

North-south inequalities in healthcare response to Covid-19 in Italy

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In Italy, the Constitution (Article 32) guarantees universality of healthcare for all on Italian soil with discrimination inadmissible. However, long-lasting inequalities in healthcare impact people in Italy based on where they live. Responsibility for healthcare planning/management is regional (Title V of the Constitution) and structural gaps exist regarding quality/quantity of care between north and south to the disadvantage of the latter.¹ These inequalities, which parallel socio-economic territorial development,¹ have affected the medical response to Covid-19.

Before the emergency, the paradigmatic ratio of intensive care unit beds (ICUb) per 100,000 resident population (ICUb/pop) ranged from 5.5 to 10.1² as shown in supplementary figure 1 (population-weighted mean 8.4). In May 2020, the government set 14 as the safe ICUb/pop threshold nationwide in preparation for an expected second wave. Based on institutional data³ (supplementary figure 2), on December 8 2020, during this second wave, only one southern region (Sicily) had reached that goal (population-weighted mean ICUb/pop 15.7 for north and 12.2 for south), suggesting that healthcare weaknesses of the southern regions curbed their capacity to effectively cope with the emergency. This geographical gradient presented exceptions and unique regional healthcare policies impacted regional performances: e.g. the northern Lombardy region (pro-capita income 38,845 euro, 44.6% over the national mean) slightly failed to reach the ICUb/pop target.²

Insufficient preparedness contributed to the government's decision to lockdown southern regions, even in the presence of less virus circulation than in the north. Calabria, the poorest region (pro-capita income 16,980 euro), suffered heavy economic repercussions from the first lockdown (March 9).⁴ Moreover, Calabria (ICUb/pop 7.9)² was among the earliest regions to be locked down (November 6) when the second wave hit the country. On December 8, the ratio between the number of patients necessitating intensive care³ and the number of available ICUb² was the lowest in Italy (1.7). If the number of critical patients were equal to that of Valle d'Aosta (8.8/100,000),³ the northern region with the best preparation for the second wave (ICUb/pop 26.3),² the number would be short by 0.86.

Also in the EU, marked differences exist between/within states regarding the degree of development⁵ with probable exacerbation by the pandemic. Covid-19 has highlighted the shortcomings of policies adopted to improve equality among European populations and the (still unquantifiable) economic burden will probably be higher for poorer countries since the scale of crisis depends on pre-existing financial/economic conditions.⁶ While European post-pandemic recovery plans promise to reduce inequalities, actual survival of the Community may depend on reaching these objectives expeditiously.

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References

- 1) *Commissione parlamentare per l'attuazione del federalismo fiscale. Audizione della Ministra della salute, On. Giulia Grillo, su attuazione e prospettive del federalismo fiscale e sulle procedure in atto per la definizione delle intese ai sensi dell'articolo 116, terzo comma, della Costituzione. Atti parlamentari. Resoconto stenografico dell'audizione della seduta del 10 aprile 2019, pag 29.* [Parliamentary commission for the implementation of fiscal federalism. Hearing of the Health Minister, the Hon. Giulia Grillo, on the implementation and outlook of fiscal federalism and on procedures to define understandings regarding Article 116, comma 3 of the Constitution. Parliamentary records. Stenographic report of the hearing on 10 April 2019, pag 29.]
<https://documenti.camera.it/apps/commonServices/getDocumento.ashx?idLegislatura=18&sezione=commissioni&tipoDoc=stenografico&tipologia=audiz2&sottotipologia=audizione&anno=2019&mese=04&giorno=10&idCommissione=62&numero=0009> (accessed 9 12 2020).

2) *Agenzia Nazionale Servizi Sanitari. Numero di posti letto disponibili in terapia intensiva per 100.000 abitanti.* [National Health Services Agency. Number of beds available in intensive care per 100,000 inhabitants.]

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjQ_MjKzbHtAhUBvaQKHbs7CsUQFjABegQIAxAC&url=https%3A%2F%2Fwww.agenas.gov.it%2Ffcovid19%2Fweb%2Findex.php%3Fr%3Dsite%252Fgraph3&usg=AOvVaw1OY-NrU3kqNa0gsWmIwPIP (accessed 9 12 2020).

3) *Ministero della Salute - Istituto Superiore di Sanità. Aggiornamento casi Covid-19 (08 dicembre 2020). Dati aggregati quotidiani Regioni/Province Autonome.* [Ministry of Health – Superior Institute of Health. Update on Covid-19 cases (8 December 2020). Daily aggregate data for Regions/Autonomous Provinces.] <http://github.com/pcm-dpc/COVID-19/raw/master/schede-riepilogative/regioni/dpc-covid19-ita-scheda-regioni-latest.pdf> (accessed 9 12 2020).

4) *Banca Italia Eurosystem. Economie regionali. L'economia della Calabria. Aggiornamento congiunturale. Numero 40* [Bank of Italy Eurosystem. Regional Economies. The economy of Calabria. Economic update. Number 40] <https://www.bancaditalia.it/pubblicazioni/economie-regionali/2020/2020-0040/2040-calabria.pdf> (accessed 9 12 2020).

5) Eurostat Statistics Explained. Income poverty statistics <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjT0Yf-29LtAhWZH-wKHZqEAecQFjAJegQIBBAC&url=https%3A%2F%2Fec.europa.eu%2Feurostat%2Fstatistics>

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explained%2Findex.php%3Ftitle%3DIncome_poverty_statistics%26oldid%3D440992&usg=A
OvVaw0vLiuZ0iVOmSxbvNWvShoB (accessed 17 12 2020).

6) CONSOB (*Commissione Nazionale per le società e la borsa*). *La crisi Covid-19. Impatti e rischi per il sistema finanziario italiano in una prospettiva comparata. Statistiche e analisi.* [CONSOB (National Commission for Companies and the Stock Exchange). The Covid-19 crisis. Impacts and risks for the Italian financial system in a comparative perspective. Statistics and analysis.] Occasional report. Chapter 2, paragraph 2, pag 12, July 2020. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjF_NeLk8HtAhVNDuwKHX4DByc4ChAWMAN6BAGFEAI&url=http%3A%2F%2Fwww.consob.it%2Fdocuments%2F46180%2F46181%2FRep-covid-19.pdf%2F02fa9e7c-c7f1-4348-be40-1d39b0c3e545&usg=AOvVaw0hOomktgQZCvC_V5KHNbc5 (accessed 9 12 2020).

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