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REACHING HIGH VACCINATION COVERAGE THROUGH ORGANIZED VACCINATION PROGRAMS – BELGIUM

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Vaccines have been the single biggest medical advance ever, and their effect on morbidity and mortality can hardly be overestimated. Vaccines are able to provide individual protection, but the implementation of effective vaccines in extended vaccination programs has led to the end of circulation of some pathogens. The control and possible eradication of the pathogens which cause these infectious diseases is only possible if high vaccination coverages are reached within a population, thus creating herd immunity. Herd immunity can be reached if vaccination coverages of >90–95% are attained and sustained over many years in a population. By creating herd immunity the most vulnerable persons in a population, those who cannot be vaccinated or those who do not respond to vaccines, can also be protected. Herd immunity is like a protective blanket which covers an entire population.

The shift in perspective from individual protection to herd immunity, or from individual vaccination to programmatic vaccination, requires the input of a higher level in the community, which oversees the vaccination program to its full extent. It requires a legal framework, the input of a national immunization technical advisory group (NITAG), an organized system of vaccine delivery, education of vaccinators and parents, vaccination campaigns, and a thorough follow-up of the vaccination program of a country, including registration of vaccination, vaccination coverage studies and epidemiological monitoring of vaccine-preventable diseases (1). Moreover, an inclusive, integrated approach to immunization requires the engagement of a wide range of stakeholders and opinion leaders from within the health sector and, more broadly, from sectors affected by the economic and social burden of vaccine-preventable disease (2).

In Belgium, several studies on vaccination coverage showed that a very high immunization coverage could be reached in infants (>90–95% for all recommended and free of charge vaccinations) and school children (>85–90%) and this coverage was sustained or even improved over a period of over ten years (3). In Belgium, the majority of the vaccines are given free of charge (vaccine

and consultation) if the vaccines are given at well-baby clinics for children under three years of age, or through school health centers for school-aged children. If parents prefer to have their children vaccinated by a pediatrician or family doctor, this is also allowed, but then a consultation fee needs to be paid. However, both the well-baby clinics and the school health system integrate vaccinations with additional regular check-ups to monitor growth and development between 0 and 18 years of age. Vaccine uptake through the organized systems is very high, as 85 to 90% of the children are vaccinated through the organized program. In particular, in the first years of life a systematic approach to guide parents in raising their child, with visits scheduled at specific pre-defined important time points in a child's life, can be helpful in providing preventive measures, such as vaccinations, to the majority of infants. An integrated and programmatic approach to vaccinating infants, with medical doctors and nurses specifically trained for preventive medicine, offers an advantage, to improve equity and the health of all infants in general. For instance, for children below three years of age the well-baby clinics also address feeding problems, neurological development and growth, behavioral problems and health in general, whereas in the school health centers learning difficulties and school related problems are also addressed besides growth and development.

As also shown in the recent study, the confidence of parents in vaccines and the vaccination program in Belgium is very high, since >90% of the parents agreed that vaccines are important for the health of their child, that vaccines are effective and that vaccines are also important for the health of others in their surroundings. Especially this last item is important as it shows that parents understand the notion of herd immunity. Also confidence in the vaccinators was equally high, because over 90% of the parents confirmed that they followed the advice on vaccinations given by the vaccinators (3).

To reach such high coverage rates and gain the trust of parents in vaccines and vaccination, requires both years of work in which confidence is gained slowly and a great deal of education of both vaccinators and parents. It is, however, important to invest in the education of parents since vaccines are often the victim of their own success. Especially younger parents do not know about infectious diseases and their complications against which their children are being vaccinated, but only see the minor side effects that vaccines can cause. Moreover, in the case of hoaxes regarding vaccines, confidence is easily lost and many years are needed to regain that confidence, as has been the case with the non-existent but alleged relationship between the MMR vaccine and autism (4).

Lastly, when establishing an organized vaccination program, it is also important to set both goals and indicators to monitor the progress made over the years. These should be set prior to starting the program, so that the program can be adapted if the goals are not met.

Investing in vaccination is a means to reduce inequities and significantly improve the health and well-being, not only of children, but of entire populations (2).

Conclusion

Reaching and sustaining high vaccination coverage in children is important to stop the circulation of vaccine-preventable diseases. Vaccination programs that deliver vaccines through integrated programs of preventive medicine for children can help in attaining herd immunity.

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