

Health Status Report

2010 - 2015

Immunization



Suggested Citation:

Northern Inter-Tribal Health Authority. *Health Status Report 2010-2015: Immunization*. Public Health Unit, Prince Albert, 2017. Available at: www.nitha.com

Chapter 6

Immunization

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Key Findings

- One year-old immunization coverage rates in NITHA steadily increased from 87% in 2010 to 91% in 2015.
- Two year-old immunization coverage rates in NITHA increased by 10% from 81% in 2010 to 89% in 2015.
- Six/Seven year-old immunization coverage rates in NITHA increased from 89 % in 2010 to 95% in 2015.

Immunization

Immunization is one of the most important achievements in public health, having saved more lives in Canada than any other public health intervention¹. Immunizations not only protect at individual level, it also provide protection at community level through herd immunity. Herd immunity is a collective protection for a particular infectious disease that can be achieved when number of people who get immunized increases and the probability of infectious disease transmission decreases. Herd immunity provides protective barriers for those individual that cannot become vaccinated such as young infants or the immunocompromised².

The aim of this chapter is to provide information on childhood immunization coverage rates (CICRs) for NITHA population for the period 2010 to 2015. CICRs contain the percentage of children who have received recommended number of doses of vaccines for a particular age group³. CICRs report children as up-to-date (UTD) if they have received the recommended doses of a vaccination by ages 1, 2 and 6/7 years as specified in the Saskatchewan Immunization Manual⁴. Children aged 6/7 years will be referenced throughout this chapter to reflect the change from reporting 6-year-old coverage rates to 7-year-old coverage rates in 2012.

One-Year-Old Immunization Converge

The Saskatchewan immunization schedule recommends the following immunization before a child reaches one year old.

- Three doses of diphtheria, tetanus, pertussis, polio, Haemophilus influenza type b (DTap-IPV-Hib) vaccine
- Three (or two) doses of pneumococcal conjugate- 13 (Pneu-C-13) vaccine

One-year-old immunization coverage rates in NITHA steadily increased from 87% in 2010 to 91% in 2015 (Figure 6.1). Between 2010 and 2015, NITHA coverage rates for 1 year old were on average 9.5 times higher than the coverage rates for First Nation population living on-reserve in South and Central Saskatchewan (Figure 6.1).

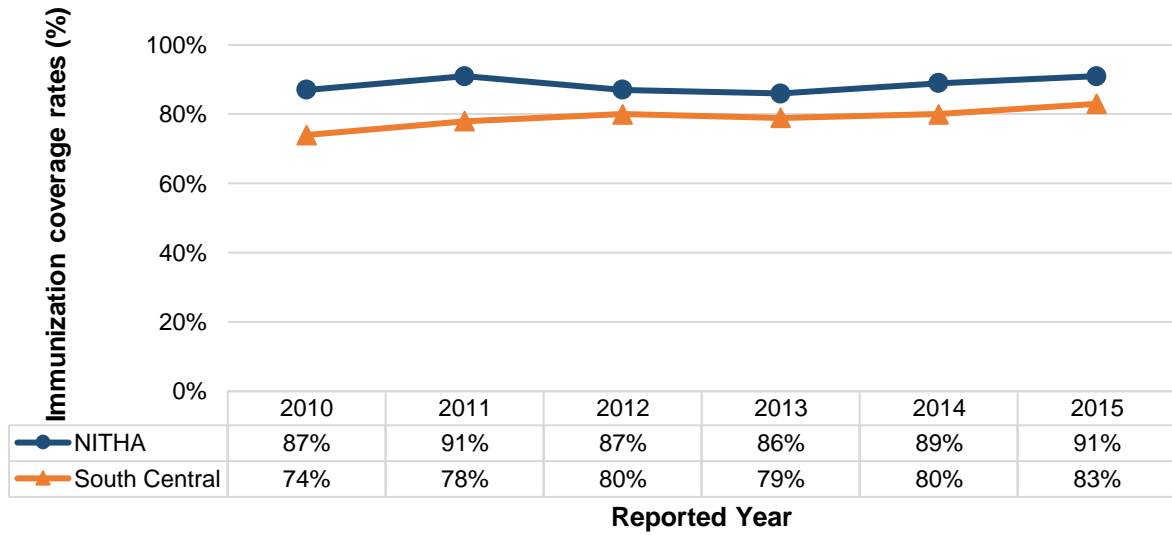
¹ Public Health Agency of Canada. (2013). *Canadian immunization guide*. Retrieved from: <http://www.phac-aspc.gc.ca/publicat/ciq-gci/p01-02-eng.php> .

² Public Health Agency of Canada. (2013). The Chief Public Health Officer's Report on the State of Public Health in Canada, 2013 Infectious Disease—the Never-ending Threat. Retrieved from: <http://www.phac-aspc.gc.ca/cphorsphc-respcacsp/2013/imm-vac-eng.php>

³ Health Canada, (2015). First Nations Health Status report 2012, Saskatchewan regions. Retrieved from: http://publications.gc.ca/collections/collection_2015/sc-hc/H34-293-2015-eng.pdf

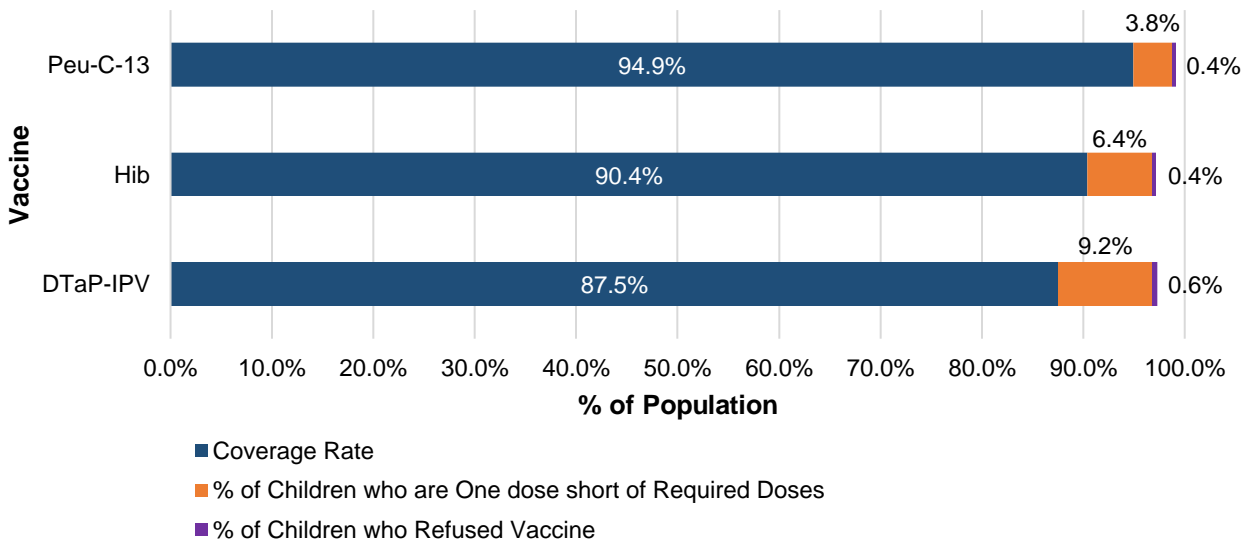
⁴ Saskatchewan Ministry of Health (2015). Saskatchewan Immunization Manual (SIM) Immunization Schedules.

Figure 6.1: Overall one-year-old immunization coverage, NITHA and South Central, 2010-2015



In 2015, out of total eligible children to receive the recommended immunizations, only less than 1% refused vaccine and 9.2 %, 6.4% and 3.8% were one dose short of required doses for DTaP-IPV, Hib, and Peu-C-13 vaccine respectively (Figure 6.2).

Figure 6.2: Overall one-year-old immunization coverage by vaccine type, NITHA, 2015



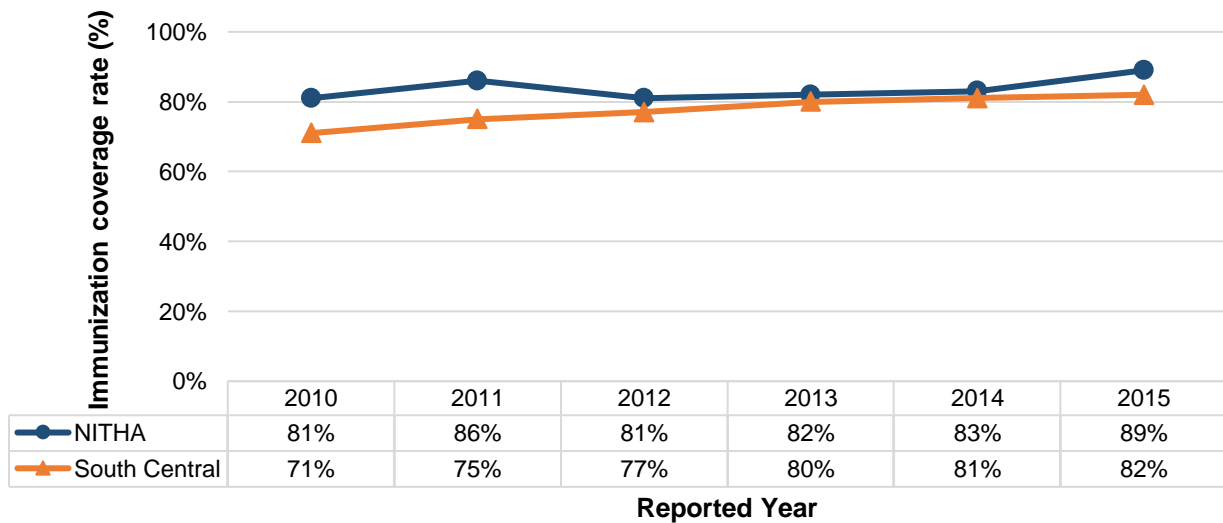
Two-Year-Old Immunization Converge

Before a child reaches two years of age, the Saskatchewan immunization schedule recommends the following immunizations:

- Four doses of diphtheria, tetanus, pertussis, polio, Haemophilus, influenza type B (DTap-IPV-Hib) Vaccine
- Four doses of pneumococcal conjugate-13 (Pneu-C-13) vaccine
- One dose of meningococcal type C (Men-C-C) vaccine
- Two doses of measles, mumps, rubella (MMR) and varicella/chickenpox (VZV) vaccine
- Two doses of hepatitis A (HA) vaccine

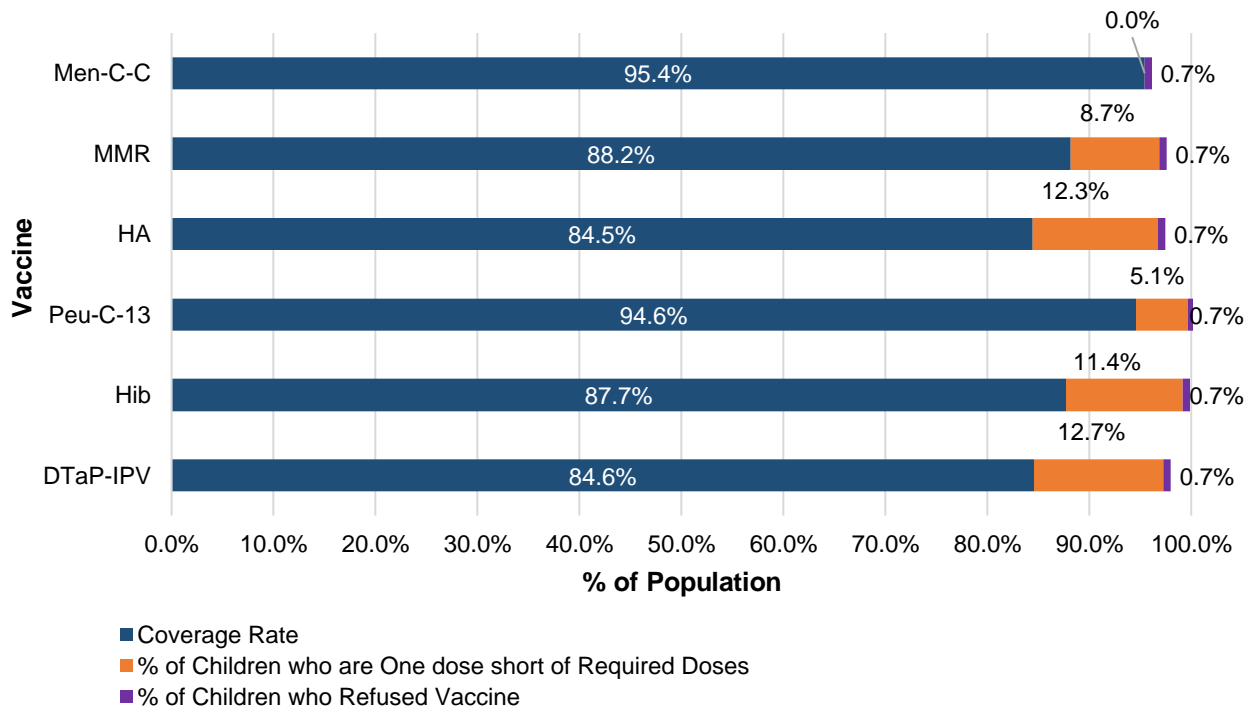
Two year-old immunization coverage rates in NITHA increased by 10% from 81% in 2010 to 89% in 2015 (Figure 6.3). Between 2010 and 2015, NITHA coverage rates for 2 year old were on average 6 times higher than the coverage rates for South Central (Figure 6.3).

Figure 6.3: Overall Two-year-old immunization coverage, NITHA, South Central, 2010-2015



In 2015, out of total eligible children to receive the recommended immunizations, only less than 1% refused vaccine and between 5% and 12% were one dose short of required doses (Figure 6.4).

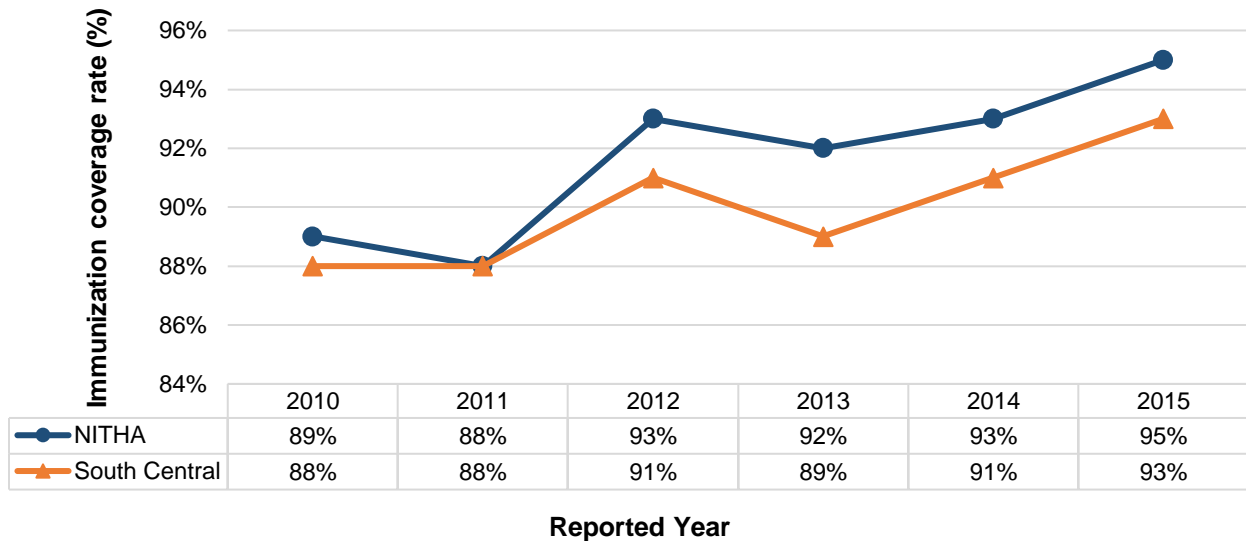
Figure 6.4: Two-year-old immunization coverage by vaccine type, NITHA, 2015



Six/Seven-Year-Old Immunization Converge

Routine immunizations should be completed by age of six/seven years. An assessment at six/seven years of age provides a picture of the level of completion for these recommended vaccinations (Figure 6.5). Overall, six/seven-year-old coverage rates for NITHA and South Central had a similar trend with a sharp increase in 2012 and steadily increased from 2012 to 2015 (Figure 6.5). In the time period of 2010 to 2015, NITHA 6/7-year-old coverage rates were higher than that in South Central except in 2011, where both had 88% coverage rates (Figure 6.5).

Figure 6.5: Overall six/seven-year-old immunization coverage, NITHA, South Central, 2010-2015



Methodology

Data source

Data were obtained from NITHA and South-Central Childhood Immunization Coverage Rates.

Data limitation

The immunization records are captured based on the location that an individual received the vaccination; therefore, the data on those who got their immunization off-reserve at a Regional Health Authority, might not have been captured by First Nations jurisdiction. This may result in underestimation of the CICRs.

Data Calculation

The Childhood Immunization Coverage Rates (CICRs) calculated as follow:

$$\frac{\text{Number of children, at a specific point in time that have received the recommended number of doses, at a specific age}}{\text{Total number of children born in the same given period, at a specific age}} \times 100 \%$$