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Socioeconomic status and waiting times for health services: An international literature review and evidence from the Italian National Health System

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ABSTRACT

In the absence of priority criteria, waiting times are an implicit rationing instrument where the absence or limited use of prices creates an excess of demand. Even in the presence of priority criteria, waiting times may be unfair because they reduce health care demand of patients in lower socio-economic conditions due to high opportunity costs of time or a decay in their health level. Significant evidence has shown a relationship between socioeconomic status and the length of waiting time.

The first phase of the study involved an extensive review of the existent literature for the period of 2002–2016 in the main databases (Scopus, PubMed and Science Direct). Twenty-eight met the eligibility criteria. The 27 papers were described and classified.

The e mpirical objective of this study was to determine whether socioeconomic characteristics affect waiting time for different health services in the Italian national health system. The services studied were specialist visits, diagnostics tests and elective surgeries.

A classification tree and logistic regression models were implemented. Data from the 2013 Italian Health National Survey were used.

The analysis found heterogeneous results for different types of service. Individuals with lower education and economic resources have a higher risk of experiencing excessive waiting times for diagnostic and specialist visits. For elective surgery, socioeconomic inequalities are present but appear to be lower.

1. Introduction

In publicly funded health systems, waiting times are considered a main policy issue because they are reaching a critical length for several health services in many OECD countries [1,2]. Long waiting times may serve as an important barrier to real and perceived access to health care services [3]. Moreover, longer waiting times for treatments leads to dissatisfaction and may cause deterioration in a patient's health status [4] or reduced treatment effectiveness [5,6].

In recent years, many countries have attempted to monitor national waiting times [7] and develop policies to reduce the number of days citizens must wait [8–10]. The main initiatives to tackle excessive waiting time consist of i) increasing supply and health expenditure, ii) fixing a maximum waiting-time target linked to economic incentives, iii) activity-based payment, iv) free choice, that is, patients waiting above the maximum time can choose another public or private structure in the country or abroad at the expenses of the originating provider, and v) prioritization tools, in which the main goal is not to reduce waiting times but to ensure that patients with high severity are treated quicker than individuals who can afford the health costs of waiting. The results of these different policies are mixed [8].

Waiting times arise as a result of the demand and supply imbalance. Reducing waiting times is difficult because of contingency factors such as the ageing population and economic recession, but it is primarily difficult because the absence or limited use of prices leads health systems to face an excess of demand. Considering resource constraints on the supply side, waiting time becomes a sort of non-monetary price and an implicit rationing instrument to maintain equilibrium for supply and demand for healthcare. This indirect rationing mechanism should not affect equity, one of the main values of national health systems. Horizontal equity requires that patients in the same need category should be treated at the same time, whereas vertical equity prescribes that a patient with

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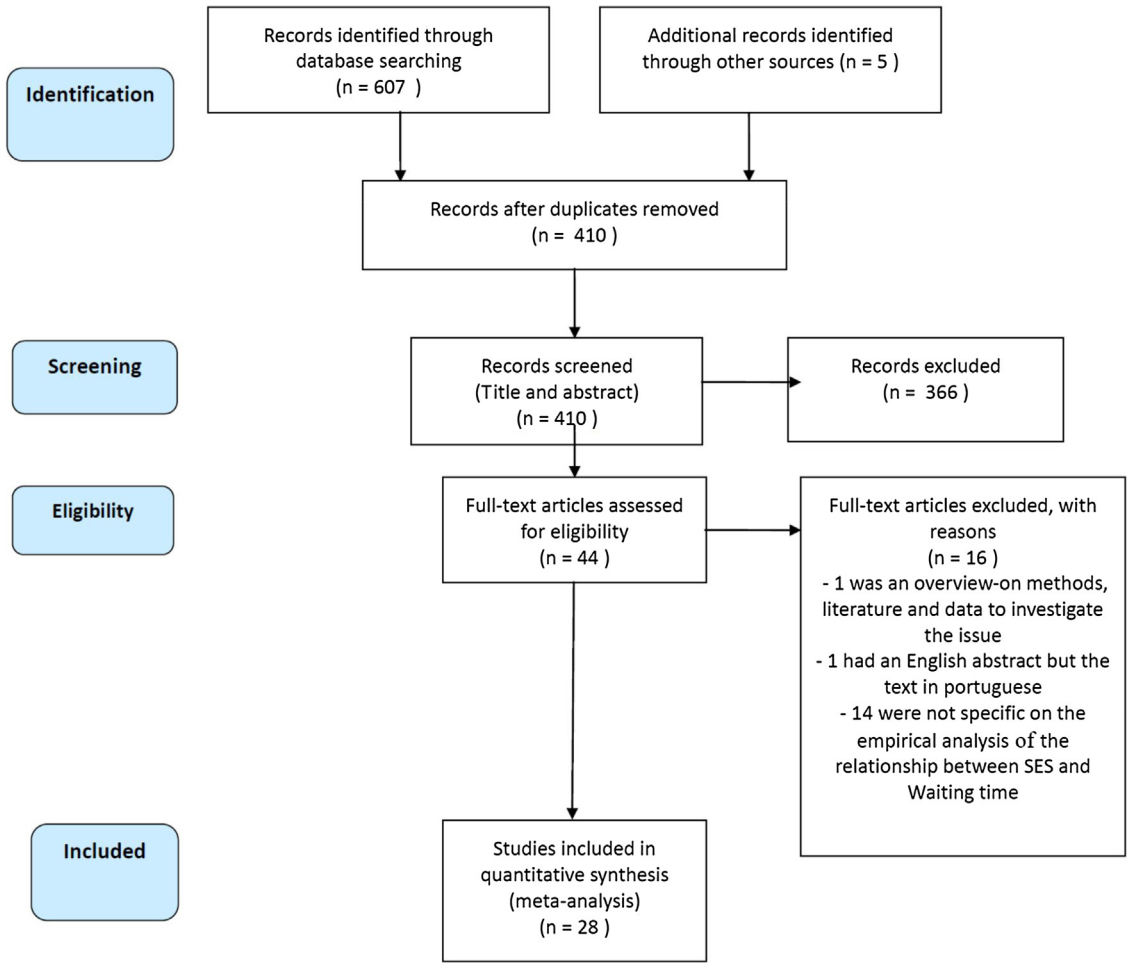

Fig. 1. Flow of information through the review. PRISMA 2009 flow diagram (years: 2002–2016).

a different need should be admitted after a different wait time. Patients' waiting times must be related only to health needs; thus, people with the same health must wait for the same time, without any difference due to socio-economic status [10–13], which is possible if waiting lists for health services are managed according to priority criteria. However, even in the presence of priority criteria, waiting times may be unfair because they reduce health care demands by patients in lower socio-economic conditions due to high opportunity costs of time or a decay in their health level. Conversely, this is confirmed by a growing body of literature: even in countries with priority criteria, there is evidence of the existence of a socioeconomic gradient in waiting times [6,14–33].

The purpose of this study was to analyse the relationship between individual socioeconomic level and waiting time through an international literature review and analysis of the Italian Health System case for three health services: specialist visits, diagnostic tests and elective surgeries.

2. Literature review

The first phase of the study involved a review of the existent literature on the topic. An international literature review was performed through the main peer-reviewed databases (Scopus, PubMed, and Science Direct) from 2002 to 2016. The key word "waiting time" was matched with "socio-economic status" and "equity" in the abstract and title field. Only English language articles were selected in both socio-economic and medical areas. In addition; three papers were included from a hand search using the references of identified articles because they were not found in the original literature search.

A total of 612 papers were identified. After removing duplicate articles, the title and abstract of 410 papers were read. Forty-four studies met the criteria. After reading the full text, 16 articles were excluded: one study only included an overview on the data and method, one article had the abstract in English but the text in Portuguese, and 14 papers did not report an empirical analysis on the relationship between socio-economic status and waiting time. Twenty-eight articles met these criteria (see Fig. 1). They are summarized in Table 1.

2.1. Main result

There is growing interest on this topic: more than half of the studies were published after 2012 (see Fig. 2). The subject is clearly interdisciplinary; thus, the methods applied vary across articles (see online Appendix Fig. 1).

The review shows the existence of a relationship between waiting time and socioeconomic status. Only seven out of twenty-seven works failed to identify an association between the two domains [14–16,28,35,37,39]. The association between waiting times and socioeconomic status is evident even if it is difficult to have more precise guidelines because of the wide heterogeneity of the studies. They differ regarding the types of data used, the health service taken into consideration, the explanatory variables and the reference context. The results of this literature review are in line with a previous review of evidence performed by Siciliani [41].

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