

EXPEDITED PROTOCOL DEVELOPMENT: BOON OR BANE?

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Industries plagued by lengthy development times have always resorted to ad hoc resource allocation and expediting in an effort to reduce the development times. Instead of decreasing the time to market, these well meaning efforts result in firefighting, causing major problems leading to the frequent failure of the development activity. Ever increasing drug development times have lead National Institutes of Health to focus attention on efforts to decrease the drug development times. High priced drugs like cancer drugs have been at the center of these efforts, and expediting is a solution that is being tried in the cancer drug development process. In this paper a model is developed to study the effects of expediting on the cancer drug development process. The analysis of the model leads to interesting insights which will help in policy decisions on expediting in the drug development process. We see that, as the percentage of expedited studies in the system is increased the productivity of the system first increases, peaks when 16% of the studies in the system are expedited, and then the productivity begin to decrease. When more than 40% of the studies in the system are expedited, the productivity of the system goes below the base case value of 0% expediting, 100% expediting the productivity of the system is 30.8% below its base case productivity. We find that expediting can help in

increasing the productivity of the system, but beyond a certain point, expediting has a negative effect on system productivity.

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