

## BACKGROUND AND OBJECTIVE

- Canada's First Nations population reports higher rates of physician-diagnosed arthritis and rheumatism, and is known to have twice the rate of osteoarthritis.
- The prevalence of inflammatory arthritis conditions such as Rheumatoid Arthritis has not been widely studied.
- Our objective was to estimate and contrast prevalence rates for RA for First Nations and non-First Nations in Alberta, and examine health services use.

## METHODS

**Data Source:** Alberta population-based healthcare administrative data, including physician billing claims and hospitalizations, years 1993-2011

**Case Definition:** 1 hospitalization or 2 physician claims in 2 years, using ICD-9-CA code 714.x and/or ICD-10-CM codes M05-M06.x

**First Nations Status:** Determined by the First Nations identifier in the Population Registry, indicating Treaty Status

**Statistical Analysis:** Standardized by age and sex (total Alberta population 2005/2006) to estimate the Standardized Rate Ratio (SRR) and 95% confidence interval limits calculated comparing First Nations to non-First Nations

**a) Prevalence:** Calculated as persons meeting the case definition at any point during the study period and registered in the database at the midpoint of fiscal year 2008/2009, per 100 population

**b) Health Care Use:** Annual rates for visits for RA to primary care, rheumatology and/or internal medicine, hospital admissions (all-cause, hip and/or knee arthroplasty, RA itself), per 100 person-years, for years 2005-2006 to 2008-2009

## RESULTS

**Table 1. Individuals Meeting the Rheumatoid Arthritis Case Definition, by Location of Residence and First Nations Status**

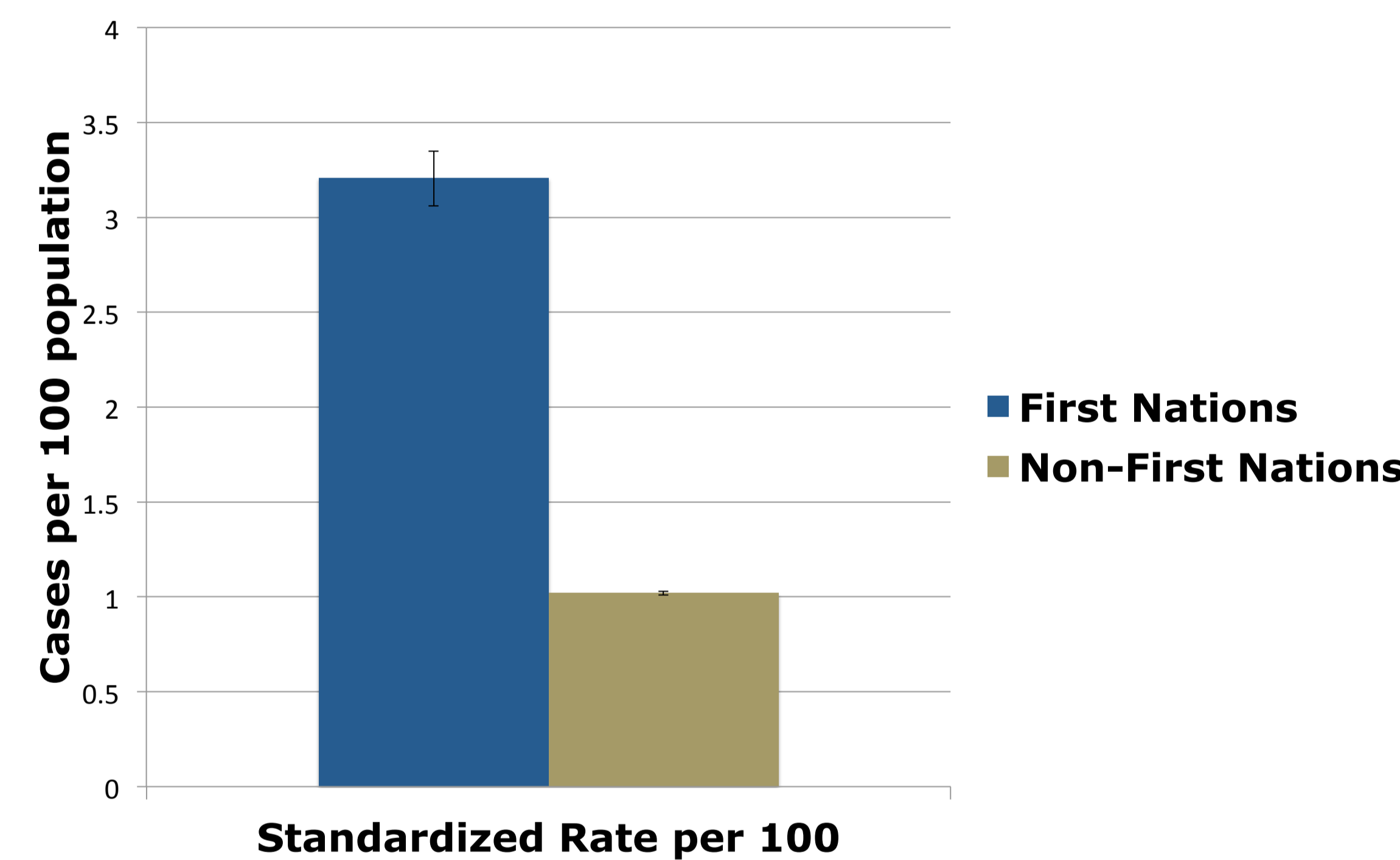
	First Nations	non-First Nations
Urban	1,035	29,136
Rural	1,637	7,123
<b>TOTAL</b>	<b>2,672</b>	<b>36,259</b>
<b>POPULATION PREVALENCE (2008/2009 fiscal year)</b>		
	3.2%	1.0%

## CONCLUSIONS

- First Nations in Alberta have a three-fold higher prevalence rate of RA. Despite the importance of specialty care for RA management, use of rheumatology and/or internal medicine services is significantly reduced compared to non-FN patients, regardless of location of residence.
- First Nations patients with RA are more frequently hospitalized for any cause, but are less likely to be admitted due to RA or for arthroplasty.
- Primary care physicians are delivering RA care to First Nations patients, thus increased alliance with these providers is critical to ensure treatment targets are being achieved.

## RESULTS

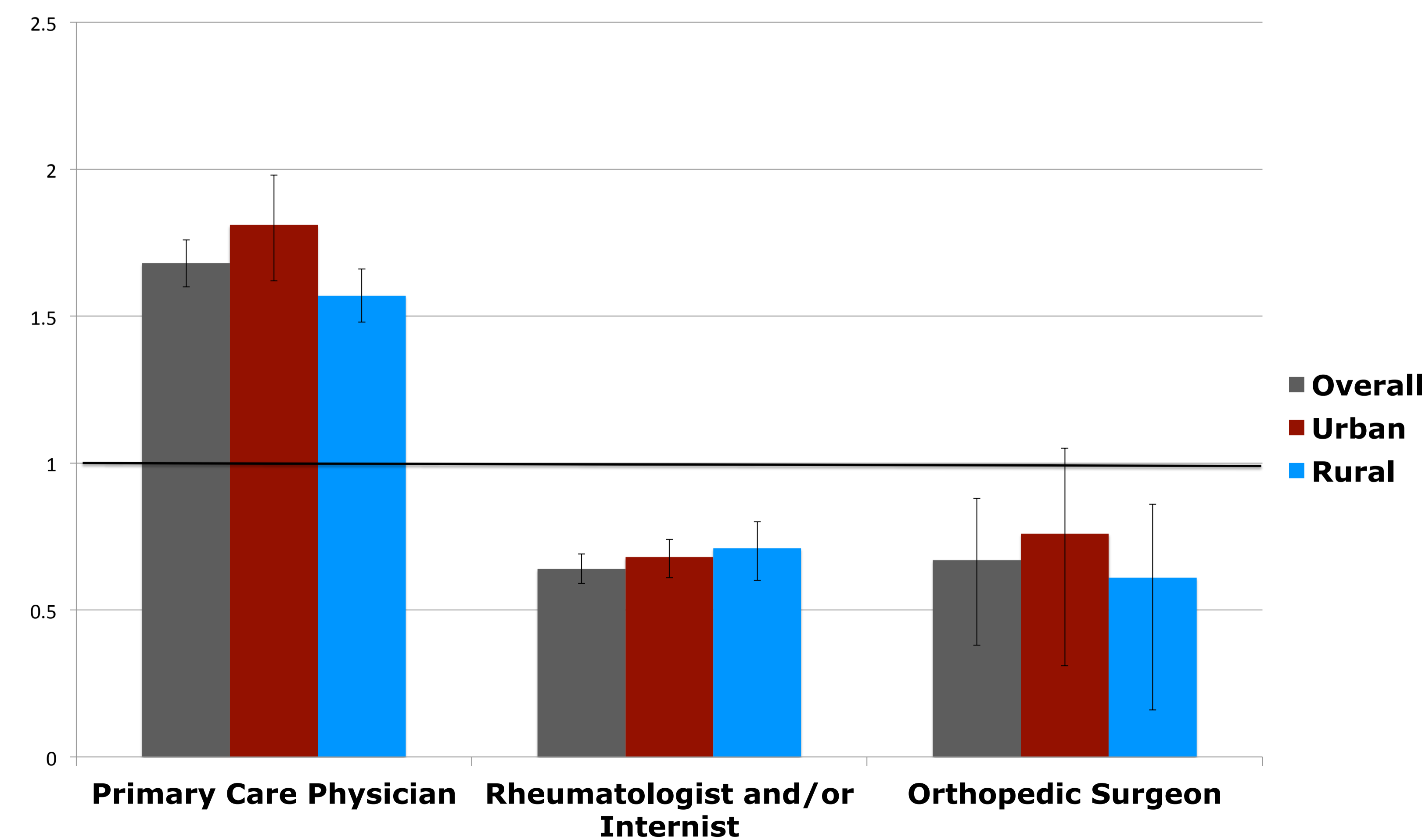
**Figure 1. Standardized Rate Ratio (SRR) for Rheumatoid Arthritis, Comparing First Nations to Non-First Nations: 3.2 (95%CI 2.9-3.4)**



**Table 2. Primary Care Visits for Rheumatoid Arthritis, by First Nations Status**

	First Nations	non-First Nations
<b>Number of Primary Care Visits for RA in 2009</b>	<b>4,813</b>	<b>41,942</b>
<b>Proportion of primary care visits that are for RA</b>	<b>13.0%</b>	<b>13.4%</b>
<b>Mean number of visits per person for RA per year</b>	<b>1.8</b>	<b>1.2</b>

**Figure 2. Standardized Rate Ratios (SRR) for Rheumatoid Arthritis Outpatient Visits, Comparing First Nations to Non-First Nations**



**Figure 3. Standardized Rate Ratios (SRR) for Hospitalizations, Comparing First Nations to Non-First Nations with RA**

