Patient care in many healthcare systems consists of two phases of service: assessment (or triage) and treatment. It is sometimes the case that these phases are carried out by the same medical providers. We consider the question of how to prioritize the work by the medical providers to balance initial delays for care with the need to discharge patients in a timely fashion. To address this question, we present a multi-server two-stage tandem queueing model for a hospital emergency department (ED) triage and treatment process. We assume that all patients first receive service (i.e. triage) from the first station. After completing this service some patients leave the system for some other part of the ED. The remaining patients are served or await service from the second station where they may abandon before receiving treatment. We use a Markov decision process formulation and sample path arguments to determine the optimal dynamic policy for the medical service provider.

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