

23 October, 2020

Indicators of demographic context and territorial expression of the COVID-19 pandemic in Portugal

COVID-19: a territorial view on demographic context and territorial expression of the pandemic

The expression of the pandemic on national territory continues to be characterised by a high degree of heterogeneity. Some of the results obtained in this context:

- Since the beginning of March, the preliminary number of deaths in 2020 for the country as a whole, as measured over the last four weeks, has remained higher than in the same reference period (average for the same period in 2018 and 2019). In 167 of the 308 Portuguese municipalities, where 68% of the population lives, the number of deaths between 14 September and 11 October 2020 was higher than the corresponding reference value.
- The analysis of mortality, controlling for the effect of the age structure of the population by calculating age-standardised mortality rates, has also shown an increase in the incidence of mortality from March to September 2020 compared to the same reference period in most of the regions.
- On 21 October, the highest number of new cases (cumulative values for the last 7 days) in Portugal was recorded: 16,247 new cases (corresponding to 15.8 new cases per 10,000 inhabitants), which represents an increase of 165% compared to 7 October, the reference date for the last press release.
- On 18 October, the date of the last data update at municipality level, 13,947 new cases were registered (corresponding to 13.5 new cases per 10,000 inhabitants) and at NUTS II region level, this value was exceeded only by the Norte region (14.1 new cases per 10,000 inhabitants). The new cases registered in the last 7 days in this region represented 36% of the total new cases observed for the country. It should also be noted that the sub-regions Tâmega e Sousa and Terras de Trás-os-Montes, both located in the Norte region, were the only ones to exceed the national average of new cases per 10 thousand inhabitants.
- The analysis focused on the last two weeks highlights for the Metropolitan Area of Lisboa (AML) growth rates lower than those observed for the country, but for the Metropolitan Area of Porto (AMP) the growth rates were higher than the national ones. In the week ending in October 18 this rate was +64.3% in the AML and +95.5% in the AMP while the growth in the country was +73.7%, thus registering a decrease in the relative importance of the number of new cases (last 7 days) in the case of the AML and an increase in the relative importance of the number of new cases in the AMP.
- On 18 October 2020, 34 municipalities registered a number of new confirmed cases of COVID-19 disease (last 7 days) per 10,000 inhabitants above the national average, of which 24 belong to the Norte region, where 39% of the region's population lives. Of these, six municipalities with more than 25 new cases per 10,000 inhabitants stood out: Paços de Ferreira (99.6), Lousada (55.4), Felgueiras (27.3) and Penafiel (25.2) in Tâmega e Sousa and the municipalities of Paredes (27.9) and Porto (26.0) in the Metropolitan Area of Porto.
- In the Metropolitan Area of Lisboa, four municipalities scored values above the national average (representing 46% of the region's population): Sintra (16.7), Lisboa (15.3), Cascais (14.7) and Loures (13.9).

I. Demographic and territorial context indicators

Figure 1 - Ratio between deaths in the last 4 weeks and deaths in the same reference period, Portugal and NUTS 2, weeks from 2 to 29 March and from 14 September and 11 October

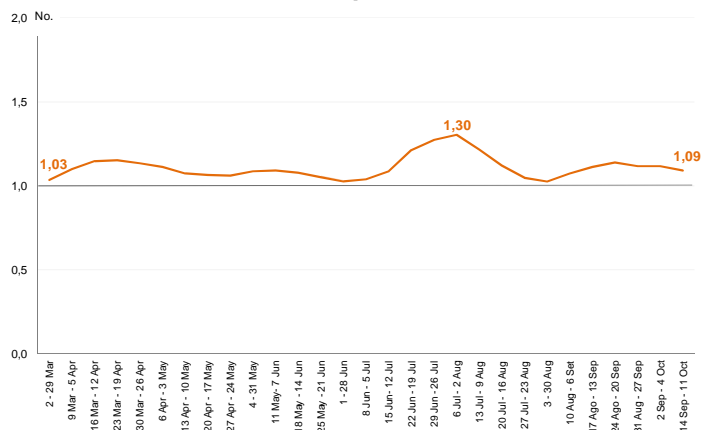
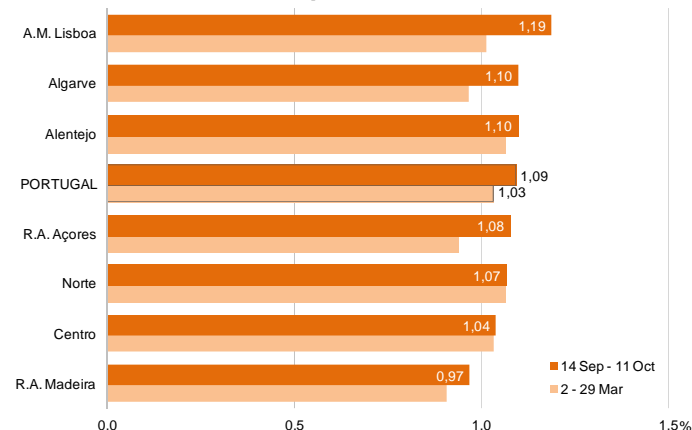


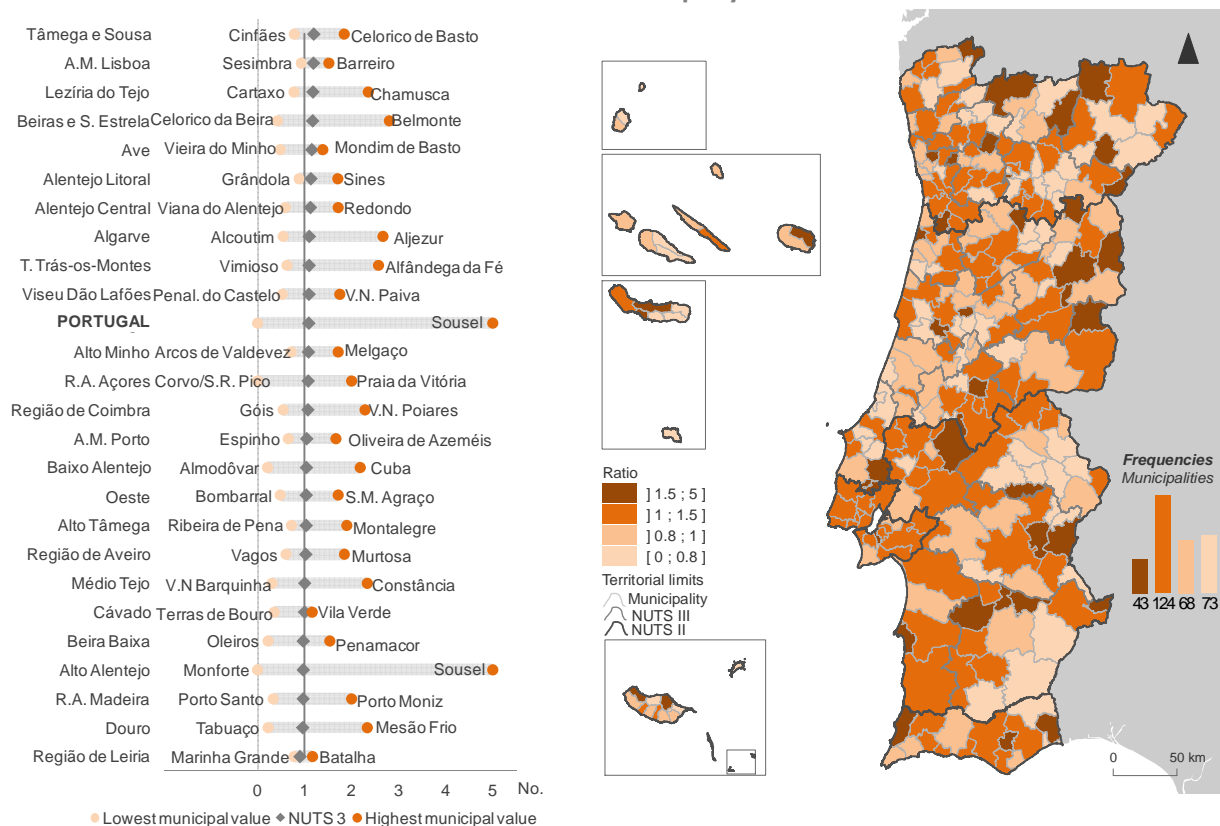
Figure 2 – Ratio between deaths in the last 4 weeks and deaths in the same reference period, Portugal, weeks from 2 to 29 March to weeks from 14 September and 11 October



Source: INE, I.P., Statistics on Deaths (Preliminary (2020) and Final Results (2018 and 2019)).

In 167 municipalities the number of deaths between 14 September and 11 October was higher than the corresponding reference value

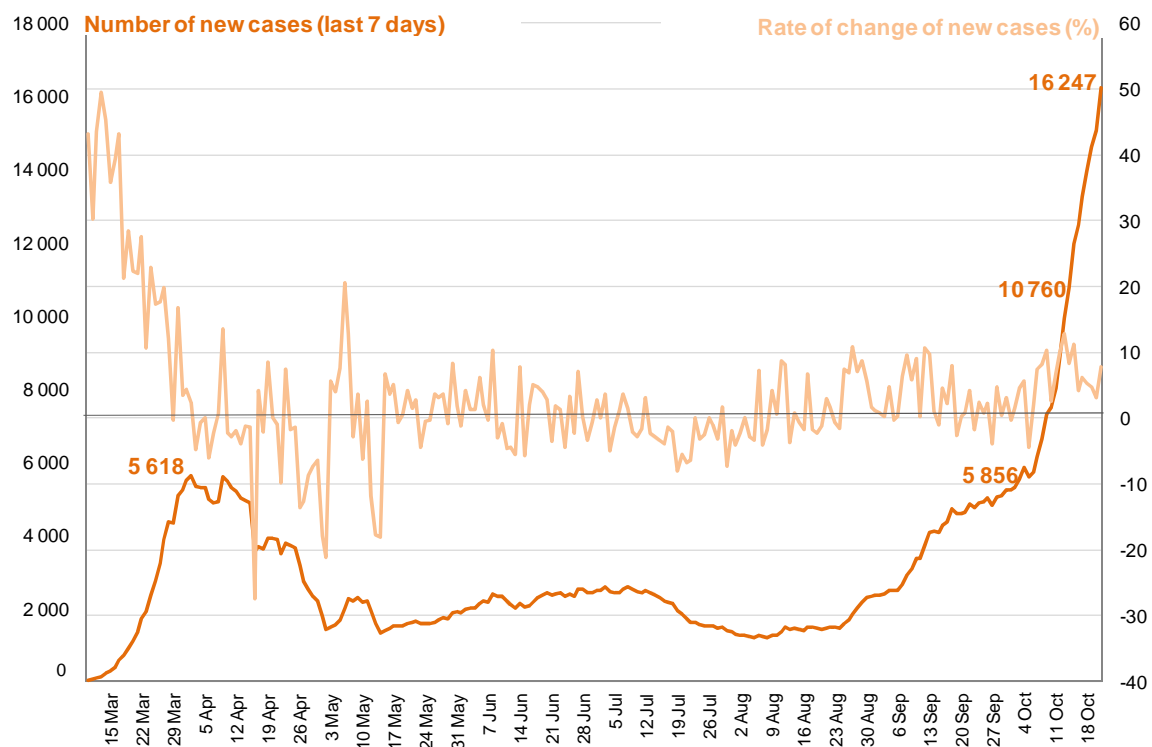
Figure 3 - Number of deaths in the last four weeks (14 September to 11 October) per deaths in the same period of reference, Portugal, NUTS 3 and municipality



Source: INE, I.P., Statistics on Deaths (Preliminary (2020) and Final Results (2018 and 2019)).

II. The expression of the pandemic in the municipalities

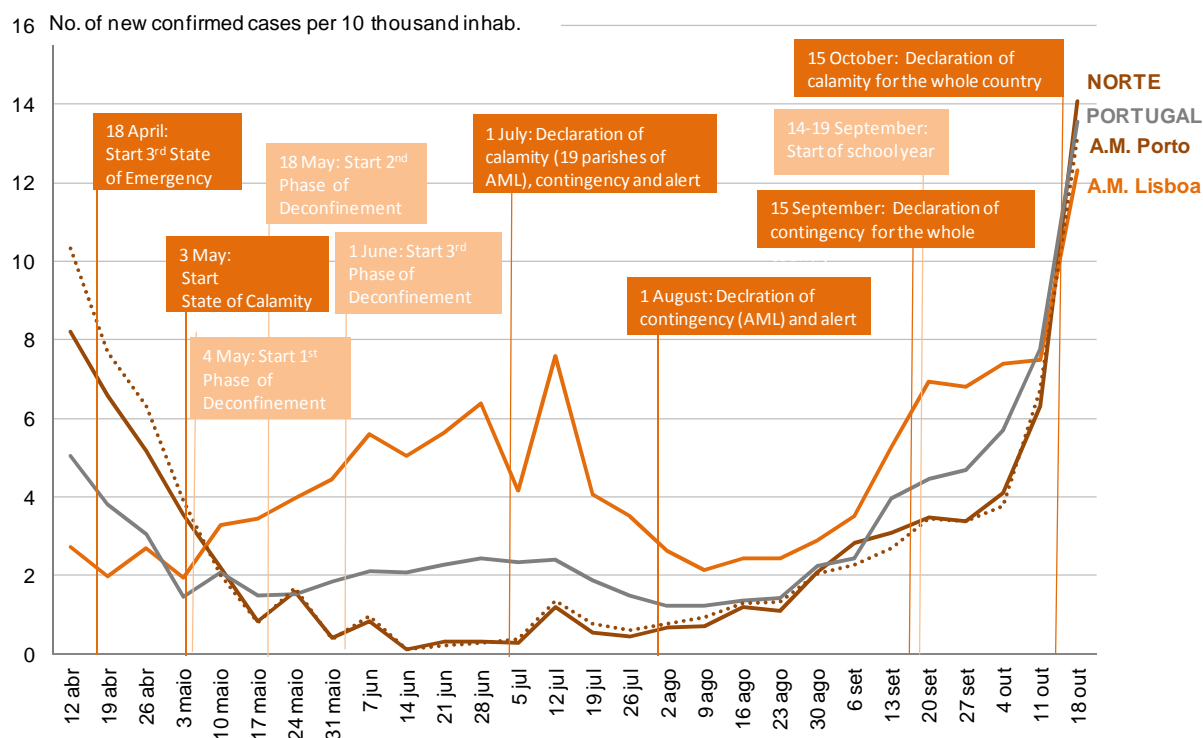
Figure 4- Number of new confirmed cases of COVID-19 (last 7 days) and corresponding rate of change, Portugal, per day



Source: Directorate-General of Health, Daily COVID-19 Status Report (released on October 22). Note: The dates marked on the graph axis correspond to Sundays.

36% of new confirmed cases of COVID-19 in the last 7 days were registered in the Norte region

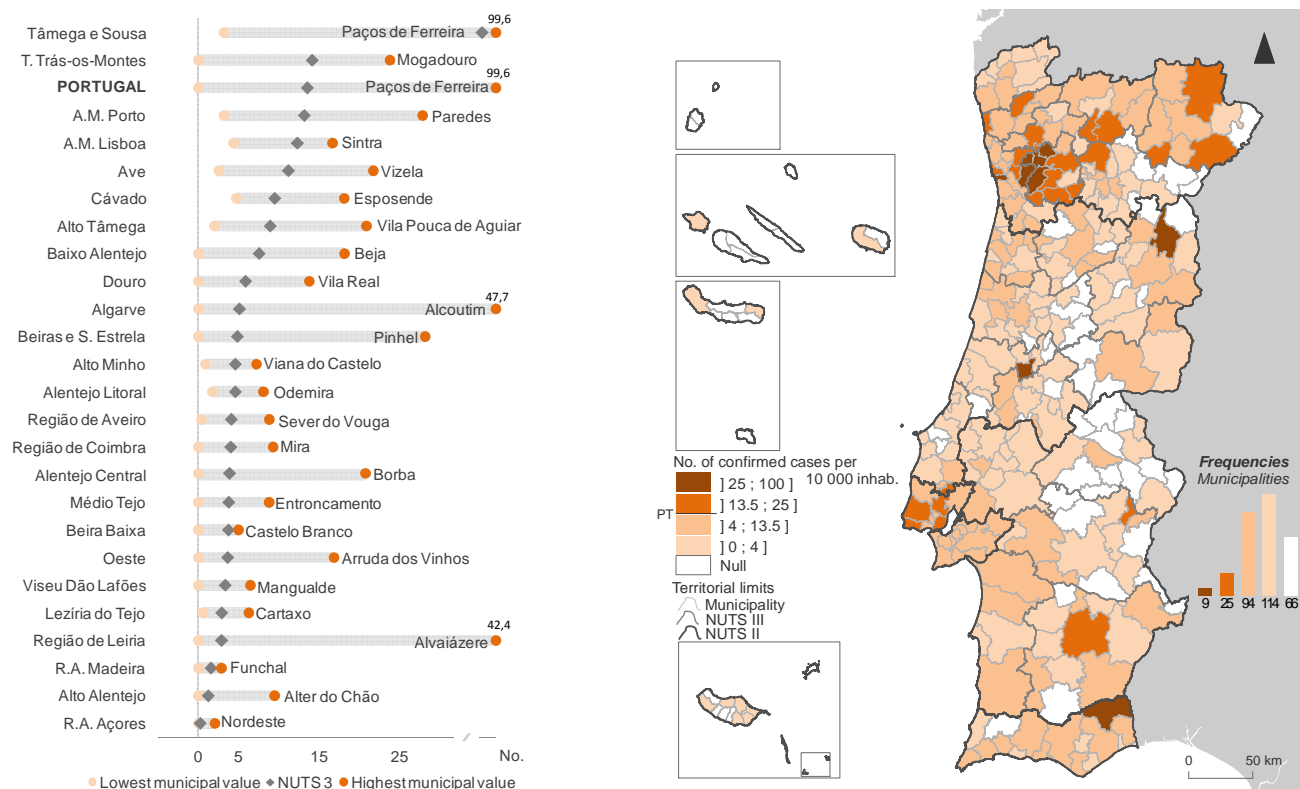
Figure 5- Number of new confirmed cases of COVID-19 (last 7 days) per 10 thousand inhabitants, Sundays – April 12 to October 18, Portugal Norte region and the metropolitan areas of Porto and Lisboa



Source: Directorate-General of Health, Daily COVID-19 Status Report (released on October 22). Note: The dates marked on the graph axis correspond to Sundays.

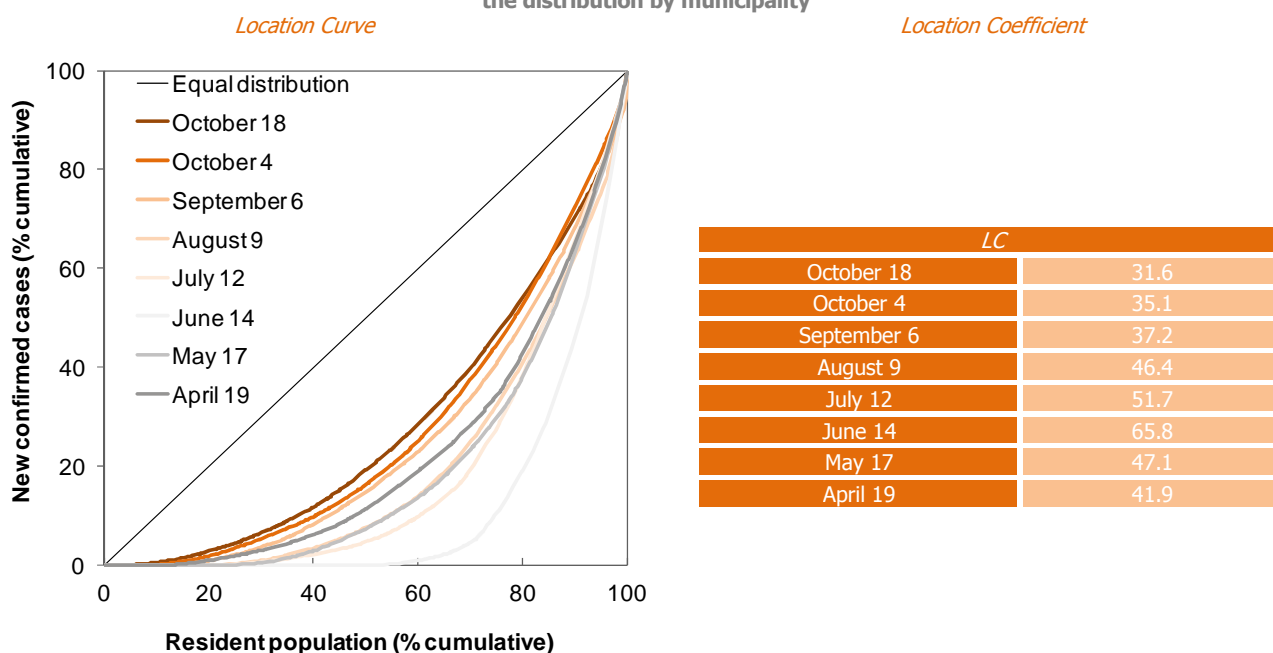
34 municipalities registered new confirmed cases of COVID-19 disease per 10,000 inhabitants above the national value

Figure 6 - Number of new confirmed cases of COVID-19 (last 7 days) per 10 thousand inhabitants until October 18, 2020, Portugal, NUTS 3 and municipality



Source: Directorate-General of Health, Daily COVID-19 Status Report (released on October 22); INE, I.P., Annual estimates of resident population, 31 December 2019.

Figure 7- Territorial concentration of new confirmed cases of COVID-19 (last 7 days) in relation to the resident population, based on the distribution by municipality



Source: Directorate-General of Health, Daily COVID-19 Status Report (released on October 22); INE, I.P., Annual estimates of resident population, 31 December 2019.
Note: For the calculation of the location coefficients zero cases were considered for the municipalities with no value in the Directorate-General of Health report (0 or < 3 cases). The dates presented refer to Sundays.

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Figure 8- New confirmed cases of COVID-19 (last 7 days) per 10,000 inhabitants, Sundays -3 May to 18 October, by municipality

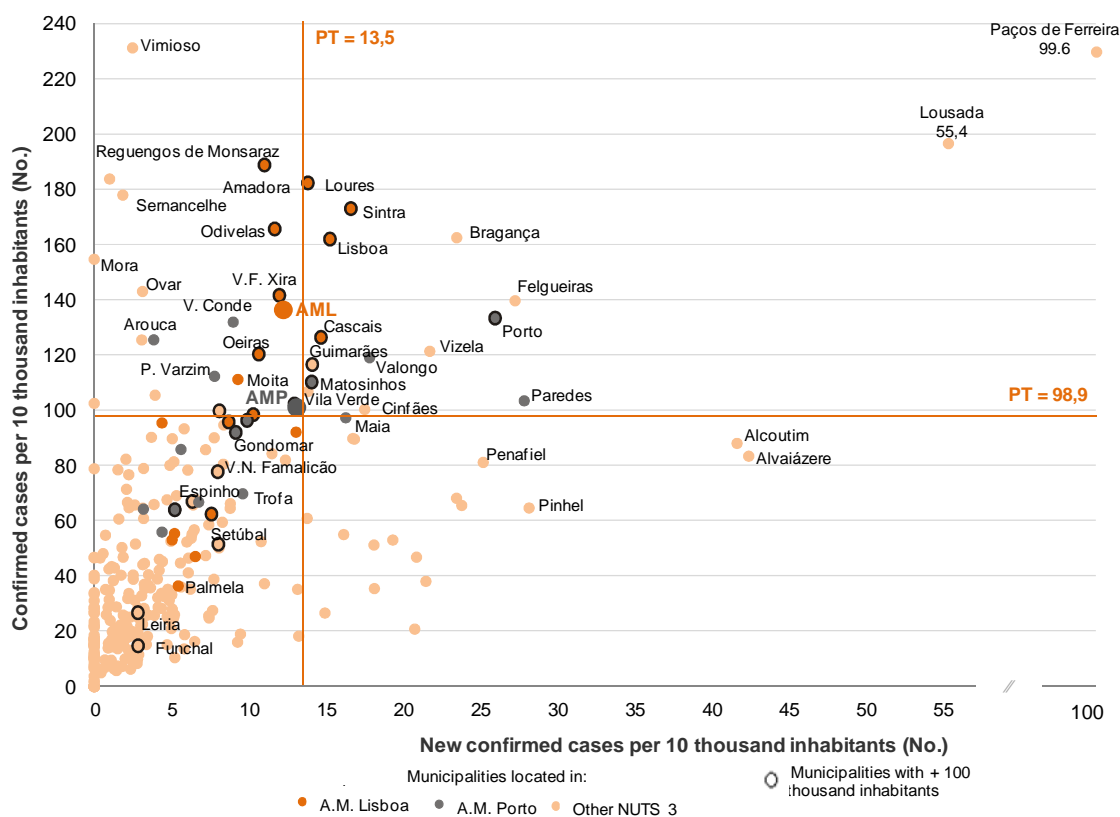


Source: Directorate-General of Health, Daily COVID-19 Status Report (released on October 22); INE, I.P., Annual estimates of resident population, 31 December 2019. Note: The municipalities with no data correspond to municipalities with a case number of zero or less than 3.

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16 municipalities registered simultaneously a number of new cases per 10,000 inhabitants and a total of confirmed cases per 10,000 inhabitants above the national reference

Figure 9 – Number of confirmed cases per 10 thousand inhabitants on October 18, 2020 and Number of new confirmed cases per 10 thousand inhabitants on October 18, 2020 (last 7 days), by municipality



Source: Directorate-General of Health, Daily COVID-19 Status Report (released on October 22); INE, I.P., Annual estimates of resident population, 31 December 2019.

34 municipalities registered confirmed cases of COVID-19 disease per 10,000 inhabitants above the national value

Figure 10 - Number of confirmed cases of COVID-19 disease per 10 thousand inhabitants until October 18, 2020, by municipality

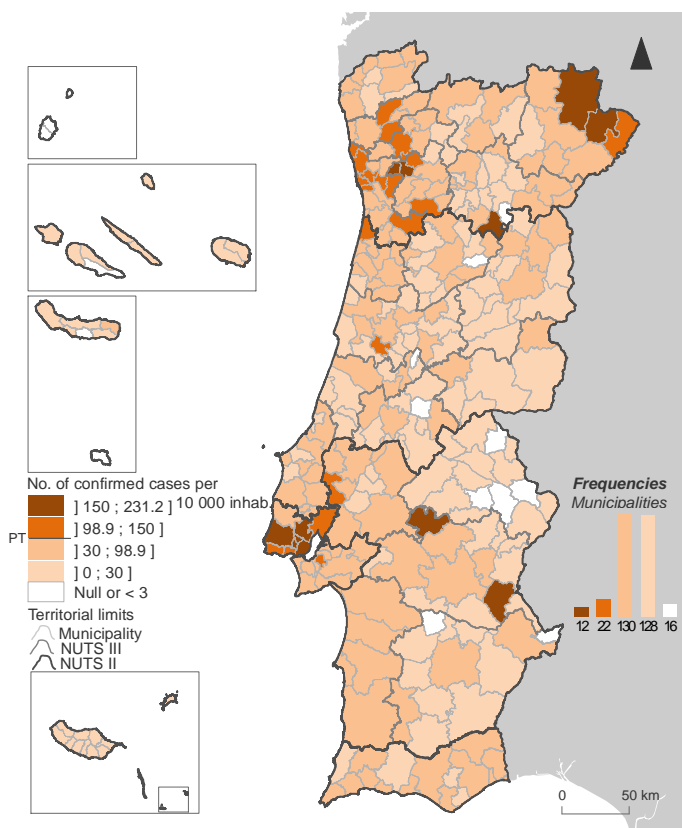
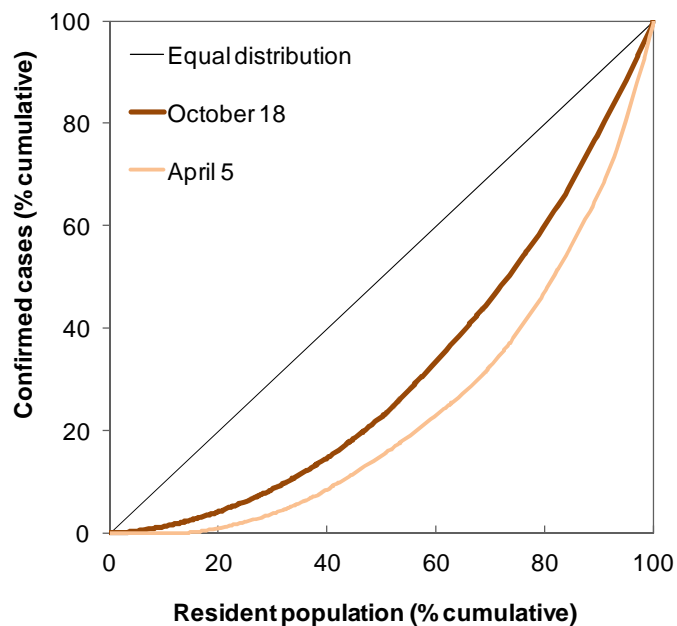


Figure 11 - Territorial concentration of COVID-19 confirmed cases until April 5 and October 18 in relation to the resident population, based on the distribution by municipality

Location Curve



Location coefficient	
October 18	27.4
April 5	37.7

Source: Directorate-General of Health, Daily COVID-19 Status Report (released on October22); INE, I.P., Annual estimates of resident population, 31 December 2019.
Note: For the calculation of the location coefficients zero cases were considered for the municipalities with no value in the Directorate-General of Health report (0 or < 3 cases).