The advent of assisted reproductive technology (ART) has radically changed the management of infertile couples. The repercussion of this change on the activity of a diagnostic andrology laboratory has not been previously assessed. This study aims to chart the profile of patients referred to a clinical andrology laboratory for diagnostic purposes within a comprehensive infertility program in a teaching hospital with services for conventional therapies and ART to resolve couples' infertility. We examined data from 805 men assessed for their fertility potential in a tertiary care center between 1998 and 2003. The parameters considered were: male race, insurance status, referring physician, and the working diagnosis. Among the 805 patients, 783 had documented ethnicity (white - 82%, African-American - 7%, Asian – 2%, Hispanic – 2%, other – 7%) and 85% had medical coverage for their infertility evaluation. The proportion of patients who were covered by health insurance was similar among different ethnic groups ($\chi^2 = 14.3, P = 0.09$). Thirty one percent of patients were referred by an in-house gynecologist or urologist, 48% by primary healthcare practitioners, and 21% had no documented source of referral. There was no significant difference in the incidence of different causes of infertility among different ethnic groups ($\chi^2 = 28.45, P = 0.77$). However, the proportion of patients diagnosed with post-vasectomy obstruction or idiopathic infertility was markedly lower than previously reported in literature. On the other hand, the proportions of men presenting with other etiologies were in agreement with previous reports. Our results demonstrated a redistribution of patient activity within a comprehensive fertility program. The low percentage of patients diagnosed with post-vasectomy obstruction may be attributed to patients directly undergoing ART to resolve their infertility. In our experience, having a specialized andrology laboratory with an in-house reproductive endocrinologist and urologist (with training in male infertility) is important in establishing the correct diagnosis for couples seeking help, thus reducing the number of patients categorized as idiopathic infertility. This shift should be of interest to healthcare planners.