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**Northwestern  
Health Unit**

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**Northwestern Health Unit**  
**Syphilis Epidemiologic Summary**  
**January 23, 2023**

## **Purpose**

This report describes recent epidemiologic statistics on confirmed cases of syphilis that have occurred in the Northwestern Health Unit (NWHU) catchment area since August 2018, with a particular focus on cases that have occurred in 2022. The report highlights the incidence and epidemiologic curve of recent cases, demographics of cases and risk factors for infection.

## **Background**

NWHU provides programming related to reportable diseases in Ontario as per the Infectious Disease Protocol published by the Ministry of Health and Long-Term Care (MOHLTC). As part of this programming, NWHU does ongoing collection, analysis and reporting of the incidence of all reportable diseases occurring in the catchment area.

In October 2018, NWHU detected a statistically significant increase in reported cases of syphilis in the catchment area, and particularly in the Kenora region, beginning August 1, 2018. Incidence has subsequently increased each year since then. As part of the investigation into this increase in cases, epidemiologic trends are being monitored and reported on periodically in order to guide mitigation efforts.

## **Methods**

Data for reported cases of all types of syphilis within the NWHU catchment area dating back to 2018 were extracted from the Integrated Public Health Information System (iPHIS), the provincial database used by public health units to collect and store all communicable disease data, on January 20, 2023. Analysis of case counts, demographics, geography and risk factors was carried out using Microsoft Excel.

## Report Highlights

There were 139 confirmed cases of syphilis in the NWHU catchment area in 2022, which is an incidence rate of 171.3 per 100,000. Incidence was up 21% from 2021, when the incidence was 141.7 per 100,000.

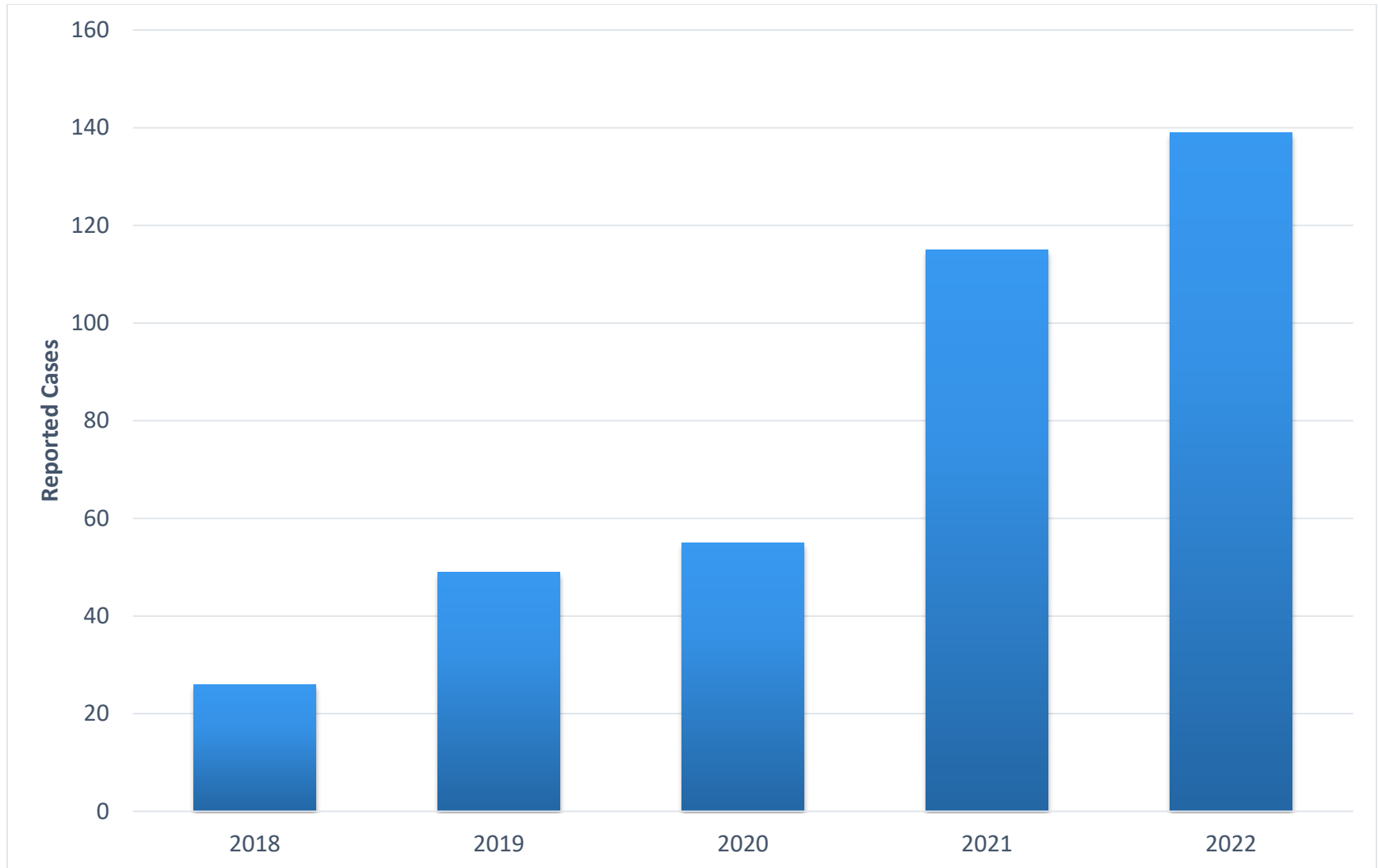
- Incidence rates per 100,00 people:
  - 2022: 171.3
  - 2021: 141.7
  - 2020: 67.8
  - 2019: 60.3
  - 2018: 32.0
- Typical incidence in the region prior to the 2018 increase was 2.9 per 100,000 per year, historically.
- Median age of cases in 2022 is 32 years old, 50% are male, 50% are female
- 50.4% of cases in 2022 are in the Sioux Lookout health hub, 42.4% were in the Kenora health hub, with the remainder being elsewhere in the catchment area
- Most common risk factors for cases include not using a condom, injection drug use, multiple sex partners, and being underhoused/homeless.
- The main reasons for testing of cases were contact tracing, symptoms being present, and routine screening

## Results

### Incidence

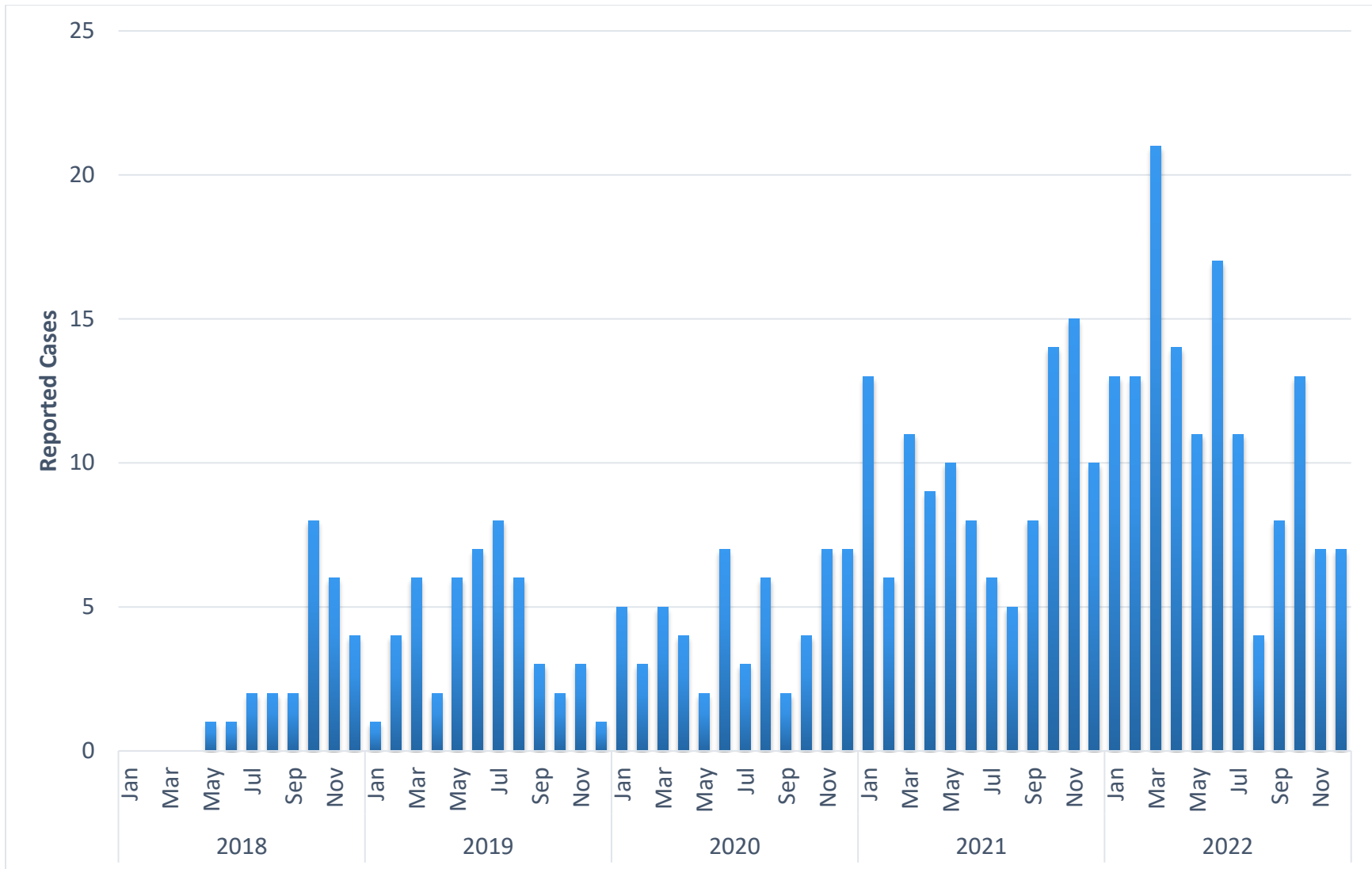
- 139 cases in 2022, an incidence rate of 171.3 per 100,000 This incidence rate is up 21% from 2021.
- The average annual incidence of syphilis in the NWHU catchment area between 2013 and 2017 was 2.9 per 100,000 per year, which serves as a historical baseline for syphilis cases in the region.

Figure 1: Syphilis cases in the NWHU catchment area by year, 2018-2022



Source: iPHIS, extracted January 20, 2023

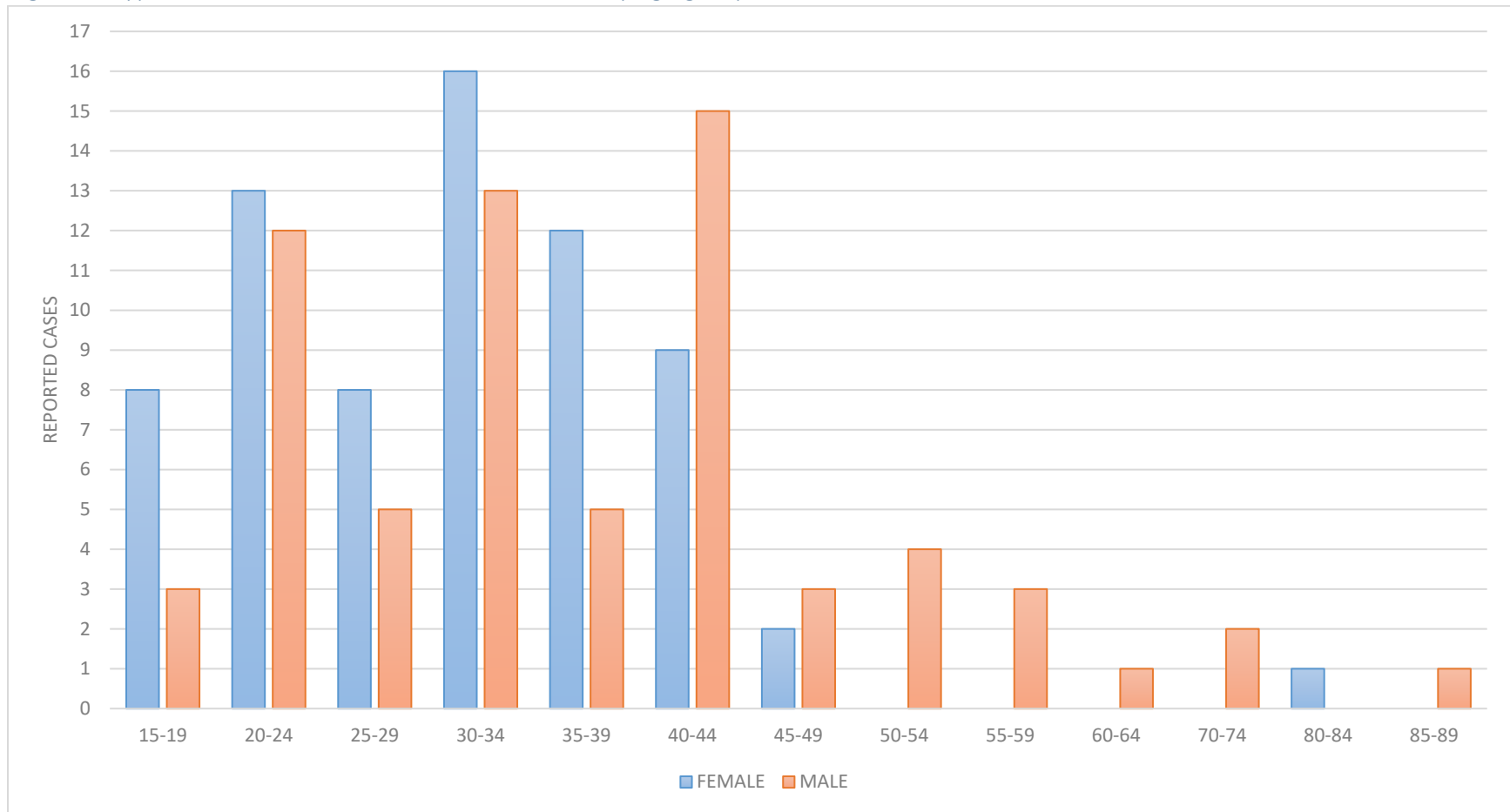
Figure 2: Syphilis cases in the NWHU catchment area by month, 2018-2022



Source: iPHIS, extracted January 20, 2023

## Cases by Age Group and Sex

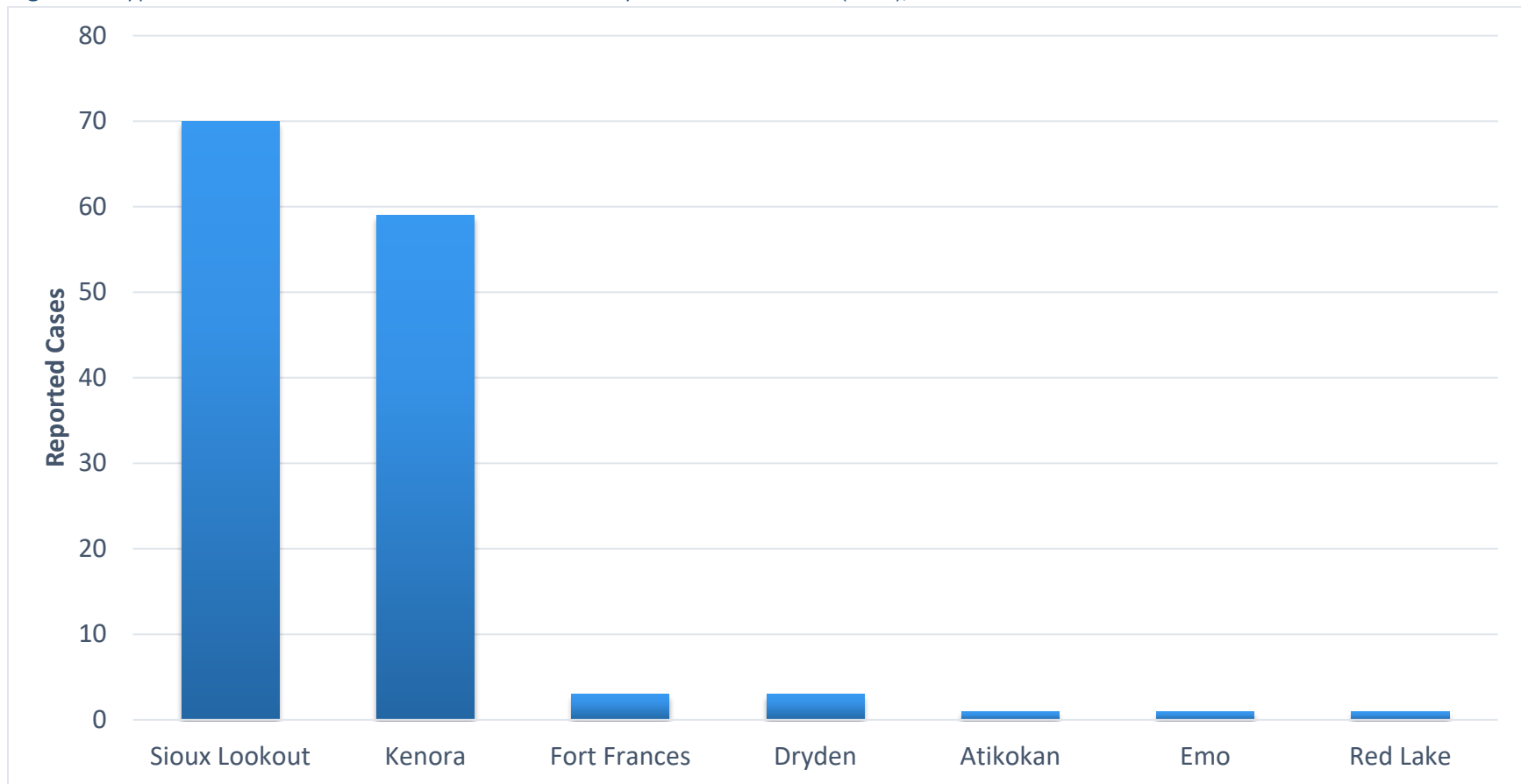
Figure 3: Syphilis cases in the NWHU catchment area by age group and sex, 2022



Source: iPHIS, extracted January 20, 2023

## Cases by Geographic Location

Figure 4: Syphilis cases in the NWHU catchment area by Local Health Hub (LHH), 2022

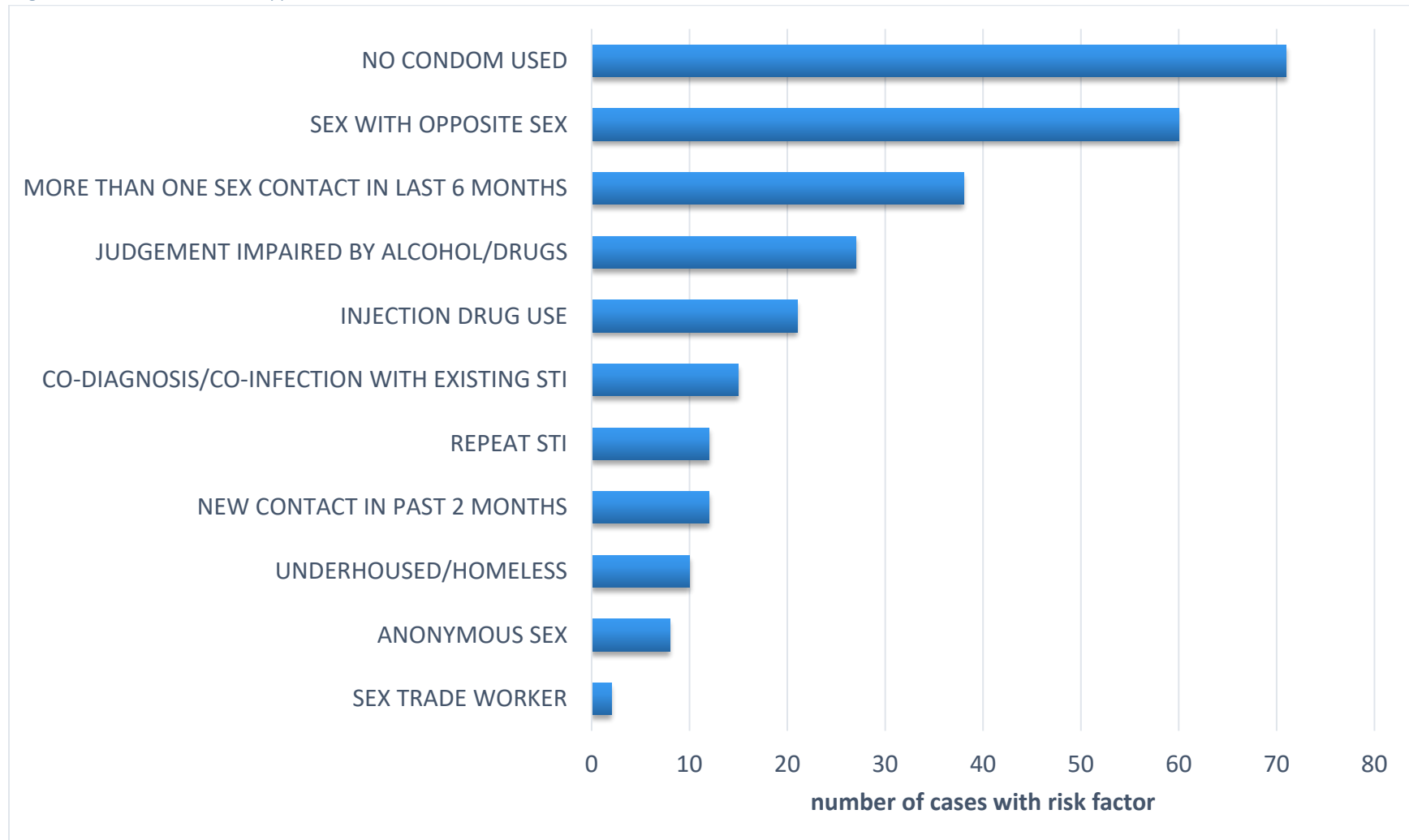


Source: iPHIS, extracted January 20, 2023



## Risk Factors

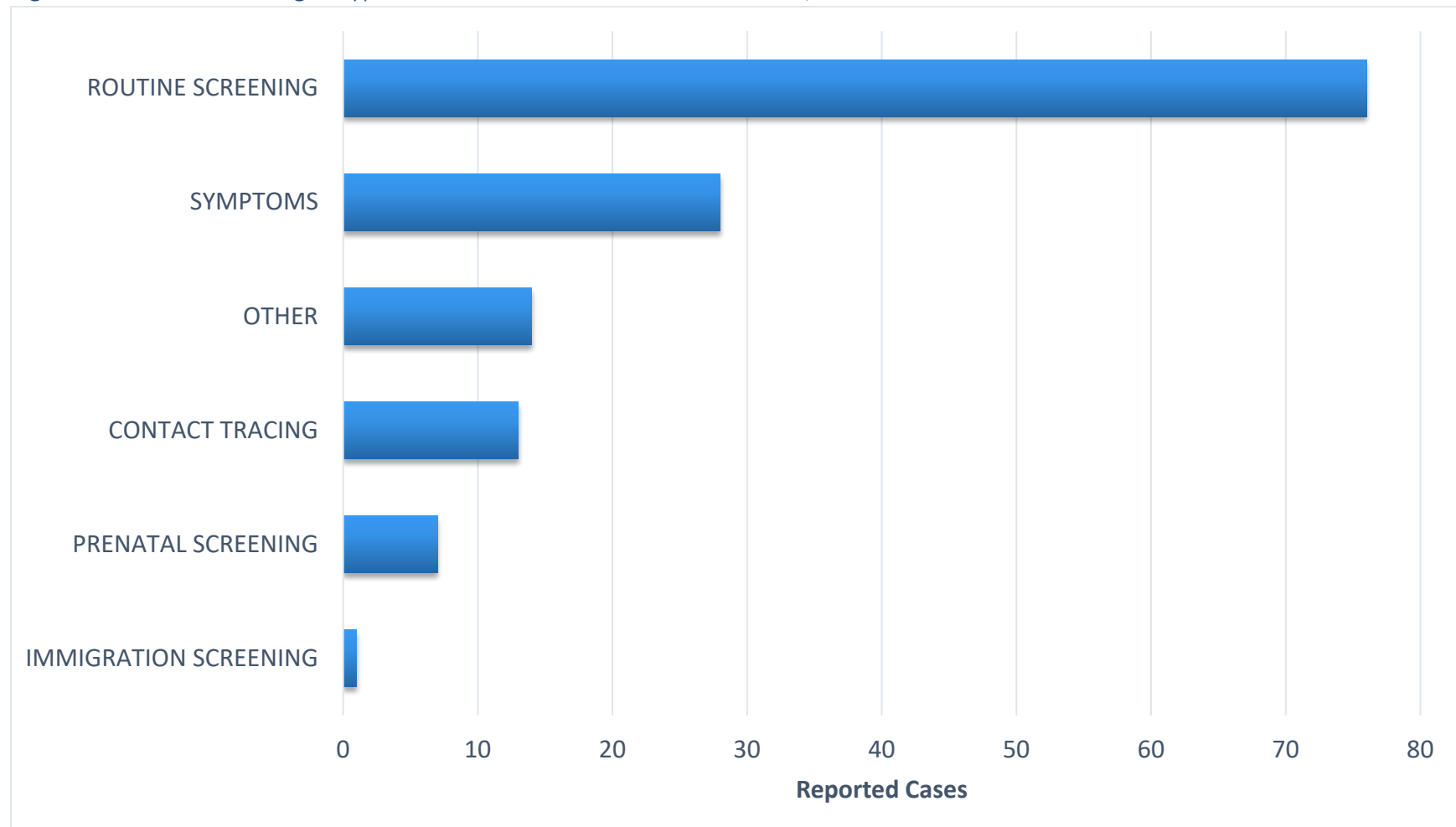
Figure 5: Risk factors of syphilis cases in the NWHU catchment area, 2021-2022



Source: iPHIS, extracted January 20, 2023

## Reasons for Testing

Figure 6: Reason for testing of syphilis cases in the NWHU catchment area, 2022



Source: iPHIS, extracted January 20, 2023

## Limitations

Case follow-up, data collection and entering into iPHIS is an ongoing process, and the statistics in this report are only reflective of the situation as of January 20, 2023. Risk factor information for some cases is incomplete or missing.

## Conclusion

NWHU has experienced a surge in syphilis incidence in the region since August 2018. Incidence has subsequently increased with each calendar year, with the highest rate yet observed in 2022. Incidence in 2021 increased by 109% compared with 2020, and increased again by 21.8% in 2022. Northwestern Health Unit will continue to monitor syphilis trends and encourage testing and treatment across the region in our ongoing efforts to mitigate the impact of the disease.