

## Optimizing Scribe Resourcing to Improve Hospitalist Workloads

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**Abstract :** Having scribes help document patient records in electronic health record systems can improve hospitalists' productivity. But hospitals need to determine the optimum number of scribes to hire to maximize scribe cost effectiveness. Scribe attendance uncertainty due to planned and unplanned absences is a primary challenge. This paper presents simulation and analytical models to determine the optimum number of scribes for a hospital to hire. Scribe staffing practices vary from one context to another; different staffing scenarios are considered where having extra attending scribes provides or does not provide additional value and utilizing on-call scribes to fill in for potentially absent scribes. These staffing scenarios are assessed for different scribe revenue ratios (ratio of the value of the scribe relative to scribe costs) ranging from 100% to 300%. The optimum solution depends on the absenteeism rate, revenue ratio, and desired service level. The analytical model obtains solutions easier and faster than the simulation model, but the simulation model is more accurate. Therefore, the analytical model's solutions are compared with the simulation model's solutions regarding both the number of scribes hired and cost-effectiveness. Additionally, an Excel tool has been developed to facilitate decision-makers in easily obtaining solutions using the analytical model.

**Keywords :** hospitalists, workload, optimization cost, economic analysis

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