Integration of personalized medicine at Duke University

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In this age of personalized medicine, genetic and genomic testing is expected to become instrumental in health care delivery, but little is known about actual implementation in clinical practice. We surveyed 192 individuals at a leading academic medical center (Duke University Medical Center) to examine the scope of genetic and genomic testing uptake. We assessed (a) providers’ use of genetic and genomic testing options and indications; (b) providers’ awareness of pharmacogenetic applications; (c) providers’ perceptions of patient interest in genetic and genomic testing; (d) providers’ opinions on returning research-generated genetic test results and (e) whether Duke has provided sufficient tools and resources to providers to permit the implementation of genetic and genomic testing into their clinical practice. Survey results indicated that while Duke providers maintain enthusiasm for genomic technologies, use of genomic tools outside of research has been limited, consistent with findings at other similar institutions. Most clinicians currently use family history routinely in their clinical practice, but less than 20% of clinicians use pharmacogenetics in their practice. Only two respondents correctly identified the number of pharmacogenetic applications with indications on drug package inserts. We also found that a large number of providers support the return of personalized information about genetic research to participants and believe research participants have a right to their individual research-based results. A minority of respondents felt that research results should only be returned if it is clinically actionable and life-threatening and only 1% felt results should never be returned. Nearly half felt research results should be returned according to participant choice. Our results demonstrate how clinicians are actually implementing genomic technologies and challenges medical institutions face with the implementation of genetic and genomic testing into patient care.

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