

Why does the 2nd shift (afternoon staffing) analysis not consider variation in workload by day of the week?

There are two reasons why this is so.

To view a 2nd shift staffing graphical analysis, open the [example report](#) used in my course. Search “2nd shift” without quotation marks. There are several pages.

First, when variation by day of the week is addressed by the 1st shift (OR efficiency) analysis ([click here](#) for lecture or [click here](#) for review article), two factors are modeled: service (i.e., unit of OR allocation) and day of the week. When variation by day of the week is addressed by the [2nd shift \(afternoon staffing\)](#) analysis, there are three factors: specialty team, day of the week, and time of the day. The 1st shift analysis does not need to consider time of the day as an independent variable, because OR time is allocated and cases are scheduled based on OR efficiency, thereby relating the dependent variable of workload with the time of the day at which cases are performed. For example, if there were 10 hours of cases, the 1st shift (OR efficiency) analysis would assume that the day would end at 5 PM, whereas the 2nd shift (afternoon staffing) analysis would make no assumption about when the workload would end. The result is that there is more uncertainty in an estimate from the 2nd shift (afternoon staffing) analysis than from the 1st shift (OR efficiency) analysis. Generally, results from the 2nd shift (afternoon staffing) analysis are such that uncertainties in estimates of appropriate staffing for combinations of team, day of the week, and time of the day exceed the variations among day of the week in appropriate staffing for combinations of team and time of the day.

Second, the 2nd shift (afternoon staffing) analysis is based on team (i.e., skill mix), not service (the unit of OR allocation). A limit to how much work can be done safely on any given workday is the number of ORs with staff having the skills to perform a case. Generally, teams will work every workday. The consequence is that, by design, little variation is expected by day of the week in how many cases are performed by each team possessing special skills.

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