

Vaccination in adolescents

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Among the four priority strategic areas in WHO's Global Immunization Vision and Strategy (GIVS), the first one reads 'Protecting more people - i.e. expand immunisation beyond infancy to older age groups'. An important age group to consider are adolescents, which are 10-19 year olds according to the WHO definition (subdivided in early - (10-13 years), mid- (14-16 years) and late adolescence (17-19 years)). Actually very few low-income countries target adolescents with some kind of immunisation (9% of countries in Africa, 11% in South East Asia, compared to 92% in Europe).

Adolescence is 'a critical formative life stage at which major changes take place: biologic, cognitive, psychological, psychosexual and at the social level'. A broad health intervention including vaccination towards this age group could have considerable health benefits.

The rationale for vaccination in adolescents is threefold:

- (1) To counter a specific risk in older age = e.g. primary series of vaccines to prevent sexually transmitted infections (STI) such as HPV vaccine (or HSV and HIV vaccines once efficacious vaccines become available).
- (2) A need for vaccine booster doses due to waning of immunological response, e.g. tetanus booster (booster with T or Td).
- (3) Incomplete vaccination or no vaccination (missed opportunities) in infancy/early childhood and risk of the disease still present in adolescence and beyond (=catch-up vaccination), e.g. HBV vaccine, polio, measles, etc.

It is evident that each country will have to consider carefully which vaccination is adequate based on the local situation.

Channels to reach adolescents with vaccination include school-based facilities, routine visits in primary care and through campaigns. There are many arguments to vaccinate at school: (1) school attendance is required by law and is very high, at least in primary school (= easy catchment of target population); (2) adolescents rarely consult in primary care; (3) cost-effectiveness of vaccination is much better in school settings than for primary care; and (4) vaccination can be included in a package of health interventions, e.g. the concept of 'health promoting schools' of Unesco, WHO and others. Difficult issues must off course be considered such as reaching out-of-school children (often deprived, disadvantaged groups at greater health risks), consent (parental, adolescent), and eventually making vaccination mandatory (highly controversial).

The prototype vaccine for adolescents is the HPV vaccine to prevent cervical/other genito-anal pre-cancer and cancer, which can be implemented annually as three doses in a one year age cohort of 10 year old girls. In ongoing demonstration projects by PATH, coverage of HPV vaccine are high after one or two doses in Peru and Uganda respectively; this indicates that introduction of HPV vaccine in young adolescents is feasible in low-income countries.

To conclude, each country should consider which primary vaccinations, boosters or catch-up vaccinations can be planned in adolescence; functioning school health systems seems to be a necessity for efficient programmes as the opportunity costs might be considerable and need major thought before a policy decision is taken.