# Supplemental Material

## Supplemental 1: Table of cohort sizes for the diagnosis categories and three time periods.

This shows the number of distinct diagnosis periods with a patient diagnosis in any of the ICD 10 codes shown.

| Diagnosis                                      | ICD-10 Codes | Total Observed Diagnoses [count] | Observed Diagnoses Pre Restrictions (01 January 2010 to 25 March 2020) [count] | Observed Diagnoses During Restrictions (26 March 2020 to 18 July 2021) [count] | Observed Diagnoses Post Restrictions (19 July 2021 to 28 February 2022) [count] |
|------------------------------------------------|--------------|---------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Seasonal Respiratory Infection Diagnosis Categories |              |                                  |                                                                                |                                                                              |                                                                               |
| RSV                                            | B974, J121, J205, J210 | 1,060                           | 891                                                                            | 29                                                                            | 120                                                                            |
| Influenza                                      | J09, J10, J11   | 471                              | 448                                                                            | 11                                                                            | 7                                                                              |
| Acute nasopharyngitis [common cold]             | J00            | 2,214                            | 1,787                                                                          | 161                                                                          | 143                                                                            |
| Acute bronchiolitis (excl. RSV)                 | J211, J218, J219 | 1,568                            | 1,203                                                                          | 125                                                                          | 138                                                                            |
| ICD-10 Hierarchy Respiratory Categories         |              |                                  |                                                                                |                                                                              |                                                                               |
| Diseases of the respiratory system              | J00-J99       | 49,168                           | 32,057                                                                         | 6,803                                                                         | 4,284                                                                          |
| Acute upper respiratory infections              | J00-J06       | 5,464                            | 4,267                                                                          | 496                                                                          | 358                                                                            |
| Influenza and pneumonia                        | J09-J18       | 4,688                            | 3,071                                                                          | 678                                                                          | 402                                                                            |
| Other acute lower respiratory infections        | J20-J22       | 5,103                            | 3,825                                                                          | 455                                                                          | 442                                                                            |
| Other diseases of the upper respiratory tract   | J30-J39       | 19,906                           | 12,515                                                                         | 2,851                                                                        | 1,989                                                                          |
| Other non-infectious diseases of the respiratory system | J40-J94 | 16,739                           | 10,876                                                                         | 2,432                                                                        | 1,281                                                                          |
| Other diseases of the respiratory system        | J96-J99       | 14,042                           | 8,771                                                                          | 2,178                                                                        | 1,188                                                                          |
**Supplemental 2:** Table of the seasonality parameters calculated for the observed respiratory disease categories diagnoses in the pre restrictions period. The seasonality amplitudes have been calculated using the equation given in the methods section and the peak dates are given for categories exhibiting large seasonality with seasonality amplitudes greater than 0.5.

| Diagnosis                                      | ICD-10 Codes            | Seasonality Amplitude [normalised] | Forecast Seasonal Peak |
|------------------------------------------------|-------------------------|------------------------------------|------------------------|
| RSV                                           | B974, J121, J205, J210 | 0.97                               | 14 December            |
| Influenza                                      | J09, J10, J11          | 0.88                               | 30 January             |
| Acute nasopharyngitis [common cold]            | J00                     | 0.72                               | 01 December            |
| Acute bronchiolitis (excl. RSV)                | J211, J218, J219       | 0.89                               | 09 December            |

**ICD-10 Hierarchy Respiratory Categories**

| Diagnosis                                      | ICD-10 Codes | Seasonality Amplitude [normalised] | Forecast Seasonal Peak |
|------------------------------------------------|--------------|------------------------------------|------------------------|
| Diseases of the respiratory system             | J00-J99     | 0.33                               |                        |
| Acute upper respiratory infections             | J00-J06     | 0.55                               | 26 November            |
| Influenza and pneumonia                        | J09-J18     | 0.59                               | 25 December            |
| Other acute lower respiratory infections        | J20-J22     | 0.76                               | 13 December            |
| Other diseases of upper respiratory tract      | J30-J39     | 0.33                               |                        |
| Other non-infectious diseases of the respiratory system | J40-J94     | 0.31                               |                        |
| Other diseases of the respiratory system       | J96-J99     | 0.31                               |                        |