**Supplemental Table 1**. Definitions, sources, and methods used by OECD for hospital discharges by country.

| **Country** | **Source of data** | **Primary diagnosis** | **Public hospitals included** | **Private hospitals included** | **Day cases included** | **Administrative data** |
| --- | --- | --- | --- | --- | --- | --- |
| Australia | Australian Institute of Health and Welfare Hospital Morbidity Database | Yes | Not stated | Not stated | No | Yes |
| Austria | Statistics Austria | Yes | Not stated | Not stated | No | Yes |
| Belgium | The Federal Public Service of Health; Food Chain Safety and Environment | Not stated | Not stated | Not stated | No | Yes |
| Canada | Statistics Canada; Canadian Institute for Health Information | Yes | Not stated | Not stated | Rarely | Yes |
| Chile | Ministry of Health; Department of Health Statistics and Information | Not stated | Yes | Yes | Yes | Registry |
| Costa Rica | Área de Estadística en Salud Caja Costarricense de Seguro Social | Yes | Yes | No | No | Yes |
| Czech Republic | Institute of Health Information and Statistics of the Czech Republic; National Registry of Hospitalised Patients | Yes  | Not stated | Not stated | Mostly | Registry  |
| Denmark | The National Patient Register; Statens Serum Institut | Yes  | Yes | Yes | Yes | Yes |
| Finland | National Institute for Health and Welfare; Hospital Discharge Register | Not stated | Not stated | Not stated | Yes | Registry  |
| France | Ministère des Solidarités et de la Santé, Drees; National discharges databases from the "programme de médicalisation des systèmes d'information | Yes | Yes | Yes | Mostly | Yes |
| Germany | Federal Statistics Office, Hospital statistics 2018; and special calculations by the Federal Statistical Office | Yes | Yes | Yes | No | Yes |
| Greece | National Statistical Service for Greece; Division of Social Welfare and Health Statistics | Not stated | Yes | Yes | Some | Yes |
| Hungary | National Institute for Strategic Health Research | Not stated | Not stated | Not stated | Yes | Yes |
| Iceland | Directorate of Health in Iceland; Hospital data registry | Yes | Yes | N/A | Yes | Registry |
| Ireland | Hospital In-Patient Enquiry, operated by the Healthcare Pricing Office | Yes  | Yes | No | Yes | Yes |
| Israel | National Hospital Discharge Database; Inpatient Mental Health Database; Summary Hospitalisation Database | Not stated | Yes | Yes | Not stated  | Yes |
| Italy | Ministry of Health-General Directorate of Health Planning | Yes  | Not stated | Not stated | Yes | Yes |
| Japan | Ministry of Health, Labour and Welfare, Patient Survey | Not stated | Not stated | Not stated | Not stated | Yes |
| Latvia | National Health Service | Not stated | Yes | Not stated | Not stated | Not stated |
| Lithuania | Lithuanian Health Information Centre (since 2010); Health Information Centre of Institute of Hygiene | Yes | Yes | Some | Yes | Not stated |
| Luxembourg | Fichiers de la sécurité sociale. Data prepared by Inspection générale de la sécurité sociale. | Not stated | Not stated | Not stated | Yes | Yes |
| Mexico | Ministry of Health, Bulletin of Statistical Information, Vol. II “Health Damages” (1995-2003); Ministry of Health, Hospital aggregates database (2004-2016) | Not stated | Yes | No | Not stated | Yes |
| Netherlands | The Hospital Discharge Register | Yes | Yes | No | Not stated | Yes |
| New Zealand | National Minimum Data Set (maintained by the Ministry of Health) | Not stated | Yes | Some | No | Yes  |
| Norway | Norwegian Patient Register in the Norwegian Directorate of Health | Not stated | Yes | Not stated | Yes | Yes  |
| Poland | National Institute of Public Health-National Institute of Hygiene, General Hospital Morbidity Study (GHMS), for discharges from general (ie. non-psychiatric) hospitals; Institute of Psychiatry and Neurology  | Yes | Yes | Yes | Yes | Not stated |
| Portugal | Ministry of Health; Central Administration of the Health System | Not stated | Yes | No | Not stated | Not stated |
| Slovakia | Institute of Health Information and Statistics | Yes | Yes | Yes | Some | Not stated |
| Slovenia | National Institute of Public Health, Slovenia; National Hospital Health Care Statistics Database | Yes | Yes | Yes | Yes | Not stated |
| South Korea | Ministry of Health and Welfare, Korea Institute for Health and Social Affairs, The Patient Survey Report; Health Insurance Review & Assessment Service, Statistics of Health Care Utilization | Not stated | Not stated | Not stated | No | No |
| Spain | Instituto Nacional de Estadística; Ministry of Health and Social Services, National Hospital Discharge Database | Yes | Yes | Yes | Some | Yes |
| Sweden | National Board of Health and Welfare, National Patient Register | Not stated | Yes | No | Not stated | Yes |
| Switzerland | FSO Federal Statistical Office; Medical Statistics of Hospitals (2002 and following years) | Yes | Yes | Yes | Some | Yes |
| Turkey | General Directorate for Health Services, Ministry of Health | Not stated | Yes | Yes | Not stated | Not stated |
| England | NHS Digital | Yes | Yes | No | Yes | Yes |
| Northern Ireland | Hospital Inpatient System (HIS), The Department of Health, | Yes | Yes | No | Yes | Yes |
| Wales | Patient Episode Database for Wales (PEDW), NHS Wales Informatics Service (NWIS) | Yes | Yes | Yes | Yes | Yes  |
| Scotland | National Health Service Scotland | Yes | Yes | Yes | Yes | Yes |
| USA | Centers for Disease Control and Prevention/National Center for Health Statistics/NationalHospital Discharge Survey Annual Summary, Advance Data from Vital and Health Statistics Summary; Vital and Health Statistics, Series 13, completed by unpublished tables | Not stated | Not stated | Yes | Yes | Yes |

OECD Health Statistics 2020: <http://www.oecd.org/health/health-data.htm>.

**Supplemental Table 2**. Incidence of hospitalization and temporal trends for peptic ulcer disease in the 21st century among 36 countries of the Organisation for Economic Co-operation and Development.

| Country | Time Period | Average Incidence Rateper 100,000 person-years | Average Annual Percent Change (%) | Forecasted Analyses (2021) | H. pylori prevalence % (95% CI)α |
| --- | --- | --- | --- | --- | --- |
| 2000–2004 | 2005–2009 | 2010–2014 | 2015–2019 | Entire Period | Inflection point | Before Inflection Point | After Inflection Point | Incidence in 2021 per 100,000 | Number of people hospitalized for PUD in 2021Ʃ |  |
| **Northern America: Pooled AAPC = −1.6% (95% CI: −2.0, −1.1)** |  |  |  |
| Canada | 2000–2018 | 33.3 | 28.8 | 27.2 | 27.5 | −1.4 (−1.9, −0.9)\* | 2009 | −3.0 (−3.7, −2.3)\* | 0.3 (−0.5, 1.0) | 26.6† (22.2, 31.0) | 10,159 | - |
| United States  | 2000–2010 | 63.1 | 50.1 | 41.3 | - | −4.2 (−6.2, −2.1)\* | - |  |  | 28.0ᵝ(14.2, 41.8) | 18,888 | 35.6 (30.0 - 41.1) |
| **Latin America & the Caribbean: Pooled AAPC = −4.1% (95% CI: −4.3, −3.9)** |  |  |  |
| Chile | 2001–2018 | 27.5 | 19.0 | 14.9 | 14.1 | −3.9 (−5.2, −2.5)\* | 2014 | −6.3 (−7.1, −5.5)\* | 4.5 (−1.4, 10.7) | 11.7† (6.3, 17.2) | 2,252 | 74.6 (72.9 - 76.2) |
| Costa Rica | 2000–2019 | 26.4 | 16.8 | 12.3 | 7.7 | −7.7 (−8.2, −7.3)\* | - |  |  | 5.6ᵝ (3.6, 7.6) | 288 | - |
| Mexico | 2000–2018 | 5.8 | 5.1 | 4.5 | 4.0 | −2.5 (−2.8, −2.2)\* | - |  |  | 3.5† (2.9, 4.2) | 15,558 | 52.5 (24.7 - 80.3) |
| **Northern Europe: Pooled AAPC = −4.2 (95% CI: −4.3, −4.0)** |  |  |  |
| Denmark | 2001–2016 | 94.8 | 79.8 | 63.0 | 46.0 | −5.3 (−5.9, −4.8)\* | 2011 | −3.6 (−4.1, −3.1)\* | −8.7 (−10.4, −7.1)\* | 18.9† (8.0, 30.0) | 1,108 | - |
| Finland | 2001–2018 | 53.2 | 43.4 | 35.7 | 30.6 | −3.9 (−4.3, −3.5)\* | - |  |  | 30.4† (18.0, 42.7) | 1,679 | - |
| Iceland | 2000–2017^ | 53.2 | 38.6 | 31.1 | 31.0 | −4.3 (−5.4, −3.1)\* | - |  |  | 22.0ᵝ (16.2, 27.7) | 80 | 36.0 (32.7 - 39.2) |
| Ireland | 2000–2018 | 44.3 | 32.5 | 22.3 | 17.4 | −6.4 (−6.7, −6.1)\* | - |  |  | 14.6† (10.1, 19.1) | 734 | - |
| Norway | 2000–2019 | 69.2 | 66.9 | 55.5 | 45.8 | −2.7 (−3.1, −2.3)\* | 2008 | −0.9 (−1.6, −0.1)\* | −4.0 (−4.5, −3.5)\* | 41.1† (37.5, 44.6) | 2,233 | 30.7 (20.5 - 40.8) |
| Sweden | 2000–2018^ | 66.5 | 65.8 | 58.5 | 50.2 | −1.8 (−2.3, −1.3)\* | 2008 | −0.1 (−1.0, 0.7)  | −3.1 (−3.8, −2.5)\* | 39.5† (22.8, 56.1) | 4,106 | 26.2 (18.3 - 34.1) |
| United Kingdom | 2000–2018 | 38.7 | 31.4 | 26.0 | 23.0 | −3.5 (−3.8, −3.2)\* | 2012 | −4.0 (−4.2, −3.8)\* | −2.4 (−3.2, −1.6)\* | 21.0† (16.3, 25.7) | 14,165 | - |
| **Southern Europe: Pooled AAPC = −5.1% (95% CI: −5.4, −4.9)** |  |  |  |
| Greece | 2000–2014 | 29.5 | 18.0 | 25.3 | - | −1.1 (−6.2, 4.2) | 2008 | −11.5 (−16.9, −5.7)\* | 14.7 (2.6, 28.2)\* | 18.3ᵝ (6.8, 29.9) | 1,942 | 52.1 (40.2 - 64.0) |
| Italy | 2001–2018 | 59.7 | 41.2 | 28.7 | 25.7 | −5.6 (−6.4, −4.9)\* | 2012 | −8.0 (−8.6, −7.4)\* | −1.1 (−3.2, 1.0) | 10.0† (4.5, 15.5) | 5,995 | - |
| Portugal | 2000–2018 | 52.1 | 38.6 | 30.2 | 25.1 | −5.2 (−5.5, −4.8)\* | - |  |  | 22.0† (14.3, 29.8) | 2,251 | 86.4 (84.9 - 87.9) |
| Spain | 2000–2018 | 47.1 | 30.7 | 23.5 | 23.4 | −4.7 (−5.3, −4.1)\* | 2010 | −8.0 (−8.7, −7.3)\* | −0.4 (−1.6, 0.8) | 15.8ᵝ (11.9, 19.7) | 7,420 | 54.9 (48.6 - 61.1) |
| **Western Europe: Pooled AAPC = −3.2% (95% CI: −3.4, −3.1)** |  |  |  |
| Austria | 2000–2018 | 78.0 | 64.2 | 51.4 | 45.4 | −3.6 (−4.0, −3.1)\* | 2013 | −4.1 (−4.5, −3.8)\* | −2.1 (−3.7, −0.4)\* | 43.1† (37.4, 58.8) | 3,854 | - |
| Belgium | 2000–2018^ | 77.0 | 62.9 | 48.2 | 39.8 | −4.5 (−4.8, −4.2)\* | - |  |  | 35.5† (21.4, 49.6) | 4,108 | 32.7 (22.4 - 43.0) |
| France | 2000–2018 | 33.8 | 28.6 | 27.4 | 26.3 | −2.3 (−2.6, −2.0)\* | 2003 | −8.5 (−10.1, −6.8)\* | −1.0 (−1.2, −0.9)\* | 23.5† (17.9, 29.1) | 15,819 | - |
| Germany | 2000–2017 | 97.8 | 97.4 | 87.3 | 78.7 | −1.4 (−2.1, −0.8)\* | 2007 | 0.1 (−1.2, 1.3) | −2.4 (−3.2, −1.7)\* | 72.7† (32.2, 113.3) | 60,469 | 35.3 (31.2 - 39.4) |
| Luxembourg | 2000–2016 | 61.6 | 46.7 | 34.1 | 26.8 | −5.7 (−6.5, −4.9)\* | - |  |  | 11.9† (0.3, 23.6) | 75 | - |
| Netherlands | 2000–2018 | 26.8 | 21.6 | 17.7 | 15.4 | −3.8 (−4.2, −3.5)\* | - |  |  | 18.4† (11.1, 25.8) | 3,207 | 35.5 (30.1 - 41.0) |
| Switzerland | 2002–2018 | 32.8 | 33.8 | 35.3 | 33.6 | 0.1 (−0.5, 0.6) | 2012 | 0.9 (0.3, 1.6)\* | −1.3 (−2.6, −0.0)\* | 32.1† (26.3, 38.0) | 2,792 | - |
| **Eastern Europe: Pooled AAPC = −4.2% (95% CI: −4.4, −4.0)** |  |  |  |
| Czech Republic | 2000–2018 | 76.1 | 63.9 | 52.3 | 43.3 | −3.8 (−4.1, −3.6)\* | - |  |  | 38.0† (12.9, 63.1) | 4,069 | 41.2 (24.8 - 57.6) |
| Hungary | 2004–2018 | 63.9 | 53.6 | 40.2 | 32.7 | −5.2 (−5.6, −4.8)\* | - |  |  | 25.7 (15.6, 35.6) | 2,494 | - |
| Latvia | 2013–2018 | - | - | 114.5 | 99.9 | −4.5 (−6.4, −2.6)\* | - |  |  | 80.9ᵝ (55.9, 106.0) | 1,517 | 79.2 (77.9 - 80.5) |
| Lithuania | 2012–2018 | - | - | 136.4 | 126.5 | −2.1 (−3.6, −0.7)\* | - |  |  | 92.1† (50.3, 133.9) | 2,509 | - |
| Poland | 2002–2018 | 72.8 | 60.5 | 51.4 | 39.5 | −4.3 (−4.8, −3.8)\* | - |  |  | 29.8† (14.0, 45.6) | 11,287 | 66.6 (56.4 - 76.7) |
| Slovak Republic | 2000–2018^ | 91.9 | 58.8 | 44.5 | 42.3 | −4.9 (−6.4, −3.5)\* | 2011 | −8.0 (−9.3, −6.6)\* | 0.0 (−3.6, 3.8) | 28.7ᵝ (23.3, 34.1) | 1,566 | - |
| Slovenia | 2000–2018 | 66.4 | 52.3 | 41.6 | 34.7 | −5.3 (−6.9, −3.6)\* | 2002 | −16.8 (−29.1, −2.4)\* | −3.8 (−4.5, −3.0)\* | 22.0† (6.8, 37.3) | 459 | - |
| **Eastern Asia: Pooled AAPC = −3.4% (95% CI −4.0, −2.7)** |  |  |  |
| Japan | 2002–2017^ | 115.0 | 97.5 | 69.2 | 56.6 | −4.7 (−5.7, −3.6)\* | - |  |  | 47.1ᵝ (34.4, 59.8) | 59,019 | 51.7 (44.7 - 58.7) |
| South Korea | 2002–2018^ | 81.4 | 81.4 | 76.4 | 61.1 | −2.5 (−3.3, −1.6)\* | 2013 | −0.7 (−1.6, 0.2) | −6.3 (−8.8, −3.7)\* | 47.9† (14.2, 81.6) | 24,781 | 54.0 (50.1 - 57.8) |
| **Western Asia: Pooled AAPC = −4.0% (95% CI: −4.8, −3.3)** |  |  |  |
| Israel | 2000–2018 | 20.7 | 15.0 | 13.6 | 12.7 | −3.6 (−4.3, −2.8)\* | 2006 | −7.1 (−9.0, −5.1)\* | −1.8 (−2.5, −1.0)\* | 13.1† (9.1, 17.2) | 1,228 | - |
| Turkey | 2011–2018 | - | - | 83.6 | 58.7 | −8.3 (−10.6, −5.9)\* | - |  |  | 39.9ᵝ (27.8, 52.0) | 33,963 | 77.2 (71.4 - 83.1) |
| **Oceania: Pooled AAPC = −2.0% (95% −2.3, −1.7)** |  |  |  |
| Australia | 2000–2017 | 33.9 | 29.8 | 26.9 | 27.0 | −1.7 (−2.2, −1.2)\* | 2010 | −2.8 (−3.4, −2.2)\* | −0.1 (−1.2, 0.9) | 22.8† (20.9, 24.7) | 5,907 | 24.6 (17.2 - 32.1) |
| New Zealand | 2000–2017 | 35.4 | 30.8 | 28.3 | 25.6 | −2.2 (−2.6, −1.8)\* | - |  |  | 22.1† (18.3, 25.9) | 1,103 | - |

^ Not all years provided within time period.

ARIMA = Autoregressive Integrated Moving Average

AAPC = average annual percent change.
\* AAPC is statistically significant (p < .05). Note: Non-significance denotes stable hospitalization rates.

† Incidence was forecasted using ARIMA

ß Poisson model was used for forecasting.

Ʃ Number calculated by taking forecasted rate in 2021, dividing by 100,000 (to give a proportion), and multiplying by total population value.

αReference: Hooi JKY, Lai WY, Ng WK, et al. Global Prevalence of Helicobacter pylori Infection: Systematic Review and Meta-Analysis. Gastroenterology. 2017;153(2):420-429.

**Supplemental Table 3**. Incidence of mortality and temporal trends for peptic ulcer disease in the 21st century among 35 countries of the Organisation for Economic Co-operation and Development.

| Country | Time Period | Average Mortality Rateper 100,000 person-years | Average Annual Percent Change (%) |
| --- | --- | --- | --- |
| Entire Period | Inflection point | Before Inflection Point | After Inflection Point |
| **Northern America: Pooled AAPC = −3.6% (95% CI: −4.1, −3.1)** |  |
| Canada | 2000–2017 |  1.3 | −3.3 (−4.2, −2.5)\* | 2006 | −5.3 (−7.4, −3.1)\* | −2.3 (−3.2, −1.3)\* |
| United States  | 2000–2017 |  1.2 | −3.8 (−4.5, −3.1)\* | 2009 | −7.0 (−7.9, −6.1)\* | −0.1 (−1.4, 1.3) |
| **Latin America & the Caribbean: Pooled AAPC = −4.6% (95% CI: −5.6, −3.6)** |  |
| Chile | 2001–2017 | 2.0 | −5.0 (−5.9, −4.2)\* | 2011 | −7.5 (−8.2, −6.7)\* | −0.4 (−2.8, 2.0) |
| Mexico | 2000–2017 | 6.1 | −3.9 (−5.3, −2.4)\* | 2015 | −5.0 (−5.5, −4.4)\* | −4.9 (−8.5, 20.2) |
| **Northern Europe: Pooled AAPC = −5.7 (95% CI: −6.8, −4.7)** |  |
| Denmark | 2001–2018 | 6.4 | −7.7 (−8.8, −6.7)\* | 2009 | −4.4 (−5.8, −3.0)\* | −11.0 (−12.8, −9.1)\* |
| Finland | 2000–2018^ | 3.3 | −6.0 (−6.9, −5.2)\* | - |  |  |
| Iceland | 2000–2019 | 1.8 | −4.6 (−7.6, −1.6)\* | - |  |  |
| Ireland | 2000–2015 | 3.5 | −8.3 (−9.4, −7.2)\* | - |  |  |
| Norway | 2000–2016 | 3.8 | −5.1 (−5.8, −4.4)\* | - |  |  |
| Sweden | 2000–2018 | 3.0 | −4.1 (−4.7, −3.5)\* | - |  |  |
| United Kingdom | 2001–2016 | 4.5 | −6.5 (−7.6, −5.4)\* | 2003 | −2.3 (−10.8, 7.1) | −7.1 (−7.6, −6.5)\* |
| **Southern Europe: Pooled AAPC = −5.5% (95% CI: −8.6, −2.5)** |  |
| Greece | 2000–2018 | 2.9 | −0.1 (−0.8, 0.6) | - |  |  |
| Italy | 2000–2017 | 1.3 | −8.7 (−9.8, −7.5)\* | 2007 | −12.7 (−14.5, −10.8)\* | −5.8 (−7.5, −4.0)\* |
| Portugal | 2000–2018^ | 2.1 | −5.1 (−6.9, −3.3)\* | 2011 | −7.9 (−9.6, −6.2)\* | −0.5 (−5.1, 4.3) |
| Spain | 2000–2017 | 1.1 | −5.5 (−6.6, −4.4)\* | 2008 | −8.4 (−10.0, −6.7)\* | −3.0 (−4.7, −1.2)\* |
| **Western Europe: Pooled AAPC = −5.6% (95% CI: −7.0, −4.3)** |  |
| Austria | 2000–2019 | 2.0 | −5.5 (−6.2, −4.7)\* | - |  |  |
| Belgium | 2000–2016 | 2.2 | −6.4 (−7.2, −5.5)\* | - |  |  |
| France | 2000–2016 | 1.2 | −3.6 (−4.1, −3.1)\* | - |  |  |
| Germany | 2000–2018 | 2.8 | −4.0 (−4.7, −3.4)\* | 2004 | 0.1 (−2.8, 3.1) | −5.1 (−5.5, −4.6)\* |
| Luxembourg | 2000–2018 | 1.6 | −5.8 (−12.1, 1.0) | 2011 | −12.8 (−19.1, −6.0)\* | 6.3 (−9.1, 24.4) |
| Netherlands | 2000–2018 | 1.5 | −8.9 (−10.8, −7.0)\* | 2002 | −1.5 (−15.6, 22.2) | −10.2 (−11.1, −9.2)\* |
| Switzerland | 2000–2017 | 1.7 | −6.2 (−7.1, −5.2)\* | - |  |  |
| **Eastern Europe: Pooled AAPC = −1.3% (95% CI: −3.3, 0.8)** |  |
| Czech Republic | 2000–2019 | 4.9 | −4.3 (−4.9, −3.8)\* | - |  |  |
| Hungary | 2000–2019 | 7.4 | −2.7 (−3.1, −2.3)\* | - |  |  |
| Latvia | 2000–2018 | 5.9 | −1.9 (−2.8, −1.1)\* | - |  |  |
| Lithuania | 2000–2019 | 7.5 | 1.9 (1.3, 2.4)\* | - |  |  |
| Poland | 2000–2018 | 5.2 | 1.7 (0.7, 2.7)\* | 2010 | −1.9 (−3.2, −0.5)\* | 6.3 (4.5, 8.2)\* |
| Slovak Republic | 2000–2014^ | 5.9 | −2.2 (−3.1, −1.3)\* | - |  |  |
| Slovenia | 2000–2019 | 4.3 | −8.3 (−8.9, −7.6)\* | - |  |  |
| **Eastern Asia: Pooled AAPC = −5.9% (95% CI −7.0, −4.7)** |  |
| Japan | 2000–2018 | 1.8 | −5.5 (−5.7, −5.2)\* | - |  |  |
| South Korea | 2000–2019 | 1.9 | −6.8 (−8.5, −5.1)\* | 2005 | −13.6 (−18.6, −8.3)\* | −4.3 (−5.9, −2.7)\* |
| **Western Asia: Pooled AAPC = −3.4% (95% CI: −12.9, 6.1)** |  |
| Israel | 2000–2019 | 0.9 | −7.9 (−9.1, −6.7)\* | - |  |  |
| Turkey | 2009–2019^ | 1.1 | 1.8 (−3.1, 7.0) | - |  |  |
| **Oceania: Pooled AAPC = −6.0% (95% −6.7, −5.3)** |  |
| Australia | 2000–2018^ | 1.6 | −6.2 (−7.1, −5.4)\* | 2008 | −8.7 (−10.1, −7.3)\* | −4.2 (−5.4, −3.0)\* |
| New Zealand | 2000–2016 | 2.2 | −5.7 (−6.8, −4.5)\* | - |  |  |

^ Not all years provided within time period.

AAPC = average annual percent change.
\*AAPC is statistically significant (p < .05). Note: Non-significance denotes stable hospitalization rates.