

National clinical database to help reduce number of miscarriages

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A new national database could help relieve the misery of miscarriage for thousands of women.

Researchers from the University of Warwick's Institute of Digital Healthcare (IDH) are using data to help discover why some pregnancies fail.

The initiative is part of the National Tommy's Centre for Early Miscarriage Care and Research (NEMC) which is the first in the UK—and the largest in Europe. The University of Warwick has been chosen as a partner, together with the University of Birmingham and Imperial College London. The NEMC is funded by Tommy's, the baby and pregnancy charity.

The team at IDH is led by Professor Theo Arvanitis, Chair in e-Health Innovation and Head of Research. He said: "Around 250,000 miscarriages occur every year, and roughly a third of women suffer more than one of these traumatic events. We'll also be creating a national database, initially by taking information from all three centres.

"Once we've brought together all the existing online clinical data, we can add new data so it will effectively act as a registry for information on miscarriages. We'll then be able to harness the power of this data to identify the major influences on this condition."

An online electronic patient record system will be designed and

constructed by IDH which will link into three Tommy's Centres (in Coventry, Birmingham and London). The clinical details and histories of women attending the centres will be entered or uploaded from existing hospital systems into the collaborative online system. The results of current and additional Tommy's investigations will also be uploaded; these will include thyroid function tests thrombophilia screening, coeliac disease screening and additional Tommy's investigations such as endometrial tests, sperm function and DNA fragmentation tests.

The system will include links to general practice databases, hospital maternity systems, electronic clinical results systems and a module for self-reported patient outcomes, to enable collection of information from patients subsequently attending elsewhere than the participating centres. Thus comprehensive pregnancy outcome data will be available for the purposes of existing and future studies in addition to routine clinical practice

It is expected to take fewer than two years to assemble the initial tranche of data. At the same time the University of Warwick's researchers will be joining doctors from University Hospital Coventry & Warwickshire to investigate the causes of early miscarriage.

Prof. Arvanitis added: "We hope to start a pilot after two years, and by year four to be building the database at a national level. There has already been much research into miscarriages, so we can gradually create a fusion of data and clinical trials to discover the best outcomes.

"The figure of 250,000 miscarriages a year is between 10% and 15% of all births, so a surprisingly large percentage. Age, general health, previous history, environment and lifestyle are all major factors, and smoking remains a significant influence, but until now there hasn't been the resources to create a predictive model, which allows data-driven conclusions to be reached."

Provided by University of Warwick

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