

State-Contingent Pricing for Congestible Public Services: Evidence from Ambulance Policy in Japan

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Abstract

Open-access yet capacity-constrained public services pose a screening problem: discouraging low-value demand without deterring users in genuine need. We provide causal evidence on an ex-post state-contingent user fee using a 2024 district-wide reform of ambulance transport in Matsusaka District, Japan. Under the reform, transported patients are charged 7,700 yen (about US\$50) only if the attending physician determines that hospitalization is unnecessary. Using district-level dispatch records and the Synthetic Control Method, we estimate a 12% reduction in monthly ambulance dispatches (about 165 calls) relative to a synthetic control. To interpret the estimated policy effect, we develop a model of emergency call decisions under uncertainty and congestion that clarifies why retrospective, diagnosis-based pricing can selectively deter individuals with low perceived severity while limiting deterrence for those with high severity signals. Our findings suggest that ex-post state-contingent pricing can be a practical screening device for managing congestion in open-access public services when need can be verified after use.

Keywords: Emergency Medical Services; Ambulance Use; Open-Access Public Services; Ex-post State-Contingent Pricing; Congestion Externalities; Synthetic Control Method

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