**Questions**

**Calculating Resident Days**

1. There are 120 residents in your LTCF during the month of June. How many resident days are there in June?
2. There are 50 residents living in your LTCF throughout the 2022 calendar year. How many resident days are there in 2022?
3. There are 100 residents living in your LTCF throughout the month of October and November. There are 102 residents in your LTFC throughout the month of December. How many resident days are there in the last quarter of the year?

**Calculating Rates**

1. There are 120 residents in your LTCF during the month of June. Five residents developed a healthcare associated COVID infection. What is the COVID infection rate per 1,000 resident days in June?
2. There are 50 residents living in your LTCF throughout the 2022 calendar year. Seven residents developed CDI. What is the CDI rate per 10,000 resident days in 2022?
3. There are 100 residents living in your LTCF throughout the month of October and November. There are 102 residents in your LTFC throughout the month of December. Three residents developed CAUTI during the quarter. There were 1,500 catheter days. What is the incidence of CAUTI during the quarter per 1,000 catheter days?
4. There are 150 residents living in your LTCF in January. Twelve residents developed influenza. What was the incidence of influenza per 1,000 resident days?
5. There is a norovirus outbreak in your LTCF which has 20 residents and 6 staff. Eleven residents and 2 staff are ill. What is the attack rate percentage of norovirus in residents and staff?

**Answers are provided on Page 2**

**Additional examples** can be found in Boxes 11 through 14 of the Ontario Agency for Health Protection and Promotion (Public Health Ontario), Provincial Infectious Diseases Advisory Committee, Best practices for surveillance of health care-associated infections in patient and resident populations. 3rd ed. Toronto, ON: Queen’s Printer for Ontario; 2014: [https://www.publichealthontario.ca/-/media/ Documents/B/2014/bp-hai-surveillance.pdf?rev=9e7eb19b6140410faed32a5dafed8f3e&sc\_lang=en](https://www.publichealthontario.ca/-/media/%20Documents/B/2014/bp-hai-surveillance.pdf?rev=9e7eb19b6140410faed32a5dafed8f3e&sc_lang=en)

**Answers**

**Calculating Resident Days**

1. 120 residents x 30 days in the month of June = **3,600** resident days in June
2. 50 residents x 365 days in the year = **18,250** resident days in 2022
3. 100 residents x 31 days in October = 3,100 resident days in October

100 residents x 30 days in November = 3,000 resident days in November

102 residents x 31 days in December = 3,162 resident days in December

Total resident days of 3,100+3,000+3,162 = **9,262** in the last quarter of the year

**Calculating Rates**

1. (5 HAI COVID cases / 3,600 resident days in June) x 1,000 resident days = **1.39** HAI COVID cases per 1,000 resident days
2. (7 CDI cases / 18,250 resident days in 2022) x 10,000 resident days = **3.84** CDI cases per 10,000 resident days
3. (3 CAUTI cases / 1,500 catheter days) x 1,000 catheter days = **2.00** CAUTI cases per 1,000 catheter days
4. 150 residents x 31 days in January = 4,650 resident days

(12 influenza cases / 4,650 resident days) x 1,000 resident days = **2.58** influenza cases per 1,000 resident days

1. (11 sick residents / 20 total residents) x 100 = **55%** attack rate for residents

(2 sick staff / 6 total staff) x 100 = **33%** attach rate for staff