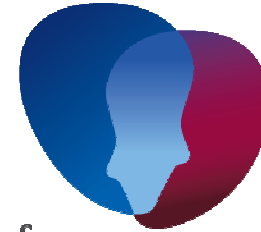




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# Emergency Cardiac Care Maximizing the Nursing Contribution

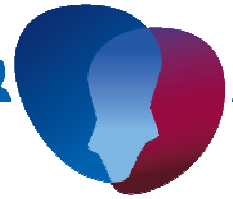
Martha Mackay, PhD, RN, CCN(C)

Sherri Stackhouse, BSN, RN



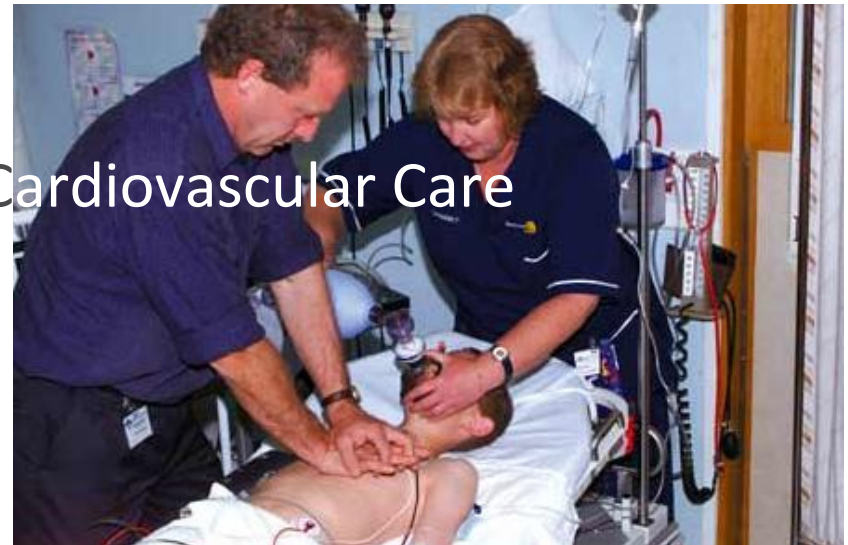
HEART CENTRE

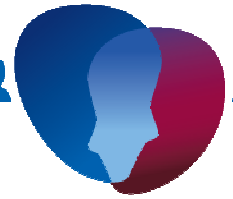
PROVIDENCE HEALTH CARE



# Outline

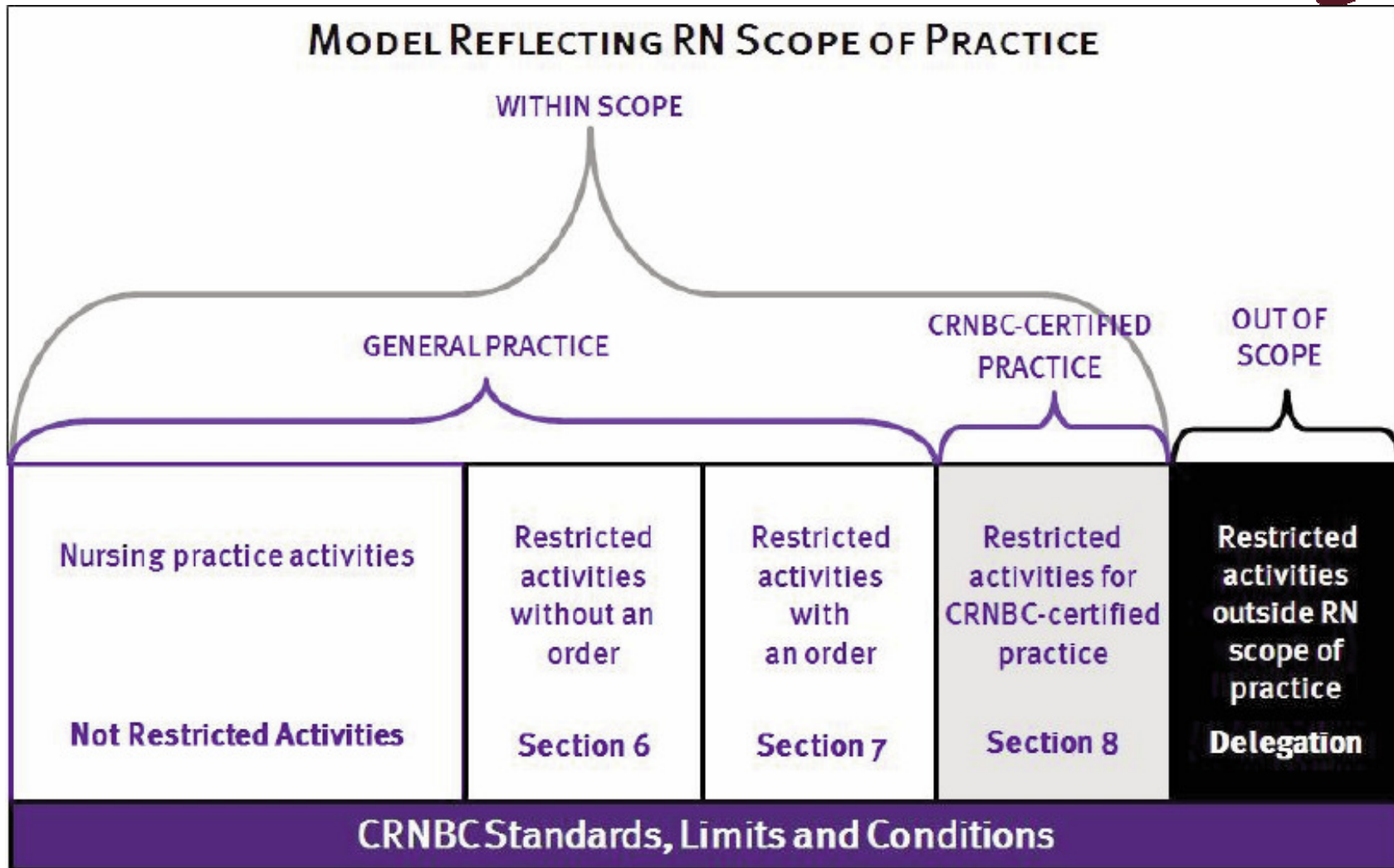
- Review changes in BC Health Professions Act relevant to emergency cardiac care.
- Outline decision support tools for providing emergency cardiac care.
- Review benefits of early CPR and use of automated external defibrillators.
- Highlight changes to Emergency Cardiovascular Care (2010)

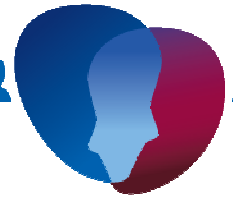




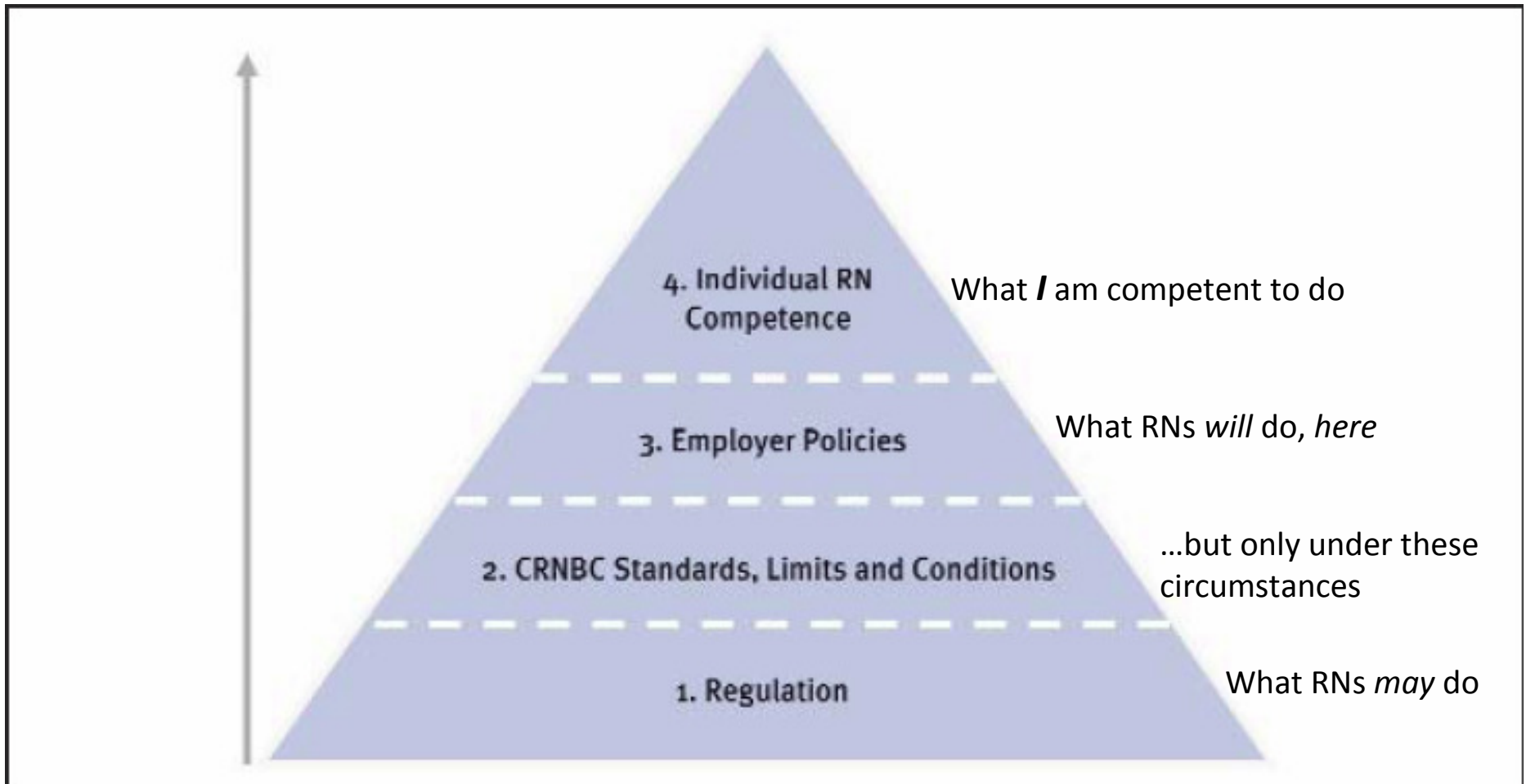
# BC Health Professions Act

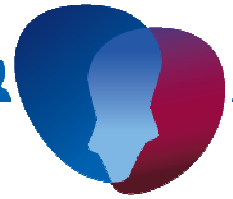
- Section 6: actions that are restricted and do not require an order
- Section 7: actions that are restricted but do require an order
- Section 8: actions that are certified practice





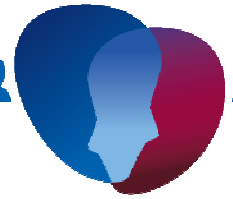
# Controls on Practice



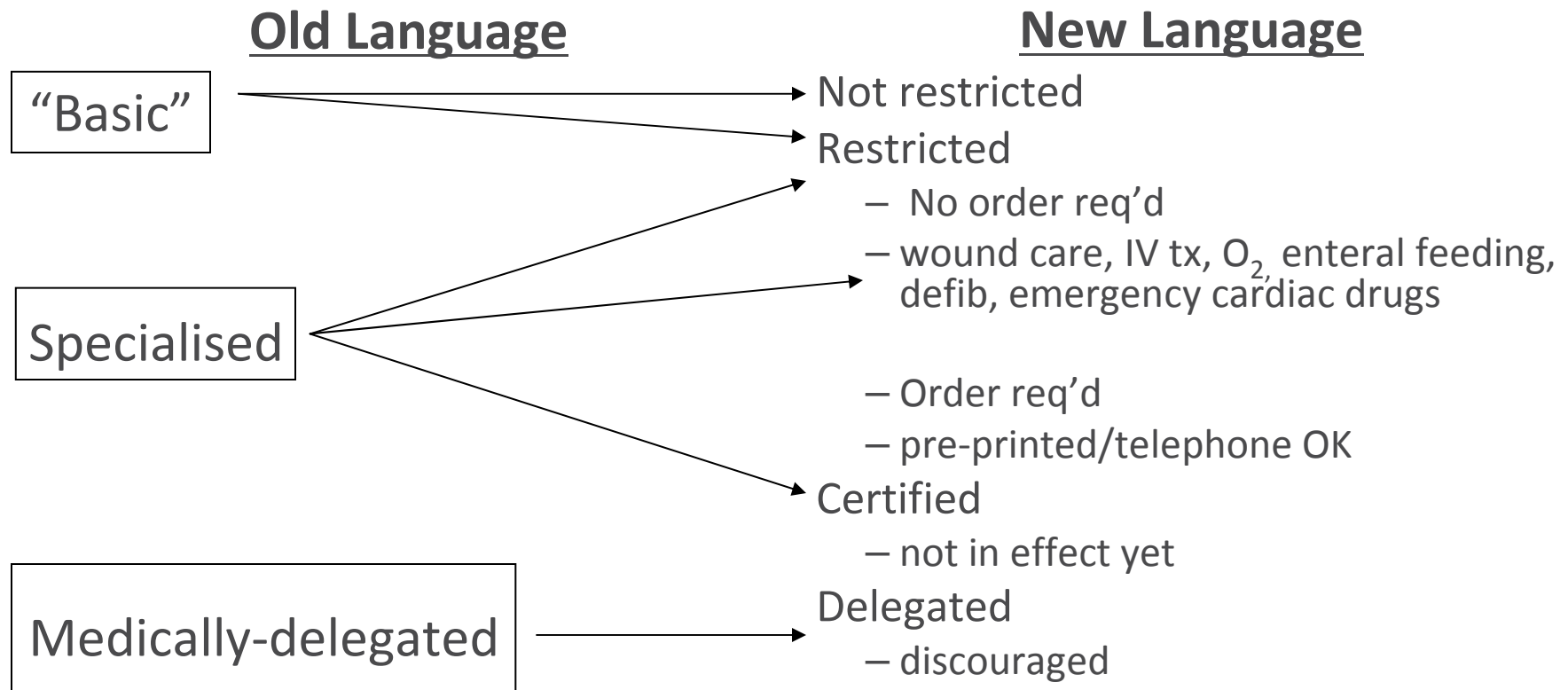


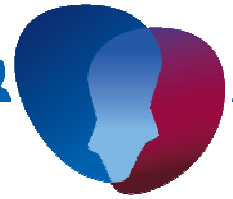
# BC Health Professions Act

- Section 6: Emergency cardiac care (ECC)
- Other Section 6 activities: management of labour, suturing, venipuncture, oxygen administration
- Providence Healthcare named as expert agency
  - develop and maintain decision support tools (DSTs) and competencies



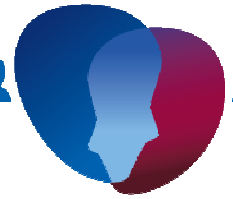
# Scope of Nursing Practice





# Cardiac Arrest Statistics

- ~45,000 cardiac arrests/year in Canada:
  - one cardiac arrest every 12 minutes
- 85% of all cardiac arrests occur in homes and public places
  - < 5% survival out of hospital
- Each minute of delay in defibrillation decreases survival rate 7-10%
- Early AED use with CPR increases survival by up to 75%



# Cardiac Arrest Statistics

## Nights and Weekends vs Weekdays

- Survival to discharge: 14.7% vs 19.8%
- ROSC > 20 mins: 44.7% vs 51.1%
- Survival at 24 hours: 28.9% vs 35.4%
- Favourable neuro outcomes: 11.0% vs 15.2%
  
- First rhythm on nights more often asystole

Peberty et al. JAMA, 2008; 299(7):785-92



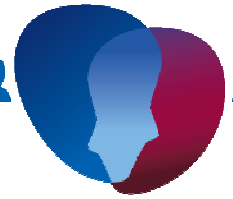
# Competencies

All nurses:

- All aspects of BLS, use of AED

Additional competencies for ECC:

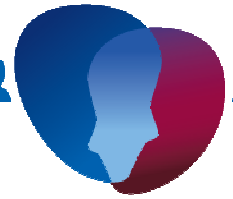
- Use of supraglottic adjuncts for airway management
- Establishment / maintenance of cardiac monitoring
- Interpretation of cardiac rhythm
- Safe operation of manual defibrillator &/or AED



# Competencies

Additional competencies for ECC (cont'd):

- Establishment of vascular access (IV/IO)
- Administration/monitoring effects of medications
- Provision of care to families in crisis
- Effective communication with colleagues



# Competencies

3 components

- Assessment
- Organization, Coordination and Provision of Care
- Communication

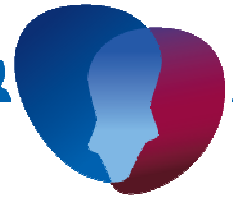
4 domains

- Knowledge, skill, judgement, attitudes



# Caveat for Emergency Cardiac Care

“Recognition of cardiac arrhythmias and use of specialised equipment (e.g. cardiac monitors, defibrillators, bi-valve masks) and techniques (e.g. intra-osseous administration of medications) requires additional education and regular practice”.



# Decision Support Tool #1

- To guide RN-initiated ECC when **no** cardiac monitoring, manual defibrillator or drugs available
  - Nursing homes, clinics, remote nursing facilities
- Stresses early CPR and AED use
- Provides guidance for discontinuation



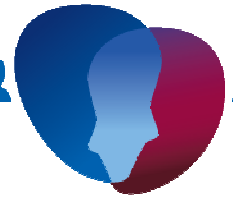
## Decision Support Tool #2

- To guide RN-initiated ECC when cardiac monitoring, defibrillator and drugs *are* available
- Directs nurse to follow relevant ACLS guidelines (pulseless rhythms, unstable tachycardia, bradycardia)



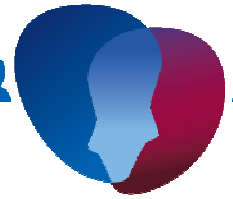
## Decision Support Tool #2

- Allowed: defibrillation, epinephrine, lidocaine, amiodarone, atropine
- NOT allowed: emergency cardioversion, transcutaneous pacing, any other meds
- Intent is to allow nurse to initiate appropriate treatment in 1<sup>st</sup> 20-30 mins of arrest



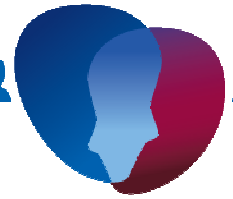
## Decision Support Tool #3

- To guide RN-initiated ECC when for patients with discomfort suggestive of acute coronary syndrome
- Allowed: (oxygen), aspirin, nitroglycerin



## Summary

- New regulations intended to legitimise and maximise nurses` scope of practice related to ECC
- Use of AEDs strongly encouraged
- Employers (health authorities→→agencies) determine how much of *allowable* practice is *appropriate and safe* in each setting
- Employers are responsible for ensuring nurses can acquire knowledge/skills/judgement



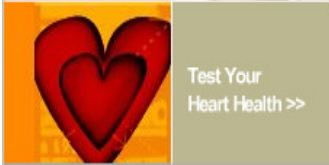
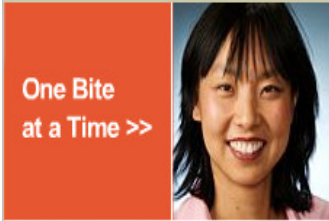
# Summary

- Emergency cardioversion, transcutaneous pacing, other drugs not allowable in current regulation
- Go to [www.heartcentre.ca](http://www.heartcentre.ca) for all DSTs and competency documents

(Info for Professionals>>Procedures & Guidelines)



About the Heart Centre Info for Patients + Families Info for Professionals Careers



The Heart Centre  
Welcome to  
Referring to the Heart Centre  
Procedures + Guidelines  
National + International Guidelines  
Educational Opportunities  
Other Links

In British Columbia, many family doctors and cardiologists refer their heart patients for specialized care to St. Paul's Hospital in downtown Vancouver. The Heart Centre at St. Paul's is known around the world for its work in the prevention of heart disease and for the care, treatment and support of people living with heart conditions. As a University of British Columbia teaching hospital, St. Paul's serves as a training facility for cardiac professionals and is a leader in heart disease research, both in the laboratory and in the clinic. In addition to treating patients with heart disease, the Heart Centre also focuses on prevention - helping patients stay well and out of hospital.

