Government of **Western Australia**
Department of **Health**

Medical Equipment and Imaging Replacement Program

Guidelines

Date: 01/08/2023

Version #: 1.2

health.wa.gov.au

Document Control and Approval

This Functional Brief is a managed document. Changes should be issued as a complete replacement document with superseded versions removed from circulation.

Version No.	Date	Author	Reason for Modification
0.1 draft	09/05/23	Moses Omollo	Initial document
0.2 draft	16/05/23	Chris Forsey	Review
0.3 draft	17/05/23	Mignon Stapelberg	Review
0.4 draft	30/05/23	Helen Parry	Review
0.5 draft	30/05/23	Gerard Miller	Review
0.6 draft	31/05/23	Al Muhit	Review
1.0 final	20/06/23	Mignon Stapelberg	Approved
1.1	16/12/24	Moses Omollo	Amendments due to revision of medical and imaging equipment categories and useful life in the Department's Financial Management Manual.
1.2	16/12/24	Andrew Hawkins	Approved

Contents

1 Introduction

The Medical Equipment and Imaging Replacement Program (MEIRP) is a capital works program introduced in 2004 with the objective of replacing medical equipment (ME) and medical imaging equipment (MIE) with a value of $5,000 and above and has exceeded its useful life or is not fit for purpose due to factors including outdated technology, lack of vendor support, irreparable, among other factors.

ME and MIE under the threshold $5,000 form part of the MEIRP only if they are portable and attractive or qualify to be aggregated. The categories and useful life of ME and MIE is specified in the Financial Management Manual (FMM). Equipment repairs and maintenance is funded from the HSPs repairs and maintenance budget.

The MEIRP was introduced following a survey of 21 public hospitals in Western Australia (WA) undertaken by Monash University in 2004 which estimated the backlog of equipment requiring replacement (as at the date of the report) equated to $45 million. A more recent review undertaken by the Office of the Auditor General in 2017 estimated that the extent of the medical equipment backlog had increased to $140 million. In 2021, HSPs advised that the backlog of ME and MIE requiring replacement was approximately $400 million.

Timely replacement of ME and MIE supports strategic alignment including Sustainable Health Review, WA State Recovery Plan and WA Health System policies and Frameworks including Clinical Services Framework, WA Health Digital Strategy, Clinical Governance, Safety and Policy among others. In order to deliver a safe, high-quality sustainable health system, medical equipment needs to be:

- fully functioning
- fit-for-purpose
- effective, stable, secure, comprehensive and supported
- updated to keep pace with changes in health service delivery.

2 Governance and Stakeholders

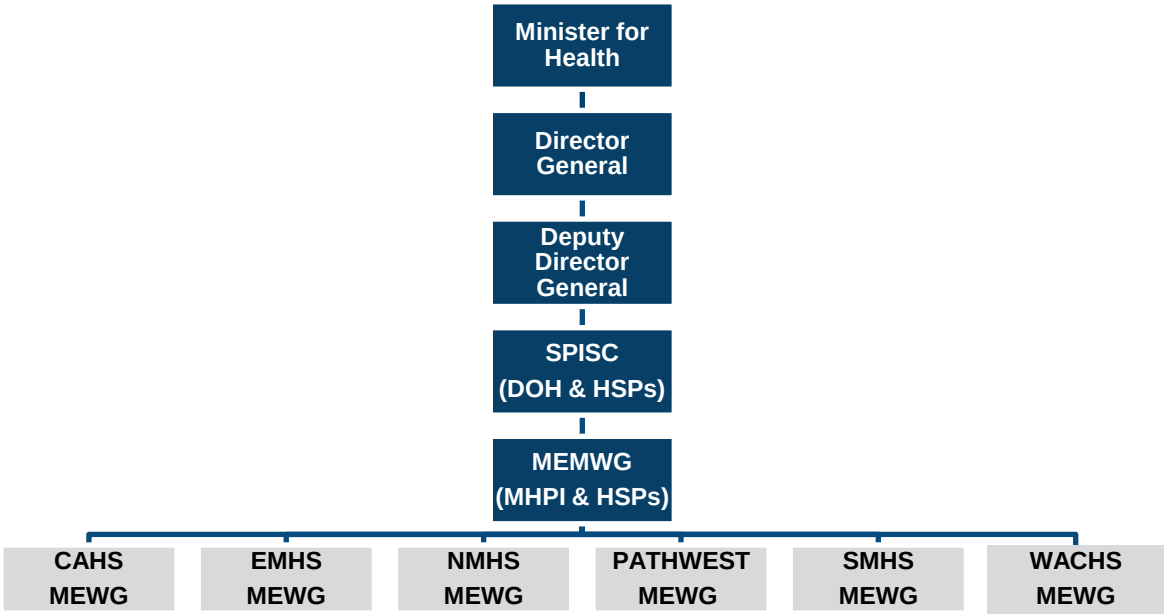
The Department of Health (the Department) considers that ME and MIE replacement should be run as two separate programs as they have different sets of demands, risks and procurement time frames. As such internally the Department has created two separate sub-programs for MEIRP. This includes Medical Equipment Replacement Program (MERP) and Medical Imaging Replacement Program (MIRP).

2.1 Medical Equipment Governance

The diagram below outlines the reporting structure for matters relating to medical equipment. Each HSP should have its own medical equipment working group (MEWG), chaired by an executive sponsor. The working group meets to discuss planning and procurement for medical equipment replacement, as well as issues and risks relating to the management of medical equipment within their hospitals and health centres.

The executive sponsor from each HSP working group will then sit on the overarching Management of Medical Equipment Working Group (MEMWG) along with a representative from the MHPI unit in the Department. The MEMWG will discuss the issues and risks across the health system pertaining to medical equipment and will

propose solutions and provide updates to the System-wide Program and Infrastructure Steering Committee (SPISC).



As an independent facilitator of MEIRP procurements, HSS does not have its own MEWG, but is part of MEMWG.

2.2 Medical Imaging Equipment Governance

2.2.1 The Medical Imaging Replacement Program (MIRP)

The MIRP is a funded program used to replace MIE - used in the Radiology and Nuclear Medicine departments. MIE includes a distinct set of equipment which is easy to separate from other medical equipment. MIE deployed in non-specialist imaging environments for use by non-specialist imaging staff (e.g., Emergency Department, hospital wards, etc) will not typically form part of MIRP. (See list of equipment eligible for MIRP in section 3).

2.2.2 Role of MIRPAC

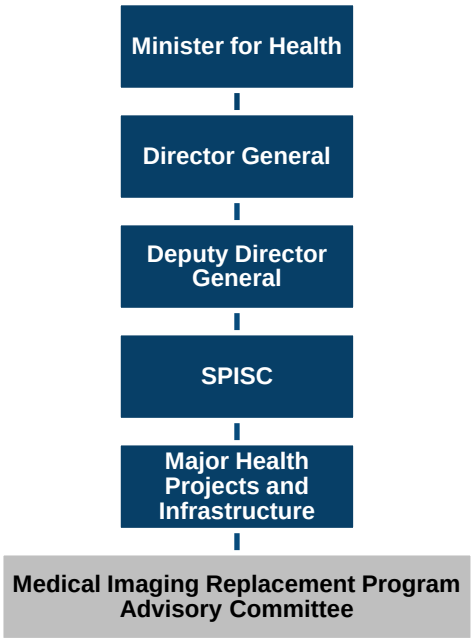
Medical Imaging Replacement Program Advisory Committee (MIRPAC) is responsible for providing guidance on the MIRP. MIRPAC consists of representatives from the Department, HSPs and the Medical Imaging Advisory Committee (MIAC). MIAC is the primary imaging working party representing all HSPs. MIAC has provided guidance to HSPs on the acquisition and management of MIE for several years. The membership is essentially Medical Heads of Departments and Chief Medical Imaging Technologists for all public imaging Departments regardless of the HSP. WA Country Health Service membership also includes the Radiology Clinical Lead.

The Chief Medical Imaging Technologists (CIMT) and Medical Heads of Department (HoDs) for each HSP work collaboratively with the Department and HSPs as part of the MIRPAC. The purpose of MIRPAC is to provide advice and guidance on MIE related issues.

MIRPAC determines the top priorities for MIE replacement across the system and not just within their own HSP. The majority of MIE are under a Whole of Health agreement with vendors which significantly improves procurement efficiency. Some equipment (e.g. Nuclear Medicine and PETCT), will still require a tender process.

As the CIMTs and HoDs collaborate to achieve cost savings across the system, savings can then be allocated to procure the next item(s) on the MIE priority list.

The diagram below outlines the reporting structure for matters relating to medical imaging equipment.



2.2.3 Stakeholders

The key stakeholders to the MEIRP are as follows:

Health Service Providers – Recipients of the funds and will undertake the procurement of ME and MIE in line with their annual procurement plan. For MIE, the CEs endorse the prioritised list and the quotes negotiated by MIRPAC.

The HSP's procurement team finalises the contract and procurement of MIE in line with MIRPAC's priority list and seeks reimbursement from Cash Management (CM) for equipment. The procurement is facilitated in consultation with Health Support Services (HSS) and the Department of Finance (DOF).

Department of Health – Prepares and submits the business case requesting funds from Treasury. Allocates the agreed funding and monitors and reports on HSP's expenditure of the funds. The Department's Cash Management Unit transfers cash to HSPs on a monthly basis based on their forecast for ME and actual expenditure for MIE (reimbursement) to meet their monthly MEIRP obligations.

Medical Equipment Working Group (MEWG) – Each HSP has its own MEWG that provides advice and guidance on MEIRP related matters.

Medical Imaging Replacement Program Advisory Committee (MIRPAC) - Provides advice on MIRP related issues including prioritisation of medical imaging equipment replacement. Once funding is allocated, MIRPAC will in consultation with HSPs seek quotes from vendors to achieve best price for MIE.

System-wide Programs and Infrastructure Steering Committee (SPISC)

SPISC comprises nominated executives from DoH and HSPs and establishes, implements and embed processes and practices relating to asset management. SPIPSC escalates medical and imaging equipment issues to the Deputy Director General for discussion at the Health Executive Committee.

Treasury – Determines the level of funding provided to the MERP based on the business case submitted by the Department.

3 Eligibility

3.1 Types of equipment

Refer to section FMM s730-C – Measurement of Assets, Depreciation and Useful Life in the Department's FMM for information on ME and MIE funded under MEIRP.

3.2 Equipment eligible for MIRP

MIE includes items governed by the Radiology and Nuclear Medicine Departments within the WA health system, for example:

Equipment	Descriptions
Angiography	Uses X-rays and intravenous contrast media to image anatomy such as veins and arteries. Primarily used for Interventional Radiology procedures
Computerised Tomography (CT) scanners	Critical technology used to obtain cross sectional anatomy imaging. Vital for ED, Inpatient and Outpatient workflow. Category includes Cone-Beam Computed Tomography (CBCT) - Variant type of CT scanner and is used in dental and extremity imaging.
Fluoroscopy	Technology that leverages x rays to view a dynamic image on a monitor – units can be fixed or mobile, critical for theatre and procedural imaging.
Magnetic Resonance Imaging (MRI)	Uses radiofrequency pulses to obtain cross sectional anatomical images. Unlike CT, this technology does not use ionizing radiation so is safer for the patient, but scans are longer in duration and the strength of the MRI magnets poses safety risks for patients and staff that must be carefully managed.
Mammography	Utilises x-ray to image the breast, providing information about morphology, normal anatomy and gross pathology. Critical for identifying breast cancers, staging and monitoring of treatment.

Equipment	Descriptions
Nuclear Medicine (including PETCT scanner)	Imaging involving the administration of a radioactive tracer that is often targeted to specific anatomy and pathology. Images are then obtained utilising detectors as radiation is emitted from the patient. PETCT are very expensive units that provide both CT and Nuclear Medicine images. The images are obtained in the one examination and are then fused to provide detailed and specific functional and anatomical information. PETCT scanners require significant capital outlay for both the unit and patient areas where the isotope is injected and taken up post injection.
Other Diagnostic Equipment (X-ray)	Category includes Orthopantomogram (OPG) - Designed to rotate around the head during a scan to provide panoramic x-ray of the upper and lower jaws.
Ultrasound	Uses high frequency sound waves to create images of internal organs and structures, map blood flow and tissue motion.

Medical Imaging Equipment not managed by these departments should be funded through the MERP.

3.3 Useful life

Useful life is the estimated amount of time in years that a medical device can be expected to be used safely, effectively, and economically for its intended purpose. Refer to the Department's FMM for MIE and MIE useful life and categories.

As listed in the FMM, the useful life of medical equipment is between 5 and 15 years. Certain equipment, mainly imaging, can have their useful life extended (for billing purposes) to 20 years as per the Medicare Benefits Schedule (IN.0.5) however the equipment is usually technologically obsolete well before this time.

ME and MIE replacement decisions should not be based entirely on useful life, but on asset condition except for MIE that are subject to Medicare rebates. Other external factors may influence medical equipment replacement. Equipment may be replaced before expiry of useful life (e.g., due to unplanned breakdowns) or after the expiry of useful life irrespective of condition, or upon expiry of useful life. The other external factors that may influence replacement decisions include but are not limited to:

- Manufacturer's recommendation.
- Nature of use, physical environment and unnatural factors such as electricals and temperature.
- Frequency of use driven by factors such as location and patient load.
- Availability of spare parts and upgrade pathways.
- Compliance with current standards and regulations e.g. Medicare capital sensitivity requirements.
- Technological or clinical redundancy.
- Equipment meeting its primary purpose.
- Occupational risk i.e. radiation, malfunction, wear and tear.

MIE useful life is as per Medicare useful life schedule except for a shorter cycle for ultrasound and x-ray with certain MIE eligible for extension. Extension of MIE useful life (upgrades) should be considered closer to the end of the useful life and be based on safety, reliability, risks and the factors listed above. The shorter life cycle for ultrasound and x-ray machines considers the rapidly evolving technology for these modalities and the wear and tear experienced by the equipment types due to high usage.

The table below shows the recommended useful life per MIE modality.

Equipment Modality	Recommended Useful Life	Maximum Extended Life Age*
Angiography	10 years	15 years
CBCT	10 years	15 years
Computed Tomography	10 years	15 years
Diagnostic Radiology (X-ray)	10 years	20 years
Fluoroscopy	15 years	20 years
Mobile Fluoroscopy	10 years	20 years
Multi-purpose Fluoroscopy with Angiography capability	10 years	20 years
Mammography	10 years	15 years
MRI	10 years	20 years
Nuclear Medicine	10 years	15 years
Nuclear Medicine with Diagnostic CT	10 years	15 years
Orthopantomogram (OPG)	15 years	20 years
Ultrasound	6 years	15 years

*Extension of recommended useful life is not a common practice as it leads to increased risk to clinical and patient safety. Most of the equipment have no upgrade option.

3.4 Capital Sensitivity

Since May 2020, Medicare benefits are no longer payable for services provided on diagnostic imaging equipment that exceeds its useful life, which is a revenue risk and intensifies the need for replacement.

The MIE modalities eligible for rebates are CT Scanners, MRI, Ultrasound and Angiography.

Medicare benefits are not payable for diagnostic imaging services rendered using equipment (other than PETCT) that has exceeded its useful life or maximum extended life age. Although PETCT is not subject to capital sensitivity, not replacing it within the recommended 10-year period comes with a similar clinical and revenue risk due to anticipated breakdowns and reduced efficiency.

To claim Medicare rebate, each imaging Department must have a current Location Specific Practice Number (LSPN) and maintain a LSPN register.

3.5 Value threshold

MERP and MIRP funding is available for capital equipment only. Capital equipment is defined as medical equipment with a minimum value of $ 5,000 and a useful life of minimum 2 years. It also includes aggregated ME and MIE assets as well as portable and attractive equipment.

3.6 Prioritisation

It is the responsibility of HSPs and MIRPAC to plan and prioritise the replacement of ME and MIE to minimise the risk or disruption to patient, staff or service delivery. As funding is often limited HSPs will need to discuss and agree within their working group how they wish to prioritise their funding request.

Prioritisation should be based on risk factors such as:

- the age of an item, its risk of failure and capital sensitivity
- safety to patient and staff
- frequency and nature of use
- availability of spare parts or maintenance services
- availability of alternative item
- criticality of the service
- impact on service delivery.

The HSPs are required to use the Risk Assessment Tables for the WA Health to enable consistency and for the risks to be assessed equally.

3.7 Aggregation

An item of MERP and MIRP must meet the following criteria to qualify for aggregation:

- Must not be a single use/implantable medical device.
- Items valued individually below $5,000.
- The minimum aggregation value for each category of medical equipment (approved for aggregation, see list of items below) is $15,000 or greater.
- Useful life should be equal to or greater than 5 years.

Items permitted for aggregation (must total a minimum of $15,000 for each item category):

- Infusion Pumps
- Beds
- Trolleys
- Patient Monitoring
- Defibrillators
- Handheld Oximeters
- Dental items
- Tympanic Thermometers
- Feeding Pumps
- Syringe Pumps
- Wheelchairs
- Hoists
- Pressure Relieving Mattresses
- Point of Care Ultrasounds (POCUS)

HSPs should note that whilst aggregation of the items above is permitted, the primary purpose of MEIRP is to purchase capital items of medical equipment (i.e., equipment which costs more than $5,000 individually).

4 Funding Request

HSPs submit a request for funding through a four-year replacement plan detailing all their replacement needs. The replacement plan will be used in the development of the business case to Government to request for funding.

Whilst the Department is aware there is a significant backlog of equipment which has exceeded its useful life, replacement plans should be realistic and include achievable procurement goals for each year (i.e., the funds requested should be able to be spent in that year based on procurement resources).

The Department will collate the funding requests and submit a business case to Government, unless funding has been pre-approved under a longer-term program. The business case will include an options analysis and a preferred option. Note that the preferred option may not represent the total amount of funding requested by all HSPs.

Treasury will confirm funding as part of the annual budget. A portion of funding is set aside for MIRP, and the remainder will be allocated to HSPs by the Department as outlined in section 5. Funding Allocation.

4.1 What is included in funding?

MERP funding is used for medical equipment that falls outside the radiology and nuclear medicine departments. MIRP funding is used for MIE that is managed by Nuclear Medicine and Radiology Departments.

5 Funding Allocation

5.1 How is funding allocated?

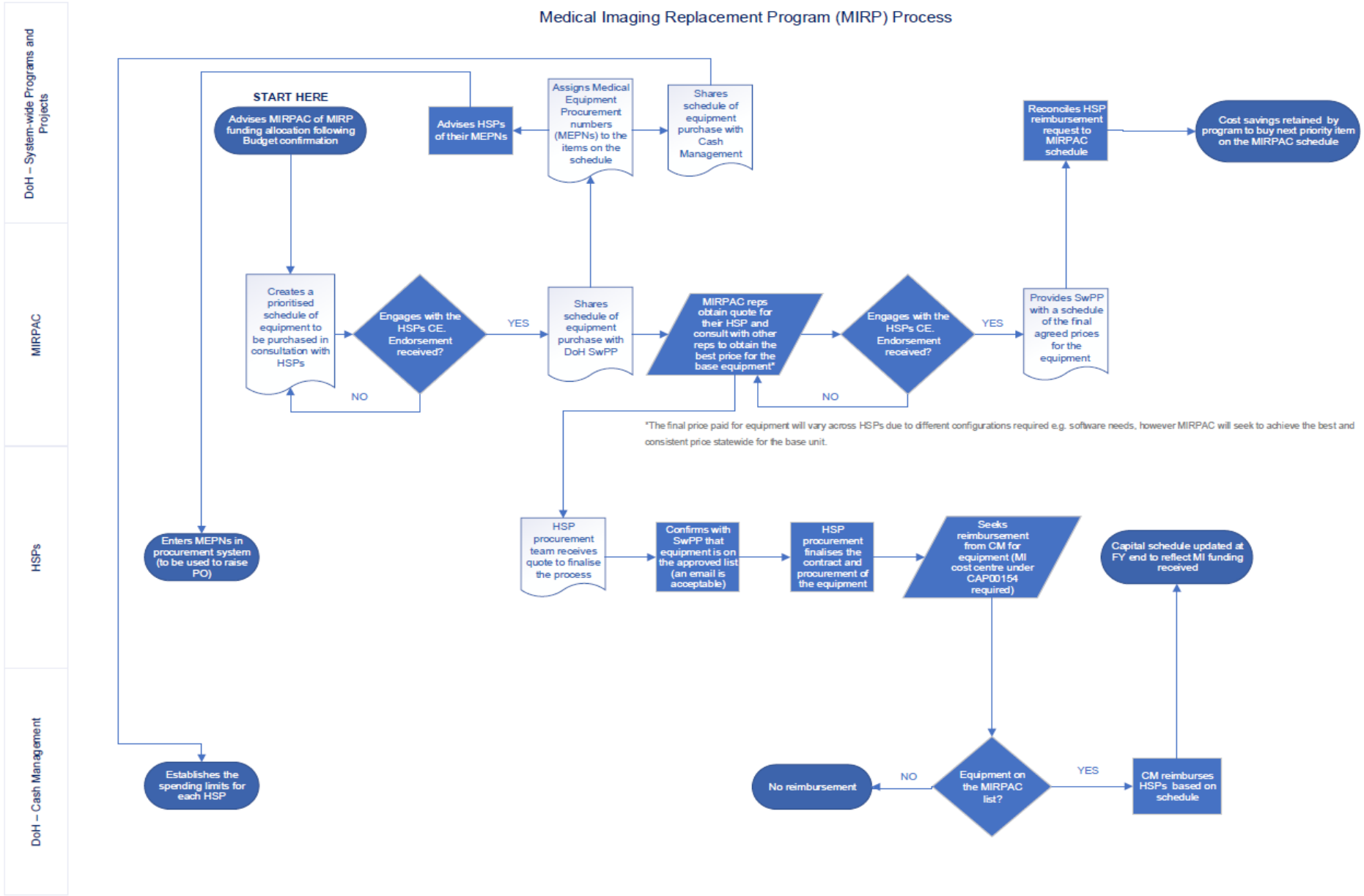
The funding provided for MEIRP each year is determined by the Government. Once the amount has been confirmed, the Department will quarantine MIRP funding (resides with the Department to be allocated in consultation with MIRPAC) and allocate the MERP funds and will endeavour to communicate the allocation to HSPs as early as possible.

The Department will take a considered approach in allocating the MERP funds which will entail a weighted combination of several factors:

- prioritisation of funding as a mitigation strategy against the known highest medical equipment replacement risks as advised by HSPs across the WA health system.
- the level of underspend in the prior 2 years.
- the size of the HSP based on hospital portfolio and activity (excluding cancelled procedures, boarders and residents in aged care) over a 4-year period.
- 4-year actual spend vs budget ratio.
- consideration of the capacity of both the HSPs and procurement agencies (HSS and Dept of Finance) to facilitate the procurements in the given financial year.

The allocation of MIRP is based on a system wide prioritisation list prepared by MIRPAC in consultation with the Department and HSPs. The business rules are stated in the WA Medical Equipment Prioritisation Group Terms of Reference. The MIRP funding process is provided in the flow chart below.

Medical Imaging Replacement Program (MIRP) Process



5.2 Contingency Allocation

A limited contingency fund is available for emergency ME and MIE for which there is no funding available. Contingency allocation requests must be endorsed by the HSP's Chief Executives and for MIE submitted via MIRPAC.

ME and MIE eligible for contingency must have a minimum value of $5,000 and a useful life of 2 years or more. Contingency funding cannot be used for the purchase of new equipment, repairs or maintenance.

Funding allocation from the MEIRP contingency to any HSP must be approved in accordance with the Department's Authorisation and Delegation Schedule.

The remaining unallocated MEIRP contingency will be allocated to HSPs in January of that financial year based on the MEIRP Funding Allocation Methodology.

5.3 Use of funds

Once funds have been allocated, and assuming that funding is known for the next financial year, HSPs and MIRPAC will be asked to provide a procurement plan by the last business day of September detailing how the allocated funding will be spent.

HSPs will need to confirm that approval has been obtained for any associated recurrent and/or capital expenditure funding (e.g., room expansion/fit out change) for each proposed procurement where relevant.

Once the financial year commences, funding should only be spent on the items listed in the procurement plan, unless a change is requested as per Changing the procurement plan section below.

Each HSP has a MEIRP budget allotted and specific cost centres to track their MEIRP expenses. At the end of the month, Cash Management team runs reports to calculate the actual cash expenditure and transfers funds to the HSP project cost centre in accordance with the budget. For ME, the cash transfer will be based on their forecast for the next month and MIE will be a reimbursement based on the actual spend.

5.4 Changing the procurement plan

Once the relevant financial year has commenced, if HSPs require any amendments to their procurement plans due to changes in risk prioritisation or supply chain issues, an email must be sent to MHPI outlining:

- the item being replaced
- the new item
- the cost of the new item being purchased
- the estimated lead time/procurement date.

Once confirmed by the Department, HSPs should also update their monthly cashflow reports to include the new item and note the forecast cashflow for the purchase.

5.5 Managing underspend

The Department will communicate budget allocations to the HSPs as early as possible, to ensure HSPs can start their procurement early in the financial year. HSPs should be realistic about their forecasts, taking into consideration market and procurement resources and have a proactive approach to procurement planning.

HSPs should consider reviewing their cashflow and forecast during Mid-Year Review and Budget processes to request recashflow of delayed procurements. HSPs can request unspent budget to be carried over to outer years, see Section 6 (MEIRP Budget Process).

6 MEIRP Budget Process

6.1 State Budget

The State Budget is an annual process starting around January, with official outcomes released by May.

Based on previous experience, the budget process is limited to:

- Remaining unfunded election commitments.
- Delivery of existing approved projects and programs, with more realistic/achievable timeframes for capital projects to help ease current cost pressures. No new capital projects will be considered unless they are identified as an urgent priority of the Government.
- Specific strategic initiatives of the Government that are communicated to the Ministers by the Premier.
- Parameter updates and report backs, including consequential flow-on financial impacts of decisions already made by Cabinet, report backs on issues previously requested by the Expenditure Review Committee (ERC), and unavoidable parameter adjustments.

6.2 Mid-Year Review (MYR)

In September, MYR provides an opportunity for HSPs to update the economic assumptions and financial projections detailed in the State Budget released earlier in the year.

Based on previous experience, the MYR process is limited to:

- parameter updates and report backs, including consequential flow-on financial impacts of decisions already made by Cabinet.
- report backs on issues previously requested by the ERC.
- unavoidable parameter adjustments.

No new capital projects will be considered unless they are identified as an urgent priority of the Government.

6.3 Recashflow

HSPs are given the opportunity to reassess, align, review and revise their cashflows twice a year, during Budget and MYR processes, based on the latest project timelines and subject to ERC approval.

The Department of Treasury (Treasury) requests that all Government agencies critically examine project cashflows and the timing of their Asset Investment Programs (AIP) to ensure that:

- project completion dates are realistic, and milestone payments are accurate and aligned with project schedules;
- project spending profiles are aligned with construction contract milestones and industry capacity; and

- project start dates accurately reflect procurement timeframes and payment schedules.

6.4 Carryover

Carryover is an annual process, part of MYR, allowing HSPs to carryover unspent budgets from the previous financial year and rollover into the current financial year. HSPs must provide sufficient supporting information to justify the carryover, which will be subject to ERC approval.

6.5 Treasury Delegated Authority

Adhoc Treasury Delegated Authority requests may be submitted by exception only, outside the normal budget cycle.

7 Reporting

The Department requests a number of reports from HSPs and MIRPAC in line with the timeline attached at Appendix 1.

These reports will either help form the business cases submitted to Government to request funding, or they will relate to the budgets allocated to each HSP once budget has been approved.

A summary of each report is provided below:

7.1 Four-year replacement plan (Medium term strategic view)

HSPs should submit their four-year replacement plan to MHPI by the last business day of August each year, using the Department's replacement plan template to ensure consistency.

The replacement plan should include the procurement process for each item and a forecast for the expenditure. It will need to be signed off by the HSP's delegated authority.

7.2 Procurement Plan

HSPs will provide a procurement plan by the last business day of September detailing how allocated budget will be spent using the Department's procurement plan template. There should be no deviations from the template to ensure consistency across all HSPs. The procurement plan must be signed off by the HSPs' delegated authority.

HSPs will note the procurement process required for each item, in addition to providing an estimated forecast for the expenditure.

7.3 Monthly reporting

The Department will monitor HSP's expenditure against the procurement plan through a monthly cash expenditure report.

A copy of the report will be issued to each HSP prior to the start of the financial year for completion, and subsequently after each month end. Reports should be completed and returned to MHPI.

The May monthly report will confirm the final planned procurements, using the funding allocated for the upcoming financial year commencing on 1 July. In addition, it will note any procurements carried forward from prior years due to re-cashflows approved as part of the prior mid-year review process.

7.4 Monitoring indicator

Monitoring will be outcome based. The outcome that will be used for monitoring will be HSP actual cash spend.

- 10% actual spend by October
- 50% actual spend by December
- 70% actual spend by March
- 90% actual spend by June

Exceptions may apply in special circumstances where the budget outcome is delayed.

8 Disposal

8.1 What to do with replaced equipment?

Equipment approved for replacement must be disposed of in line with the Department's Financial Management Manual. Replaced equipment must be removed from the asset register and not be kept as a backup.

9 Glossary

Abbreviation	Term
Department	Department of Health
HSP(s)	Health Service Provider(s)
CM	Cash Management
MEIRP	Medical Equipment Replacement Program
MEMWG	Medical Equipment Management Working Group
MERP	Medical Equipment Replacement Program
MIAC	Medical Imaging Advisory Committee
MIRP	Medical Imaging Replacement Program
MIRPAC	Medical Imaging Replacement Program Advisory Committee
SPISC	System-wide Programs and Infrastructure Steering Committee
Treasury	Department of Treasury

Appendix1: Reporting Requirements

Reports	Description
Monthly Reports	Submitted monthly by HSPs detailing YTD actual spend, procurement status and forecast spend to the end of the financial year for each item of ME and MIE.
Capital Cash Requirement Profile (Capital CRP)	Sent to HSPs by Cash Management on 5th working day of each month for all capital projects with details of approved budget and actual cash expenditure. HSPs are requested to provide forecasted expenditure for the remainder of the year. HSPs are required to provide comments on any deviation from the budget (usually if there is an overspend). The purpose of this report is to know how much HSPs need to meet their monthly obligations and facilitate actual cash transfer.
4-year Replacement Plan	Submitted by last business day of August to facilitate Budget Submissions
Procurement Plan	HSPs should submit their annual procurement plan by last business day of September detailing how the allocated budget will be spent.

This document can be made available in alternative formats on request for a person with disability.