

Product Development & Evaluation (PDE)

Queensland Health Skills Development Centre has some of the world's best clinical simulation training equipment. Courses are carefully developed and evaluated by clinical and training experts before being offered at the Centre. The Product Development and Evaluation domain invests sessional time of leading clinicians to keep the Centre's curriculum current and relevant. New courses and training tools from around the globe are carefully evaluated by professionals to assess their usefulness. Research trials and testing of products, just adds to the body of knowledge available.

The SDC curriculum development staff work actively with healthcare professionals, medical, nursing and allied health, and other industry bodies to identify gaps in training, or areas where skills may be further developed.

Currently, courses are being developed for all streams of healthcare staff. Communication courses are regularly reviewed to ensure their relevancy. New surgical simulation trainers are constantly being evaluated to supplement the current range of virtual reality trainers and to remain at the forefront of emerging medical technologies. This will allow SDC to create one of the best simulation and virtual training libraries in the world

E-Learning

Queensland Health Skills Development Centre believes that technology plays a major role in the training process. Besides the sophisticated virtual reality and simulation equipment that is available at the Centre, high-speed networks and interactive technologies allow the Centre to provide customised training to individuals at their convenience.

Based on Internet technologies, the e-learning training platform is very user-friendly and suits both the clinician who has had no previous exposure to computers, as well as the more computer advanced professional. It allows participants to learn at their own pace, place and convenience. This flexibility provides those constrained by time or location for example healthcare professionals in remote and rural locations and overseas professionals or consultants.

The system is able to record and monitor the user's training sessions, provide feedback and provide peer support through asynchronous group methodologies. The Centre has courses developed specifically for identified areas of need. Users also have access to library material, journals and other electronic learning products.

Rural and Remote Arrangements (RARA)

The Skills Development Centre has courses for healthcare professionals in rural and remote areas to update and enhance their skills. Transport and logistic issues often do not allow healthcare professionals, in these areas, time off to upskill or attend further training. Hence, rather than have professionals attend courses physically at the Skill Development Centre, in the Herston Campus, the Centre takes the courses to them.

Using a hub and spoke arrangement, the Centre is establishing Skills Development Laboratories at key locations across the State. These labs will be equipped with manikins and other training aids, as required. Through high-quality video conferencing links, professionals will be able to access courses held at the Centre, locally.

SDC is also investing in a 4WD mobile Skills Development Lab, which will have manikins and other training aids capable of providing training in even the most remote region in the State.

In addition a library of part trainers and manikins will be available to "top-up" training that is provided locally in rural and remote locations.

For further course or Centre details please contact:

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For more details about CIMG courses, please contact.

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Queensland Health
Skills Development Centre

Queensland Government

The Queensland Health Skills Development Centre is the largest and most technologically equipped skills development centre in the world. From a mere concept in 2000, it today covers over 3200sqm, with 26 session rooms, laboratories and even a simulated hospital ward. The courses are not restricted to any one area of healthcare training, but cover a wide range of programs for freshly qualified healthcare providers to experienced professionals.

Over the last twelve months, 150 practising senior healthcare professionals from all over Queensland have provided teaching for the Centre — ensuring the courses are current, tested and the skills learned are of use to the 300-odd participants who completed SDC courses during this period.

With the help of virtual reality, clinical staff can practise surgery using the latest surgical procedures. Other courses prepare clinical staff to deal with crisis and trauma situations, like the Pre-Hospital Trauma Life Support course that is well recognised around the world, or the courses in Crisis Resource Management that cover crisis situations in various settings. In addition, the Centre for International Medical Graduates (CIMG) assists in preparing overseas qualified doctors for Queensland medical registration.

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capability safety innovation



Surgical Skills

The Skills Development Centre's Surgical domain has some of the world's finest virtual reality simulation equipment. This domain comprises a virtual reality (VR) laboratory and a surgical skills laboratory. The VR lab houses a comprehensive range of surgical simulators which have a rich set of programs that allows the operator to practice a range of minimally invasive surgical procedures and enhance skills. The simulators have learning management systems imbedded, which provide feedback on how the operator performed a given procedure. Examples of reports that may be generated include; the time spent on the procedure, the amount of blood loss and the amount of trauma caused. This is a safe, confidential, non-threatening environment where clinicians can practise and hone their surgical skills. In the surgical skills lab there are 8 workbenches, each with their own Laparoscopic stack, where the image from each monitor has the potential to be beamed onto the large screen in the room for teaching purposes.

In the VR lab there are haptic (which means tactile, relating to the sense of touch) laparoscopy, hysteroscopy, endoscopy, colonoscopy and endo-vascular virtual reality surgical trainers. The learning management system reports the performance and skills proficiency the operator achieves during training.

This domain has Australia's first vascular virtual reality trainer to simulate endovascular interventions such as angiography and angioplasty. With this simulator coronary, renal and carotid interventions by balloon dilatation and/or stenting and placement of pacemaker electrodes can be practised. The simulator has a force feedback system (haptics) which allows for varying resistance depending on anatomy and instrument handling.

Procedural Skills

Healthcare professionals face clinical challenges on a daily basis. From the novice practitioner perfecting new skills, to the experienced professional mastering new techniques, access to the procedural skills labs can improve proficiency and competence. Studies show that routine procedural practice enhances healthcare professionals' skills and increases confidence in both routine and emergency situations - thus improving patient safety and enhancing patient care.

The Skills Development Centre has three dedicated Procedural Skills laboratories. The CPR lab and Airways laboratories are separated by an operable wall allowing a larger area in which courses incorporating both facilities can be delivered. The labs have a variety of simulators, including paediatric and neonatal models, allowing participants to practice resuscitation and airway management techniques on adults, children and infants. Full size manikins and part task trainers allow for bag-mask ventilation, the insertion of oral or nasal and laryngeal mask airways, intubation by a variety of techniques or the creation of a surgical airway. Cardiac life support is delivered using models that analyse efficacy of chest compressions and that be defibrillated or externally paced. Participants also have the opportunity to review cardiac rhythms generated by the models.

Crisis Resource Management

Building on research done in the airline industry, the Skills Development Centre recognises the need to provide healthcare professionals training in crisis management. Research has shown that pilots, who completed crisis management training in simulated environments, dealt more effectively with actual crisis situations, even when faced with unfamiliar situations.

The core focus of Crisis Resource Management training is to develop teamwork, situation awareness and provide human factors training - as, in an emergency, team members need to complement and support each others' efforts for successful results. Training is therefore delivered in cross-discipline teams, so that doctors, nurses and other healthcare professionals can become aware of their own behaviour and interaction with other team members in a crisis situation. This also develops a greater appreciation for each team member's role in an emergency.

The Operating Room, Resuscitation bay, training ward and other clinical training areas are set up with real equipment, instruments and supplies to create as real a hospital setting as possible. Participants have to gown up and pass through scrub rooms before entering the theatre. The training ward is complete with ITU beds and has the flexibility to convert to a Neonatal ICU. It includes an immersive ensuite so that correct patient handling procedures can be followed.

Multiple high-fidelity manikins - adult, paediatric and infant versions - allow the Centre to simulate a variety of crisis situations in a highly realistic manner. Portable manikins are used to simulate on-road traumas, or situations in non-clinical locations. These manikins will also be used to provide training in rural and remote areas.

Communications

Good communication is the heart (and soul) of good healthcare. It is also an essential component in the safety and efficiency of service delivery. One-on-one communication between individual clinicians and patients will always be the cornerstone of how care is given and received. However, with the increasing complexity of healthcare systems, workers in all areas of healthcare also need to acquire the skills of good communication within and between teams.

How do you break bad news to a patient? How do you make an open disclosure of the events that have led up to a clinical error? How do you communicate effectively within a cardiac arrest team that has only just formed?

The Skills Development Centre conducts courses to enhance the communication skills of all healthcare staff. Techniques of both verbal and non-verbal communication are taught and the Centre's state-of-the-art communications suite provides an ideal environment for such teaching and assessment. The suite has eight separate communications skills rooms, each with camera and microphone facilities and all clustered around a central observation area.

Each room can be configured to a different setting, such as a waiting room, a consulting room, an examination room, etc, so that participants can feel the realistic and practical nature of the situation.

Pre-Hospital Trauma Life Support (PHTLS)

Research has shown that accurate diagnosis of, and efficient management of patients involved in trauma situations increases their survival rate - especially in far-flung rural and remote areas, where it often is a long way to the nearest hospital. The Pre-Hospital Trauma Life Support course concentrates on 'golden hour' interventions that are critical for the best outcome for a trauma patient. It is a course that is taught in more than 30 countries throughout the world and was originally developed in the U.S. by the National Association of Emergency Medical Technicians and the American Society of Surgery.

Many of the participants who completed this course have written back to thank the instructors for the training, especially after being in trauma situations themselves. They found that after the course they were calmer and more in control of the trauma situation and themselves.

To quote a few:

"I believe my skills have increased 75% now I have done this course."

"Excellent lectures, concise and relevant: I will promote this course for sure."

"A most informative course that I would recommend to all nurses & health workers to participate in if they wish to upgrade their skills as professional health workers."

PHTLS is conducted throughout Australia and will be rolled-out to the Asia-Pacific Region - an area for which the Skills Development Centre holds the training rights.

Centre for International Graduates (CIMG)

There are many excellent medical professionals who enter Australia, either to gain experience or to make it their home. However, to practice medicine in Australia, overseas trained medical graduates need to pass a certifying exam set by the Australian Medical Council (AMC). With a view to assist these graduates to settle in, the Centre for International Medical Graduates (CIMG) was established in 1996 and is now an integral part of the Skills Development Centre.

The CIMG runs bridging courses in specific topics to assist International Medical Graduates (IMGs) into the Australian workforce. These courses prepare the IMGs for the AMC examination, provide them with library and research facilities, help them build networks, and assist them to enhance their communication skills.

CIMG is staffed by three qualified lecturing staff experienced in medical communication for non-English speaking background health professionals. In addition, it has the support of a large number of health professionals - including medical administrators, clinicians, directors of clinical training, medical education officers, nursing and allied health professionals - from all over Australia. In any year, over 150 health professionals from the public, private and university sectors provide services to the Centre. They are involved in the selection of suitable participants, lecturing, assessment and mentoring. CIMG has seen over 600 doctors participate in its courses. Many of the IMGs now work in the public and private sector throughout urban and rural Queensland, providing a vital role in the communities they serve.