



# Assessing incentives for service-level selection in private health insurance exchanges



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## ABSTRACT

Even with open enrollment and mandated purchase, incentives created by adverse selection may undermine the efficiency of service offerings by plans in the new health insurance Exchanges created by the Affordable Care Act. Using data on persons likely to participate in Exchanges drawn from five waves of the Medical Expenditure Panel Survey, we measure plan incentives in two ways. First, we construct predictive ratios, improving on current methods by taking into account the role of premiums in financing plans. Second, relying on an explicit model of plan profit maximization, we measure incentives based on the predictability and predictiveness of various medical diagnoses. Among the chronic diseases studied, plans have the greatest incentive to skimp on care for cancer, and mental health and substance abuse.

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## 1. Introduction

Several provisions of the Patient Protection and Affordable Care Act of 2010 (ACA) are designed to minimize adverse selection in Exchanges (also referred to as Marketplaces).<sup>1</sup> Exchange plans may condition premiums only on age (with restricted rate bands), family size, smoking status, and geography, but not preexisting conditions or other factors. Coverage is regulated. The ACA also mandates that Exchanges engage in risk adjustment and implement temporary risk corridors and reinsurance programs.<sup>2</sup> Risk adjustment is budget neutral: health plans drawing enrollees with lower than

average health risk transfer funds to plans with higher than average health risks.<sup>3</sup>

These regulations may not fully address selection problems, however, because Exchange plans may engage in the difficult-to-regulate practice of distorting service offerings to attract “winners” and deter “losers.” For example, news stories already contain reports that plans are engaging in aggressive network management, possibly discouraging enrollees requiring more costly treatment.<sup>4</sup> Aggressive network management will also generally lower premiums, making insurance purchase more attractive to good risks.

Assessment of selection incentives is often undertaken by calculating “predictive ratios” for a group with a chronic illness (for example), with the ratio defined as the average risk adjusted payment divided by the average cost for the group (e.g., Pope et al., 2011). One of our contributions is to improve the methodology of predictive ratios. The idea of a predictive ratio is simple: show the

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<sup>1</sup> On October 1, 2013, U.S. citizens and legal residents who are not eligible for employer-sponsored or public coverage could begin to purchase health insurance through new Exchanges for the January 1, 2014 start date. States can choose to operate their own state-based Exchange, a state-Federal partnership Exchange, or choose instead to rely on the Federal government to perform the function (known as a Federally facilitated Exchange). See Collins and Garber (2013).

<sup>2</sup> The reinsurance and risk corridor programs are to operate from 2014 to 2016 and are intended to create stability in during the transition years (when healthier individuals may delay enrolling). In contrast, risk adjustment is permanent.

<sup>3</sup> These adjustments will take place at the insurance carrier level, based on insurers' aggregate risks across an entire state. Risk adjustment does not apply to self-insured ERISA plans, large group plans, or grandfathered health plans. The federal proposal for risk adjustment is described in DHHS (2013).

<sup>4</sup> Pear (2013) reports on health plans in several states offering low-cost/tight network coverage. One study quoted in the article claims that “... The use of narrow networks may also lead to higher out-of-pocket expenses, especially if a patient has a complex medical problem...”

revenue for a group in relation to the costs for the group. Profitable groups will be attractive to plans, unprofitable groups will be unattractive. While the idea is simple, its implementation in Medicare and in Exchanges has neglected that revenues (in both Medicare and the Exchanges) involve premiums as well as risk adjustment. Premiums themselves involve some “risk adjustment” in that premiums can be up to three times higher for an older than a younger person. In our construction of predictive ratios we anticipate equilibrium premiums to better characterize winning and losing groups.

While predictive ratios are relatively easy to calculate, they are far from a complete description of incentives related to selection in managed care. Managed care plans are usually modeled as making discriminatory decisions about *services* (which is legal though regulated), not about individual persons or groups of people (which is not legal). Thus, a plan might set up a difficult-to-access network of specialists for a disease (e.g., cancer) if it wished to discourage people who would want to use this network in the plan. A plan can do that within limits, but it cannot discriminate on the basis of “pre-existing conditions.”

In an alternative to predictive ratios, we use a theory-driven measure to characterize the services a plan would wish, in its own self-interest, to undersupply. Relying on an earlier literature referenced below, we characterize service-level incentives based on an explicit model of plan profit-maximization. A plan will want to stint on quality for services that are predictable by enrollees and predictive of net losses. This second measure, while more precise theoretically, involves more assumptions and empirical work to implement. We must estimate what individuals can predict for various sets of services, and measure the correlation of these predictions with total gains and losses for each person. We show how to implement both measures of incentives based on a “Exchange population” drawn from five panels of the Medical Expenditure Panel Survey (MEPS).

Section 2 contains a brief review of the literature on adverse selection and health insurance markets, emphasizing studies relevant to the new Exchanges. Section 3 presents the economic rationale for our measures of incentives for plans to engage in service-level selection. Section 4 explains how we use the MEPS data to define and construct revenue and cost-related variables used to illustrate our methods. Characterizing plan revenue per person in an Exchange requires us to simulate risk-adjustment. After approximating the risk adjustment to be used in Exchanges, we find the zero-profit plan premiums consistent with the risk adjustment methodology. On the cost side, we assess plan incentives to select across seven disease areas – heart disease, injury, cancer, mental health and substance abuse, lower respiratory, diabetes, and joint and back disorders – a mix of chronic and acute conditions. The measure of predictability requires a statistical model estimating how well individuals can forecast use of various services. Our methods for estimating predictability are described in Section 5. Section 6 presents results for predictive ratios for groups of users, and the measure of incentives to over and underprovide services based on plan profit maximization. Among the disease areas studied, incentives for plans to underprovide services are strongest in the case of cancer, and mental health and substance abuse. A final Section 7 discusses the limitations of our approach, including those related to the uneven rollout of the Exchanges, and some possible next steps for research.

## 2. Literature review

Enrollees choosing health insurance in their best interest fuels adverse selection: premium differences between plans generally

understate cost difference for sicker individuals, making more generous/expensive plans more attractive to sicker types. In an open enrollment environment, inefficiencies arise when plans take actions to discourage the financial losers from joining by limiting coverage for care used by sicker people, or managing certain benefits too tightly. Risk adjustment using demographic variables only partially overcomes these incentives. In the *Handbook of Health Economics* Volume I, Cutler and Zeckhauser (2000, Table 9) summarize thirty studies documenting adverse selection in health insurance. Breyer et al. (2012), in the *Handbook*, Volume II, update the literature review and call attention to potential “indirect selection,” which involves plans designing or managing benefits to discourage costly enrollees.

Managed care health plans, when enrolling individuals in products for which they are at risk, are assumed to seek a favorable selection of enrollees by structuring provider networks and managing the administration of benefits. With the notable exception of private health insurance markets operating pre-ACA in the U.S., direct selection (aka underwriting) is prohibited in virtually all markets for health insurance featuring individual choice, including the Netherlands, Germany, Switzerland, major U.S. payers such as private employers, Medicare, Medicaid, and now, in the Exchanges.

Our work is set in the context of individuals choosing among at-risk insurers in an Exchange, as well as individuals insured by Medicare who can choose a product from an at-risk private Medicare Advantage plan. It does not apply to individuals who obtain insurance through self-insured employers or through employers who do not provide a choice among competing, at-risk insurers. Indeed, much of the economics literature fails to distinguish health insurance markets where different insurers compete for individual business and markets with self-insured employers, which historically have comprised about half the American market. Employers offering products from competing insurers will often specify the cost sharing and benefit coverage they want. They cannot control a plan’s network or formulary (though they may seek to regulate it) or the plan’s utilization management techniques, but can choose not to offer a plan with a network they deem inadequate or management deemed too strict. In short, employers generally control entry into the market for their employees, whereas the literature on selection typically proceeds on an assumption of free entry, as do we. In our context, Exchanges regulate insurance products; some control entry and some do not, but to simplify the exposition we will proceed on the assumption that the Exchange does not control entry.

In competitive individual insurance markets with open enrollment, Rothschild and Stiglitz (1976), assuming Nash behavior, showed that insurers will break a pooling equilibrium by offering less coverage for a lower premium to attract good risks. Glazer and McGuire (2000) applied the same logic to managed care plans skimping on services: there is an incentive to cut back services that are relatively more attractive to higher risk types and offer more generous services that appeal to lower risk types. More precisely, profit maximization implies that plans that are at risk for medical costs have incentives to tightly ration services that are *predictable* and *predictive*. Predictability, the degree to which enrollees can anticipate future use of a service, is a *necessary condition* for service-level rationing to matter – if consumers cannot anticipate their use of a service, they cannot be influenced in their plan choices by its selective rationing. Predictiveness refers to the contemporaneous correlation of use of one service with net revenues per person and governs whether selective rationing will be strict or loose. Services that are both predictable and predictive are especially vulnerable to strict rationing.

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