Contribution of hepatitis B vaccination programmes initiated by Alexander Milne and Dr Christopher Moyes to the decline in prevalence of hepatitis B infection in pregnant women in the Midlands region of the North Is, New Zealand

In his recent article, Michael Addiddle demonstrates a decline in the prevalence of hepatitis B infection from the late 1990s in the antenatal population of the Midlands region, particularly among women less than 20 years of age. Prior to the introduction of hepatitis B vaccination, this region had pockets of high prevalence with a marked ethnic differential in infection rates.

In the early 1980s serosurveys conducted by Alexander (Sandy) Milne and Dr Christopher Moyes in the eastern Bay of Plenty found the disease was endemic among children aged 0–15 years, and the prevalence of chronic hepatitis B infection among Maori was five times higher than among Europeans (12.0% vs 2.6% respectively). In Kawerau, where Milne recruited almost all the townspeople in a population-based study in 1984, 42% of the population showed evidence of past infection (54% of non-Europeans and 33% of Europeans). Infection rates among children were even more striking.

Addiddle suggests that the downward trend in the prevalence of hepatitis B infection among antenatal women, noticeable from 1997 onwards, is most likely the result of the Health Department infant and preschool immunisation programme introduced in early 1988. However, Milne and Moyes’ contributions to reducing the rates of infection in this region should not be overlooked. In the early 1980s the Health Department was reluctant to consider the introduction of childhood hepatitis B immunisation, citing the high cost of the vaccine and uncertainty over prevalence rates among New Zealand children.

In late 1984, Milne pioneered the use of low-dose plasma-derived hepatitis B vaccine (2mcg rather than 10mcg) to reduce the cost of a community-funded childhood immunisation campaign in Kawerau. With the enthusiastic support of residents, he immunised more than 95% of the susceptible preschool, primary and intermediate children. Community-funded programmes for children in the Bay of Plenty followed in late 1985. In all, more than 8000 children completed courses of low-dose hepatitis B vaccine, which was subsequently used in the Health Department immunisation programme from 1988–89. During the late 1980s, Milne and Moyes continued to promote community-funded immunisation for school-aged children in central and northern North Island districts.

From February 1988 the Health Department programme provided universal infant hepatitis B immunisation and a ‘one off’ immunisation programme for preschoolers throughout the country. Uptake among preschoolers was lower than anticipated, however; less than 60% of preschool children were fully immunised (60% of non-Maori and 35% of Maori). The 1992 regional immunisation coverage survey, which...
included infant hepatitis B immunisation, indicated that the Central-North RHA had lower levels of coverage at 2 years of age than other RHAs. Nationally, lower overall immunisation coverage was found among Maori (45%) and Pacific children (53%).

While coverage rates improved during the 1990s, uncertainties over the accuracy of coverage data remained until the introduction of the national immunisation register in 2005. Addidle provides data which suggests that the ongoing immunisation programme is having a positive impact in the Midlands region. To complete the picture, however, some recognition should be given to the earlier part played by Milne and Moyes in reducing hepatitis B virus infection rates.

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