Determining the productivity of individual workers engaged in team production is difficult. Monitoring expenses may be high, or the observable output of the entire team may be some single product. One way to collect information about individual productivity is to observe how total output changes when the composition of the team changes. While some employers may explicitly shift workers from team to team for exactly this reason, the most common reasons for changes in team composition are at least partly voluntary: vacation time and sick days. In this paper, we develop a model of optimal absenteeism by employees which accounts for strategic interactions between employees. We assume the employer uses both observed changes in output and the strategies of the employees to form beliefs about a given worker's type. We argue that the model we develop is applicable to a variety of workplace situations where signaling models are not, because it allows a worker's decisions to provide information about other workers, as well as about himself.