EFFECTS OF SOCIOECONOMIC STATUS ON MORTALITY AFTER ACUTE MYOCARDIAL INFARCTION

The following is a summary of an article by Wei-Ching Chang, Padma Kaul, Cynthia M. Westerhout, Michelle M. Graham and Paul W. Armstrong.

- This study found that socioeconomic status profoundly affected the rate of emergency department presentation as well as the process and outcomes of acute myocardial infarction (heart attacks).
- The death rate among Canadian patients in this study with acute myocardial infarction, within one year of the first episode, declined as household income rose.
- The effects of socioeconomic status on mortality are modulated by revascularization (restoring blood flow to the heart). In fact, the link between income and death within a year was most pronounced among patients who were not revascularized.

Low socioeconomic status, as measured by neighbourhood median household income, is linked with a higher incidence of acute myocardial infarction (heart attack), fewer medical interventions (such as coronary angiography) and a higher death rate. These relationships have been demonstrated in community and hospital inpatient settings. The authors of this study looked at the effects of socioeconomic status on one-year mortality in patients who had heart attacks and whether revascularization — restoring blood flow to the heart — modified this relationship.

Other studies have found that socioeconomic status is a predictor of mortality within one year of a heart attack. This study found that household income was also a predictor of the patient being revascularized. And when only those who had not had surgery were considered, socioeconomic status was an even stronger predictor of mortality. Chang et al. analyzed how this effect changed when they controlled for co-morbidities, like diabetes, and access to aggressive treatment, found in higher-volume metropolitan hospitals.

The data for the study came from more than 5,000 patients, all over the age of 18, who presented to Alberta hospital emergency rooms with an initial episode of acute myocardial infarction between mid-1998 and mid-2002. All patients were fully insured for necessary medical care.

The data shed light on three issues surrounding the difference in care processes of low-income patients with heart attack, in comparison to care received by medium- and high-income patients.
Emergency department visits: People from lower socioeconomic communities visited an emergency ward more frequently following a heart attack, and they had a lower rate of invasive diagnostic procedures.

Hospital admittance: The analysis of the data showed that lower-income patients were less likely to be immediately hospitalized because they were more likely to die in the emergency department. Patients with less money die more frequently in the emergency room because they rate higher on two other contributing factors: they have more co-morbidities (such as diabetes or angina) and they are more likely to live near smaller hospitals that do not provide the needed reparative or emergency surgeries.

Revascularization: Across the entire population, patients with less means were less likely to be revascularized. However, socioeconomic status lost its predictive quality when hospital emergency department volume was taken into account. It seems that less-aggressive treatment of the patients with low incomes was related to their distance from a high-volume hospital that performs these kinds of treatments.

Even when the general health and revascularization of the patient were taken into account, low socioeconomic status corresponded with higher mortality rates within a year of a first heart attack. In fact, the link between income and death within a year was most pronounced among patients who had not been treated invasively.

Suggestions for care

The authors argue that because low-income patients with a heart attack are more likely to be female and older, less likely to be revascularized, and more likely to die within a year, they would benefit most from revascularization. They suggest a targeted approach to improve the quality of care for low-income patients with a heart attack, including greater adherence to accepted standards of care and speedier transfer from their own communities to hospitals that offer revascularization interventions.

Bibliographic Reference


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