



**PWYLLGOR DIWYLLIANT, POBL A DATBLYGU SEFYDLIADOL  
PEOPLE, ORGANISATIONAL DEVELOPMENT & CULTURE COMMITTEE**

<b>DYDDIAD Y CYFARFOD: DATE OF MEETING:</b>	29 October 2024
<b>TEITL YR ADRODDIAD: TITLE OF REPORT:</b>	Advancing Collaborative Practice: Progress Report towards the Interprofessional Education Plan
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**Pwrpas yr Adroddiad (dewiswch fel yn addas)**

**Purpose of the Report (select as appropriate)**

Er Sicrwydd/For Assurance

**ADRODDIAD SCAA  
SBAR REPORT**

**Sefyllfa / Situation**

The ethos of Interprofessional Education (IPE) suggests ‘those that work together, train together’. Research demonstrates IPE leads to improved outcomes for our patients and communities. Hywel Dda University Health Board’s (HDdUHB) IPE Strategy promotes that all staff within a patient’s pathway, including porters, medical records and ward clerks, should be involved in education and system learning. HDdUHB needs to recognise the true value of IPE, incorporating simulation to not only improve the learning experience, but to demonstrate the advancement in education.

IPE is at the centre of improved staff development to deliver holistic, patient-centred care. The IPE Report (Appendix 1) outlines the work undertaken towards the IPE agenda aligned with the IPE plan, an analysis of works and intended next steps. It aims to identify progress and impact, whilst outlining the risks, opportunities and challenges.

**Cefndir / Background**

HDdUHB’s vision is to be an exemplary provider of healthcare education and development that benefits all staff, reflecting the rurality of the Health Board’s footprint. Working towards the vision, in February 2023, the People and Organisational Development Culture Committee approved the Interprofessional Education Plan 2023- 2026.

This report demonstrates the work carried out towards the Planning Objective: Delivery of a Workforce Education and Development Plan. It demonstrates an increase in the number of IPE opportunities across medical, clinical and wider workforce, including how simulation is being used to positively impact patient safety and experience. The progress also aligns with the Health Education and Improvement Wales (HEIW) Simulation-Based Education and Training (SBET) strategy and supports achievement towards the Welsh Government National Workforce Implementation Plan: Addressing NHS Wales Workforce Challenges. Recognising the organisation’s six key domains within Targeted Intervention (TI), this work will also support the organisation in improving its quality of care, performance and outcomes.

Evidence demonstrates that bringing professionals together from a plethora of disciplines to learn collaboratively, improves patient care in several ways.

Through three funding streams (HEFCW, Charities and Health Board investment), work to date has piloted IPE across staffing groups and demonstrates strong collaborative practice. The report provides an overview of IPE drivers, the progress to date through several programmes of work and the impact, alongside the next steps to maximise IPE opportunities and future proof its concept.

Operationalising the IPE strategy has posed challenges to overcome, but the report evidences the collective commitment displayed and an opportunity to drive IPE forward within HDdUHB.

### Asesiad / Assessment

The key points within the report are:

- The IPE plan outlined a number of intended outcomes.
- The financial investments from HEFCW, Charities Funding Bid and the Health Board.
- Programmes of work including:
  - Future Workforce School Engagement
  - Virtual reality a Welsh Reality
  - High Fidelity Simulation-based education equipment
  - Supporting the development of our educators
  - Interprofessional learning:
    - Assessing, recognising and escalating a deteriorating patient.
    - Major haemorrhage training
    - Simulated practice for infrequent events e.g. emergency airway assessment
    - Intubation and ventricular fibrillation cardiac arrest scenarios
    - Embedding simulated learning within PROMPT training
    - Conflict resolution
    - Emotive conversation in palliative care
- Opportunities of IPE
- Challenges of IPE
- Risks of IPE
- Systems and quality learning

Within each programme of work, the drivers, actions, impact, and subsequent steps were explored. The programmes of work have demonstrated measurable improvements in competencies and confidence in both clinical and non-clinical staff.

There has been significant progress made through the programmes of work, and learning provides a robust foundation to improve the Health Board's IPE offer which will provide enhanced collaborative practice, further increased confidence of learners and educators and ultimately improved patient care.

Advancing IPE includes widening the reach of disciplines and environments, and the continuation of evaluation is imperative in refining the offer of IPE.

### Argymhelliad / Recommendation

This report outlines the impact that IPE and simulation has had on patients and staff in terms of interprofessional communication, positive impact on the quality of patient care and the move to updating teaching models in line with best practice.

PODCC are asked to:

- RECEIVE ASSURANCE from the progress made towards the IPE strategy, noting the impact made on quality of education, future workforce experiences, development of educators.
- NOTE the risks highlighted as part of the report.
- APPROVE the System and Quality Learning approach as a strategic focus to continue embedding IPE and fostering collaborative working practices.

An updated action plan paper will be presented to the next Strategic People Planning Education Group (SPPEG).

**Amcanion: (rhaid cwblhau)**

**Objectives: (must be completed)**

<p>Committee ToR Reference: Cyfeirnod Cylch Gorchwyl y Pwyllgor:</p>	<p>2.2 To provide assurance to the Board on the implementation of the UHB's Workforce and OD Strategy, and the all-Wales Health &amp; Social Care Workforce Strategy, ensuring these are consistent with the Board's overall strategic direction and with any requirements and standards set for NHS bodies in Wales.</p> <p>2.4 To receive an assurance on delivery against all relevant Planning Objectives falling under Strategic Objectives 1 (Putting people at the heart of everything we do), 2 (Working together to be the best we can be), 3 (Striving to deliver and develop excellent services) and 4 (The best health and wellbeing for our communities), in accordance with Board approved timescales, as set out in Health Board's Annual Plan</p>
<p>Cyfeirnod Cofrestr Risg Datix a Sgôr Cyfredol: Datix Risk Register Reference and Score:</p>	<p>Not Applicable</p>
<p>Parthau Ansawdd: Domains of Quality <u>Quality and Engagement Act</u> (sharepoint.com)</p>	<p>1. Safe 4. Efficient 6. Person-Centred</p>
<p>Galluogwyr Ansawdd: Enablers of Quality: <u>Quality and Engagement Act</u> (sharepoint.com)</p>	<p>4. Learning, improvement and research 5. Whole systems perspective</p>
<p>Amcanion Strategol y BIP: UHB Strategic Objectives:</p>	<p>1. Putting people at the heart of everything we do 2. Working together to be the best we can be 3. Striving to deliver and develop excellent services 5. Safe sustainable, accessible and kind care</p>
<p>Amcanion Cynllunio Planning Objectives</p>	<p>1 Workforce Stabilisation</p>

Amcanion Llesiant BIP: UHB Well-being Objectives: <a href="#">Hyperlink to HDdUHB Well-being Objectives Annual Report 2021-2022</a>	2. Develop a skilled and flexible workforce to meet the changing needs of the modern NHS 5. Offer a diverse range of employment opportunities which support people to fulfill their potential 8. Transform our communities through collaboration with people, communities and partners
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<b>Gwybodaeth Ychwanegol: Further Information:</b>	
Ar sail tystiolaeth: Evidence Base:	Outlined in attached report
Rhestr Termau: Glossary of Terms:	Outlined in the attached report
Partion / Pwyllgorau â ymgynhorwyd ymlaen llaw y Pwyllgor Diwylliant, Pobl a Datblygu Sefydliadol: Parties / Committees consulted prior to People, Organisational Development & Culture Committee:	Elements of this report have been submitted to Charities Committee as part of a bid to support Remote Interprofessional Simulation Equipment

<b>Effaith: (rhaid cwblhau) Impact: (must be completed)</b>	
<b>Ariannol / Gwerth am Arian: Financial / Service:</b>	e.g. financial impact or capital requirements: (if yes, please complete relevant section of the Integrated Impact Assessment Template available via the link below) <a href="#">Integrated Impact Assessment Template</a>
<b>Ansawdd / Gofal Claf: Quality / Patient Care:</b>	Impact on quality and patient care highlighted as part of the document. This includes impact on patient safety and quality of education & development provision.
<b>Gweithlu: Workforce:</b>	Positively impacts the quality of education and development, the support given to educators as well as supports the collaboration between professions.
<b>Risg: Risk:</b>	Risks highlighted in the content of the document.
<b>Cyfreithiol: Legal:</b>	Not Applicable
<b>Enw Da: Reputational:</b>	Positive reputational opportunities based on the work undertaken with schools, the ASPiH conference and demonstrating investment in IPE and supports a positive attraction strategy.
<b>Gyfrinachedd: Privacy:</b>	Not applicable
<b>Cydraddoldeb: Equality:</b>	Aspects of equality highlighted in the document.





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Hywel Dda  
University Health Board

# Advancing Collaborative Practice: Progress Report on the Interprofessional Education Plan



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## **Glossary of Terms**

AHP: Allied Healthcare Professionals

ANTT: Aseptic Non-Touch Technique

ASPiH: Association for Simulated Practice in Health

CAIPE: Centre for the Advancement of Interprofessional Education

CPD: Continuing Professional Development

DKA: Diabetic ketoacidosis

DNACPR: Do Not Apply Cardiopulmonary Resuscitation

EoS: Essentials of Simulation

ETI: Invasive intubation

GP: General Practice

HCSW: Healthcare Support Worker

HDdUHB: Hywel Dda University Health Board

HEI: Higher Education Institutions

HEIW: Health Education Improvement Wales

HEFCW: Health Education Funding Council Wales

ITU: Intensive Therapy Unit

IPE: Interprofessional education

IV: Intravenous

MDT: Multi-Disciplinary Team

MHP: Major Haemorrhage Procedure

NA: Nursing Anne Simulator Manikin

NEWS: National Early Warning Score

NMC: Nursing and Midwifery Council

OSCE: Objective Structured Clinical Examination

PDN: Professional Development Nurse

PODCC: People Organisational Development Culture Committee

PROMPT: Practical Obstetric Multi-Professional Training

SBET: Simulation Based Education and Training

SMOTS: Scotia Medical Observation and Teaching System

SPPEG: Strategic People Planning Education Group

SPENI: Systematic Physical Examination of the Newborn Infant

TI: Targeted Intervention

WAST: Welsh Ambulance NHS Service Trust

VF: Ventricular Fibrillation

VR: Virtual Reality

### **Terminology:**

Fidelity: multi-dimensional concept corresponding to the degree of realism created through the selection of simulation equipment, setting, and scenario.

In Situ: Simulations that occur in the actual clinical environment and whose participants are on-duty clinical providers during their actual workday.

## **1.0 Introduction**

The ethos of Interprofessional Education (IPE) suggests ‘those that work together, train together’. This report outlines the progress made towards the implementation of an Interprofessional Educational Plan (IEP) within HDdUHB, which aims to foster collaborative learning among health professionals from diverse disciplines. The ultimate goal of driving Interprofessional Education (IPE) is to improve patient care outcomes through teamwork, communication and mutual understanding of roles and responsibilities. Recognising the historical challenges associated with uni-professional working, the IEP emphasises the importance of breaking down silos between professions and creating a culture of shared knowledge and learning. The interprofessional approach is increasingly seen as essential in delivering holistic, patient-centred care, particularly in complex healthcare environments. Through this ongoing effort, HDdUHB seeks to not only enhance the professional development of healthcare staff but also ensure that the communities we serve benefit from more integrated, efficient and responsive care.

Recognising the current financial climate, this report outlines the investment through various funding streams for 2023/2024 and 2024/2025 financial years and the impact of the collective funding. It should be noted that although the impact of some funding streams can be demonstrated, due to the progressive nature of the work undertaken, this report considers this holistically.

This report will highlight the drivers for the work undertaken to date, outputs, impact of work undertaken and identified next steps. The work undertaken reflects true IPE, which includes all staff along a patient's pathway, including porters, medical records and ward clerks who have participated in learning outlined in this report. Operationalising the IPE strategy has raised significant challenges due to the vast educational systems within HDdUHB, although reflects how various teams have come together and demonstrated a collective commitment. It should be noted that whilst the report aims to measure impact of the IPE and simulation activities undertaken, these interventions have been piloted on a small scale and therefore the true impact will be evident as IPE work is deeply integrated, longitudinally.

Work highlighted within the report form part of the milestones to achieve the key outcomes of the Interprofessional Education plan (appendix 1) outlined below:

- Ensure that the learning needs are met for all professional groups in terms of curriculum delivery and/or personal development plans.
- Provide equitable access to learning opportunities for all professional groups.
- Foster a supportive, engaging, equitable and compassionate learning environment and culture.
- Develop the profile of interprofessional education across the organisation with complete engagement from the executive team.
- Ensure a robust, interprofessional educational governance structure is in place.
- Embrace all opportunities that allow for the practicable integration of medical and non-medical education.
- Ensure that the Board is sighted on risks associated with not providing high-quality education and development.
- Respond to advances in technology.
- Respond to changes in the workforce, ensuring robust and transparent resource and financial planning.

## **2.0 Findings**

### **2.1 Financial investment**

Within HDdUHB’s various educational teams, there is a significant knowledge, experience and skills in the design, delivery and evaluation of learning programmes, although the use of simulation, debrief and commitment to IPE varies significantly. To support collaboration, embed IPE and support educators, funding has been accessed as a collective resource to support staff development and patient care, regardless of role or profession, managed by the People Development Team. Funding sourced is outlined below:

Funding Stream	Overview of funding	23/24 £	24/25 £	Total £
HEFCW (Externally Accessed)	“Virtual Reality a Welsh Reality” Swansea University & HDdUHB Partnership bid with Higher Education Funding Council of Wales (HEFCW) grant. Expanding immersive learning education to address growing clinical education challenges with innovative solutions. The application enabled a Simulation-Based Education (SBE), Virtual Reality (VR) solution to support and enhance healthcare training.	*£895,000		£895,000
Charities Funding Bid	Funding for a high-fidelity clinical simulation manikin, audio/visual recording equipment and simulation design software licences to promote and facilitate IPE using a simulation-based education methodology.		£56,461	£56,461
HB Investment	Funding utilised for educator development across all professions, providing basic, intermediate and advanced development opportunities	£43,237	£117,500	£160,737
HEIW Funding (Externally Accessed)	Staff costs to drive IPE, supporting simulation and coordinate interprofessional educational opportunities	£48,482	£48,482	£96,964
<b>Total Investment</b>		<b>£986,719</b>	<b>£222,443</b>	<b>£1,209,162</b>

\* It should be noted that although the HEFCW bid generated £895K, this funding was managed through Swansea University, with the output generating scenarios for use within HDdUHB.

Recognising how funding supports many IPE/simulation initiatives, progress to date has been divided into the following programmes of work:

- Future Workforce Engagement
- Resource Development
- Educator Development
- Interprofessional Learning
- Maximising Opportunities and Future Proofing Interprofessional Education

## 2.2 Programmes of work

### 2.2.1 Future Workforce Opportunities

#### What was the Driver?

Engaging with schools to attract and inspire our future workforce is integral to ensuring a workforce pipeline as part of our strategic workforce planning and recruitment strategy. Previously, despite significant improvement in resources used, these future workforce sessions focussed on traditional presentation methods, which lacked participation from students and failed to show the breadth of careers and practical application of roles.

#### What did we do?



Engaging simulation scenarios were designed, providing greater opportunities to highlight the potential careers available. Two school engagement events have been delivered to date, using the manikin as an experiential learning tool for students to engage in various clinical simulations. The engagement events allowed students to learn how to care for patients with several illnesses, how to recognise a deteriorating patient and to use communication skills in providing appropriate care. The equipment created a highly realistic environment, where the students were able to talk to the manikin and take a series of measurements such as blood pressure, heart rate and breathing rate. Using an IPE model, the events have so far included Intensive Therapy Unit (ITU)

consultants, a nurse manager and practice educators, demonstrating skills and talking about their respective careers.

### What impact did it have?

Feedback highlights that prior to engagement with the manikin and clinical experts, only 35% of students had considered a career within HDdUHB. Following the session this had increased to 63%, with 100% of students enjoying the practical aspect of the session. 86% of students would like to participate in future sessions and 100% of teachers/facilitators wanting to repeat and expand the number of events they organise.



The transportability of the manikin has enabled visits to multiple schools and further education sites, which has proved to be a real success with students and teachers. The students provided feedback that expressed their enjoyment and interest in having the opportunity to get involved.

#### ***Case Study: Educating on gender assumptions.***

*During the sessions the students were asked which of the interprofessional faculty was the Consultant Intensivist and which was the ITU nurse. Nearly all of the students chose the male as the Consultant, when in fact the female was the senior Consultant for HDdUHB Intensive Care Unit. It was a revelation to many of the students that the ITU Nurse was male and the ITU Consultant Doctor was female, this led to focussed discussion on consideration of career choice based on interest and motivation rather than gender.*

### What next?

Next steps involve increasing the number of school interactive sessions that utilise simulation-based activities to demonstrate the variety of available professions. This will be achieved by widening the professional champions, incorporating more careers. In addition, there will be a focus on how to create engaging sessions to promote non-clinical careers, using engaging interactive learning interventions.

## 2.2.2 Resource Development

### Virtual Reality a Welsh Reality HEFCW Bid

#### What was the Driver?

Following research into how to fully embed IPE into HDdUHB, which included collaboration with health boards in NHS England and visiting Devon and Torbay Health Trust, it was evident that there was limited knowledge and resources on how to fully utilise Virtual Reality to enhance the learning experience. Recognising the need for external knowledge and skills, discussions began with Swansea University, which soon matured into collaborating to identify how they were able to support the Health Board.

#### What did we do?

Swansea University and HDdUHB partnered to access funding to deliver a HEFCW Virtual Reality project. This involved identification of key stress areas within the NHS for delivering education including resource constraints, staff shortages and high service pressures. This highlighted a growing need for innovation within educational design, utilising new technologies, offering effective experiential learning, with capacity for large scale and remote delivery. Whilst Virtual Reality (VR) employs state of the art technology, its affordability makes it a viable educational resource for a health service operating under extreme financial constraints. A VR platform can offer multi-player access, allowing IPE training in a highly immersive environment. The technology offers the potential for teams to engage in IPE learning virtually, supporting rural challenges and possible reduction in travel costs, increasing equity.

Following a collaborative consultation period, seven subject areas were agreed for VR modules, which included themes such as healthcare team and communication scenarios, emergency management actions, holistic and empathetic patient care, and a variety of clinical skills practice and assessment sessions. The selection of the seven modules included a needs assessment delivering potential impact across multi-professional teams, departments, programmes and locations, ensuring equitable access for the wider workforce.

The seven modules selected were:

- Delirium: Designed with health board subject matter experts. Provides an immersive experience of a confused patient admitted to hospital.

- Systematic Physical Examination of the Newborn Infant (SPENI): Designed with health board subject matter experts. Provides the opportunity to practice this critically important examination.
- Blood Transfusion: Designed with health board subject matter experts. Provides multiple learning experiences around administration of blood and blood products.
- Aseptic Non-Touch Technique (ANTT): Designed with health board subject matter experts. Provides the opportunity to practice wound dressing change using critically important technique to reduce the risk of infection.
- Hypovolemic Shock: An interactive multi-player module that allows IPE team response practice to a life-threatening condition.
- Do Not Apply Cardiopulmonary Resuscitation (DNACPR):
- Diabetic ketoacidosis (DKA): An interactive multi-player module that allows IPE team response, practice and diagnosis of a life-threatening condition.

What impact did it have?

Having designed the seven modules, the testing and evaluation phase is underway. Commencing in July 2024, subject matter experts from the Blood transfusion, Paediatric/Neonate and Midwifery development teams attended faculty training days to learn how to facilitate evaluation sessions. Within these sessions various health board staff engage with the VR modules and complete comprehensive pre and post evaluation forms as part of the research project. This phase is expected to last until March 2025, whereby there is an expectation to have enough data to begin the analysis and findings phase.



Testing outside of 'mandatory' training has supported the attraction of multi-professional staff, uniting them to evaluate the modules, facilitate IPE learning and collaborate. Sessions have included non-clinical staff, paediatric and obstetric doctors, nurses, midwives and support workers. This project is also fostering improved collaboration between HDdUHB and Swansea University, both on a strategic and educational design and delivery level. It is hoped that evaluation impact data, once analysed, will provide quantifiable evidence linking the use of VR to enhanced learning and delivery of patient care, enabling the strategic integration of technology into various educational programmes.

### What next?

The seven modules will be fully embedded into the HDdUHB IPE curriculum. Collating data in relation to participation feedback and data linked to patient care.

Early analysis of evaluation data, along with ongoing project reporting will enable HDdUHB and Swansea University to present the project at the Association for Simulated Practice in Healthcare (ASPiH) International Conference in Edinburgh 2024. This opportunity will raise the profile of the Health Board to the forefront of immersive and experiential learning. The profile of the conference will also elevate the reputation of HDdUHB as an innovative driver of high-fidelity learning and collaborative enterprise with Higher Education Institutions (HEI's) and promote the Health Board as an employer of choice to support recruitment. Following full analysis of findings, further collaboration and planning with Swansea University will continue with regards to integrating and embedding VR as an effective learning tool.

### High Fidelity Simulation-based Education Equipment (Hywel Dda Charities Bid)

#### What was the Driver?

The IEP, endorsed by the People and Organisational Development Culture Committee, acknowledges the benefits to simulation-based education that advances in technology provide. Utilising state of the art technology can elevate the quality of experiential learning. High-fidelity immersive learning methodology leads to a greater degree of training transfer; the process whereby learners adopt new information and take it with them into workplace practice (Lawrenson, 2023). Having previously invested in staff development to deliver simulation based activities, there was a need to access funds to utilise these newly developed skills, whilst improving the quality of learning provision.

## What did we do?

Accessing Hywel Dda Charities funding enabled the purchasing of specific equipment that has increased the fidelity and realism of learning experiences.

Equipment purchased:

- ✓ Laerdal Nursing Anne Simulator Manikin: A high-fidelity simulation manikin providing realistic and highly immersive interaction (Laerdal, 2018).
- ✓ Scotia Medical Observation and Teaching System (SMOTS): A multi-view, audio/visual recording system allowing playback of the simulation to aid debriefing sessions.
- ✓ iRIS simulation software licences: A web-based programme providing step by step guidance in the creation of bespoke simulation scenarios, using best practice standards. Also provides access to a national database of scenarios created by health care educators across the UK.

## What impact did it have?

To assess the true impact of the equipment, there is a need to consider all examples highlighted in this report. Key outputs include:

- Support workers understanding of recognition and escalation of a deteriorating patient has increased.
- Enhanced school engagement activities have resulted in an increase in 32% of young people now considering a career in the NHS.
- Improvement in learner experience and confidence in a variety of clinical learning interventions.
- A greater awareness of changes to emergency blood transfusion policy.
- Life-saving emergency care can now be delivered following simulated learning and practice within ITU.
- An evaluation report was presented to the Charities Committee who have been assured that the funding has had significant impact.

## What next?

Recognising financial challenges, identify other opportunities for funding to increase the scale of reach of existing provision and enable further programmes to be developed by increasing simulation technology resource.

## 2.2.3 Educator Development

### Support & development of our educators: providing the tools to deliver IPE and Simulation

#### What was the Driver?

In line with the IEP, there is a need to provide development opportunities for HDdUHB educators, supporting their Continuing Professional Development (CPD). Following an educator's survey during early 2024, feedback was obtained identifying their experience in the delivery of IPE and simulation-based education. Results revealed:

- 52% of educators have never delivered to an interprofessional audience.
- 68% of educators have never delivered simulation-based education.
- Over 90% of all respondents wanted to be able to deliver IPE and simulation activities.

#### What did we do?

Recognising the importance of IPE and how this can be embedded, investment (through a procurement process) provided the opportunity for educators to access 'Essentials of Simulation (EoS)' courses. 73 staff have attended to date, providing them with the skills and educational methodology to begin designing and delivering simulated learning sessions.



IPE professionals collaborating on a respiratory assessment

The knowledge required to setup, monitor, adapt and troubleshoot new technology has proved to be a challenge for some educators, regardless of their experience of delivering educational programmes. This impacted their ability to assemble and utilise new technology. To meet the wider support needs, an IPE educators study day allowed them to train using technology, which included use of a manikin within an interprofessional teaching model. Healthcare professions attending included Clinical Education, Community Professional Development Nurses, Community and Acute Physicians Associates, International Nurse Support Team and Operating Theatre Practice Educators.

## What impact did it have?

The EoS was delivered to interprofessional groups, which has enabled educators to experience interprofessional simulation-based education. This has raised awareness of IPE and multiple scenarios have been designed and delivered using the newly developed skills. A Simulation Champions Teams channel has provided access to best practice resources for simulation design and delivery. As simulation champion numbers grow the channel will act as a collaborative communication hub, facilitating expansion of IPE collaborative opportunities.

Simulation champions publicise manikin availability, aligning with commitment to move away from training uni-professionally and identifying areas where IPE can be facilitated.

## What next?

Work is underway to identify under-represented areas by profession and locality, ensuring equitable access to IPE and simulation, also supporting wider IPE engagement. Post EoS session support is being provided that aims to maintain governance and standardisation of all IPE/simulation sessions, including continually measuring impact, participation and feedback to aid evaluation and continuous improvement.

Further learning opportunities are planned, including advanced simulation design, debriefing skills and utilising iRIS software. These sessions are aimed at educators who have an understanding of IPE and simulation methodology, with the commitment to delivery of IPE relating to Health Board priority interventions through system and quality learning.

### **2.2.4 Interprofessional learning**

#### **Assessing, recognising and escalation of a deteriorating patient (HCSW)**

## What was the Driver?

Wider discussions have highlighted the need to expand and develop training to assessing, recognising and escalating care of the 'deteriorating patient'. As Health Care Support Workers (HCSW) are at the forefront of 'bedside patient care', they are uniquely placed to assess and recognise and report early deterioration. Their ability to notice changes in cognitive function, physiological observations and increasing National Early Warning Score (NEWS) is critical to early recognition and treatment. Early

recognition of deterioration leads to improved patient outcomes due to prompt, high quality care and treatment (Zegrean et al., 2023).

### What did we do?

Content within the 'All Wales Induction Programme' for HCSW was reviewed, identifying opportunities to embed innovative simulation-based education scenarios. Following theoretical learning on anatomy and physiology, participants receive skills sessions on carrying out physiological observations and calculating NEWS scores. This learning is then reinforced, allowing identification of performance gaps through a simulated scenario where a patient has further deteriorated. Scenario design utilised the iRIS platform ensuring best practice standards in simulation design.



Participants complete observations on the high-fidelity manikin which can simulate multiple areas of deterioration. Facilitators are also able to communicate with the participants through the manikin (from a separate room, utilising the SMOTS system), allowing for holistic communication practice and assessment of new onset confusion. Following completion and calculation of rising NEWS score, the participants choose whether to escalate findings to the nurse in charge of the ward. This scenario provides access to innovative, engaging and effective training that will prepare them and enable transfer of learning to workplace practice.

### What impact did it have?

100% of participants stated that the simulation session provided an opportunity to practice both clinical and communication skills in recognising a deteriorating patient, with technology enhancing their learning, providing a realistic experience when

practicing skills. They also felt that the debrief session facilitated an opportunity for enhanced reflective practice, encouraging them to analyse their own actions, develop ideas and strategies to improve performance.

"If a patient deteriorates significantly in a short space of time, then it is possibly sepsis, which is something I didn't know before today. It made me aware of the importance of observations as usually when they're performed on myself, I would think nothing of it. This workshop has really changed my perspective." HCSW

### What next?

To enhance both acute and community support worker induction, simulated learning will be integrated to support the recognition and escalation of a deteriorating patient, including increasing micro-learning in-situ simulations, to enhance the training experience. This is supportive of the current financial constraints and the reduced ability to release staff. Prioritisation will consider using data from Datix, Quality and Safety Committee and other sources to target resources to have the greatest impact on patient safety and care.

Longitudinal data will be captured to identify the impact of these additional HCSW development opportunities to establish the initial and long-term effect on training experience, staff confidence, changes in practices and the impact on patient care. The project will also seek to capture all success stories where support workers have excelled, demonstrating an understanding of their pivotal role in care of a deteriorating patient.

### **Major haemorrhage procedure training: Taking simulated practice into the operating theatre.**

### What was the Driver?

The Major Haemorrhage Procedure (MHP) is an established protocol, providing an algorithmic process for professionals to follow in the event of a patient experiencing a major bleed (HDdUHB, Blood Transfusion/Haematology policy no. 503). MHP's are not a common procedure and thus staff are not often exposed to these events.

The blood transfusion team conduct regular simulated MHP sessions across the acute sites and in multiple ward areas. To date, a MHP simulation session based in operating theatres was not available, despite the risk of a major bleed in operations being elevated. This highlighted the need to provide theatre professionals with immersive experiential learning sessions, helping them to understand individual and team roles along with opportunity to practice the algorithm steps.

## What did we do?

Working collaboratively, a bespoke operating theatre MHP scenario was developed using the iRIS software, focusing on a major patient bleed during a routine laparoscopic procedure. Participants were able to recognise a major bleed, activate the protocol by contacting the blood bank, carried out checks and administered simulated products to the NA manikin. The NA manikin elevated the realism of the simulation, providing a high-fidelity experience to participants, allowing for real time cardiovascular monitoring, including rapid deterioration due to blood loss. The manikin allowed interprofessional participants to practice realistic actions such as communication, decision making, gaining intravenous (IV) access, fluid resuscitation, administering blood products, and measuring blood loss during the procedure.



The SMOTS system recorded the simulation session allowing facilitators and participants to analyse individual and team decisions and actions, identifying performance gaps and strategies to overcome these. Recording of the scenario also allowed facilitators to review and further fine tune the scenario. The operating theatre MHP simulation included the following interprofessional personnel: Surgeons, Anaesthetists, Operating Department Practitioners, Health Care Support Workers (HCSW), Theatre Assistants, Porters and Blood Bank staff.



What impact did it have?

100% of participants found the scenario and session either relevant or very relevant to their workplace role and environment. They felt that the manikin added to the realism of the simulated learning experience. 100% of participants felt that the experience would help them to improve their clinical practice in the future.

#### ***Case Study: Remaining current with the best available evidence***

*During the scenario O+ blood was delivered to the operating theatre in response to activation of the MHP. The latest health board policy recommends O+ blood for emergency transfusion instead of O- (ONLY for certain patient groups, of which our simulated patient was in). This caused confusion as traditionally O- blood is used in emergencies and participants were unsure whether the correct blood had been delivered. The debrief session allowed analysis of this confusion, leading to clarity on the types of 'emergency blood' that can be used in an MHP and who they can be used for.*

"More training like this please, as being a new member of staff I've not been in that situation before."

"It was useful and helped me to learn all of the different roles required and the steps within the MHP algorithm."

### What next?

Next steps are to engage with operating theatre practitioners and blood transfusion specialists across the four acute sites to facilitate appropriate simulation delivery training, leading to a roll out of the scenario throughout the four sites.

### **Simulated practice for infrequent events: Emergency airway assessment and management within ITU**

#### What was the Driver?

An emergency involving a blocked patient airway poses the greatest risk to human life and must be assessed and treated with immediate appropriate interventions. To this end the National Tracheostomy Safety project created an algorithm for interprofessional teams responsible for tracheostomy care to follow in the event of an emergency. Due to an increased level of junior staff within the ITU there was an identified need to conduct training and practice regarding the emergency care of patients with a tracheostomy airway in place.

#### What did we do?

Utilising iRIS simulation design software the ITU practice educator, along with a senior ITU anaesthetist conducted high-fidelity simulation scenarios utilising a manikin with a tracheostomy opening. During the scenario the patient was assessed by the participating nurses using an A to E assessment methodology. The manikin technology was manipulated to demonstrate respiratory distress leading to the required usage of the emergency airway algorithm. First runs of the scenario identified performance gaps whereby, through debrief, the team discussed what went wrong and identified strategies to close the identified gaps. The scenarios were then run again, giving the team opportunity to practice the newly identified steps and strategies they had discussed. The

junior ITU nurses left the simulated learning experience feeling more confident about caring for a patient with a tracheostomy in place.

### What impact did it have?

The following case study demonstrates the impact that immersive, experiential simulated learning with debriefing can have on transferring training to workplace practice:

#### Case Study: Impact on Patient Care and safety

*The iRIS platform assisted in the creation of a scenario for junior ITU nurses to experience a simulated emergency whereby a tracheostomy (artificial airway) had become blocked. The nurses involved had never experienced this situation in clinical practice and had limited exposure to caring for patients with a tracheostomy in place.*

*Delivered in-situ within ITU in Glangwili Hospital and using a simulation manikin, the nurses practiced assessment of a patient in respiratory difficulty and how to deliver treatment based on the Emergency Tracheostomy Management algorithm (National Tracheostomy Safety Project, 2012). The structured scenario design allowed junior ITU nurses to participate in a safe learning environment, identify performance gaps and devise/practice ways in which to close those gaps.*

*Approximately two weeks after this session, one of the nurses involved was caring for their first patient with a tracheostomy in place. During the shift, the patient became distressed, showing signs of respiratory failure. The nurse, due to their simulated learning experience knew precisely how to assess the patient, commence the emergency algorithm, and call for urgent help. The patient in question had experienced a completely blocked airway which needed to be removed and a new artificial airway inserted to restore breathing. It is, by feedback from the nurse in question and the team of professionals involved, that knowledge and experience gained from simulated practice contributed to the patient making a complete recovery from this life-threatening incident.*

### What next?

The scenario will be repeated across all sites as part of an annual study day and embedded as part of the Junior Nurse ITU Foundation Programme.

## Intensive Therapy Unit (ITU): Delivering Interprofessional Intubation and Ventricular Fibrillation (VF) cardiac arrest scenarios

### What was the Driver?

Invasive intubation (ETI) is a clinical procedure whereby the airway of a critically ill patient is failing and must be protected with an artificial device. This is an extremely high-risk procedure, requiring expert practitioners working together to avoid complications. Junior team members must be provided with realistic training and assessment on roles within this procedure before they are exposed to real life events (CC3N, 2016; GPICS, 2022).

### What did we do?

As simulation champions, the clinical practice education team within ITU designed a number of simulated scenarios to facilitate realistic and experiential learning for interprofessional colleagues, HCSW's, anaesthetists and nurses. Working as part of a team the participants experienced the following simulated scenarios:

- Failed intubation requiring oxygenation and use of advanced equipment for success.
- Difficult intubation (grade 4) with significant deterioration requiring fibre-optic equipment for success.
- VF cardiac arrest following administration of sedation drugs: Scenario requires complex teamwork and communication, switching from intubation to resuscitation and then back to intubation once return of circulation is achieved.



## What impact did it have?

Attendance on the EoS programme provided educators the skills to create immersive scenarios in line with simulation standards and best practice, whilst providing a safe and engaging learning environment for participants. Debriefing allowed participants to identify performance gaps and plan further learning.

Participants data identified:

- 100% of respondents agreed that high fidelity simulation manikins add to the realism of the simulation scenarios.
- 95% of participants felt that the manikin promoted their learning experience.
- 92% of participants felt that the immersive element of simulated learning increased their motivation to immerse themselves in the learning experience.
- 89% of participants felt the debrief analysis was a helpful process in the practical/problem solving method that adult learners appreciate.

"Having a practical session helps to think about the process of intubation when not in actual patient care. This is a safer way of learning."

"Attending the session was beneficial as I am new on the unit, I feel that I will be able to participate in future invasive intubation events having participated in this study day."

## What next?

As part of their junior nurse induction programme the ITU education team are embedding simulated learning within their curriculum. They are also continuing to design and deliver further emergency interprofessional simulated sessions including the blocked tracheostomy simulation discussed earlier. The team are also keen to develop and expand their knowledge and skills in simulated learning as part of their ongoing professional development.

### **Embedding simulated learning within PROMPT training days**

## What was the Driver?

With a large combination of multi-disciplinary participants involved with an emergency such as a post-partum haemorrhage there is a professional and obligational requirement for interprofessional learning and practice on dealing with a life-threatening situation (PROMPT, 2024).

## What did we do?

Professional development midwives deliver regular PROMPT (Practical Obstetric Multi-Professional Training) study days to an interprofessional audience involving Welsh Ambulance Service NHS Trust (WAST), HCSW's, obstetricians, midwives and anaesthetists. The study day involves discussion and skills based interprofessional learning. Following EoS attendance, the development midwives designed and embedded a post-partum simulation scenario into, including extensive debrief, allowing participants to identify and close their own performance gaps.

## What impact did it have?

Feedback highlighted that:

- 98% of participants enjoyed and felt they benefitted from the interprofessional post-partum haemorrhage simulation scenario.
- 93% of participants felt that they benefitted from experiencing and discussing the 'human factors' element of the simulation.

"I enjoyed the interdisciplinary attendance during the simulation. It improved the practice of emergency scenarios".

"I enjoyed training with different members of the team and gaining knowledge on what other people's roles are in obstetric emergencies."

## What next?

Prompt Team to be supported to explore further opportunities to develop further scenarios using patient and safety data.

## Conflict Resolution: Providing our staff with skills to recognise and de-escalate conflict

### What was the Driver?

Confrontational behaviour and abuse is often experienced by administrative and reception based staff working in many industries, including health care. Collaboration with community and primary care Multi-Disciplinary Teams (MDT) highlighted the high levels of confrontational behaviour and abuse experienced by General Practice (GP) reception staff. They wanted to learn techniques on how to de-escalate conflict and inappropriate behaviour so that they could begin to try and respond appropriately.

### What did we do?

The Clinical Education, Culture and Primary Care Academy Teams designed and delivered an interactive skills study day. GP receptionists from managed practices attended a session, learning how to use communication skills to manage and de-escalate conflict. They then participated in simulated scenarios resembling real life events, enabling them to apply learning to practice, identifying performance gaps and discussing in the debrief ways in which they could improve performance.

### What impact did it have?

Participants stated the content of the day provided skills that were suitable to managing and de-escalating conflict. They felt more confident about dealing with conflict more effectively. The participants enjoyed the debrief discussion, analysing their performance and discussing strategies for improvement. This was designed as an ongoing programme, with this being already being replicated for dental staff.

100% of pilot participants believed that the simulation session provided them with the learning content and opportunity to practice skills in de-escalating conflict.



Participants engaging in the debrief session

## What next?

Recognising success, this to be piloted on a larger scale over multiple sessions, identifying how within current resources can be a regular offer to all support staff.

## Emotive conversations in palliative care: Utilising simulated learning to develop empathetic listening and talking skills

### What was the Driver?

Health board staff from MDT community teams highlighted a need for advice and education on how to effectively conduct emotive conversations with patients recently diagnosed with terminal illness requiring palliative care and support. Immediately following diagnosis discussion in hospital, community-based professionals are finding themselves as a 'first contact'. This often involves a visit to the patient's house for follow up support. These patients and their families often have many questions, **and can be** anxious, frustrated and angry. MDT professionals are experienced in their specific roles but wanted to increase their skills in managing these difficult conversations effectively.

### What did we do?

The EoS course allowed community practice development nurses, with support from the Clinical Education Team to design and deliver a simulated learning experience on conducting difficult, emotive conversations with palliative patients. The study included an interactive learning element delivered by health board palliative care specialists, providing information on available resources for signposting, empathetic listening and effective body language and verbal communication skills. Attendees then participated in immersive, experiential simulated learning on the following scenarios.

- Palliative patient with a young family and concerns about leaving them behind.
- A palliative patient is deteriorating faster than expected, the patients partner is upset and confused about the rapid deterioration.
- Palliative patient and partner were so shocked about the diagnosis in hospital that they didn't take the details in. Now they need advice and options.

## What impact did it have?

Following reflection, participants provided the following feedback:

"Feel this day would benefit all who provide care to palliative patients from Band 2 upwards."

"The discussions prior simulation was very beneficial to support scenarios. This in return prompted emotive discussions. I do believe this brought the group together and supported one another with ideas and discussions."

"I genuinely believe this simulation day should be cascaded throughout services. It would be hugely beneficial within the preceptorship, especially as this aspect of nursing is what we all worry about getting 'wrong'."

This study day combined interactive learning and immersive simulated practice and was designed on a repeating model. It is planned to upload the study day to the course catalogue, allowing eventual wider workforce access.

## What next?

There are discussions regarding embedding the session within all community health care provider induction programmes along with offering access as part of the CPD course being designed by clinical education.

### 2.3 Maximising Opportunities and Future Proofing Interprofessional Education

This report highlights the progress made towards IPE and simulation, whilst creating an infrastructure to ensure sustainability of growth during a challenging financial climate. Being mindful that embedding IPE as a learning culture is still in its infant stages, the opportunities, challenges and risks have been highlighted below:

#### Opportunities

- Carmarthen Hwb Training and Simulation Suite will include acute and community facilities. The community facilities will be particularly essential for community staff who are unable to practice in-situ.
- Collaboration with Swansea University has allowed us to utilise the high fidelity, innovating 360-degree projection simulation suite based at Saint David's Park, Carmarthen.

- Scoping the vision of developing a mobile resource (training van) that can enable training/ simulation to go to various locations throughout HDdUHB, overcoming challenges around rurality. This was observed as part of the research and networking with NHS England.
- Determine how the advances in technology such as VR can support our work with regards to future workforce, support worker development, non-clinical skills and understanding the patient perspective.
- Identify external funding streams to drive this agenda forward.
- Policies to reflect IPE, with Executive Sponsor to encourage engagement.
- Throughout the localities of the HDdUHB footprint there are many resources. A mapping exercise to identify these resources and ensure their used to full capacity.

## **Challenges**

- Profession 'buy in' to the IPE culture, recognising resources are not centrally managed.
- Simulation equipment requires a technical knowledge to setup, monitor, adapt and troubleshoot. With limited resources, a champion approach was taken to encourage educators to undertake simulations although often these individuals are not able to utilise the advanced simulation equipment. This requires additional in person support in utilisation of the technology until the educators have gained sufficient experience.
- Sharing of equipment and resources to ensure they are used to full capacity is challenging due to the IPE culture not yet being embedded and the spread of educational teams across the HDdUHB footprint.
- Simulation doesn't allow for large group training due to the importance of realism. The evidence so far endorses the benefits reported nationally, however does reduce training numbers as a teaching modality.

## **Risks**

- Carmarthen Hwb plans for training and simulation suites for HDdUHB may result in lack of funding for IPE due to reduction in capital and potential overspend. This could impact plans to drive IPE and simulation.
- IPE and Simulation Coordinator is essential to drive IPE and support educators as highlighted in the report. This post is currently funded by HEIW which identifies as a risk dependant on approval of external funding.
- Some healthcare professionals may resist shifting from traditional uni-professional roles to a collaborative, team-based model, particularly if they are accustomed to working independently.
- Some staff may perceive IPE initiatives as an additional burden on top of their existing workload. If not managed properly, the extra time and effort required for training and collaboration could lead to burnout or disengagement from the program.
- Inconsistent buy-in may be an issue. While some departments or professionals may embrace IPE, others may not fully commit, leading to uneven implementation across the organisation. This lack of consistent buy-in can undermine the overall effectiveness of the initiative.

- Educators who lack training in simulation methodology may unintentionally undermine the learning process by failing to provide effective feedback, creating unsafe learning environments, or designing ineffective simulations. These shortcomings can negatively impact learners' engagement, confidence and overall competency development. To mitigate this risk, additional training is being developed and a governance process to monitor quality of the IPE/Simulation delivered.
- If the IPE initiative is seen as a temporary or pilot project, unclear long-term commitment may raise concerns about its longevity and the organisation's commitment to sustained interprofessional learning. This uncertainty could affect long-term engagement and planning. Addressing these risks through proactive leadership, clear communication, and adequate resourcing can help mitigate potential challenges and enhance the successful implementation of the IPE plan.
- Effective IPE requires adequate resources, including dedicated time, staff, and financial investment. Without proper funding or institutional commitment, there's a risk that the program may be unsustainable or unable to reach its full potential.
- There is a potential risk of blurring professional boundaries if roles and responsibilities are not clearly defined during interprofessional activities. This can lead to confusion about who is accountable for specific tasks, potentially impacting patient care or creating interpersonal tensions.
- Difficulty measuring outcomes: Demonstrating the direct impact of IPE on patient outcomes and professional development can be challenging. Without clear metrics and a reliable evaluation framework, it may be difficult to justify continued investment.
- Differences in professional cultures, norms, and communication styles may create challenges in fostering effective collaboration. If these cultural barriers are not addressed, they could inhibit open communication and teamwork, limiting the benefits of IPE.
- Growth of IPE exceeds the capacity of the Clinical Education team to support and ensure governance and quality remains at the core of the work undertaken.

## **Systems and Quality learning**

To monitor and drive the IEP, an Interprofessional Education Governance Group has been established that reports to the Strategic People Planning Education Group (SPPEG). As part of this group, four workstreams have been established:

- Support worker development
- Newly registered workforce and Preceptorship
- Interprofessional mapping (Competencies)
- System Learning and Improvement

It is proposed that using data identified through Datix, Quality and Safety Committee, Assurance and Risk Committee and patient experience feedback, the three main areas of concern should be identified. Following this, the System Learning and Improvement Group will work in partnership with Swansea University to consider the three priority areas using both human learning training and systems improvement design, planning

interventions. Using planned educator development sessions outlined in this paper, high-fidelity immersive simulated learning scenarios will be developed, targeted to identify performance gaps and provide participants with the opportunity to devise strategies to close them. These identified projects will include pre and post data collection and analysis to demonstrate impact and output of these interventions. Demonstrating how IPE/simulation is critical as a learning culture going forward.

## **Conclusion**

The report highlights the significant impact of IPE and simulation on enhancing collaborative skills and improving patient outcomes. The integration of simulation-based learning has proven to be an effective method for fostering teamwork, communication, and critical thinking among healthcare professionals. The outputs of this report include measurable improvements in clinical and non-clinical competencies, increased confidence among participants and positive feedback from both learners and educators.

Moving forward, the next steps involve expanding the scope of IPE and simulation programs to include a broader range of healthcare disciplines and settings. This will ensure a more comprehensive approach to interprofessional learning. Additionally, ongoing evaluation and research will be essential to continuously refine and adapt the simulation scenarios to meet the evolving needs of the healthcare environment. By doing so, we can sustain the momentum of these educational innovations and further solidify their role in preparing healthcare professionals for collaborative practice.

Having considered the risks and challenges, further work is needed to identify how to mitigate the risks.

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