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Family Tree Can Lead to Timely Screening of At-Risk Patients

Mapping a patient's family tree could identify additional risks and drive patients to more timely screenings as most doctors and nurses often use a paper checklist or brief interview to identify risk factors for heart disease and cancer, according to a new study from Duke Health.

The study, published on 3 March in the journal *Genetics in Medicine*, recruited 488 patients at two community clinics in Greensboro, North Carolina, to use a web-based programme called MeTree to map their family health history.

MeTree was designed specifically for the study and provided recommendations on five specific conditions: thrombosis, breast cancer, ovarian cancer, colorectal cancer, and hereditary cancer syndrome. Of the 174 cases in which patients were at increased risk, only two had previously undergone more in-depth monitoring of their health for the diseases they were at risk for.

Authors found an unexpected benefit, said lead author Lori Orlando, M.D., an associate professor of medicine at Duke and associate director of the Duke Center for Applied Genomics and Precision Medicine. An in-depth family history, which took about 25 minutes to complete, also identified patients who assumed they were at high risk for disease, but weren't.

"Some people who were getting screenings such as yearly breast MRIs were able to stop getting an invasive or expensive procedure they really didn't need," she said.

While patients were eager to participate, clinicians were reticent, Orlando said. "They felt it would add time, but very quickly they started seeing the value of the reports."

Companies have marketed similar tools to physicians, but there is little research on the impact of such programmes for mapping medical histories, Orlando said. The Duke team is currently expanding its research to test a more complex version of the software and ways to increase buy-in from clinics.

Pending the results of their next study, the team hopes to publish the software for public use for free, or for a nominal fee that would defray the costs of hiring a third party to routinely update the programme, Orlando said.

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Journal Reference:

1. Lori A. Orlando, R. Ryanne Wu, Rachel A. Myers, Adam H. Buchanan, Vincent C. Henrich, Elizabeth R. Hauser, Geoffrey S. Ginsburg. **Clinical utility of a Web-enabled risk-assessment and clinical decision support program** . *Genetics in Medicine*, 2016; DOI: 10.1038/gim.2015.210 http://dx.doi.org/10.1038/gim.2015.210

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