



Delivering a Healthy WA

METROPOLITAN CLINICAL SERVICES PLANNING

GENERIC THEMES

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PRIMARY AND SECONDARY PREVENTION

Children

Schools

- Canteens (healthier foods)
- Health & lifestyle education (tackling childhood obesity)
- Expand school nurses roles to include health promotion/education
- Contraception, relationships, parenting

Immunisations

- 86% of child immunisations occur in GP practices

Screening

- Ophthalmic screening for 6-8 year olds
- 10% Preterm infants have disability
- Visual and auditory screening;
- Cerebral palsy and intellectual disability
- Psychologists to assist families post screening are required
- Ear Bus- 13 operating in NZ – 1 commenced in WA in February 2006
- Regional ear buses run by experienced ear nurses

Treatments

- Appendicitis, intersusception and gastroschisis – education to GP's to detect and prevent major complications
- Chronic constipation clinics
- Children of atopic parents to have access to strategies to prevent allergies

Prevention

- Expand Kidsafe WA

Adolescents/Youth

Services

- P.A.R.T.Y program (prevent drug and alcohol abuse)
- Pat Mesiti's NSW youth program (drug/alcohol rehab)
- Community adolescent service required in WA with a network of clinics for high risk youth in outer suburbs of Perth- should consist of GP's, allied health and mental health professionals
- Linkage between mental health and youth who offend therefore introduce preventative programs to diagnose and treat mental illness.
- Increase programs to reduce self harm and suicide
- Street doctors

Young Adults

Education

- Obesity
- Dietary and exercise programs
- Drug & alcohol (Increase tax on alcohol)
- Smoking (Lobby govt to offer incentives to workplaces to achieve quitting in apprentices other employees)
- Road trauma
- Anti social behaviours- anger management etc

Screening

- Familial hypercholesterolemia in relatives with MI at an early age
- Skin Cancer (Increase campaigns)
- Industrial dermatitis (Better education (hygiene measures) for occupations where hands are exposed to irritants)
- Mental Health screening in pregnancy
- Improve industrial safety and health regulation

Middle Adults

Education

- Back care and ergonomic education
- Back pain community education (reduces days off work and minimises need for health intervention.)
- Smoking cessation
- Diabetes
- Should focus more on morbidity from MVC's and not just mortality
- Osteoporosis
- Diet/Exercise
- Teach (health professionals) motivational interviewing techniques to promote education
- Cultural change in attitude to MH illness

Screening

- Pterygium
- Cervical Ca
- Colorectal screening
- Hep C screening
- Head & neck cancer
- First degree relatives of patients with immunodeficiency should be referred for genetic counselling
- Glaucoma
- Aneurysms- (genetic relationships)

Treatments

- Drug & alcohol rehab ; literacy program
- Coordinate alcohol services
- Educate and empower GP practice nurses to identify patients who would benefit from 1 & 2 education prevention and refer them to appropriate organisations etc.
- Well persons Health Checks-(45+ with one or more risk factor that could lead to chronic disease to have a lifestyle and assessment and physical assessment – no charge.)
- Metabolic syndrome
- Osteoporosis Clinics

Older Adults

Education

- Due to reduced LOS not clear about patients ability to digest pre discharge education. Therefore require nurse lead secondary prevention clinics for follow up
- Same issue for ED. Not enough time for patient therefore could refer to education follow up etc
- Improve pre op risk assessment and informed consent
- Pre-surgery fitness and education
- Telephone follow up post discharge

Prevention

- 50% of people in residential care have depressive disorder require specific services to target this population cohort and prevent tertiary admissions
- Incontinence management
- Community foot screening programs for early detection of PVD and peripheral neuropathy
- Providing influenza and pneumococcus immunisations prior to hospital discharge to compliment staff program.
- Prevent falls with laser beams on beds/doorways
- Hip protection wear should be free to all residential care homes.

Specific Conditions/Groups

Migrants Cultural Specific

- Children with Anaemia, Vit D deficiencies require education
- Migrant health assessment and treatment is limits visits and patients have to be referred to GP's and usually do not attend and end up in ED's

Mental health

- Assessments for spinal patients to prevent self harm etc

Diabetes

- Access to foot care in the community
- Only small minority - 3% see diabetes educators (BEACH report)

Asplenic patient

- Guidelines

Recurrent infections-

- Guidelines required to assist with when and how to investigate

Respiratory allergic disease patients

- Should be offered desensitisation at diagnosis to prevent chronic morbidity

Lymphoedema**Indigenous**

- Increase aboriginal health workers
- Step A (reduce strep sore throats and skin diseases and therefore reduce valve disease-- by improving living conditions)
- QLD vaccine development close
- Adequate waste disposal
- Swimming pools- no school- no pool policy

PREVENTING TERTIARY ADMISSIONS/REDUCING BED DEMAND/LOS/REDUCING READMISSIONS

Continuity (Continuum) of Care

“Integrated and seamless care between Hospitals, GP’s and Community Care”

a. Case Management

- Guided care practices/nurse practitioners/practice nurses
- Both within hospitals and along patient continuum
- General Practitioner Hospital Integration program (GPHI)
- Encourage dual appointments between services ie tertiary; secondary , community
- Shared care models
- Senior medical and other health professionals should work in both inpatient and community environments
- Care coordination model used in Victoria
- GP up skilling for particular diseases
- Involve case manager at discharge
- Medications - Ongoing review by pharmacist of patients medications. Could be part of multidisciplinary team and undertake home visits.

b. Communication Strategies

- Electronic Medical Record
- Clinical Pathways
- Care plans
- Patient empowerment
- Clever use of Electronic Gadgets
- Telehealth

Self Management

- Lorig self management program. GPHI used. NHS now trialing an on-line version. Practice guidelines for patients.
- Flinders model along with the Lorig model improves patient empowerment
- Patients have day rooms and lounges to dine and get dressed. Move toward wellness and not illness model
- Mobile phone service by experts ie Diabetes at PMH take calls during the day and give advice and therefore prevent admissions
- COACH program (coaching patients on achieving cardiovascular health) St Vincents Melbourne

GP Community

- GP's standardised database for recall of patients to monitor risk factors. Could be linked to discharge summaries. Could be Statewide etc
- Enhanced/Expanded community programs
- Improve assessment of high risk patients and timely referral
- Specialist manned telephone service for GP's to get advice
- Use of bulletin board/ web site for experts to help with queries from GP's
- Protocol driven assessments and referral processes.
- GP's should be involved in surgical pre op work up to facilitate post op care.
- Allow GP's to prescribe S100 for HIV, viral hepatitis
- Midwifery visits to surgeries where volume allows
- Include GP in hospital care and discharge planning
- Make it mandatory for all discharge letters to GP's to have therapeutic targets and check list to assist GP when to refer patient to hospital again
- Have multidisciplinary community based teams
- Increase CAMHS presence
- Diabetic foot teams

Outpatient Clinics

- Access to urgent (hot) out patient clinic appointments for GP's, ED and other clinics
- Not all patients need to be medically assessed
- Clear referral criteria
- Encourage private clinics
- Increase allied health presence in OP
- Multiple comorbidities...go to general outpatient clinic
- Reprioritise access to pathology and imaging
- Programmed investigation unit
- Better access to interventional cardiology
- Expand into ambulatory care facilities
- Discharge patients back to GP care
- Expand to 7/7 (eg oncology)
- Multidisciplinary outpatient teams
- Pharmacology to treat patients as outpatients instead of inpatients. Biological agents for psoriasis. Ingrams regime(light therapy & topical dithranol) for eczema
- More generous PBS regulations concerning prescribing of statins and clopidogrel for patients with PVD.
- Transport (stop missed appts)

Day care hospital/centres

- Eating disorders
- CSF

ED

- Chest pain units co-located with ED , run by ED physicians with support from cardiologists
- Social Work required to be more proactive not reactive and be resourced to keep people in the community (stop social admissions)
- Multidisciplinary teams for patients to be discharged to
- More allied health in ED
- ?Detox units (ED, Psych and Next Step)

No Treatment

- Consider quality adjusted life years as a measure of whether to operate/medically intervene
- Use criteria to determine if intervention is beneficial ie similar to organ transplant suitability (Involve consultant and ICU staff)
- Liverpool palliative protocol (telling patients they are dying). Treat for comfort
- Agree treatment protocols and guidelines for a range of gynae procedures (?others)

LOS Reduction

- Shift more cases to day surgery (eg tonsillectomy)
- Create incentives for day surgery
- Shift day to outpt surgery (eg grommets)
- Enhanced recovery programs to accelerate post op recovery (perioperative specialists)
- Improve pre op selection including consideration of no surgery if multiple co-morbidities
- Some Emergency surgery should be sent home and readmitted as DOSA
- Improve discharge planning
- Clinical pathways for all care
- Clearly documented care plans
- Make multidisciplinary patient meetings mandatory and have daily
- Pre admission should include assessment for drug & alcohol & smoking withdrawal as well as solve the problems they discover not just document them.
- Learn post op exercises, transfers from chair to bed etc prior to surgery
- Non medical discharge authority (strict not optional)
- Increase isolation rooms in non tertiary facilities
- Nursing and allied health initiated referrals
- RAILS-rehab acute intervention and liaison service
- Lack of clinical pathways is a major barrier to discharges
- Home wards
- Reduce exit block (from ED, from ICU, from CCU, from AAU, from acute bed, from hospital)
- Ambulatory care wards (pts dress and sit out of bed for meals)
- Benchmark against National best
- Build 30% of all beds as same day (or short stay)
- Ensure timely theatre access

- Allied health staffing 7 days a week (?hospitals 7 days a week)
- AAU's for hospitals
- Rehab services are under resourced
- Equipment -Increase access to electric beds for patients in the home and other equipment to facilitate care at home
- Community Aids and Equipment Program (CAEP) needs greater access.
- All patients 70+ who are frail etc and have been in hospital for greater than Days should be referred to the geriatrician
- Improve internal processes and efficiencies to access test for inpatients
- Educate public regarding LOS expectations
- Planned admissions occur late in day thus lose a day before treatment starts
- Agreed antibiotic protocols
- No fault payment for injuries (eg quads), so they can afford to go home
- Redefine (?define) criteria for MH patient admission
- Consults to be done within 48 hrs (?what current standard is?)
- Increased training for all staff
- Telephone follow up

Rehabilitation

- Issue for <65yo
- Under resourced (inpt, outpt and community)
- All hospitals to have gym and hydrotherapy

Hospital in the Home

- Steroid preparations under wet dressings
- Have non infectious diseases patients included
- End stage liver failure
- Palliative care
- Administer s/c immunoglobulin as opposed to IV
- Antimicrobials (rather than always inpatient)
- IV cyclophosphamide

Healthy @home

- expand
- regular checks to keep patients "tuned" topped up
- While on waitlist allied health support, wellness maximiser to reduce emergency admissions and accelerate post op recovery
- Increase home monitoring

Non Hospital Accommodation

Aged care

- Equity in remuneration for RN's working in aged care facilities and expanded scope of practice to reduce transfers (PIVMAC in NSW).
- Aged Care flying quads to review patients particularly terminal patients

Alternative accommodation

- Medihotels
 - Victoria has medihotels functioning
 - QLD has some private hotels operating in conjunction with plastic surgery
- Welltels
 - Free standing facility adjacent to hospital
 - Three star hotel rating
 - Nursing support
 - For self caring patients who are ambulant but require rehab
 - Medically stable
- Drug and alcohol
 - Lack of detox centres leads to inappropriate admissions to both tertiary and mental health hospitals
- HACC type services for non chronically ill
 - Mental Health
- Crisis Accommodation
- Residential Facilities
 - Medium term – in between tertiary and aged care
 - Permanent care for young disabled=- ABI
- Respite
 - Disabled children
 - Chronic diseases
 - In home respite
 - Young disabled
- Palliative care
 - Earlier referral, particularly of Oncology patients to palliative care, and shift of philosophy that palliation is not seen as failure.

Education/technology

- Require electronic search engines to locate appropriate resources and support groups.
- telemedicine

Migrant Health

- Increase number of visits to migrant health services. Currently limited visits allowed and patients then end up in ED's

Mental Health

- Lack of psychosocial support ie food, shelter, human contact leads to tertiary admissions
- Have medical clinics in Psych hospitals
- Have phone access/advice for police to triage inappropriate transfers to ED/mental health

Rural & remote

- Mobile paed operating units
- Flying teams to visit with more than medico's ie nursing & allied health
- Rural rehab facilities required. Currently only exist at Geraldton- 6 beds

CONTINUITY OF CARE

Care should be patient not specialist/specialty centric

Incentre

- Specialist treating the primary disease should be responsible for coordinating care
- Family doctor should be involved (use funding from Medicare for case conferencing)
- Multidisciplinary teams/team meetings
 - Provide optimal care
 - Support and promote an integrated approach
 - Forum for development & maintenance of policies and protocols
 - Review treatment regimes and outcomes
 - Undertake teaching, training & research
 - Undertake discharge planning
- Multidisciplinary ward rounds
- Multidisciplinary outpatients
- Care coordinator: Case manager who manages LOS, community networking and discharge
- Rehabilitation Coordinators to seek out rehabilitation needs and broker appropriate services to facilitate discharge

Across the patients Continuum

- Care coordination ie Cancer Care Coordinators
- Multidisciplinary utilising multiskilled, multilocation teams with good practice guidelines, good care coordination and good education support
- Shared care model across services

SELF-MANAGEMENT

Overwhelmingly limited and requires much more attention/resources

Equity of access to programs limited and depends on geography, socioeconomic etc

Wellness models

- Patients to have day rooms and lounges to dine and get dressed. Move toward wellness and not illness model
- Self-management teaching essential
- Need to change co-dependency between patients and health care professionals and hospitals
- Separate newly diagnosed patients from long term patients so that they are not socialised into co-dependency ie renal patients should never see the inside of tertiary hospital unless clinically required
- Psychological support essential to achieve self-management ie stress management, relaxation techniques, energy conservation, work simplification, functional training.

Empowerment

- Crisis emergency line for families of people with mental illness so they can get expert advice
- Direct responsibility back to the individual/ promote the patient charter
- Educate the public about self responsibility
- Not for health professionals to decide what scope of patient self-management should be, is up to patient once fully informed and educated to make decision. Health professionals need to let go
- Waitlist patients while they reduce their risk factors and set goals they must reach
- Education/information specific areas in outpatients with access to internet, computers education booklets etc. ie British Columbia model
- Patients should have their own clinical pathways
- Improve written information material
- Canning division of GP's a very rare group who enhance patient empowerment
- Self report from home either via phone, video link SMS monitoring or email for weekly/monthly checks therefore earlier identification of disease progression.
- A list of mental health (all disease specific self help sites) to be centrally managed and updated by DOH www.healthinsite.gov.au
- Support patients to implement patient support groups
- CVM at SCGH have link to hospital internet site and links to best practice websites on bottom of patients discharge summaries
- www.entkids.com.au great website
- Patient held records and full access to records
- Cancer care other than breast and prostate does not encourage patient empowerment. Need to use chronic diseases model empowerment framework for those with cancer.

- Lorig self-management program. GPHI used. NHS now trialling an on-line version.
- Flinders model along with the Lorig model improves patient empowerment
Flinders model- one to one basis. Links GP and health professionals and their patients with community delivered self-management education programs. Is generic.
- COACH program (coaching patients on achieving cardiovascular health)
St Vincents Melbourne

WORKFORCE

Medical

- Use Fellows as Associate Consultants
- Expand role of practice nurses
- Physician assistants/physician extenders (QLD health: has a medical assistants course)
- Nurse/Allied health practitioners in community and hospitals

Nursing

- Nurse Practitioners
- Enrolled Nurses Scope
- Certificate 3 carers (Personal care assistants)

Allied Health

- Increase therapy assistants- consider certificates to specialise beyond generalist roles at present
- Welfare Assistants
- Allied health practitioners
- eg : physiotherapy extended scope practitioners (NHS)have
- Limited prescribing rights
- Take ABG'
- Some do bronchoscopies

All

- Upskilling of carers
- Give HR duties back to HR
- Communication clerks
- Scribes or enhanced communication technology
- Relieve health care workers from administrative tasks and increase efficiency by
 - Increasing admin support
 - Increasing clerical support
 - Secretaries
 - Audit staff
 - Standardised documents
 - Electronic records
 - Data managers

Recruitment/retention

Many medical specialists do not need to work in the public sector, they do so because they want to give back to the public system.

Incentives

- Full time medical staff with appropriate remuneration
- Appropriate funding for professional development
- Paid study leave
- Financial incentives for post graduate study
- Competency appraisals and remuneration-recognition of skill acquisition
- Backfill so research can be undertaken
- Develop incentives for staff who remain in public sector or institution for long term
- Increase remuneration for unsociable shifts
- Reward achievements including achievements of targets
- Improved salary packaging
- Scholarship programs
- Support for higher education
- Superannuation bonuses
- Subsidise public transport for staff

Career structures

- Review allied health and nursing career structure to be more competency based
- Reinstate clinical nurse specialist and management roles not combined hybrids
- Equity across health services in relation to professional classifications
- Well defined career pathways and opportunities for promotion
- For surgeons and other clinicians who want to change their practice style without retiring, alternative innovative positions should be developed
- Joint training positions to provide a future multi skilled workforce eg oncology & psychiatry

Working Conditions

- Increase flexibility of shifts and casual work ie school hours
- Encourage job/work sharing
- Adequate staff numbers
- Reduce non nursing duties
- Avoid temporary contracts
- Ability to work from home
- Leave relief

Facilities

- Environment that is adequate for physical space
- Capital equipment replacement to avoid breakdowns
- Breast feeding facilities
- Staff car parking (quarantined)
- Child care facilities
- Staff gyms and aerobics exercises
- Offices
- Tea/lunch rooms

Well at Work

- Specific support for stress related issues- Murdoch staff wellness program to reduce burnout who cares for the carer

Culture

- Family friendly culture
- Respect and acknowledge as part of the team
- Move away from culture of blame and fault finding/complaint process accuses first rather than coming from a neutral position and fact finding
- Locus of control issue staff need to be active participants in decision making
- Those in leadership positions need to recognise and acknowledge the high standard of care that is delivered

Other

- Return to lifting teams
- Zero tolerance to aggression/abuse in the workplace
- Recruit staff while still at university to assist with their education and training similar to apprenticeships.
- Increase academic posts
- Well developed orientation programs
- Decision support systems
- Not being sent out of specialty to other areas- nursing and allied health
- Early hospital trainee positions to be joined with a specific hospital
- Joint /Dual medical, nursing, allied health appointments between services- tertiary-secondary-community and between private and public

SAFETY

Equipment

- Up to date equipment and facilities- maintenance not being carried out and is a risk issue

Workforce

- Appropriate staff numbers
- Safe rostering practices
- Well developed and used orientation packages and processes ie how many medical staff attend hospital orientation?
- Practice of evidenced based medicine
- Access to security
- Quarantined staff parking
- Lifting teams should return
- Ergonomically safe workplaces
- Discourage long shifts
- Zero tolerance to aggression
- More bariatric equipment needed

Other

- Premix treatments to reduce medication errors
- Computerised prescribing systems
- Improve change management when introducing new technology other changes-need to have time allotted to attend education etc

Governance

Everyone learning more about what the other services had and exchanging guidelines

Clinical guidelines

- Development of comprehensive clinical support strategy across all specialties and linked with community and GP's at state level and national if possible- initiate when still at home and continue through continuum of care
- Clinical pathway initiated referrals by non medical staff
- Protocols and algorithms
- Teach all undergraduate health students basis of governance- emphasise team and not working in professional silos
- Ensure AIMS reporting is more timely and that everyone uses it
- Use Decision support systems (DSS). Lots of potential for DSS by using DOH hospital separation index data . Need for more pre intervention an post intervention data via electronic records with unique identifier. Data access must be granular and the technology /user interface must be accurate, efficient and user-friendly
- Diagnostic Imaging Pathways project at RPH
- Clinical guidelines should be statewide ie tonsillectomy etc

- Guidelines should be multidisciplinary
- Aged care has lots of guidelines available via geriatric medicine website: staff training(over and over again as staff turn over re guidelines is essential as is infrastructure to maintain etc
- Non clinical sessions required to develop clinical guidelines
- Guideline support required to keep them up to date. Reluctance to put on internet for others to use because can't upkeep
- Provide incentives for clinical guideline development
- Medico legal concerns need to overcome by some clinicians who have concerns about standardised pathways
- Literature review indicates inconsistent evidence of the benefit of clinical guidelines for people with long term conditions
- Neural network decision support system for allocating optimal intervention and providing individualised short and long-term outcomes for patients

Credentialing

- Senior staff in mixed ED's to have paediatric credentialing with possible co appointments with PMH
- Unable to achieve proper governance because systems not replaced or supported ie Paed surgical audit
- Credentialing process for individuals and units and regular recredentialing
- Need to support mentoring amongst medical staff

Audit

- Need resources for database support, management and monitoring

Other

- Still a blame culture out there, a lot of work to be done
- Performance review still only lip service
- Better support for junior medical staff especially when on call
- (ID)Antimicrobial guidelines that are electronic(ie TGA version unfriendly and accessing via CIAO difficult) are cumbersome and therefore not occurring as frequently as should. Should purchase john Hopkins electronic guideline. Booklets given out become too out of date
- IDEA software –electronic antimicrobial approval system linked to decision support for common infections- gives approval and releases the registrars from having to do this.
- Standardise all HITH and other community guidelines to facilitate patient continuity across areas.

TECHNOLOGY

Electronic record

- Strict security and confidentiality
- with links to pathology, radiology, pharmacy, everything
- access to all health providers along patient continuum and linked between all health service providers ie GP, community, hospital
- to be available at patient bedside
- Patient held medical records

Electronic Ordering

Other

- GPS navigation systems for domiciliary nurses
- Increase use of digital camera's to observe wound progress and have images as part of patients electronic records
- Electronic communication with patients
- Health smart cards
- Computerised medication chart that would query inappropriate doses with a cross check to blood results etc and records when and why medications and or dosages were changed
- Electronic communication with GP's
- Centralised data bases with up to date community resources
- On line patient referrals
- Expanded use of telemetry in hospital in home etc
- Computer generated chemotherapy charts
- Triaging patients as soon as ambulance has them via digital transfer of clinical stats
- Electronic voice recognition dictation systems

Mass General - Boston Massachusetts

- Everyone has a PDA- paging, messages, guidelines and results all available via the PDA.
- If particular doctor requests a test then every doctor looking after the patient gets a copy of it. Different alarm sounds for abnormal results. Can access information from home because of secure net.

Equipment

- Laparoscopic equipment for limb vein harvest
- Fibrescopic endoscopes with image recording capacity
- Point of care testing
- Improved bed technology for patient and staff safety
- Improved manual handling and bariatric equipment

- Digital retinal cameras
- Improved insulin pumps
- Continuous glucose sensors
- Fully resources gait and motion laboratory
- Greater access to halter and bp monitoring equipment
- Powered wheelchairs
- Postural seating systems
- Ultrasound imaging for nerve blocks
- Da vinci robot (paediatric surgery)
- Oesophageal/anorectal manometry

Innovation

- Use of kangaroo valves FH
- Fast turn around genetic profiling to identify patients who will benefit from expensive technologies
- Use of feedback systems to monitor ventilation during weaning and control drug infusions
- Photodynamic therapy- skin cancer treatment use of light source metvix R
- Use of biological agents to treat psoriasis
- Improved laser technology
- Automate data capture and workload stats ie bar codes
- Universal patient numbers throughout the state for both public/private
- Increased use of capsule endoscopy
- Evolution of in vivo diagnosis techniques
- Increased therapeutic/interventional endoscopy at tertiary sites
- PET/Ct and enhanced molecular imaging
- Bioimpedance, tonometry and penometry will all be important in lymphodema practice
- Lab tests change
- Non invasive liver fibrosis tests
- Advanced imaging techniques
- New vaccines to enhance prevention
- When patients arrive and pay for parking or enter the premises their hand held med records or health card locks them in and notifies those they are going to see that they are on their way
- Computer programs for cognitive training and assessment
- Speech pathology- more biofeedback and electrical stimulation equipment for use for facial muscle weakness and swallowing problems
- Cognitive rehab following ABI
- 3D ultrasound
- Genomic analysis
- High quality images of cervix to allow remote colposcopy
- Higher quality microscopes
- Virtual technology for teaching and training staff and patients

- Computerised systems to select the most appropriate prosthesis for patients in theatre
- Real time ultrasound for physio to measure success of muscle retraining ie transverse abdominus and pelvic floor muscles
- Portable blood gas analysers for community use
- Telesurgery
- Dermoscopy and artificial intelligence will allow the accurate diagnosis of skin lesions
- Digital technology with confocal microscopy will allow accurate assessment of the depth of burns
- Debridement systems that can chemically/enzymatically differentiate between viable/non viable tissues
- Percutaneous cryotherapy
- Liver support systems such as Molecular Adsorbent recirculation system (MARS) or extracorporeal Albumin dialysis (ECAD) used for drug toxicity and liver failure
- Multifaceted hyperbaric chamber
- Intraoperative MRI
- Functional MRI
- Monitoring of anaesthetic depth

TEACHING & RESEARCH

Every specialty and every profession within that specialty would like academic chairs /departments and post graduate courses as well as structured ongoing education

- Abandon term teaching hospital as every hospital/service ie GP surgery are environments for teaching
- Require time to undertake/time must be quarantined
- Increasing teaching loads because of increasing student numbers and reduced supervisory support a fundamental issue for all professions
- Need to fund teaching and research posts across all professions
- Improve availability of scholarships
- Consider cross cardiology and cardiothoracic training
- Lack of office space or not prioritising office space for all staff an issue
- Prof chairs for allied health-increase the number
- Part time staff need sessions for teaching/research 3sessions per week not adequate should have no part time medical staff on less than 5 sessions per week
- Up skilling of non hospital staff essential to move patients from in hospital care to community
- Trainees need to be attending non teaching hospitals when surgery/ procedures shift to these centres- bonuses for teaching or the provision of junior staff to care for patients in these non teaching environments would facilitate medical staff to accept teaching roles in these environments. should be considered
- Easy access seminar rooms required
- Staff development positions essential
- Adjunct positions with universities- so long as it is more than a title and with the position comes quarantined academic and teaching time
- Maintain library facilities and increase librarian support
- Use private areas more
- Fund study leave
- Recruit good teachers and researchers
- Need access to support staff, statisticians etc
- Collocation of research facilities with health services
- Quarantine percentage of budget for teaching and research
- Department heads should provide leadership in teaching and research