Objective of the program: Many hospital laboratories use separate workflows for the most urgent (“stat”) samples. The additional staffing, instrumentation, and reagents needed make this approach financially inefficient. The objective of this program was to demonstrate that with appropriate management and continuous real-time supervision, such separate workflows can safely be integrated into the general (“routine”) workflow of the laboratory. Furthermore, we quantified the financial savings that can be achieved with this approach.

Planning/research methods: Laboratory leadership reached out and met with the Emergency Room's (ER) leadership to assess their needs and service expectations regarding cardiac marker testing. We then collected data on the present level of service, performed the intervention, and collected data on the situation after the intervention.

Implementation methods: We discontinued the separate workflow for stat troponin samples sent from the ER of our hospital. Simultaneously, we started an intensive, continuous, real-time monitoring program of troponin turnaround times from the ER. At least once a day during the first six weeks after implementation, a medical director of the laboratory reviewed the turnaround time reports for these samples. When all samples were reported within the target time, the supervisors and staff of the shift were publicly congratulated. If there were samples that were not reported within the target TAT of one hour, the responsible supervisor was contacted, provided with the accession number(s) of the sample(s) in question, and asked for a written explanation for the delay and a brief corrective action plan. Recurring causes of service failures were addressed. Once the target turnaround time was consistently achieved, supervisors were instructed to run the turnaround time report themselves at the end of every shift, and to report any outliers.

Results: The elimination of the separate workflow for ER troponins had both clinical and financial benefits: before the intervention, less than 90% of all troponins were resulted within one hour; this improved to 99% after the intervention. The discontinuation of leases and service contracts for four instruments that had been used in the separate workflow, and of the continued purchase of calibrators, reagents, and proficiency testing materials for these instruments led to annual savings of $252,000. In addition, the approximately 2.2 FTEs who had been assigned to operate the now discontinued workflow allowed for annual savings in labor costs of approximately $154,000. Annual savings therefore totaled over $400,000.