

Monitoring Belgian COVID-19 infections in work sectors in 2022

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1 Introduction

The workplace is among the main activities for a large proportion of the population, and consequently a source of potential infection. Hence, it is often (up to 25%) reported in the contact centre database as one of the collectivities visited by the index case. It is important to monitor the incidence of COVID-19 by sector as it can help us to better understand causes of increased infection rates and it can offer us ways to reduce infections without jeopardising the continuity of these sectors/companies for the benefit of all, first and foremost the companies and their workers. In contrary to previous reports only one source of information on infection in work sectors will be used: the RSZ/ONSS data. Due to changed policy concerning testing and contact tracing in March 2022, insufficient incidence data is available from the IDEWE contact tracing.

1.1 RSZ/ONSS data

The RSZ/ONSS data analyses of COVID-19 infections in the working population were set up in the first place to allow for signal detection. The alerts consist of 2 or more cases in the same company as well as the identification of employment of an index case in a risk sector as defined by the regional contact tracing agencies (daily alerts are sent by the RSZ/ONSS to the regions). Aggregated data show the evolution over time of the incidence in the sectors. It helps to better understand the spread of the virus in the active population. The latter is of interest here.

Data description: RSZ-ONSS has been receiving information regarding positive COVID-19 cases from Sciensano since 8 September 2020. RSZ-ONSS links this information to workplace-related databases, at the level of the national number (NISS). The linkage is allowed during a period of 14 days, after which the information on positive cases is destroyed, while the aggregated output tables are stored. Linkage is done of positive cases with the NSSO Dimona database of active workers since 8 September 2020. This covers most of the workers, such as private and public sectors, interim employment and job students. Since 12 January 2021, additional linkage of positive cases with the ARZA-RGTI (Algemeen Repertorium van de Zelfstandige Arbeiders - Répertoire Général des Travailleurs Indépendants) database was allowed, which covers self-employed workers.

Each company is classified by sector of its main activity (as attributed by the RSZ-ONSS), which are identified by the NACE code. This standard code classifies workplaces into 21 main sectors and then in subcategories for which the specificity depends on the chosen granularity (which can have up to 943 subcategories). However, although some companies or self-employed workers may be active in more than one sector, only one NACE number associated with the main activity is used in the analysis. This limitation is particularly important to consider for employees within national education. Because a vast majority of schools provide both primary and secondary education, the employees will be registered as working in “Secondary education” even when in reality they are primary school teachers.

Further, since the link of the cases is only identified at the level of the company, no information is available on the type of the job of the index case (e.g., administrative work in metal industry will be registered under metal industry). Further, information on the exact employment location is not always available and/or accurate (e.g., information on telework or temporary unemployment is not available).

Finally, the actual source of infection (in particular: at the workplace or elsewhere) cannot be traced back from this database. Thus, the size and extent of the database allows us to obtain a clear and precise picture of the level of infection within a given sector, without link to the source and circumstances of infection.

2 Methodology

2.1 COVID-19 14-day incidence

The data provided by RSZ/ONSS will be shown per work sector. Work sectors are divided by NACE codes and grouped into 5 levels of detail, going from 21 sectors at level 1 to 943 sectors at level 5. The evolution of the 14-day incidence of positive COVID-19 cases among all employees registered in the same sector (number of cases per 100,000 employees) is presented for the 5 levels of work sectors. A 95% confidence interval (CI)

for the incidence is calculated on a logit transformation of the incidence, after which it is backtransformed to the original scale.

At each of the 5 levels of detail of the work sectors, the highest incidences in the last 14-day period are selected (28 February – 7 March 2022) and presented together with the COVID-19 14-day incidence over all work sectors (~ 4.5 million individuals) and the COVID-19 14-day incidence in the general population (~ 11.5 million individuals) for reference.

Because the number of employees in some occupational sectors is low compared to others, the precision of the 14-day incidence is low in such small sectors. Therefore, we select the highest incidences for level 1 sectors with a minimum of 10,000 employees and self-employed workers. For level 2 and 3 sectors with a minimum of 5,000 employees and self-employed workers are selected, while for level 4 and level 5, sectors with a minimum of 3,000 and 1,500 employees, respectively, are selected.

Note that for 25% of the self-employed a sector is missing in the ARZA-RGTI data. Positive cases of self-employed worker with missing sector information are left out of the analysis. Linkage to occupational data shows that missing sector information is dispersed over many sectors, so that the impact of missing data is not affecting a single sector excessively. There will be a slight underestimation of the true incidence, but the ordering among sectors is likely not affected.

Finally, we cannot exclude varying testing preparedness and custom between sectors.

3 Results

This report is accompanied with an Excel sheet, listing all sectors and all NACE-BEL sectors for further examination.

3.1 Level 1 work sector

Of the 20 sectors at level 1, the sector with a 14-day incidence on 21 March 2022 significantly above the working population average is Human health and social work activities (sector Q) and Education (sector P) (Table 1 and Figure 1). The 14-day incidences is increasing again in all sectors.

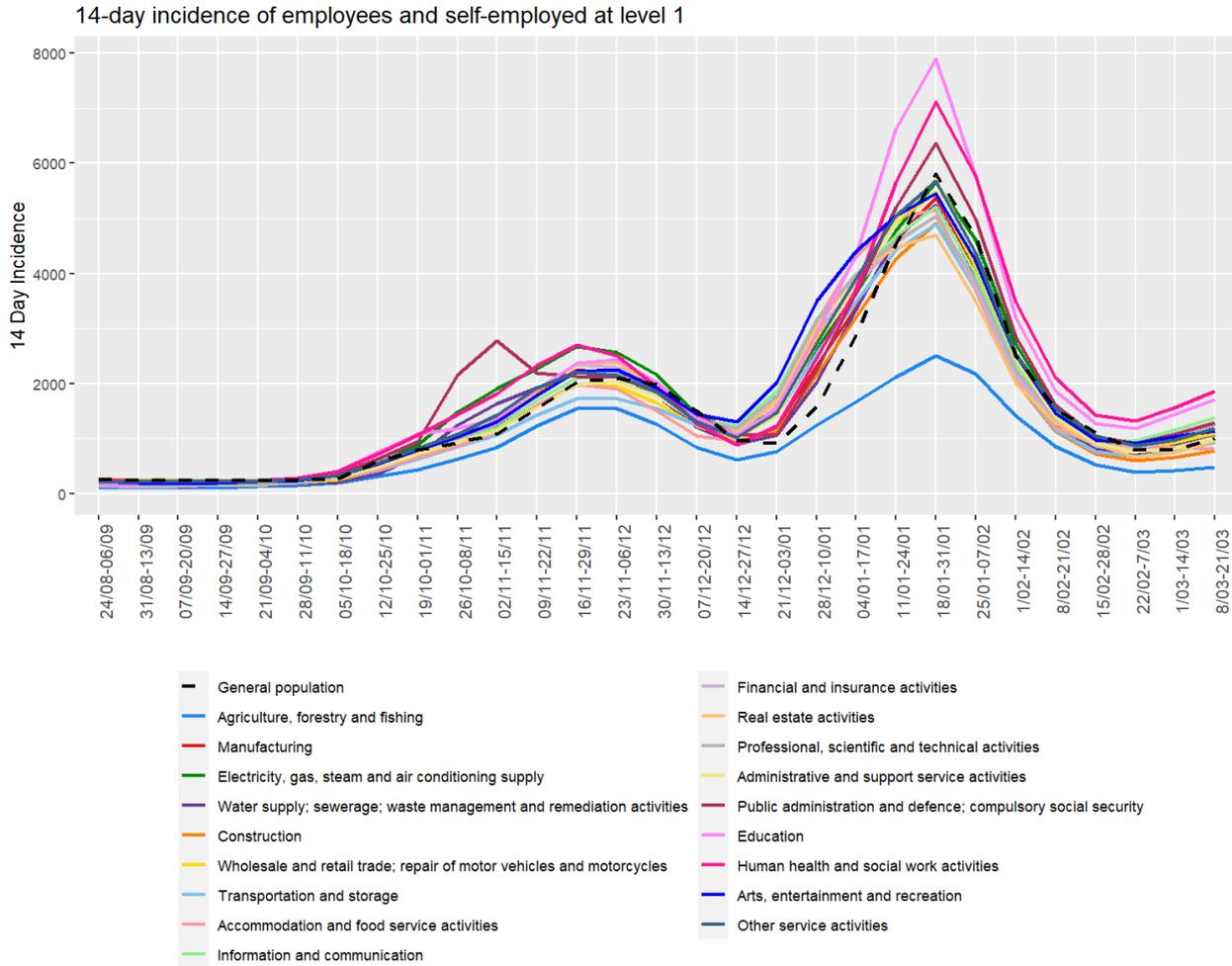


Figure 1: 14-Day incidence of COVID-19 infection of 20 sectors at Level 1 in both employees and self-employed workers

Table 1: 14-Day incidence of COVID-19 infection of 20 sectors at Level 1 on 21 March 2022

DESCRIPTION	NACE-code	Total number of workers	Incidence (95%CI) all workers	Incidence (95%CI) employees	Incidence (95%CI) self-employed	Percentage of self-employed workers
Human health and social work activities	Q	657427	1858(1826;1891)	1914(1880;1949)	1227(1137;1324)	8.41
Education	P	749121	1706(1677;1736)	1716(1686;1746)	1444(1306;1596)	3.61
Working population		4631937	1456(1445;1467)	1456(1445;1467)		
Information and communication	J	185403	1377(1325;1431)	1486(1422;1553)	1115(1030;1207)	30.02
Public administration and defence; compulsory social security	O	593606	1298(1270;1327)	1297(1269;1326)		0.18
Electricity, gas, steam and air conditioning supply	D	21429	1288(1145;1448)	1308(1160;1475)		6.19
Financial and insurance activities	K	159591	1272(1218;1328)	1379(1316;1445)	894(801;998)	22.28
Manufacturing	C	622968	1267(1240;1295)	1319(1289;1349)	812(745;884)	10.46
Professional, scientific and technical activities	M	396288	1266(1232;1301)	1512(1461;1565)	985(941;1031)	47.54
Other service activities	S	160745	1182(1130;1236)	1293(1218;1372)	1066(996;1140)	49.76
Arts, entertainment and recreation	R	107840	1148(1086;1213)	1140(1063;1223)	1162(1061;1272)	38.08
Wholesale and retail trade; repair of motor vehicles and motorcycles	G	835289	1091(1069;1114)	1196(1170;1223)	729(692;768)	23.07
Water supply; sewerage; waste management and remediation activities	E	36170	1081(979;1193)	1101(995;1218)		6.59
General population			1005	1005	1005	
Administrative and support service activities	N	442728	997(968;1027)	1032(1000;1065)	837(776;903)	18.37
Real estate activities	L	58696	966(890;1048)	1124(1000;1263)	850(757;954)	58.49
Transportation and storage	H	308974	936(903;971)	977(941;1014)	534(456;626)	9.40
Accommodation and food service activities	I	320567	812(782;844)	885(849;922)	554(502;612)	23.08
Construction	F	384010	788(761;816)	919(881;959)	592(555;632)	40.97
Agriculture, forestry and fishing	A	81875	480(435;530)	457(386;541)	493(437;557)	64.93

3.2 Level 2 work sector

In the sectors at level 2 with a minimum of 5,000 workers, the sectors with the highest 14-day incidence on 21 March 2022 higher than the general population average are: Health and care sector (sector 86, 87), Manufacturing (sector 20, 29, 21), Programming and broadcasting activities (sector 60), Education (sector 85) and Social work activities without accommodation (sector 88) (Table 2 and Figure 2).

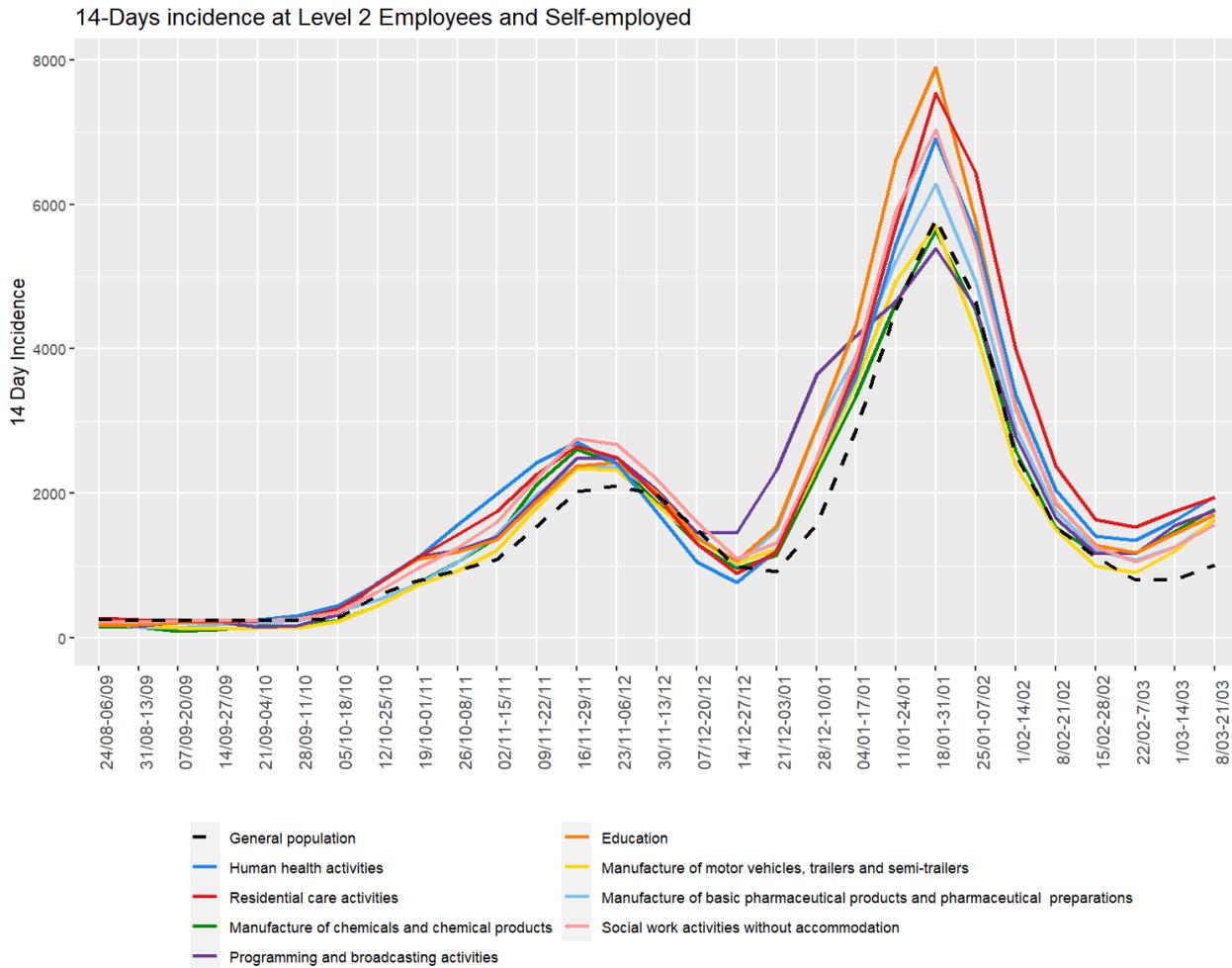


Figure 2: 14-Day incidence of COVID-19 infection in sectors with the highest incidence at Level 2 in both employees and self-employed workers

Table 2: 14-Day incidence of COVID-19 infection in sectors with the highest incidence at Level 2 on 21 March 2022

DESCRIPTION	NACE-code	Total number of workers	Incidence (95%CI) all workers	Incidence (95%CI) employees	Incidence (95%CI) self-employed	Percentage of self-employed workers
Human health activities	86	315714	1960(1912;2009)	2088(2035;2143)	1232(1136;1336)	15.30
Residential care activities	87	172974	1950(1886;2016)	1960(1895;2027)	1172(805;1704)	1.36
Manufacture of chemicals and chemical products	20	47672	1783(1668;1906)	1798(1681;1923)		2.81
Programming and broadcasting activities	60	8735	1763(1507;2061)	1757(1496;2063)		4.92
Education	85	749121	1706(1677;1736)	1716(1686;1746)	1444(1306;1596)	3.61
Manufacture of motor vehicles, trailers and semi-trailers	29	36126	1647(1521;1784)	1659(1531;1797)		2.07
Manufacture of basic pharmaceutical products and pharmaceutical preparations	21	35504	1628(1501;1765)	1624(1497;1762)		1.31
Social work activities without accommodation	88	169745	1570(1512;1630)	1584(1525;1646)	1142(891;1462)	3.22
Working population		4631937	1456(1445;1467)	1456(1445;1467)		
General population			1005	1005	1005	

3.3 Level 3 work sector

In the sectors at level 3 with a minimum of 5,000 workers, the sectors with a 14-day incidence on 21 March 2022 significantly higher than the working population average are: Residential care activities (sector 871, 872, 873), Hospital activities (sector 861), Manufacture of bodies for motor vehicles, basic chemicals, basic metals, pharmaceutical preparations and motor vehicles (sector 292, 201, 244, 212, 291), Secondary and Higher education (sector 853, 854), Social work without accommodation for the elderly and disabled (sector 881), Wholesale of information and communication equipment (sector 465), Television programming and broadcasting activities (sector 602), Research and experimental development on natural sciences and engineering (sector 721) and Provision of services to the community (sector 842) and (Table 3 and Figure 3).

The last 4 weeks the incidences in Higher education is plateauing, while the rest of the education subsectors show an increase in incidences (Figure 4). A comparison between primary and secondary schools is inaccurate based on the available data. Indeed, the NACE-BEL code for school employees is assigned to the main activity

of the school. Hence, for schools offering both primary and secondary education, all employees are counted as secondary education employees. Employees under the NACE-BEL code primary education are employees in schools that offer only primary education.

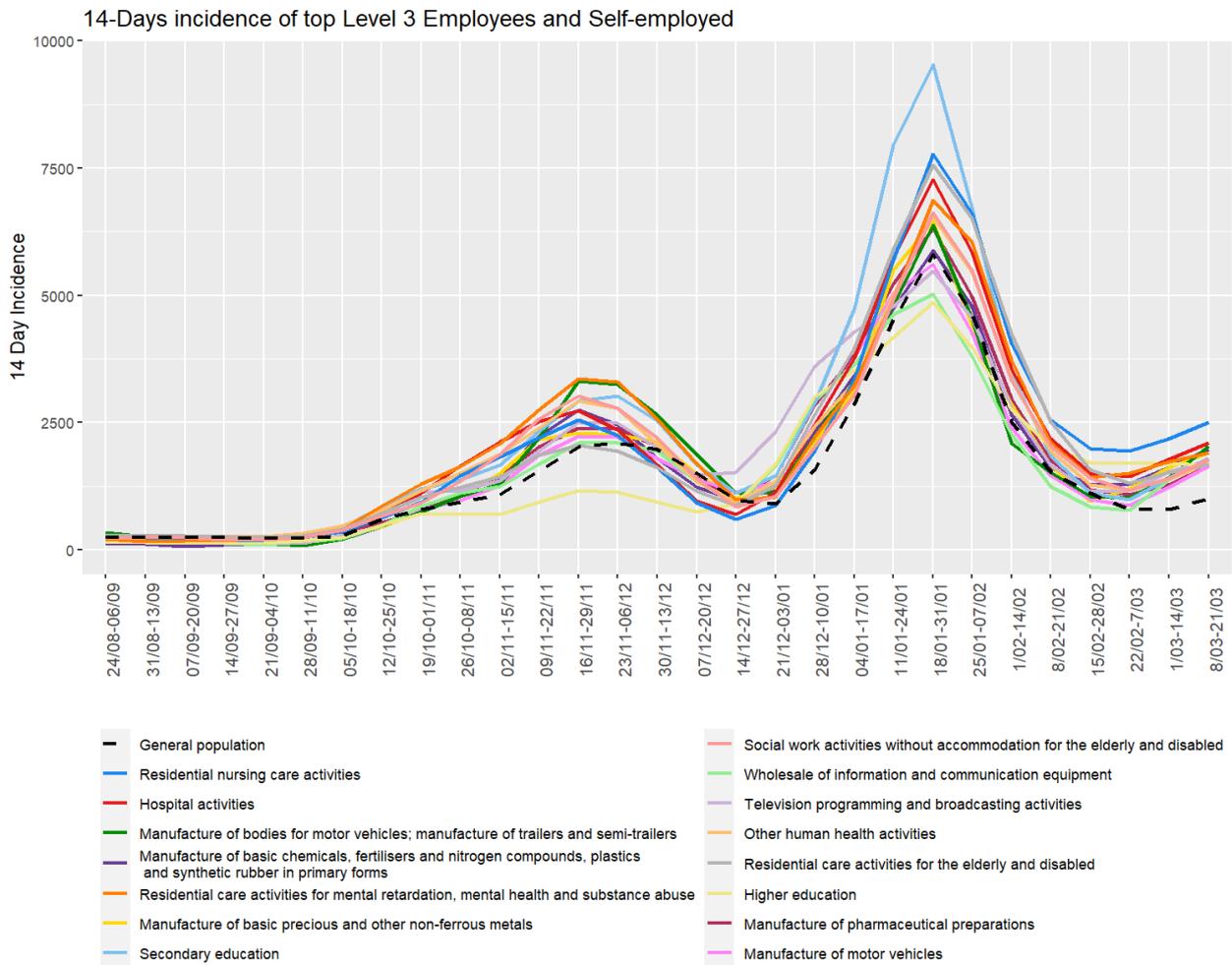


Figure 3: 14-Day incidence of COVID-19 infection in sectors with the highest incidence at Level 3 in both employees and self-employed

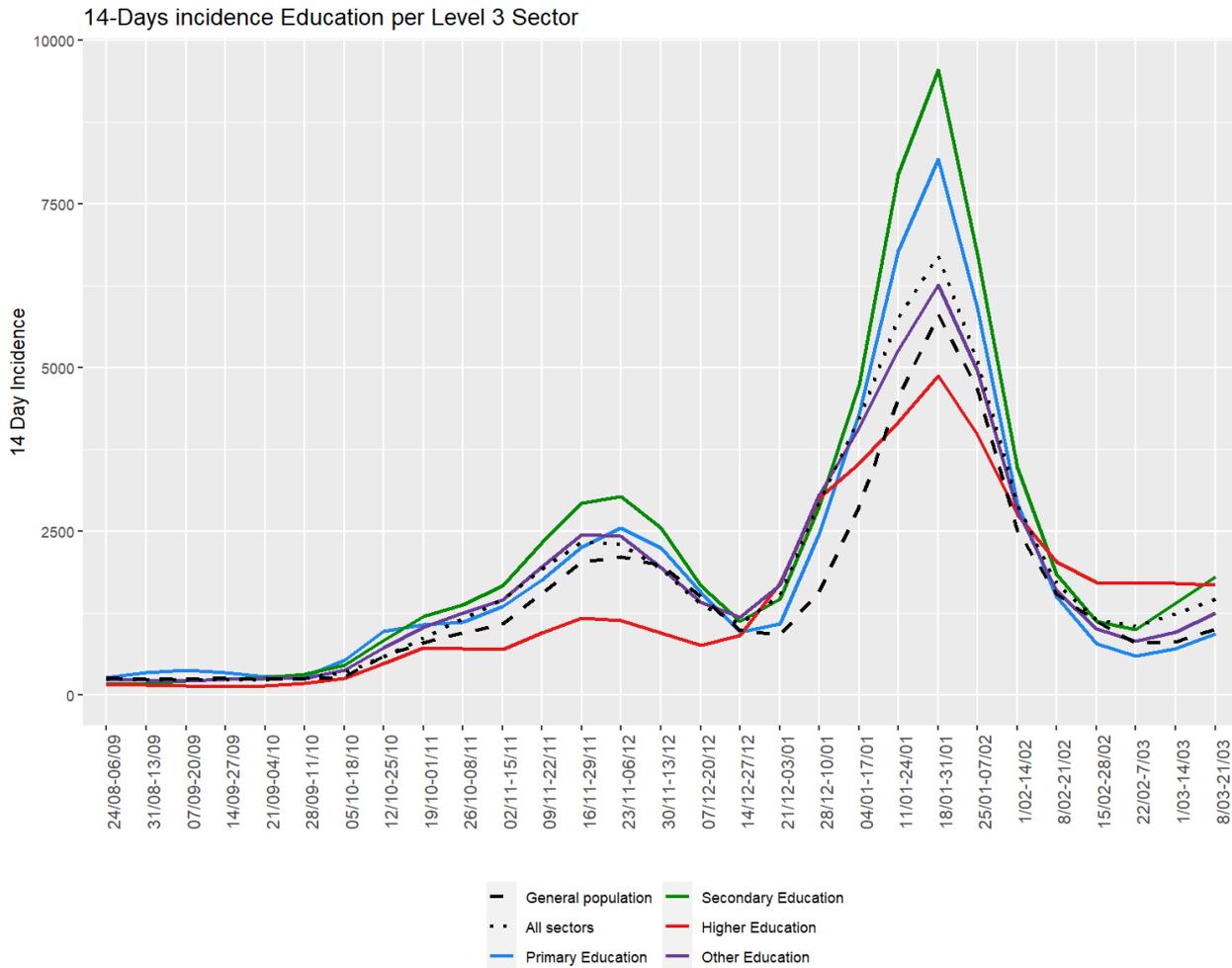


Figure 4: 14-Day incidence of COVID-19 infection in Education sectors at Level 3 in both employees and self-employed

Table 3: 14-Day incidence of COVID-19 infection in sectors with the highest incidence at Level 3 on 21 March 2022

DESCRIPTION	NACE-code	Total number of workers	Incidence (95%CI) all workers	Incidence (95%CI) employees	Incidence (95%CI) self-employed	Percentage of self-employed workers
Residential nursing care activities	871	45585	2503(2364;2650)	2516(2376;2665)		0.89
Hospital activities	861	216019	2110(2050;2171)	2113(2053;2175)		0.33
Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers	292	5839	2038(1705;2434)	2084(1737;2498)		6.33
Manufacture of basic chemicals, fertilisers and nitrogen compounds, plastics and synthetic rubber in primary forms	201	29207	1979(1825;2145)	1990(1835;2158)		1.58
Residential care activities for mental retardation, mental health and substance abuse	872	42588	1909(1783;2043)	1929(1802;2065)		1.78
Manufacture of basic precious and other non-ferrous metals	244	8753	1908(1642;2217)	1937(1666;2251)		2.08
Secondary education	853	459156	1802(1764;1841)	1803(1765;1842)		0.19
Social work activities without accommodation for the elderly and disabled	881	48908	1785(1671;1906)	1798(1683;1920)		1.09
Wholesale of information and communication equipment	465	13152	1764(1553;2004)	1882(1648;2148)	985(613;1579)	13.18
Television programming and broadcasting activities	602	8082	1757(1492;2068)	1775(1506;2091)		2.41
Other human health activities	869	54694	1715(1610;1827)	2060(1903;2230)	1323(1190;1470)	47.43
Residential care activities for the elderly and disabled	873	68650	1681(1587;1780)	1686(1592;1786)		1.30
Higher education	854	216537	1669(1616;1724)	1669(1616;1724)		0.10
Manufacture of pharmaceutical preparations	212	33434	1654(1523;1796)	1652(1520;1795)		0.94
Manufacture of motor vehicles	291	20521	1652(1486;1836)	1658(1492;1843)		0.66
Research and experimental development on natural sciences and engineering	721	27943	1614(1473;1769)	1663(1514;1826)	1005(656;1536)	7.51
Provision of services to the community as a whole	842	138048	1527(1464;1593)	1527(1464;1593)		0.11
Working population		4631937	1456(1445;1467)	1456(1445;1467)		
General population			1005	1005	1005	

3.4 Level 4 work sector

In the sectors at level 4 with a minimum of 3,000 workers, the sectors with a 14-day incidence on 21 March 2022 significantly higher than the working population average are: Manufacturing activities (sector 2014, 1920, 2443, 2813, 2920, 2016, 2120, 2910), Residential care (sector 8710, 8720, 8730), Hospital activities (sector 8610), Construction of water projects (sector 4291), Other human resources provision (sector 7830), General Secondary education and higher education (sector 8531, 8542), Child day-care (sector 8891), Social work activities without accommodation (sector 8810), Wholesale of computers and software (sector 4651), Television programming and broadcasting activities (sector 6020), Other human health activities (sector 8690), General medical practice activities (sector 8621), Public order and safety and fire service activities (sector 8424, 8425)

and Other research and experimental development on natural sciences and engineering (sector 7219) (Table 4 Figure 5).

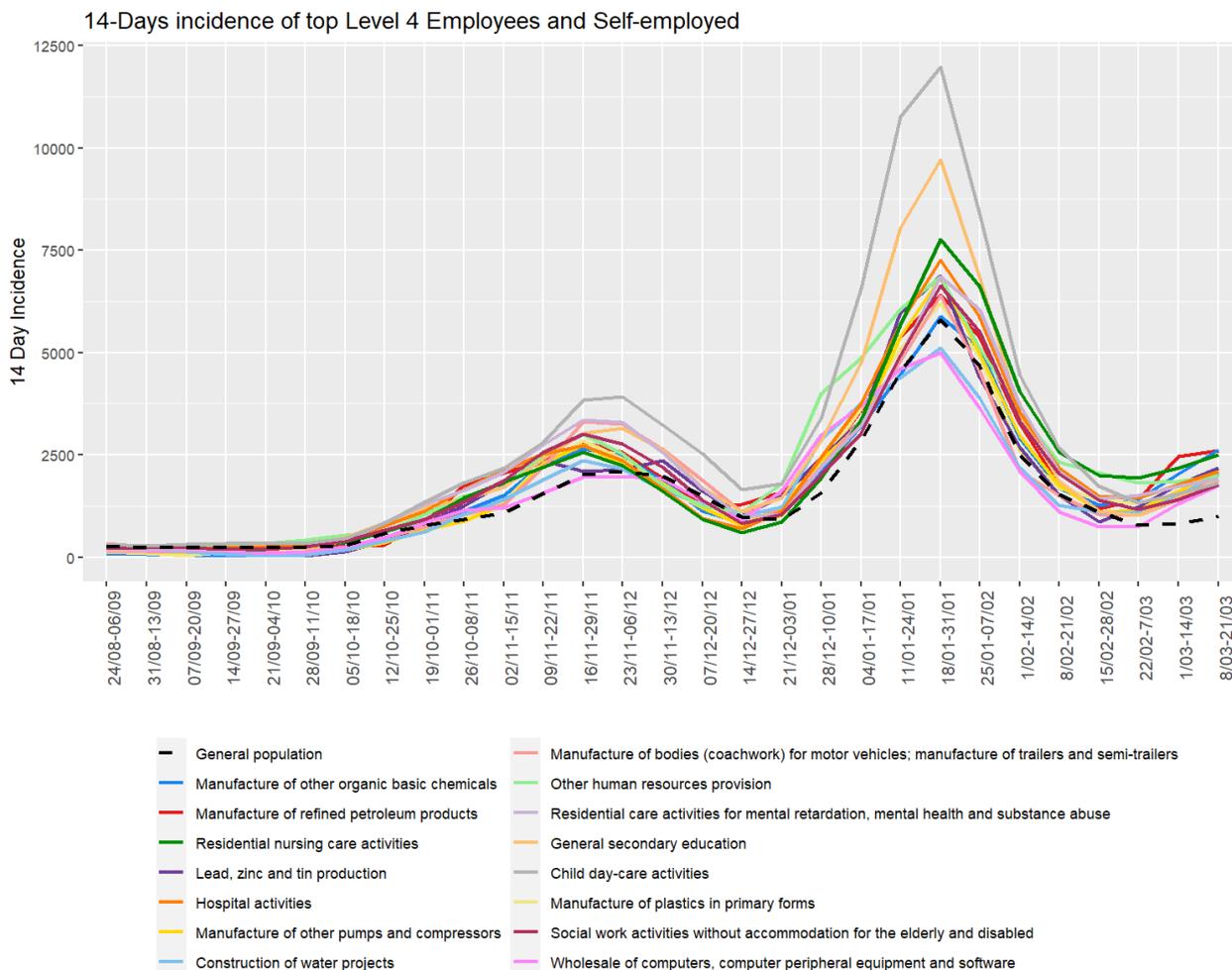


Figure 5: 14-Day incidence of COVID-19 infection in sectors with the highest incidence at Level 4 in both employees and self-employed

Table 4: 14-Day incidence of COVID-19 infection in sectors with the highest incidence at Level 4 on 21 March 2022

DESCRIPTION	NACE-code	Total number of workers	Incidence (95%CI) all workers	Incidence (95%CI) employees	Incidence (95%CI) self-employed	Percentage of self-employed workers
Manufacture of other organic basic chemicals	2014	12681	2618(2354;2911)	2618(2354;2911)		1.08
Manufacture of refined petroleum products	1920	3634	2614(2142;3186)	2615(2141;3191)		1.07
Residential nursing care activities	8710	45585	2503(2364;2650)	2516(2376;2665)		0.89
Lead, zinc and tin production	2443	4310	2181(1785;2662)	2181(1785;2662)		0.69
Hospital activities	8610	216019	2110(2050;2171)	2113(2053;2175)		0.33
Manufacture of other pumps and compressors	2813	3977	2087(1686;2581)	2085(1682;2582)		1.11
Construction of water projects	4291	4442	2071(1691;2534)	2144(1743;2635)		7.62
Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers	2920	5839	2038(1705;2434)	2084(1737;2498)		6.33
Other human resources provision	7830	4705	1998(1635;2440)	2076(1688;2552)		9.90
Residential care activities for mental retardation, mental health and substance abuse	8720	42588	1909(1783;2043)	1929(1802;2065)		1.78
General secondary education	8531	427994	1879(1839;1920)	1881(1841;1922)		0.15
Child day-care activities	8891	28981	1815(1668;1975)	1839(1686;2006)	1454(992;2127)	6.24
Manufacture of plastics in primary forms	2016	8959	1797(1542;2094)	1802(1544;2102)		1.50
Social work activities without accommodation for the elderly and disabled	8810	48908	1785(1671;1906)	1798(1683;1920)		1.09
Wholesale of computers, computer peripheral equipment and software	4651	10176	1759(1521;2033)	1832(1572;2133)		13.17
Television programming and broadcasting activities	6020	8082	1757(1492;2068)	1775(1506;2091)		2.41
Other human health activities	8690	54694	1715(1610;1827)	2060(1903;2230)	1323(1190;1470)	47.43
General medical practice activities	8621	17153	1714(1530;1919)	1835(1616;2082)	1357(1053;1748)	26.01
Public order and safety activities	8424	54184	1685(1580;1797)	1686(1581;1798)		0.18
Residential care activities for the elderly and disabled	8730	68650	1681(1587;1780)	1686(1592;1786)		1.30
Tertiary education	8542	215394	1676(1623;1731)	1676(1623;1731)		0.09
Fire service activities	8425	18817	1674(1500;1868)	1671(1497;1865)		0.12
Manufacture of pharmaceutical preparations	2120	33434	1654(1523;1796)	1652(1520;1795)		0.94
Manufacture of motor vehicles	2910	20521	1652(1486;1836)	1658(1492;1843)		0.66
Other research and experimental development on natural sciences and engineering	7219	21495	1619(1459;1797)	1692(1522;1880)		6.85
Working population		4631937	1456(1445;1467)	1456(1445;1467)		
General population			1005	1005	1005	

3.5 Level 5 work sector

In the sectors at level 5 with a minimum of 3,000 workers, the sectors with a 14-day incidence on 21 March 2022 significantly higher than the working population average are: General secondary education and higher education (sector 85319, 85421, 85422), Manufacturing activities (sector 20140, 19200, 29201, 24430, 28130, 20160, 21201, 29100), Residential care (sector 87101, 87302, 87201, 87202, 87901, 87301), Hospitals (sector 86101, 86104), Activities of medical laboratories (sector 86901), Other human resources provision (sector 78300), Nursing activities (sector 86906), Mental health activities (sector 86904), Retail of photographic and optical articles (sector 47782), Local police and fire services (sector 84242, 84250), Wholesale of computers and software (sector 46510), Television and broadcasting activities (sector 60200), Nurseries and crèches (sector 88911), Social services without housing sector (88101, 88999), General medical practice activities (sector 86210), Other research and experimental development on natural sciences and engineering (sector 72190) and Public Centers for Social Welfare (sector 84115) (Table 5 and Figure 6).

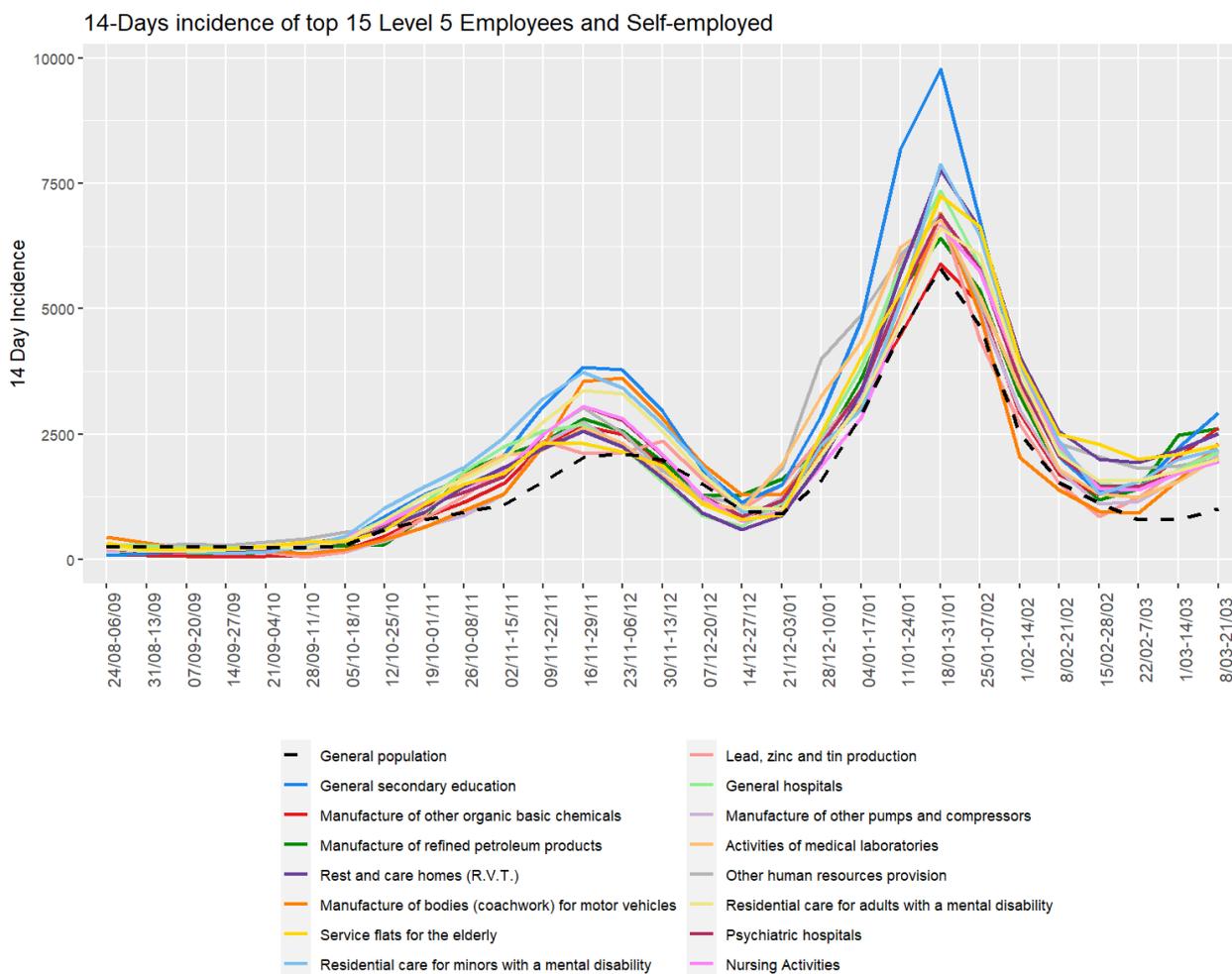


Figure 6: 14-Day incidence of COVID-19 infection in sectors with the highest incidence at Level 5 in both employees and self-employed

Table 5: 14-Day incidence of COVID-19 infection of sectors with the highest incidence at Level 5 on 21 March 2022

DESCRIPTION	NACE-code	Total number of workers	Incidence (95%CI) all workers	Incidence (95%CI) employees	Incidence (95%CI) self-employed	Percentage of self-employed workers
General secondary education	85319	211714	2928(2857;3001)	2928(2857;3001)		0.02
Manufacture of other organic basic chemicals	20140	12681	2618(2354;2911)	2618(2354;2911)		1.08
Manufacture of refined petroleum products	19200	3634	2614(2142;3186)	2615(2141;3191)		1.07
Rest and care homes (R.V.T.)	87101	45549	2505(2365;2653)	2518(2377;2667)		0.85
Manufacture of bodies (coachwork) for motor vehicles	29201	4293	2306(1897;2800)	2388(1961;2905)		5.42
Service flats for the elderly	87302	6376	2274(1935;2670)	2285(1940;2689)		3.26
Residential care for minors with a mental disability	87201	9095	2199(1917;2521)	2199(1917;2521)		1.25
Lead, zinc and tin production	24430	4310	2181(1785;2662)	2181(1785;2662)		0.69
General hospitals	86101	177581	2141(2075;2209)	2143(2077;2211)		0.26
Manufacture of other pumps and compressors	28130	3977	2087(1686;2581)	2085(1682;2582)		1.11
Activities of medical laboratories	86901	6778	2036(1726;2401)	2148(1812;2545)		10.78
Other human resources provision	78300	4705	1998(1635;2440)	2076(1688;2552)		9.90
Residential care for adults with a mental disability	87202	28062	1992(1835;2162)	2004(1845;2176)		1.68
Psychiatric hospitals	86104	32946	1979(1834;2135)	1983(1838;2140)		0.36
Nursing Activities	86906	16547	1952(1752;2174)	2027(1809;2270)	1445(1018;2047)	13.03
Mental health activities, excluding psychiatric hospitals and care homes	86904	6977	1935(1637;2286)	2186(1741;2741)	1705(1331;2181)	53.22
Integrated youth care with housing	87901	12628	1853(1632;2103)	1858(1634;2113)		2.85
Retail sale of photographic and optical articles and precision instruments	47782	5350	1813(1488;2207)	2321(1858;2897)	1011(660;1546)	39.24
Manufacture of plastics in primary forms	20160	8959	1797(1542;2094)	1802(1544;2102)		1.50
Local Police	84242	36702	1771(1641;1911)	1770(1640;1910)		0.11
Wholesale of computers, computer peripheral equipment and software	46510	10176	1759(1521;2033)	1832(1572;2133)		13.17
Television programming and broadcasting activities	60200	8082	1757(1492;2068)	1775(1506;2091)		2.41
Nurseries and crèches	88911	25527	1755(1601;1924)	1777(1617;1952)	1423(947;2132)	6.41
Activities of family and elderly care at home	88101	44997	1749(1632;1874)	1757(1639;1883)		0.85
Official higher education	85421	74424	1736(1645;1832)	1735(1644;1831)		0.04
General medical practice activities	86210	17153	1714(1530;1919)	1835(1616;2082)	1357(1053;1748)	26.01
Manufacture of medication	21201	31597	1709(1572;1858)	1702(1565;1851)		0.68
Fire service activities	84250	18817	1674(1500;1868)	1671(1497;1865)		0.12
Manufacture of motor vehicles	29100	20521	1652(1486;1836)	1658(1492;1843)		0.66
Freely subsidized higher education	85422	140389	1644(1579;1712)	1644(1579;1712)		0.10
Other research and experimental development on natural sciences and engineering	72190	21495	1619(1459;1797)	1692(1522;1880)		6.85
Other social services without housing	88999	36518	1591(1468;1725)	1621(1492;1761)	1192(835;1700)	6.98
Rest homes for the elderly (R.O.B.)	87301	58599	1570(1472;1674)	1575(1477;1680)		1.09
Public Centers for Social Welfare (O.C.M.W.)	84115	90816	1557(1478;1640)	1557(1478;1640)		0.15
Working population		4631937	1456(1445;1467)	1456(1445;1467)		
General population			1005	1005	1005	

Finally, when considering specifically the non-medical contact professions, we see that the incidence in the employees is close to the incidence in the self-employed. Additionally, the average incidence for both the beauty saloons and hairdressers is similar to the general population average. (Figure 7).

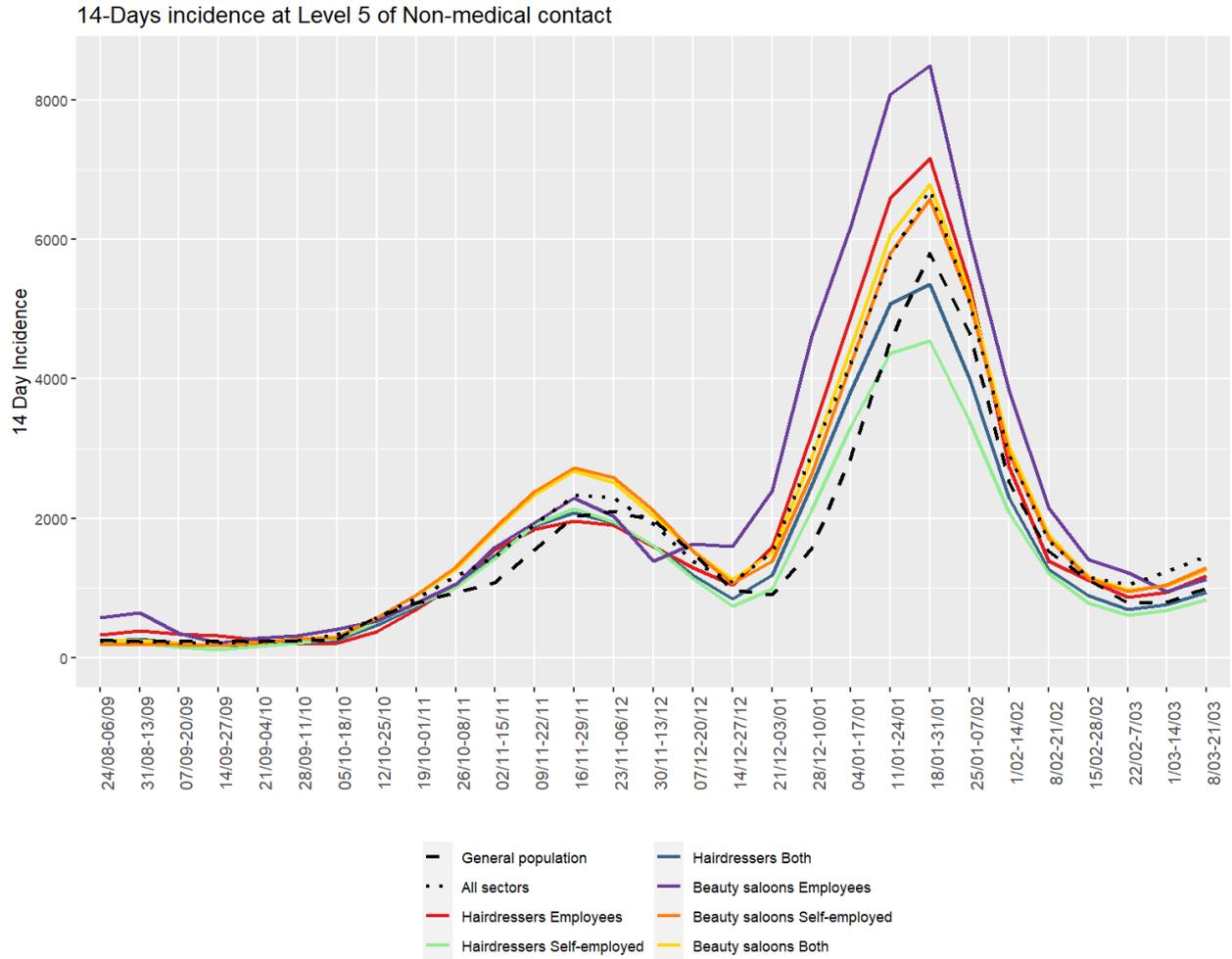


Figure 7: 14-Day incidence of COVID-19 infection at Level 5 of non-medical contact professions.

3.6 Additional analyses

3.6.1 Cross-level overview

When contemplating the 14-day incidences across NACE-BEL sectors, it is possible to gauge the contribution of each sub-level sector to the higher level incidence (Figure 8).

The 14-day incidence in the Human health and social work sector (sector Q) and Education (sector P) are elevated compared to the working and general population (Figure 8). The increased incidence in Education mainly comes from the increase in incidences in secondary and higher education, while in the health and social work sector the increase in incidence is broadly present.

Although the 14-day incidence in Public administration and defence (sector O), Administrative and support service activities (sector N), Information and communication (sector J) and Professional scientific and technical activities (sector M) is around or below the working population average, individual subsectors show an increased incidence compared to the working population, such as Public centres for social welfare (sector 84115), Public order and safety (sector 8484), Fire service activities (sector 8425), Other human resources provision (sector 7830), Television programming and broadcasting activities (sector 6020) and Other research and development work in the natural sciences (sector 7219).

It is encouraging that the incidence in Other service activities (sector S), Arts, entertainment and recreation (sector R), Accommodation and food service activities (sector I) and Transportation and storage (sector H) is similar to or below the general population average.

The sectors Manufacturing (sector C) and Wholesale and retail trade (sector G) are sectors with the highest number of sublevels. This results in large differences in 14-day incidences within the sector. While there is a remarkable increase in the number of manufacturing sectors with an incidence well above the working population average, the incidences in the whole and retail sectors is below or close to the working and popula-

tion average, except for a few sectors, which show an increased incidence compared to the working population average (Figure 8).

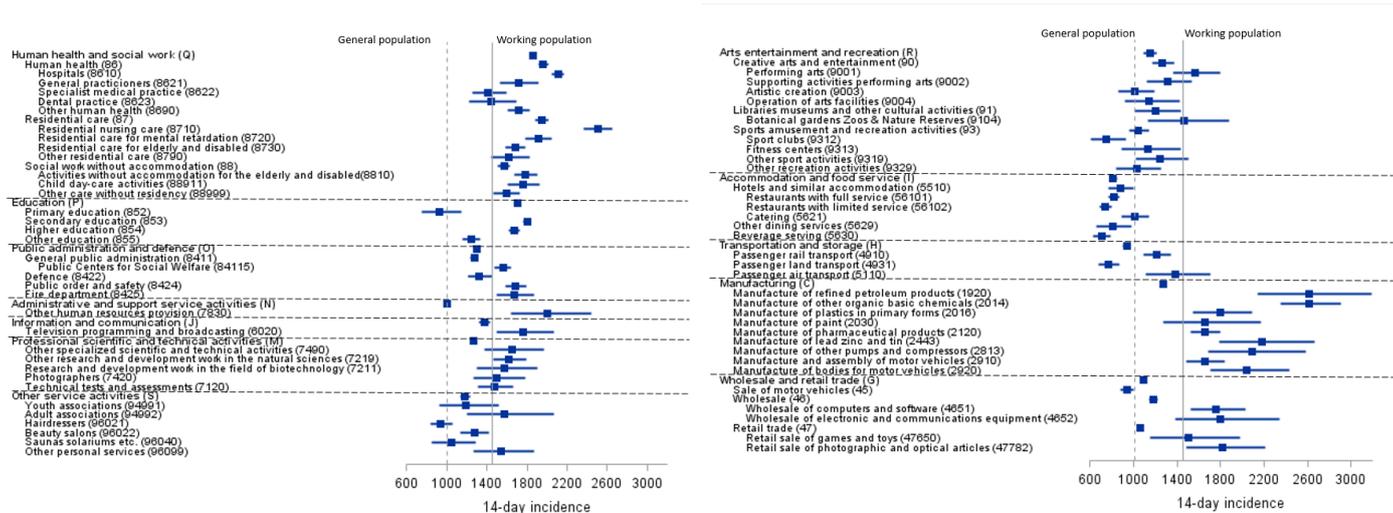


Figure 8: Forest plot of 14-Day incidence and 95% CI of selected sectors on 7 March 2022 in both employees and self-employed.

4 Conclusion

Despite the limitations of the data, the RSZ/ONSS data demonstrates an increase again in the 14-day COVID-19 incidences in all sectors. The highest incidences are present in manufacturing, residential care, secondary and higher education and hospitals. The average incidence in the working population is 45% higher than the average incidence in the general population, suggesting that infections are more among adults than children and the elderly. Although the changed testing procedure in schools and the general population may influence this comparison.

Vigilance is required in especially education, human health, social work and manufacturing sectors since they're not able to telework.

Although no conclusions can be drawn regarding the location of infection (workplace or elsewhere) nor the location of employment (at work, telework, or temporarily unemployed) of the employees in the RSZ/ONSS data, the contact tracing in the segments under surveillance by IDEWE showed that in the index cases, where this information was available, 7% indicated that the workplace was certainly the source of infection. Due to changed testing policy in March 2022, insufficient data is available from the contact tracing to provide accurate results.

It is important to carefully monitor the incidence of COVID-19 in all sectors, especially sectors with frequent high risk contacts with a sharp increase in incidence in the last 2 weeks. Several manufacturing sectors, secondary education, Residential care, Human health activities, Television programming and broadcasting activities, Public order and safety, Fire service activities and Other human resources Provision, all show a sharp increase in incidences compared to the general population average and continue to require careful attention.

For some sectors the reason for the higher incidences is not immediately obvious, such as Wholesale of computers and software and Other research and experimental development on natural sciences and engineering. It would be worthwhile to evaluate the hygiene protocols and its practice in these sectors.

The incidence in non-medical contact professionals is comparable to the general population average, with no obvious difference between employees and self-employed professionals, nor between beauty saloons and hairdressers.

It is encouraging to note that employees in other service activities, accommodation and food services, transportation, arts entertainment and recreation and most wholesale and retail sectors are well protected, as

they are often not able to telework. It is worrisome that several manufacturing sectors show a sharp increase in incidence among employees.

Finally, despite the high degree of vaccination, COVID-19 infection remains possible. Continuous monitoring of breakthrough infections, despite primo and booster vaccination, and especially protection against hospitalization, is warranted.

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