

## **Student Elective Report 2025**

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**Topic of Elective: Perinatal Pathology**

**Department where elective was completed: University Hospital Galway Department of Pathology**

When an expectant mother or a mother who has just delivered is diagnosed with a placental pathology, they are presented with their pathology report. This report is either given to them directly or explained by obstetricians in the clinic. These reports are written in clinical language which can be difficult for patients to understand.

My supervisor, Dr Laura Aalto, brought the title of the project forward as she identified that there are currently no leaflets or booklets available in the Obstetrics unit in University Hospital Galway to aid in the patient's understanding of their diagnosis

If a patient were to look online via the HSE, they would be limited to direct information on sections titled "Placenta Previa", "Pre-eclampsia" and "Gestational Diabetes". A brief section on placenta accreta is available on the section titled "getting pregnant after a caesarean". However, in order to find this information, prior knowledge that having multiple caesarean sections is a risk factor for placenta accreta is required.

The aim of this project was to produce patient information leaflets/booklets that explained the function of the placenta, common conditions in the placenta and uncommon but serious conditions that have high recurrence rates in subsequent pregnancies. This would hopefully aid in decreasing the impact of lowered health literacy on attending follow-up appointments, compliance with recommended treatment and informed consent.

I began with researching the conditions chosen to be included in the booklet. These included placenta previa, placenta accreta, placenta increta, placenta percreta, circumvallate placenta, massive perivillous fibrinoid deposition, villitis of unknown etiology, chronic histiocytic intervillitis, maternal vascular malperfusion, fetal vascular malperfusion and acute chorioamnionitis.

The research was undertaken using sources I obtained via the National Library of Medicine via PubMed and Textbooks that I accessed via the James Hardiman Library

Once the necessary information was compiled, I reformatted and rewrote the information in patient-centred language. I achieved this by following the HSE resource "Guidelines for Communicating Clearly using Plain English with our Patients and Service Users"

I designed and assembled the booklet via the app Notability for iPad.

This project originally aimed to include gross and histologic diagrams that were converted to illustrations via an AI algorithm. However, shortly after commencing the project, I decided to avoid using AI due to ethical and environmental concerns. I instead created the illustrations by tracing gross and histological pictures manually on an iPad using the app Ibis Paint X. This process proved to be time consuming and tedious however it provided me with accuracy and full creative control over the images produced.

The histopathology portion of this project focused on the conditions Villitis of Unknown Aetiology and Chronic Histiocytic Intervillositis. The Illustrations were created to clearly explain to patients the aetiology of the disease.

Although the summer is nearly over, I don't believe that my time with this project is over. There is still so much that can be added and improved. The booklet will need to be reviewed by obstetricians, and a focus group will need to be gathered to test its patient friendly approach. The final goal of this project is to submit the booklet to the HSE with the goal to have it published and distributed in University Hospital Galway and other hospitals around Ireland. We aim to have it distributed as a physical booklet and in QR code format. A physical booklet will assist those who may not have the required technological literacy skills to use a digital format while the QR code format will be beneficial for promoting a more environmentally conscious approach to healthcare.

This project has furthered my interest in pathology, especially histopathology. I hope to continue with research in placental pathology. There are still so many conditions that are only marginally understood, and this project has motivated me to complete research and aid in our understanding of these conditions

Finally, I would like to thank my supervisor Dr Laura Aalto for guiding me through this project and for introducing me to placental pathology. I am also extremely grateful to the BDIAP for providing the funding for me to be able to complete this project and for giving me the opportunity to hopefully make a difference to our patients.

