Optimizing healthcare provider network with principal-agent approach and optimal transport

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Designing the optimal healthcare providers network is a challenge for insurance companies that wish to bring the best quality of care to their members for the best price. However, insurers have no direct control on the choice of healthcare providers of their members, they can only steer them through incentive. Then the matching between the members and the providers can be modeled through optimal transport as done by economists for modeling pairings. We show the existence of a solution to the optimal problem and build an algorithm that finds the optimum.

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