

## STRATEGIC FRAMEWORK FOR MODERNISATION OF TERTIARY SERVICES

**Model B:**

<b>Model B</b>	
<b>Regional Hospital Services</b>	
<b>Specialist Service Available On-Site</b>	<b>Specific Components Explicitly Included:</b>
Anaesthetics	
Diagnostic Radiology	X-Ray, CT Scan, Ultrasound, Fluoroscopy Telelinked Nuclear Medicine Radiographer, Interventional radiology (basic interventions e.g. image guided aspirations)
General Medicine Service	Echocardiography, Stress ECG Specialist Immunology Nurse Regional ICU Service Diabetes / Endocrine clinic GIT incl. endoscopy, proctoscopy, sigmoidoscopy, colonsocopy (with Gen Surg) Regional Dialysis Service & Organ Donation Geriatric Care Genetic Nurse & Counselling Oncology palliation and basic care Neurology basic care Spirometry & oximetry Basic Rheumatology Basic Infectious Diseases Pathology Services Infection Control Proctoscopy, Sigmoidoscopy
General Surgery Service	Regional Burns Service 24 hour Level II Trauma Service, Accident & Emergency
Mental Health (Psychiatry & Psychology)	Acute Inpatient & Outpatient Child & Adolescent Psychiatry ECT Liaison Psychiatry Community Mental Health Services
Neonatology	Neonatal Low & High Care, Neonatal Intensive care
Obstetrics & Gynaecology Service	Emergency Obs & Gynae Ultrasound, prenatal diagnosis Kangaroo Care Basic urogynaecology Mid trimester abortions and adequate pain relief systems Basic oncology, menopause and screening programmes Preliminary infertility investigations
Orthopaedic Surgery	General Orthopaedic Surgery 24 hour Level II Trauma Service, Accident & Emergency
Paediatrics Service	General Paediatric Medicine Service General Paediatric Surgery (General Surgeon?)
Rehabilitation Centre	Physiotherapy, OT, Orthotics & Prosthetics, Speech Therapy, Dietetics, Podiatry Acute Rehabilitation Team incl. Spinal beds

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<b>Model B</b>	
<b>Tertiary Hospital Services</b>	
Specialist Service Available On-Site	Specific Components Explicitly Included:
Anaesthetics	
Burns Unit	Specialised Burns ICU & Theatre
Clinical Immunology Service	
Clinical Pharmacology Specialist	
Critical Care & ICU	Full ICU Service
Dermatology Specialist Service	Inpatient & ambulatory
Diagnostic Radiology	X-Ray, Multi-slice CT Scan, Ultrasound, Fluoroscopy, MRI, Mammography, Colour Doppler US, Interventional Radiology, Angiography
ENT Surgery Specialised Service	
Gastroenterology	Tertiary GIT Service
General Medicine Service	Angiography AT Scan Coronary Care Echocardiography, Stress ECG Endoscopy, proctoscopy, sigmoidoscopy, colonoscopy (with Gen Surg), Genetic Nurse & Counselling, Oncology palliation and basic care
General Surgery Service	Complex & High Acuity Care
Geriatrics	Specialised Geriatric Service
Infectious Diseases	Tertiary Infectious Diseases Service, Pathology Services, Infection Control, Dietician, Counselling Services, Social Worker
Mental Health Services (Psychiatry & Psychology)	Child and adolescent psychiatry; Old-age psychiatry; Forensic psychiatry; Substance abuse; Liaison psychiatry; Eating disorders; Inpatient psychotherapy; Social psychiatry; Acute psychotic (complicated); Acute non-psychotic (complicated)
Neonatology	Neonatal Intensive Care Unit
Nephrology	Acute renal failure / clinical nephrological problems / dialysis complication
Obstetrics & Gynaecology Service	As Regional plus: Fetal / Maternal Medicine
Ophthalmology	Specialised Ophthalmology Service
Orthopaedic Surgery	Sub-Specialty Orthopaedics
Paediatric Medicine	Specialist General Paediatricians with special interest
Paediatric Surgery	Specialist Paediatric Surgery Service
Paediatric ICU	Full Paediatric ICU Service
Paediatrics Service	Neonatal Low & High Care General Paediatric Medicine Service General Paediatric Surgery
Plastic & Reconstructive Surgery Specialist Service	Tertiary Plastic & Reconstructive Surgery
Rehabilitation Centre	Physiotherapy, OT, Orthotics & Prosthetics, Speech Therapy, Dietetics, Podiatry, Audiology Acute Rehabilitation Team incl. Spinal beds, Stroke Unit
Respiratory Medicine	Comprehensive Pulmonology Service
Trauma	Tertiary Major Trauma Centre (n.b. protocol-based transfer only, no walk-in A&E service)
Urology Specialist Service	Tertiary Urology Service
Vascular Surgery Specialist Service	Tertiary Vascular Surgery Service

## STRATEGIC FRAMEWORK FOR MODERNISATION OF TERTIARY SERVICES

<b>Model B</b>	
<b>National Referral Hospital Services</b>	
<b>("Adds on" to a Tertiary Hospital)</b>	
Specialist Service Available On-Site	Specific Components Explicitly Included:
Cardiology	Echocardiography, Ultrasound, Electrocardiography, Stress Testing, ECG Holter Pacemaker follow-up, Cath Lab, Electrophysiology Ablation
Cardiothoracic Surgery	Full Cardiothoracic Service
Craniofacial Surgery	
Critical Care & ICU	Additional ICU Capacity
Endocrinology	Tertiary Endocrinology Service
Haematology	Tertiary Haematology Service
Human Genetics	Tertiary Genetics Service
Infectious Diseases	Clinical Research Capacity
Medical & Radiation Oncology	Tertiary Oncology Centre
Neurosurgery	Tertiary Specialist Neurosurgery Service, Interventional Neuroradiology
Nuclear Medicine	Tertiary Nuclear Medicine Centre
Obstetrics & Gynaecology Service	Oncology Urogynaecology Reproductive Medicine
Ophthalmology	Super-Specialist Ophthalmology Service
Orthopaedic Surgery	Orthopaedic Oncology
Renal Transplant	Renal Transplant Unit
Rheumatology	Tertiary Rheumatology Service
Paediatric Cardiology	
Paediatric ICU	Additional Paediatric ICU Capacity
Paediatric Endocrinology	
Paediatric Gastroenterology	
Paediatric Haematology & Oncology	
Paediatric Infectious Diseases	
Paediatric Nephrology	Dialysis & Renal Transplant
Paediatric Neurology	
Paediatric Respiratory Medicine & Allergology	
Paediatric Rheumatology	

## STRATEGIC FRAMEWORK FOR MODERNISATION OF TERTIARY SERVICES

<b>Model B</b>	
<b>Central Referral Units</b>	
<b>("Add on" to a National Referral Hospital)</b>	
<b>Specialist Service Available On-Site</b>	<b>Specific Components Explicitly Included:</b>
{ Cardiology	Cardioverter Defibrillator & LV Assist Devices Unit
{ Cardiothoracic Surgery	Heart & Lung Transplant Unit
{ Respiratory Medicine	National Pulmonology Referral Centre: Lung volume reduction, Lung Transplant
Maxillofacial Surgery	National Referral Centre
{ Diagnostic Radiology	National PET Scan
{	Interventional Neuroradiology
{	Cardiac Imaging
{ Nuclear Medicine	PET or gamma-PET
{ Medical & Radiation Oncology	National Oncology Referral Centre: Bone Marrow Transplant, IMRT, Intraoperative Radiation, Stereotactic Radiation, PET Scan planning; laminar flow, cryopreservation, stem cell harvesting, T-cell depletion facilities
{ Haematology	Bone Marrow Transplantation Unit
{ Hepatology	Specialist Liver Unit
{ Liver Transplant	Liver Transplant Unit
{ General Surgery	National Surgical Referral Centre: Liver and major pancreatic resections, TME
{ Nephrology	National Nephrology Centre: Pancreas-kidney / Liver-kidney Transplant
Clinical Immunology	National Referral Centre
Clinical Pharmacology	National Policy Support Unit
Dermatology	National Referral Centre
Endocrinology	National Endocrinology Referral Centre
ENT	Cochlear Implant Skull Base Surgery
Human Genetics	National Genetics Centre
Infectious Diseases	National Institute for Communicable Diseases
<i>National Paediatric Referral Centre:</i>	
{ Paediatric Medicine & Surgery	Organ transplantation, epilepsy surgery, craniofacial surgery; certain high-cost / complexity medical interventions
{ Paediatric Gastroenterology	Transplant Surgery, Metabolic Laboratory
{ Paediatric Haematology & Oncology	Bone Marrow Transplant
{ Paediatric Neurology	Complex epileptic surgery, complex neuromuscular patients, neurodegenerative and metabolic patients, Video telemetry, intracranial mapping, neuro-metabolic lab.
{ Paediatric Rheumatology	Bone Marrow Transplant, DEXA scans, Interleukin levels, joint replacement

## STRATEGIC FRAMEWORK FOR MODERNISATION OF TERTIARY SERVICES

**Model C:**

<b>Model C</b>	
<b>Regional Hospital Services</b>	
<b>Specialist Service Available On-Site</b>	<b>Specific Components Explicitly Included:</b>
Anaesthetics	
Diagnostic Radiology	X-Ray, CT Scan, Ultrasound, Fluoroscopy, Interventional radiology (basic interventions e.g. image guided aspirations)
General Medicine Service	Echocardiography, Stress ECG Specialist Immunology Nurse Regional ICU Service Diabetes / Endocrine clinic GIT incl. endoscopy, proctoscopy, sigmoidoscopy, colonoscopy (with Gen Surg) Geriatric Care Genetic Nurse & Counselling Oncology palliation and basic care Neurology basic care Spirometry & oximetry Basic Rheumatology Basic Infectious Diseases Pathology Services Infection Control Proctoscopy, Sigmoidoscopy
General Surgery Service	Regional Burns Service 24 hour Level II Trauma Service, Accident & Emergency
Mental Health Services (Psychiatry & Psychology)	Acute Inpatient & Outpatient Child & Adolescent Psychiatry ECT Liaison Psychiatry Community Mental Health Services
Neonatology	Neonatal Low & High Care, Neonatal Intensive care
Obstetrics & Gynaecology Service	Emergency Obs & Gynae Ultrasound, prenatal diagnosis Kangaroo Care Basic urogynaecology Mid trimester abortions and adequate pain relief systems Basic oncology, menopause and screening programmes Preliminary infertility investigations
Orthopaedic Surgery	General Orthopaedic Surgery 24 hour Level II Trauma Service, Accident & Emergency
Paediatrics Service	General Paediatric Medicine Service General Paediatric Surgery (General Surgeon?)
Rehabilitation Centre	Physiotherapy, OT, Orthotics & Prosthetics, Speech Therapy, Dietetics, Podiatry Acute Rehabilitation Team

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**STRATEGIC FRAMEWORK FOR MODERNISATION OF TERTIARY SERVICES**

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<b>Model C</b>	
<b>Tertiary Hospital Services</b>	
<b>Specialist Service Available On-Site</b>	<b>Specific Components Explicitly Included:</b>
Anaesthetics	
Burns Unit	Specialised Burns ICU & Theatre
Clinical Pharmacology Specialist	
Critical Care & ICU	Full ICU Service
Dermatology Specialist Service	Inpatient & ambulatory
Diagnostic Radiology	X-Ray, Multi-slice CT Scan, Ultrasound, Fluoroscopy, Mammography, Colour Doppler US, Interventional Radiology, Angiography
ENT Surgery Specialised Service	General ENT Surgery
Gastroenterology	Tertiary GIT Service
General Medicine Service	Angiography AT Scan Coronary Care Echocardiography, Stress ECG Endoscopy, proctoscopy, sigmoidoscopy, colonoscopy (with Gen Surg) Genetic Nurse & Counselling Oncology palliation and basic care
General Surgery Service	Complex & High Acuity Care
Infectious Diseases	Tertiary Infectious Diseases Service, Pathology Services, Infection Control, Dietician, Counselling Services, Social Worker
Mental Health Services (Psychiatry & Psychology)	Child and adolescent psychiatry; Old-age psychiatry; Forensic psychiatry; Substance abuse; Liaison psychiatry; Eating disorders; Inpatient psychotherapy; Social psychiatry; Acute psychotic (complicated); Acute non-psychotic (complicated)
Neonatology	Neonatal Intensive Care Unit
Nephrology	Acute renal failure / clinical nephrological problems / dialysis complication
Obstetrics & Gynaecology Service	As Regional plus: Fetal / Maternal Medicine
Ophthalmology	General Ophthalmology Service
Orthopaedic Surgery	Sub-Specialty Orthopaedics
Paediatric Medicine	Specialist General Paediatricians with special interest
Paediatric Surgery	Specialist Paediatric Surgery Service
Paediatric ICU	Full Paediatric ICU Service
Paediatrics Service	Neonatal Low & High Care General Paediatric Medicine Service General Paediatric Surgery
Plastic & Reconstructive Surgery Specialist Service	General Plastic & Reconstructive Surgery
Rehabilitation Centre	Physiotherapy, OT, Orthotics & Prosthetics, Speech Therapy, Dietetics, Podiatry, Audiology Acute Rehabilitation Team incl. Spinal beds Stroke Unit
Respiratory Medicine	Comprehensive Pulmonology Service
Trauma	Tertiary Major Trauma Centre (n.b. protocol-based transfer only, no walk-in A&E service)
Urology Specialist Service	General Urology Service
Vascular Surgery Specialist Service	General Vascular Surgery Service

## STRATEGIC FRAMEWORK FOR MODERNISATION OF TERTIARY SERVICES

<b>Model C</b>	
<b>National Referral Hospital Services</b>	
<b>("Adds on" to a Tertiary Hospital)</b>	
<b>Specialist Service Available On-Site</b>	<b>Specific Components Explicitly Included:</b>
Cardiology	Echocardiography, Ultrasound, Electrocardiography, Stress Testing, ECG Holter Pacemaker follow-up, Cath Lab, Electrophysiology Ablation
Cardiothoracic Surgery	Full Cardiothoracic Service
Clinical Immunology	Tertiary Clinical Immunology
Craniofacial Surgery	
Critical Care & ICU	Additional ICU Capacity
Diagnostic Radiology	MRI Interventional Neuroradiology
ENT Surgery	Specialised ENT Service
Endocrinology	Tertiary Endocrinology Service
Geriatrics	Specialised Geriatric Service
Haematology	Tertiary Haematology Service
Human Genetics	Tertiary Genetics Service
Infectious Diseases	Clinical Research Capacity
Medical & Radiation Oncology	Tertiary Oncology Centre
Neurosurgery	Tertiary Specialist Neurosurgery Service
Nuclear Medicine	Tertiary Nuclear Medicine Centre
Obstetrics & Gynaecology Service	Oncology Urogynaecology Reproductive Medicine
Ophthalmology	Specialised Ophthalmology Service
Orthopaedic Surgery	Orthopaedic Oncology
Plastic & Reconstructive Surgery	Tertiary Plastic & Reconstructive Surgery
Renal Transplant	Renal Transplant Unit
Rheumatology	Tertiary Rheumatology Service
Urology	Tertiary Urology Service
Vascular Surgery	Tertiary Vascular Surgery Service
Paediatric Cardiology	
Paediatric ICU	Additional Paediatric ICU Capacity
Paediatric Endocrinology	
Paediatric Gastroenterology	
Paediatric Haematology & Oncology	
Paediatric Infectious Diseases	
Paediatric Nephrology	Dialysis & Renal Transplant
Paediatric Neurology	
Paediatric Respiratory Medicine & Allergology	

## STRATEGIC FRAMEWORK FOR MODERNISATION OF TERTIARY SERVICES

<b>Model C</b>	
<b>Central Referral Units</b>	
<b>("Add on" to a National Referral Hospital)</b>	
<b>Specialist Service Available On-Site</b>	<b>Specific Components Explicitly Included:</b>
{ Cardiology	Cardioverter Defibrillator & LV Assist Devices Unit
{ Cardiothoracic Surgery	Heart & Lung Transplant Unit
{ Respiratory Medicine	National Pulmonology Referral Centre: Lung volume reduction, Lung Transplant
Maxillofacial Surgery	National Referral Centre
{ Diagnostic Radiology	National PET Scan Interventional Neuroradiology Cardiac Imaging
{ Nuclear Medicine	PET or gamma-PET
{ Medical & Radiation Oncology	National Oncology Referral Centre: Bone Marrow Transplant, IMRT, Intraoperative Radiation, Stereotactic Radiation, PET Scan planning; laminar flow, cryopreservation, stem cell harvesting, T- cell depletion facilities
{ Haematology	Bone Marrow Transplantation Unit
{ Hepatology	Specialist Liver Unit
{ Liver Transplant	Liver Transplant Unit
{ General Surgery	National Surgical Referral Centre: Liver and major pancreatic resections, TME
{ Nephrology	National Nephrology Centre: Pancreas-kidney / Liver-kidney Transplant
Clinical Immunology	National Referral Centre
Clinical Pharmacology	National Policy Support Unit
Dermatology	National Referral Centre
Endocrinology	National Endocrinology Referral Centre
ENT	Cochlear Implant Skull Base Surgery
Human Genetics	National Genetics Centre
Ophthalmology	Super-Specialist Ophthalmology Service
Infectious Diseases	National Institute for Communicable Diseases
<i>National Paediatric Referral Centre:</i>	
{ Paediatric Medicine & Surgery	Organ transplantation, epilepsy surgery, craniofacial surgery; certain high-cost / complexity medical interventions
{ Paediatric Gastroenterology	Transplant Surgery, Metabolic Laboratory
{ Paediatric Haematology & Oncology	Bone Marrow Transplant
{ Paediatric Neurology	Complex epileptic surgery, complex neuromuscular patients, neurodegenerative and metabolic patients, Video telemetry, intracranial mapping, neuro-metabolic lab.
{ Paediatric Rheumatology	Specialised Paediatric Rheumatology including Bone Marrow Transplant, DEXA scans, Interleukin levels, joint replacement

## STRATEGIC FRAMEWORK FOR MODERNISATION OF TERTIARY SERVICES

**Model D:**

<b>Model D</b>	
<b>Regional Hospital Services</b>	
<b>Specialist Service Available On-Site</b>	<b>Specific Components Explicitly Included:</b>
Anaesthetics	
Diagnostic Radiology	X-Ray, Ultrasound, Fluoroscopy,
General Medicine Service	Echocardiography, Stress ECG Specialist Immunology Nurse Regional ICU Service Diabetes / Endocrine clinic GIT incl. endoscopy, proctoscopy, sigmoidoscopy, colonoscopy (with Gen Surg) Geriatric Care Genetic Nurse & Counselling Oncology palliation and basic care Neurology basic care Spirometry & oximetry Basic Rheumatology Basic Infectious Diseases Pathology Services Infection Control Proctoscopy, Sigmoidoscopy
General Surgery Service	Regional Burns Service 24 hour Level II Trauma Service, Accident & Emergency
Mental Health services (Psychiatry & Psychology)	Acute Inpatient & Outpatient Child & Adolescent Psychiatry ECT Liaison Psychiatry Community Mental Health Services
Neonatology	Neonatal Low & High Care, Short stay ventilatory support
Obstetrics & Gynaecology Service	Emergency Obs & Gynae Ultrasound, prenatal diagnosis Kangaroo Care Basic urogynaecology Mid trimester abortions and adequate pain relief systems Basic oncology, menopause and screening programmes Preliminary infertility investigations
Orthopaedic Surgery	General Orthopaedic Surgery 24 hour Level II Trauma Service, Accident & Emergency
Paediatrics Service	General Paediatric Medicine Service General Paediatric Surgery (General Surgeon?)
Rehabilitation Centre	Physiotherapy, OT, Orthotics & Prosthetics, Speech Therapy, Dietetics, Podiatry Acute Rehabilitation Team

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<b>Model D</b>	
<b>Tertiary Hospital Services</b>	
<b>Specialist Service Available On-Site</b>	<b>Specific Components Explicitly Included:</b>
Anaesthetics	
Burns Unit	Specialised Burns ICU & Theatre
Clinical Pharmacology Specialist	
Critical Care & ICU	Full ICU Service
Dermatology Specialist Service	Inpatient & ambulatory
Diagnostic Radiology	X-Ray, Multi-slice CT Scan, Ultrasound, Fluoroscopy, Mammography, Colour Doppler US, Interventional Radiology, Angiography
ENT Surgery Specialised Service	General ENT Surgery
Gastroenterology	Tertiary GIT Service
General Medicine Service	Coronary Care Echocardiography, Stress ECG Endoscopy, proctoscopy, sigmoidoscopy, colonoscopy (with Gen Surg) Genetic Nurse & Counselling Oncology palliation and basic care
General Surgery Service	Complex & High Acuity Care
Infectious Diseases	Tertiary Infectious Diseases Service, Pathology Services, Infection Control, Dietician, Counselling Services, Social Worker
Mental Health Services (Psychiatry & Psychology)	Child and adolescent psychiatry; Old-age psychiatry; Forensic psychiatry; Substance abuse; Liaison psychiatry; Eating disorders; Inpatient psychotherapy; Social psychiatry; Acute psychotic (complicated); Acute non-psychotic (complicated)
Neonatology	Neonatal Intensive Care Unit
Nephrology	Acute renal failure / clinical nephrological problems / dialysis complication
Obstetrics & Gynaecology Service	As Regional plus: Fetal / Maternal Medicine
Ophthalmology	General Ophthalmology Service
Orthopaedic Surgery	Sub-Specialty Orthopaedics
Paediatric Medicine	Specialist General Paediatricians with special interest
Paediatric Surgery	Specialist Paediatric Surgery Service
Paediatric ICU	Full Paediatric ICU Service
Paediatrics Service	Neonatal Low & High Care General Paediatric Medicine Service General Paediatric Surgery
Plastic & Reconstructive Surgery Specialist Service	General Plastic & Reconstructive Surgery
Rehabilitation Centre	Physiotherapy, OT, Orthotics & Prosthetics, Speech Therapy, Dietetics, Podiatry, Audiology Acute Rehabilitation Team Stroke Unit
Respiratory Medicine	Comprehensive Pulmonology Service
Trauma	Tertiary Major Trauma Centre (n.b. protocol-based transfer only, no walk-in A&E service)
Urology Specialist Service	General Urology Service
Vascular Surgery Specialist Service	General Vascular Surgery Service

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<b>Model D</b>	
<b>National Referral Hospital Services</b>	
<b>("Adds on" to a Tertiary Hospital)</b>	
<b>Specialist Service Available On-Site</b>	<b>Specific Components Explicitly Included:</b>
Cardiology	Angiography, Echocardiography, Ultrasound, Electrocardiography, Stress Testing, ECG Holter Pacemaker follow-up, Cath Lab, Electrophysiology Ablation
Cardiothoracic Surgery	Full Cardiothoracic Service
Clinical Immunology	Tertiary Clinical Immunology
Craniofacial Surgery	
Critical Care & ICU	Additional ICU Capacity
Diagnostic Radiology	MRI, Interventional Neuroradiology
Endocrinology	Tertiary Endocrinology Service
ENT Surgery	Specialised ENT Service
Geriatrics	Specialised Geriatric Service
Haematology	Tertiary Haematology Service
Human Genetics	Tertiary Genetics Service
Infectious Diseases	Clinical Research Capacity
Medical & Radiation Oncology	Tertiary Oncology Centre
Neurosurgery	Tertiary Specialist Neurosurgery Service
Nuclear Medicine	Tertiary Nuclear Medicine Centre
Obstetrics & Gynaecology Service	Oncology Urogynaecology Reproductive Medicine
Ophthalmology	Specialised Ophthalmology Service
Orthopaedic Surgery	Orthopaedic Oncology
Plastic & Reconstructive Surgery	Tertiary Plastic & Reconstructive Surgery
Rehabilitation	Spinal Injury Unit
Renal Transplant	Renal Transplant Unit
Rheumatology	Tertiary Rheumatology Service
Urology	Tertiary Urology Service
Vascular Surgery	Tertiary Vascular Surgery Service
Paediatric Cardiology	
Paediatric ICU	Additional Paediatric ICU Capacity
Paediatric Endocrinology	
Paediatric Gastroenterology	
Paediatric Haematology & Oncology	
Paediatric Infectious Diseases	
Paediatric Nephrology	Dialysis & Renal Transplant
Paediatric Neurology	
Paediatric Respiratory Medicine & Allergology	

## STRATEGIC FRAMEWORK FOR MODERNISATION OF TERTIARY SERVICES

<b>Model D</b>	
<b>Central Referral Units</b>	
<b>("Add on" to a National Referral Hospital)</b>	
<b>Specialist Service Available On-Site</b>	<b>Specific Components Explicitly Included:</b>
{ Cardiology	Cardioverter Defibrillator & LV Assist Devices Unit
{ Cardiothoracic Surgery	Heart & Lung Transplant Unit
{ Respiratory Medicine	National Pulmonology Referral Centre: Lung volume reduction, Lung Transplant
{ Diagnostic Radiology	Interventional Neuroradiology Cardiac Imaging
{ Medical & Radiation Oncology	National Oncology Referral Centre: Bone Marrow Transplant, Stereotactic Radiation; laminar flow, cryopreservation, T-cell depletion facilities
{ Haematology	Bone Marrow Transplantation Unit
{ Hepatology	Specialist Liver Unit
{ Liver Transplant	Liver Transplant Unit
{ General Surgery	National Surgical Referral Centre: Liver and major pancreatic resections, TME
{ Maxillofacial Surgery	National Referral Centre
{ Clinical Immunology	National Referral Centre
{ Clinical Pharmacology	National Policy Support Unit
{ Dermatology	National Referral Centre
{ Endocrinology	National Endocrinology Referral Centre
{ ENT	Cochlear Implant Skull Base Surgery
{ Human Genetics	National Genetics Centre
{ Ophthalmology	Super-Specialist Ophthalmology Services
{ Infectious Diseases	National Institute for Communicable Diseases
<i>National Paediatric Referral Centre:</i>	
{ Paediatric Medicine & Surgery	Organ transplantation, epilepsy surgery, craniofacial surgery; certain high-cost / complexity medical interventions
{ Paediatric Gastroenterology	Transplant Surgery, Metabolic Laboratory
{ Paediatric Haematology & Oncology	Bone Marrow Transplant
{ Paediatric Neurology	Complex epileptic surgery, complex neuromuscular patients, neurodegenerative and metabolic patients, Video telemetry, intracranial mapping, neuro-metabolic lab.
{ Paediatric Rheumatology	Specialised Paediatric Rheumatology including Bone Marrow Transplant, DEXA scans, Interleukin levels, joint replacement

## **Overview of Models**

Clearly, each of Models A to D reflects a slightly different resource scenario, but also a different emphasis in the balance of service delivery across levels. Model A reflects a very optimistic resource scenario, in which sufficient funds and skills are available to achieve a significant deepening of specialist services at regional hospital level, so that all regional hospitals could have basic specialist services such as Dermatology, ENT, Ophthalmology, Urology and Vascular Surgery, as well as comprehensive radiology services up to and including single-slice CT scanners. Once consequence of Model A would be the need to have relatively fewer tertiary hospitals – on the grounds that regional hospitals are significantly stronger in this model than in others. Model B also reflects an optimistic scenario – but one in which it is not feasible to have such a wide range of specialist skills at regional hospital, and which rather seeks to offer a larger number of concentrated tertiary hospitals. Model C reflects a rather more resource-constrained scenario. Under this model, a number of services have to confine their tertiary presence to entry-level specialist services, with complex activities only affordable at national referral level. Model D then offers the most pessimistic view, requiring a further degree of concentration and foregoing a number of significant investments (e.g. no CT at regional hospital level, no PET centre nationally etc.).

Readers should also note that, in all these models, Regional Hospitals offer the highest level of access to health care at which the public can directly “walk in” without referral (i.e. via A&E or open access out-patients clinic). From the tertiary level upwards, models A to D all clearly assume that patients will arrive at their doors following referral or transfer, and that tertiary and national referral hospitals would be physically configured to prevent walk-in access by unreferral patients (e.g. by not providing ambulatory A&E facilities, but a Major Trauma facility for EMS-delivered casualties only). This does not preclude offering regional hospital services on site – but there would always need to be a significant degree of physical separation of regional and tertiary facilities on the same campus.

While the precise number of hospitals affordable under each model and scenario is itself a critical output of the modelling which will shortly be undertaken, it is probably helpful to readers to have some illustration of how these models might translate into numbers of hospitals by type. Please do not construe these numbers as in any way a “plan” or an intention – their purpose is simply to help readers to visualise the models. Currently, there are 45 public regional hospitals, and 26 “tertiary” hospitals – the ten “central” hospitals (in Gauteng, Western Cape, KwaZulu Natal and Free State) plus another 16 across the country offering a significant level of more specialised services, and

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receiving funding under the National Tertiary Services Grant. Compared to this baseline, it might be helpful to imagine Models A to D looking something like this:

Model	Regional Hospital	Tertiary Hospital	Combined Tertiary and National Referral Hospitals	Central Referral Units (by type of unit)
A	45	14 to 16	5 or 6	1 or 2
B	45	18 to 22	5 or 6	1 or 2
C	45	16 to 20	4 or 5	1
D	45	14 to 20	4 or 5	1

### **Next Steps**

Over the coming months, the MTS Project Team will be using the concepts and service models developed in this document as the basis for a substantial quantitative modelling exercise. We will use cost and activity data, and the information generated by specialties on optimal unit sizes, to develop costed scenarios for the future configuration of tertiary hospital services. These data will be combined with the outputs of a spatial model (which considers the costs of patient travel between hospitals, and uses GIS software to model alternative hospital and service location scenarios), and a review of the evidence on hospital efficiency and quality of care, to generate and evaluate specific options for the configuration and distribution of tertiary hospital services across the country. The best options will be presented to health decision makers in the form of an option appraisal and plan for the modernisation of tertiary services. It is anticipated that this plan would probably take up to ten-years to implement, to ensure that essential human resources can be developed and nurtured to match the required expansion and reconfiguration of services in key areas, and to ensure that capital investments are matched by the human resources required to make them work effectively. We anticipate that the plan itself would be subject to detailed consultation before its final adoption.

In the meantime, the MTS Project Team is eager to receive feedback and comments from anyone who has not participated in the MTS workshop process – be they patients, carers, health care professionals, academics, or simply concerned members of the public. If you would like to submit comments or suggestions to the team, please provide them in written form to the individuals overleaf:

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