

The Geography of Older Adults' Accessibility to Health Services in Italy

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Introduction

Italy is the world's second country (after Japan) in terms of old-age dependency ratio (UN, 2019): older adults (aged 65 years and older) represent 22.8% of the Italian population and by 2050 they will be 32.3% (ISTAT, 2019).

Objective

The poster follows a two-fold aim: (i) to offer an overview of the Italian ageing society by means of mapping methods of the most recent data; (ii) to evaluate the older adults' road access to health services within three Italian provinces: Milano, Varese and Padova. This work represents an alternative approach to the definition of Inner Areas, which identify vulnerable areas within urban contexts.

Theoretical Background

Our societies are ageing. Reported by the OECD (2015), ageing societies are facing various issues and challenges regarding their infrastructures and urban development patterns, social isolation, lack of accessibility and housing affordability. Access to health care services is fundamental, especially in the older age. In fact, older adults are the main users of such services compared to the younger groups (Fernandez-Mayoralas et al., 2000). Since Europe is one of the fastest ageing regions in the world, this trend may increase pressure on the health care sector. Making reference to the concept of

'healthy and active ageing' introduced by the World Health Organisation (2002) and then promoted by the European commission (2013), a key determinant (see Fig. 1) concerns the 'health and social service systems' and the access to quality primary health care and long-term.

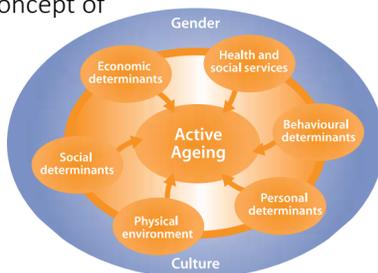


Fig. 1: The determinants of active ageing
Source: WHO (2002: 19)

Data Collection

The following four indicators are used to build the INDEX of VULNERABILITY:

Indicator	Operationalization	Data Source
Elderly share	Percentage of older adults – aged 65 years and older – over the total resident population within the municipality in 2019.	ISTAT (2019)
Elderly variation	Percentage change (between 2015 and 2019) in the number of older adults at municipal level.	Istat (2015-2019)
Dispersion	Percentage of the older adults, living within the census areas (i.e. "zone censuarie" ISTAT), which are classified as "case sparse - houses scattered" over the total elderly population within the municipality in 2011. It indicates the elderly share, who live in non-urban or rural contexts.	ISTAT (2011)
Accessibility to health services	The indicator highlights, for each municipality, the ease (in terms of travel time) of reach to the closest health service by road. There are 5 categories: average travel time TT < 15 minutes; TT between 15 and 30 minutes; TT between 30 and 45 minutes; TT between 45 and 60 minutes; TT > 60 minutes.	NSIS (2018) & OSM (2019)

Methodology

The INDEX of VULNERABILITY is built using the following two-step procedure (Chiarini, 2018): i) for all the municipalities, each indicator is normalised in order to take values from 0 to 1, using the following formula: $(X - min_value) / (max_value - min_value)$, where X is the initial value of the indicator for the municipality, min_value is the minimum value taken by the indicator across all municipalities, max_value is the maximum value taken by the indicator across all municipalities. ii) Calculate the average of the four normalised indicators. The higher the value of the index, the more "vulnerable" is the municipality.

Index of Vulnerability

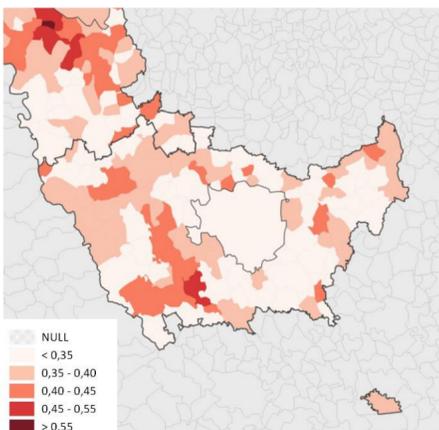


Fig. 7: INDEX OF VULNERABILITY, MILAN

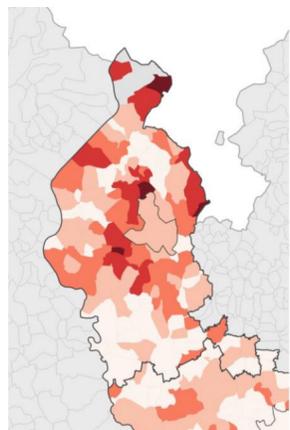


Fig. 8: INDEX OF VULNERABILITY, VARESE

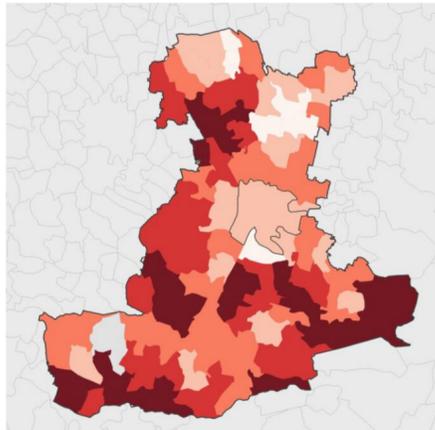


Fig. 9: INDEX OF VULNERABILITY, PADOVA

References:

European Commission (2013), Introducing the Active Ageing Index: Policy Brief. https://ec.europa.eu/eip/ageing/library/policy-brief-introducing-active-ageing-index_en
Fernandez-Mayoralas G., Rodriguez V., Rojo F. (2000), Health services accessibility among Spanish elderly. Social Science & Medicine, 50: 17-26.
OECD (2015). Ageing in Cities; OECD Publishing: Paris, France, 2015; ISBN 9789264231146.

Mapping and Spatial Analysis

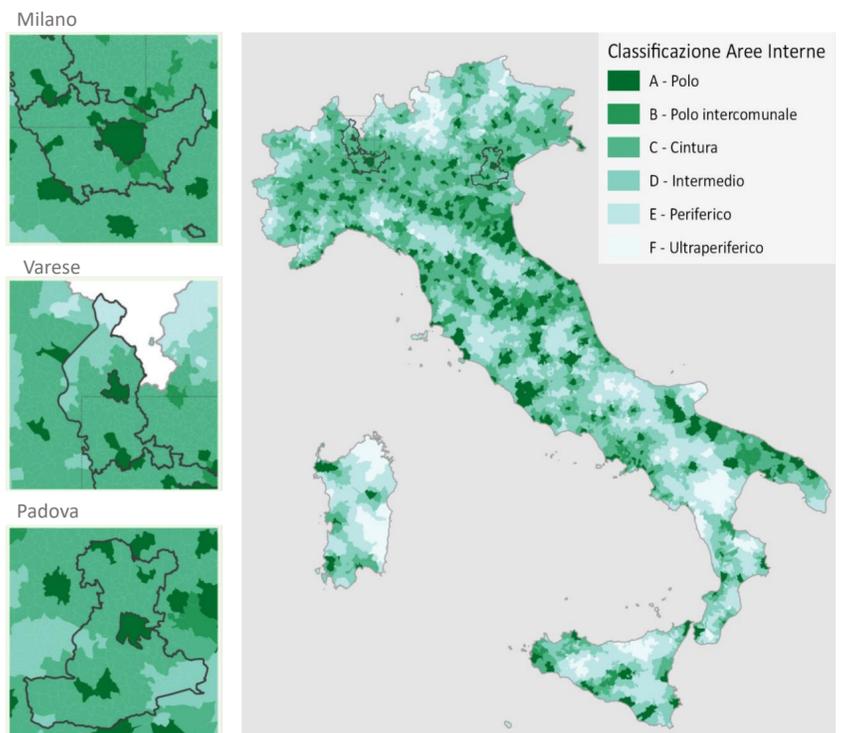


Fig. 2: Inner Areas, authors' elaboration, Data Source: SNAI (2014)

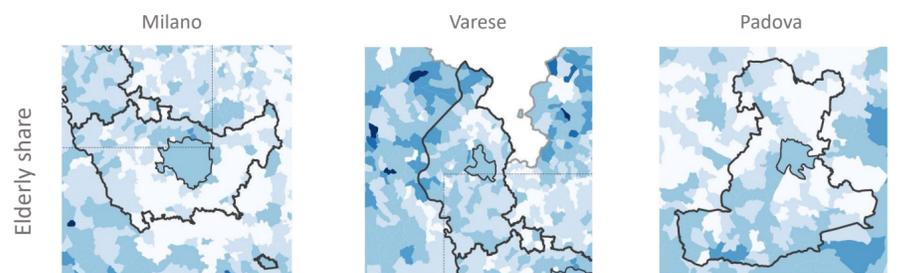


Fig. 3: The elderly share indicator, Data Source: ISTAT (2019)

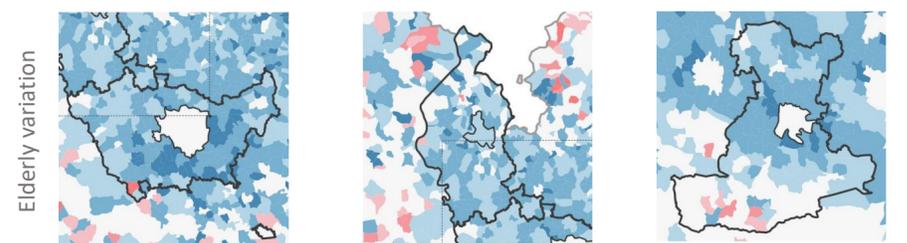


Fig. 4: Elderly variation indicator, Data Source: ISTAT (2015-2019)

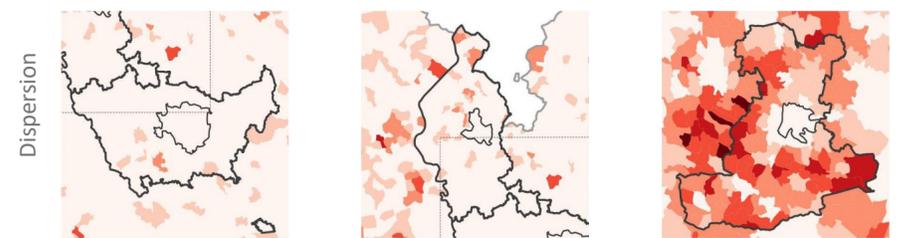


Fig. 5: Dispersion indicator, Data Source: ISTAT (2011)

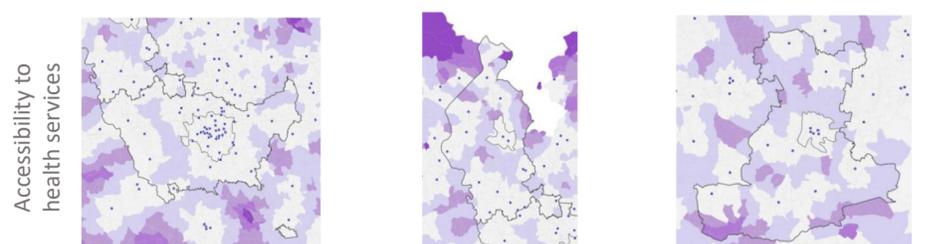


Fig. 6: Accessibility to health services indicator, Data Source: NSIS(2018) & OSM (2019)

Discussion and Conclusions

The findings could influence policy making in order to improve older adults' accessibility to health services: infrastructural improvements; strengthen the local health units (ASL/ATS) within peripheral areas; implement a "mobile" health service, which periodically visit remote municipalities.

The methodological approach could also be useful to evaluate other specific issues, linked to different population segments (e.g. accessibility to kindergartens for young families).

Future studies should consider all Italian provinces; include local health units, family doctors and drugstores; consider a wider set of indicators; compare the results obtained from other indexes (e.g. Mazziotta-Pareto index).