Precision Breast Cancer Screening: An Iterative Learning Health System Intervention

A Learning Health System (LHS) supports evidence generation from clinical activities and implementation (or de-implementation) according to what is learned in a virtuous and repeated cycle of rigorous adaptation. Our LHS at the University of Wisconsin (UW) is built upon a collaboration between the UW CTSA-supported Institute for Clinical and Translational Research (ICTR) and the UW Health System. The development artificial intelligence tools to predict breast cancer risk and the successful implementation of a patient-centered, evidence-based, EHR-embedded shared decision-making (SDM) tool for breast cancer screening illustrates the power of an emerging LHS infrastructure. ICTR support, including biomedical informatics, dissemination and implementation (D&I), team science, and patient engagement resources enabled a multidisciplinary team to deliver, test, and improve this SDM tool at the point of care informed by Patient Advisory Committees, physician stakeholders, and institutional leadership.

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