



About the Innovator

Claire Ahern is a senior radiographer in Breast Check West. Claire trained in St Bartholomew's School of Radiography, London. In addition, Claire studied Electronic Engineering and holds an MSc in Telecommunications from University College London. After working as an engineer until 2007 Claire returned to radiography to work part time with BreastCheck, the Irish breast cancer screening service, where she is currently the QA (Quality Assurance) radiographer representative. Claire's Interest in art, creative writing and film coupled with a diploma in technology enhanced learning at NUIG, combined to create her award winning "AniMammo" project. Claire won the individual category in the Galway regional final and the Bank of Ireland award for Best Innovation in Healthcare Award (Individual) at the HSE-HIHI Spark Ignite National Final 2021 with 'AniMammo'

About Health Innovation Hub Ireland

Health services in Ireland and across the world are increasingly seeking innovations in health-related technology, products and services to drive improvements in the quality, access and value of healthcare delivery. Health Innovation Hub Ireland (HIHI) brings enterprises and healthcare professionals together to test, validate and help commercialise innovative technologies, products and services, while enabling greater innovation in healthcare delivery. HIHI supports the building of an innovation culture within the health service through a suite of knowledge building resources and guidance for healthcare professionals on the key steps from ideation to

adoption. HIHI works with those with ideas that address unmet healthcare needs to develop new products and processes within the healthcare system and stimulate a pipeline of new needs driven innovations for the future.



The Healthcare Challenge

Breast cancer is the most common type of cancer in women in Ireland (excluding skin cancer). About 1 in 8 women will get breast cancer, and 8 in 10 cases will be in women aged over 50 years. BreastCheck is the Irish population based screening programme, inviting women aged 50 up to 70 years of age for a mammogram every two years. Current available information with regards to a mammographic procedure is mainly text based. There are a number of animated and live action videos available online, but the information is

not specific to the actual procedure. It is the role of the radiographer to position the client and to explain the procedure to them. However, further information sharing would be beneficial to understand the process and what may cause poor images, recalls, patient anxiety, and low participation:

Women invited for a screening mammogram are well women and they can be resentful of the procedure, anxious about compression and results and concerned about radiation.



The solution

Animating the mammogram, AniMammo, enables the presentation of the information in a realistic and engaging format. Visual is more powerful than text and is better understood and remembered. The animations will be clearly defined and ideally timed at two minutes or less so that users can directly access information and know how long it will take to view.

The design is generic, endeavouring to provide as much information through illustration and to be easily translated into multiple languages for all users. The contents will inform and prepare clients for the

mammographic procedure by showing how to get into position, what anatomical detail is required in the final image, what the final image looks like, and what it would look like when positioning or compression is inadequate. Providing accessible visual comprehensive information facilitates informed consent and client empowerment.

A better understanding of the procedure may lead to an enhanced service user experience, facilitating them to be active participants in their own care. Understanding the reason behind the instruction combined with visualising the imaging outcome of poor positioning

and compression can improve acceptance and compliance. This can lead to improved image quality with associated improved outcomes for the service users in terms of radiation safety and diagnosis and for radiographer ergonomics. Health promotion and other advocacy organisations

can use the videos as a tool to promote the service and address concerns, in particular participation. The organisation benefits from digitisation, regulatory and standards compliance. Financial benefits may accrue from improved participation, improved ergonomics and a reduction in repeat imaging.



HSE-HIHI Spark Ignite

The Health Innovation Hub collaborated with the Office of Nursing and Midwifery Service Development (ONMSD), National Doctors Training and Planning (NDTP), the National Health and Social Care Professions Office (HS CP), and the Galway Local Enterprise Office to deliver the only bottom up, staff facing, innovation competition open to all HSE staff. The programme received over 180 applications from all disciplines and grades across the HSE. Thirty-six applications were selected to attend an innovation workshop to develop their idea by building a business proposition and preparing a pitch. The workshop participants pitched their ideas to a panel of experienced judges to win prize funding to develop their idea towards reality.

Outcome Report/ Next Steps

Claire's next steps are to create short, impactful, artistic animated videos and conduct a pilot study to capture the benefits of better-informed service users **on the service (BrestCheck)**, scan efficiencies, and patient attendance, experience, and outcome. An understanding of the procedure and the co-operation required from clients may lead to reduced costs associated with repeat images during appointment and 'technical recalls' where the radiologist, upon image review, is not satisfied with the quality.

Role of HIHI

Through HSE-HIHI Spark Ignite, Claire developed a prize-winning presentation displaying the need for a solution in this space from a patient, clinical, and commercial perspective. HIHI helped Claire to highlight the financial and clinical benefits, demonstrated increases in efficiencies, and the scalability of the solution. Claire's idea for 'AniMammo' won the individual category in the Galway regional final and was awarded the Bank of Ireland prize for Best Innovation in Healthcare Award (Individual) at the national final with her innovative solution.

HIHI will continue to work with Claire to develop this project further through the development of the content video and advising on the development of a meaningful pilot showing the benefits for both the healthcare system and for service users.



Testimonial

My participation in the HSE-HIHI Spark Ignite competition empowered the progression from idea and proposal to pitch and presentation in a well-organised and supportive environment; the webinars, mentor discussions and breakout sessions were invaluable! I am delighted to have funding and support for the next steps in developing the product.

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