Vaccine 34 (2016) 3950–3960

Contents lists available at ScienceDirect

Vaccine

journal homepage: www.elsevier.com/locate/vaccine

Review

Knowledge, attitudes and practices on adolescent vaccination among adolescents, parents and teachers in Africa: A systematic review

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ARTICLE INFO

Article history:
Received 4 February 2016
Received in revised form 18 May 2016
Accepted 3 June 2016
Available online 8 June 2016

Keywords:
Adolescents
Parents
Teachers
Knowledge
Attitudes and practice
Vaccination barriers
Africa

ABSTRACT

Introduction: Vaccines are the most successful and cost-effective public health interventions available to avert vaccine-preventable diseases and deaths. Despite global progress in adolescent health, many adolescents in Africa still get sick and die from vaccine-preventable diseases due to lack of vaccination. Adolescents, parents and teachers are key players in the development and implementation of adolescent vaccination policies. Optimal knowledge, attitudes and practices towards adolescent vaccination among these key players may improve vaccine uptake among adolescents. We conducted a qualitative and quantitative systematic review on knowledge, attitudes and practices of adolescent vaccination among adolescents, parents and teachers in Africa.

Methods: We searched PubMed, Cochrane Central Register of Controlled Trials, Scopus, Web of Science, WHOLIS, Africa Wide and CINAHL for eligible quantitative and qualitative primary studies with no time limits. We also checked reference lists of included studies for eligible studies and searched grey literature. Two authors independently screened the search outputs, selected studies and extracted data; resolving discrepancies by consensus and discussion. Qualitative data were analysed using thematic analyses where applicable, while analyses from quantitative studies used different methods based on the type of outcomes.

Results: We included 18 cross-sectional studies in this review. The included studies were conducted in 10 out of the 54 countries in Africa. The 18 studies focused on a wide range of adolescent vaccines. Thirteen studies evaluated vaccines against Human Papilloma Virus, while each of the remaining 5 studies, evaluated vaccines against rabies, HIV, tetanus toxoid, tuberculosis and adolescent vaccines in general. Among the key players, we found low to moderate levels of knowledge about adolescent vaccination. Positive attitudes and practices towards adolescent vaccination, especially against Human Papilloma Virus were reported. Despite the low knowledge, our results showed high levels of acceptability to adolescent vaccination among adolescents, parents and teachers.

Conclusions: It was evident in our review that all key demographics (parents, adolescents and teachers) were receptive towards adolescent vaccines. We propose relevant policy makers in Africa to consider continuous education programs such as those aimed to inform the parents, adolescents and teachers on adolescent vaccination.

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http://dx.doi.org/10.1016/j.vaccine.2016.06.023
0264-410X/

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1. Background

There is evidence that vaccination during childhood, may in some instances, induce a short-lived immunity [1–3]. To ensure vaccine-induced immunity persists beyond childhood through to late adulthood, booster doses (for example during adolescence) of some vaccines (such as tetanus and pertussis) are recommended [1–4]. However, such booster vaccine doses needed during adolescence are not widely given, particularly in Africa [2]. Both programmatic and individual challenges may partly explain the lack of booster vaccination during adolescence in Africa [5].

The World Health Organisation (WHO) defines adolescents as young persons aged 10–19 years [6,7]. Taking this definition, and looking at age-specific global data reported in 2014, adolescents, accounted for nearly 25% of the world's population [8]. Furthermore, adolescents' population growth in Africa is reported to be the fastest in the world [8]. From a vaccination standpoint, the public health authorities in Africa need to respond appropriately to the rapid growth of the adolescents' population.

If booster adolescents' vaccines are successfully introduced in Africa, enormous public health benefits such as reduced transmission and treatment costs of vaccine-preventable diseases (VPDs) will be achieved [1,2]. Additional public health benefits of adolescents' vaccination programmes are: primary immunisation (new vaccines such as human papillomavirus vaccines (HPV)) and catch-up immunisation (such as hepatitis B vaccines) [1,9].

Data from settings where adolescents' immunisation programmes have existed show that unique challenges are faced when vaccinating adolescents [12,13]. Therefore, public health authorities in Africa need to consider developing adolescents' immunisation programmes that take into account the challenges of targeting adolescents for immunisation.

Challenges of adolescents' immunisation includes: (a) lack of relevant vaccination knowledge among key players (adolescents, parents and teachers) [9–12,14–20], (b) negative attitude towards vaccination among adolescents, parents and teachers [10,14,15,17,18], and (c) anti-vaccination practices among adolescents, parents and teachers [10]. Teachers are crucial key players, especially for adolescent vaccines delivered through school programs [21]. We summarize these challenges as knowledge, attitude and practices (KAP).

A decision making axis is known to exist among adolescents, parents or guardians and the teachers [12,18]. For example, for an adolescent to make a decision on being vaccinated or not, support from the parent, the teacher or even both is crucial. The decision by the adolescent accepting or rejecting vaccination as well as the parent or teacher supporting the decision, is influenced by the KAP among the three key players. We propose if two or all three key players (adolescents, parents and teachers) have optimal KAP towards vaccination, uptake of vaccines by adolescents would significantly increase in most settings.

The assessments of knowledge and attitude among adolescents, parents, and healthcare workers, towards HPV vaccines are well documented [12,14–18]. In contrast, and to the best of our knowledge, assessments of KAP among adolescents, parents and teachers on the other adolescents' vaccines are lacking. We therefore conducted a systematic review on KAP towards adolescents' vaccination among adolescents, parents and teachers in Africa.

2. Objectives

2.1. Primary objective

(a) Assess the KAP among adolescents, parents and teachers on the adolescents' vaccination in Africa.