Journal of Health Economics 32 (2013) 895–908

Contents lists available at ScienceDirect

Journal of Health Economics

journal homepage: www.elsevier.com/locate/econbase

Doctors, patients and the racial mortality gap[☆]

Emilia Simeonova[*]

Tufts University and NBER, United States

ARTICLE INFO

Article history:
Received 9 February 2012
Received in revised form 1 July 2013
Accepted 3 July 2013
Available online 12 July 2013

JEL classification:
I10
I12
I14

Keywords:
Health inequality
Racial mortality gap
Adherence to medical therapy
Health production

ABSTRACT

Research in the health sciences reports persistent racial differences in health care access, utilization, and outcomes. This study investigates three potential sources of these disparities – differential quality of care, physician discrimination, and patient response to therapy. It uses a unique panel dataset of physician–patient encounters, the resulting medication therapies and the patients' adherence to those medical recommendations. Equalizing access to quality health care will not erase the racial differences in mortality among chronically ill patients. Targeted programs aimed at improving adherence with medication therapy among disadvantaged groups must be an integral part of any policy aimed at achieving equality in health outcomes.

© 2013 Elsevier B.V. All rights reserved.

1. Introduction

Research in the last twenty years has uncovered persistent racial differences in health care access, utilization, and health outcomes (Institute of Medicine, 2002). A separate literature has studied the socio-economic (SES) gradient in health and mortality, identifying large differences in outcomes across socio-economic groups (for a recent overview, see Cutler and Lleras-Muney, 2011). Grossman (2006) discusses in detail the existing hypotheses that attempt to explain this phenomenon – disparate economic resources, dissimilarities in preferences, and differences in health-related knowledge. Due to the large economic and social disparities between races in the US, some of the mechanisms that drive the SES gradient likely contribute to the racial gap in health care utilization and outcomes.

In addition to the economic determinants that affect the SES-health gradient, racial segregation, provider discrimination and cultural dissimilarities between racial groups could play a role in shaping the racial mortality gap. First, African Americans may face systematically inferior health care, manifested in worse quality of facilities, fragmented access to care, and interactions with less qualified clinicians. Second, institutional or provider discrimination may lead to different treatments. Finally, minorities may respond differently to identical conditions of care. This study uses panel data of physician–patient interactions and the resulting medical therapy decisions to test whether and to what extent these channels contribute to the racial mortality gap.

In this study patients are followed through outpatient and pharmacy encounters for up to six years. Directly observing the pharmacological therapy prescribed to patients allows the construction of measures of patient adherence to physician recommendations and of the compliance with clinical care guidelines by individual doctors. These measures are then used to empirically test for provider discrimination and differential patient response to prescribed medical therapy.

We document a significant racial difference in survival rates among patients suffering from a chronic condition in an equal-access health care system. Including additional demographic and SES controls does little to reduce this gap. Differences in SES across racial groups account for only 20% of the survival difference. Differences in the quality of clinical care within health facilities are small. They account for at most 5% of the survival gap. The largest racial difference is in patients' adherence to recommended clinical therapy. Patient-, rather than health care system or provider-level factors could be the most significant contributor to the observed

---

[☆] This is an abridged version of the first chapter of the author's PhD dissertation. This research has benefited from comments by many colleagues and most importantly from my PhD advisors. I am also indebted to the editor and two anonymous referees for a number of excellent suggestions. This article reflects only the views of the author and all remaining errors are my own.

[*] Tel.: +1 6092588265.
E-mail address: emilia.simeonova@tufts.edu

0167-6296/$ – see front matter © 2013 Elsevier B.V. All rights reserved.
http://dx.doi.org/10.1016/j.jhealeco.2013.07.002

racial gap in outcomes. This research also finds that there is no difference in survival rates among patients who observe therapy prescriptions.

2. Background and previous literature

The hypotheses explaining the racial gap can be grouped into three broad categories: institutional or geographic barriers to obtaining good health care, disparate returns to seeking care, and differences in patient health investment or responses to care. Most medical and public health studies have concentrated on documenting institutional and provider-induced barriers to equalizing health outcomes.

African Americans are more likely to experience discontinuities of care and concentrate in an inferior subset of facilities and physicians (Oster and Bindman, 2003). Studies have found that doctors who primarily treat minority patients are less likely to be board certified and more likely to report not being able to provide high quality care to their patients (Bach et al., 2004). Poorer African Americans are treated by lower-quality and lower-volume cardiac surgeons (Bach et al., 2004; Mukamel et al., 2000; Rothenberg et al., 2004). This study finds that in an equal-access environment, physician–patient matching has little effect on the quality of care received by minorities.

When studying differences in outcomes induced by supply side inequalities, such as inferior medical treatment, it is important to distinguish the role of racial segregation on the level of health facilities from physician-level factors, such as doctor–patient matching and discrimination. Previous studies diverge in their assessment of the relative contributions of within- and between-facility health care differences to the survival gap. This is the result of two main obstacles. First, data are rarely recorded on the level of physician–patient pairs. Therefore the survival gap remaining after controlling for average clinic quality is customarily assigned to within-clinic differences. This may be misleading if patient response to care also differs along racial lines.

Second, in order to assess the clinical quality of care provided, we usually study conditions with clearly defined treatment guidelines and outcomes, such as in cardiovascular care. Assessing differences in 30-day, 6-month or 1-year mortality rates from AMIs is common in the literature (Bradley et al., 2004; Barnato et al., 2005; Skinner et al., 2005). However, patients being treated in emergency conditions are assigned doctors randomly at least in the first hours. Therefore, differences in short-term mortality rates are mostly driven by differences in average doctor and equipment quality between hospitals. The effects of doctor–patient matching are more likely to manifest over a longer time horizon and within a condition that requires regular interactions and follow-up.

Statistical discrimination, clinical uncertainty or stereotyping may result in differential treatment across racial groups (Balsa and McGuire, 2003). Clinical uncertainty could contribute to over- or under-prescription of therapies because doctors are less aware of the severity or of the appropriate treatment in the minority group. Statistical discrimination based on the doctor's perception of average behavior across SES or racial groups also results in treatment differences. For example, Bogart et al. (2001) demonstrate that doctors are less likely to prescribe certain medications to minority patients because they expect worse adherence to therapy.

Previous research shows that ethnic and racial minorities differ in their attitudes towards health and the health care system. There are several ways in which such attitudes may influence health outcomes. First, systematic differences in health investment over the life cycle will result in disparities in health outcomes. For example, Charles et al. (2009) demonstrate that African Americans spend about 56% less on health care than whites.

Second, differences in attitudes can manifest in discrepancies in adherence to prescribed clinical therapy. Poor adherence to medication therapy is a chronic problem of the health care delivery system, costing about one hundred billion a year in avoidable hospitalizations (Cutler and Wendy, 2010). But we know little about the roots of this problem.

This paper investigates racial differences in the clinical treatment, patient response to treatment, and death rates from any cause after a diagnosis of chronic heart failure (CHF).[1] There are several reasons to focus on this condition. First, heart disease is the leading cause of death in the elderly and is the single most costly condition in Medicare in recent years (estimated 32 billion dollars in 2008 US dollars during 2013)[2] with costs expected to rise up to 120 percent in the next 15 years. Cardiovascular disease is a major contributor to the racial mortality difference, accounting for over 40% of the gap.[3] Approximately 10% of all inpatient admissions are for CHF and hospitalizations are about twice as frequent in black males as in white males.[4] Third, heart disease is classified as an ambulatory care sensitive condition, which makes it particularly susceptible to policy interventions in an outpatient setting. Finally, chronic heart failure is rarely misdiagnosed, and there are clear, well publicized guidelines for pharmacologic treatment. This study relies on the published clinical guidelines to construct a measure of doctor compliance with recommended therapy and to test whether doctors provide the optimal therapy to both racial groups.

Chronic heart failure is a progressive health disorder with fatal outcomes. Mortality rates in the first year after diagnosis are about 10%. However, if care is managed well, patients' chances of living longer and their quality of life can be improved significantly. Short-term (one-year) mortality is more likely to be influenced by the patient's initial physical condition at diagnosis, while longer-term survival is more sensitive to the success of medical therapy and the ability of the patient and the doctor to coordinate the management of the disease. Appendix A discusses the medical condition and treatment options in more detail.

3. Data

We use data from the Veterans Health Administration (VHA), where access to care is equalized, conditional on veteran status, and physicians are compensated according to a fixed salary scheme. The data come from the VHA Medical SAS inpatient and outpatient datasets, the Beneficiary Identification Records Locator Subsystem (BIRLS) death files, the VHA Enrollment files, and the Veterans Service Support Administration (VSSA) clinic performance measures database. The data cover all outpatients who were diagnosed

---

[1] In particular, the primary diagnosis of interest corresponds to ICD-9 code 428-heart failure. Congestive and chronic heart failure are used interchangeably in the literature. Chronic heart failure may be the results of, among others, acute heart failure or acute myocardial infarction (AMI). We base the investigation on outpatients and their (outpatient-care) primary diagnoses. Thus, even if the patient has experienced a prior acute episode, their condition must have been stabilized sufficiently to receive treatment in an outpatient setting.

[2] According to the AHA statistical update, published in Circulation (2013).

[3] The largest estimate of the racial mortality gap in CHF was reported by the CDC – 7.8%. This is a very crude benchmark of the yearly mortality rate, unadjusted for the number of years since diagnosis or differences in access and co-morbidities. The closest estimate of the gap to the one reported here is found in a study using Medicare data by Dries et al. (1999). They find a 3.1 percentage points higher probability of survival for white patients after two years of follow-up.

[4] In the population over 65 (Alexander et al., 1999; Joshi et al., 2004).

Download English Version:

https://daneshyari.com/en/article/10476745

Download Persian Version:

https://daneshyari.com/article/10476745

Daneshyari.com