

# VACCINATION POLICY AND PROGRAMS IN THE CIRCUMPOLAR WORLD

In Canada the introduction of the *Haemophilus influenzae* type b (Hib) capsular polysaccharide-protein conjugate vaccines in 1988 led to a reduction in the annual incidence of Hib meningitis in children less than 5 years of age from approximately 44/100,000 in 1985 to <1/100,000 by 1994 (1). This reduction in morbidity and mortality was particularly dramatic among the Canadian Inuit, who had suffered the highest reported incidence of Hib meningitis (530/100,000 children less than 5 years) among indigenous populations worldwide (2).

Finland played a seminal role in the field trials of the Hib polysaccharide vaccine, and subsequently in trials of the polysaccharide-protein conjugate vaccine. Finnish vaccine trials have been remarkable for the large number of children successfully recruited and the meticulousness of follow-up. These characteristics attest to the trust and care that have been woven into the relationship between parents, children, their health care providers and vaccine researchers. Accessible high quality community based maternal and child care in Finland allows for a milieu in which informed consent and adherence may flourish.

Vaccine programs throughout the world are currently challenged by factors which include, but are not limited to, the emergence of new and old microbiologic threats, the complexities of vaccine production, evalu-

ation, licensure, cost, delivery and acceptance, and competing preventive and health care priorities. In order to address the challenges of vaccine prevention as well as other public health initiatives, many countries have created national public health institutes in which critical technical and human resources, characterized by scientific rigor, expertise and experience may be assembled (3). The relationship of these programs to national departments or ministries of health often determines the degree to which these institutes may operate in an atmosphere removed from political pressure.

In this edition of the *International Journal of Circumpolar Health*, Satu Rapola describes the Finnish National Immunization Programme (NIP), which is guided and advised by the National Public Health Institute (KTL). The advice provided by the KTL is ultimately accepted or rejected by a National Advisory Board of Communicable Diseases within the Ministry of Social Affairs.

Criteria by which new vaccines are evaluated by KTL include expected public health benefit, safety at the individual and population level and cost-effectiveness. It is particularly the latter criterion that many national immunization programs find problematic. How do we define "cost" – do we include societal costs, and how do we evaluate non-monetary costs, if at all? How do

we define “benefit”? How do we assess the place of the vaccine in a field of competing preventive, acute and chronic care priorities? Equally important, how do we collect, assess and incorporate public knowledge and opinion regarding vaccines into our vaccine strategy, in order to inform the public and provide credible leadership.

In the circumpolar world, new vaccines against Pneumococcus, Meningococcus, Human Papillomavirus Virus (HPV) and Rotavirus, among others, are currently being evaluated. The evaluation process must ensure that vaccine components and immunogenicity are suited to the targeted arctic population. In Canada the licensed seven valent pneumococcal conjugate vaccine does not include Serotype 1 which is a significant cause of morbidity and mortality among Canadian aboriginal children (4). In considering the use of HPV vaccines in aboriginal Canadian women, who suffer higher morbidity and mortality due to cervical cancer compared to the general Canadian population, how can we have confidence in vaccine immunogenicity given the lack of specific testing in this group and the experience of variable immune

response to other vaccines in this population? The potential costs and benefits of many new vaccines must be interpreted within a context of competing societal “needs and wants”. In rising to these and other challenges, Dr. Rapola’s paper prompts us to reflect that Finland, Canada and other circumpolar countries may develop and strengthen their vaccine programs through the sharing of data, approaches, models and experience.

## REFERENCES

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