

Case Studies: Better Use of Laboratory Testing due to Analyzing Test Ordering Pattern (ATOP®) Findings

Please note that ATOP findings and recommendations are highly dependent on an institution's willingness and ability to implement our suggestions. We are currently enrolling candidates for case studies to determine how we can help our clients better implement our suggestions, perhaps through educational efforts. If you are interested in participating, please contact us at atop@aruplab.com.

Please also note that the case studies below focus on only one ATOP issue for each client. A typical ATOP report may find five to ten different issues on which recommendations are made, with improved patient care and possible cost savings for each issue.

Due to client privacy issues, we are, unfortunately, unable to name all the clients in the case studies mentioned below.

Case Study #1: Emory Medical Center

When performing an ATOP review of Emory Medical Center, we noticed that Emory ordered an unusually large number of whole blood drug screens in one year. The amount seemed inappropriate, as it constituted 95 percent of ARUP's total volume for all clients of this particular test. When we brought this to the attention of an Emory pathologist, he discovered that Emory's kidney transplant protocol, which required whole blood drug screens, had been copied throughout other transplant protocols, even though urine drug screens are more appropriate in most settings. Emory corrected those transplant protocols, greatly reducing the volume of whole blood drug screens, improving patient care, and saving the difference in cost between whole blood drug screens and urine drug screens.

Case Study #2: Intermountain Healthcare

We review a standard set of commonly misordered tests with each ATOP report. One of the issues we sometimes discover is overuse of HIV-2 testing, which is only recommended by the CDC for use in rare circumstances. On a recent ATOP report, we noted that Intermountain Healthcare was ordering significant volumes of HIV-2 tests despite being in a low-risk area. This misordering was traced to an internal laboratory process, which was corrected, reducing the volume of ordered HIV-2 tests and saving patients and Intermountain Healthcare the costs and inconvenience of unneeded testing.

Case Study #3: Large Academic Medical Center

An issue we routinely examine in an ATOP report is the ordering of hepatitis C virus confirmations by RIBA. According to current CDC guidelines, RIBA confirmations should be performed only in follow up to low-positive HCV screens. During a recent ATOP review, we noticed that a client was ordering a large amount of RIBA HCV confirmation testing. Upon further investigation, it appeared that a RIBA confirmation was being ordered for nearly every positive HCV screen. In researching the issue, the medical center discovered that its HCV screen results were accompanied by an interpretive comment that encouraged RIBA confirmation. The client has since markedly reduced its use of RIBA, providing faster results to patients by eliminating one round of testing and saving money spent on unnecessary testing.

Case Study #4: Large Hospital Network

We offer yearly ATOP reviews to our clients. Some clients take advantage of this service yearly, and others less often depending on their needs. We performed an ATOP review for a large hospital network in 2005, and we made the recommendation that it discontinue ordering human papillomavirus low-risk genotype testing. High-risk genotype testing may be useful for cervical cancer screening, but there is no current clinical indication for low-risk genotype testing. By the time of our next ATOP review for this hospital system in 2008, it had markedly reduced its orders for low-risk genotypes. By eliminating these tests, clinicians can focus on following up with patients who may actually be at risk and save patients and the health care system the costs of the clinically unnecessary low-risk testing.