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Optimal quality reporting in markets for health plans

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Abstract

Quality reports about health plans and providers are becoming more prevalent in health care markets. This paper casts the decision about what information to report to consumers about health plans as a policy decision. In a market with adverse selection, complete information about quality leads to inefficient outcomes. In a Rothschild–Stiglitz model, we show that averaging quality information into a summary report can enforce pooling in health insurance, and by choice of the right weights in the averaged report, a payer or regulator can induce first-best quality choices. The optimal quality report is as powerful as optimal risk adjustment in correcting adverse selection inefficiencies.

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There is a general consensus that consumers know too little about the quality of health care services they buy, and improving what consumers know would make markets function better. Better-informed consumers may choose providers more appropriately. Furthermore, consumers and patients choosing on the basis of quality conveys incentives to providers to improve quality in the first place. These arguments motivate public regulators and business coalitions to discover and reveal characteristics of providers' quality of care.[1] There is, however, a glitch in the argument:

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[1] Public payers, like Medicare (Clancy and Scully, 2003), and private coalitions, like the Leapfrog Group (Berkmeyer et al., 2000), are constructing quality reports intended to reward providers for improving quality. Medicare and the Federal Employees Health Benefit Plan (FEHBP), have made quality reports about plans or providers available to beneficiaries for some time, either as experiments or on a regular basis (Wedig and Tai-Seale, 2002).

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markets in health care are subject to adverse selection-related inefficiencies even in the presence of complete information (Cutler and Zeckhauser, 2000; Van de Ven and Ellis, 2000). For example, consumers' knowledge about the quality of services they anticipate receiving at a health plan drives the plan to set quality suboptimally for services that will be used by enrollees whose expected costs exceed their expected revenue (Frank et al., 2000). With consumers' information an essential element in the adverse selection causal chain, it is not self-evident that giving consumers more information will improve health care markets.[2]

This paper casts the decision of what information about quality to report to consumers as a policy instrument. We focus on markets for health plans, where in many cases a regulator supplies information to consumers about quality at the plans. For example, before choosing a plan, consumers in California can consult an annual report published by the state (Office of the Patient Advocate, 2003) containing plan ratings from a consumer survey and from medical record based indicators. More than 75 million people in the U.S. enroll in capitation-based health plans (Keenan et al., 2001). These health plans provide a range of health care services, including obstetric care, mental health care, oncology, vision services and so on. Potential enrollees choose a plan partly on the basis of what they anticipate will be the quality of services they receive in the plan.

Our main finding about reporting is intuitive and practical: by providing information only about the average quality of services in a health plan, rather than the quality of each of the elements of service a plan provides, a payer or regulator can give consumers helpful information but prevent a plan from setting quality of its services to try to attract a profitable mix of enrollees. The averaged report is powerful: the right weights for elements of quality in the averaged report induce a plan to produce the socially efficient quality of all services. This strong result emerges in a basic model of adverse selection where the efficient outcome is a pooling equilibrium and there are no heterogeneous tastes to be served among consumers. More complicated models of health insurance with plan heterogeneity (about which consumers would need to know) and some pricing related to risk might call for other information strategies.

Our general result, that social welfare in the case where consumers can only observe the average quality of each plan can be higher than social welfare in the case where consumers have full information about the quality of each of the services a plan offers, is somewhat surprising, especially under the assumption that consumers are rational. Consumers' rationality implies that even when they cannot observe the quality of each of the services a plan provides, and they can only observe the average quality of these services, in equilibrium, consumers do know the precise quality of each of these services. This property follows from the standard assumption that in equilibrium rational agents know the strategies of all other agents, which in our model implies that the consumers know the quality of the services each plan chooses. However, even though in both cases, the full information case and the case where consumers can only observe the average quality of each plan-individuals know the quality of each of the services each plans offers in

[2] The economics literature outside of health care contains papers pointing out that in the presence of some other inefficiency, improving buyers' information need not improve the efficiency of a market equilibrium. Generally, the reason for this is that while more information may improve the quality of consumers' decisions, other parties to the exchange may behave differently when dealing with better-informed consumers, and their reactions might lead to a worse net efficiency effect of more information. For example, Schlee (1996), studies a market in which a monopolist sets price so as to equalize marginal cost and marginal revenue, but because information is imperfect, the marginal revenue reflects consumers' expectations about quality. With more information, consumers' expectations become more accurate, but may affect the shape of the marginal revenue function in ways that lead to a worse market outcome post better information (for related analyses in the general literature, see Hirshleifer, 1971; Mirman et al., 1994; Glazer and McGuire, 2003).