

SURVEI TERFOKUS : CT dan MRI

Kardinah

Outline

- Manajemen Mutu berdasarkan : QUAADRIL as quality improvement tool (IAEA Publication)
- Implementasi di tingkat rumah sakit
- Fokus CT dan MRI

There are three sections described in the QUAADRIL document. Each has key principles and criteria for good practice followed by the audit programme for each point.

Section 1: Quality management procedures and infrastructure

key principles and criteria for good practice

- Mission and vision of the diagnostic radiology unit
- Quality management system
- Structure of the diagnostic radiology unit
- Equipment
- **Documentation control**
- Patient confidentiality, feedback and complaints
- Communication

Section 2: Patient related procedures

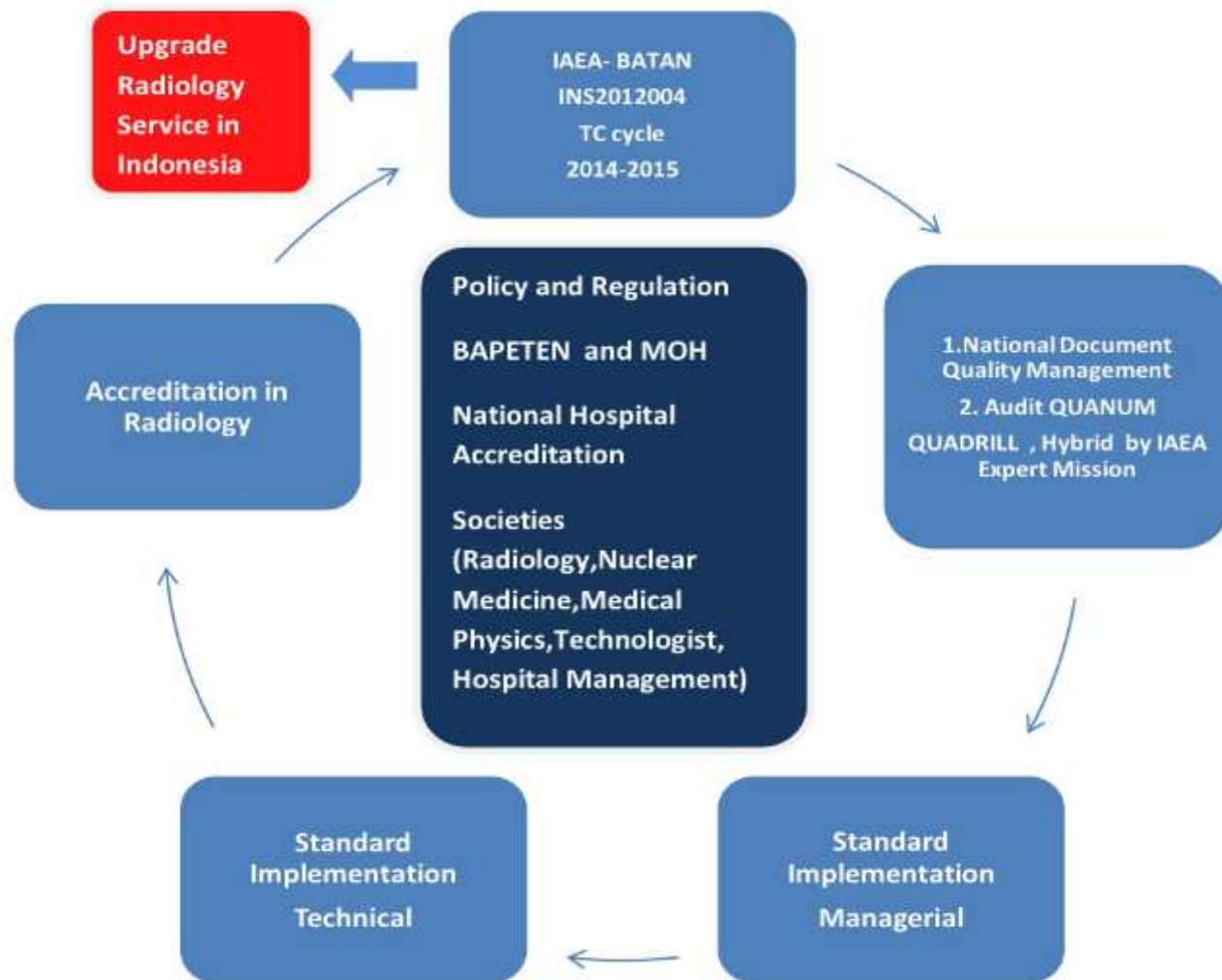
key principles and criteria for good practice

- Referral of the patient for examination
- **Identification of the patient**
- Examination
- The imaging report
- Report communication
- Continuity of clinical care
- Accident and incident reporting
- Record and film/image retention

Section 3: Technical procedures

key principles and criteria for good practice

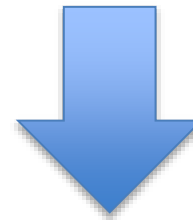
- Quality Assurance Infrastructure
- Radiation protection and general safety
- Equipment Quality Assurance Processes
- **Calibration of instrumentation**
- Dosimetry
- Optimisation



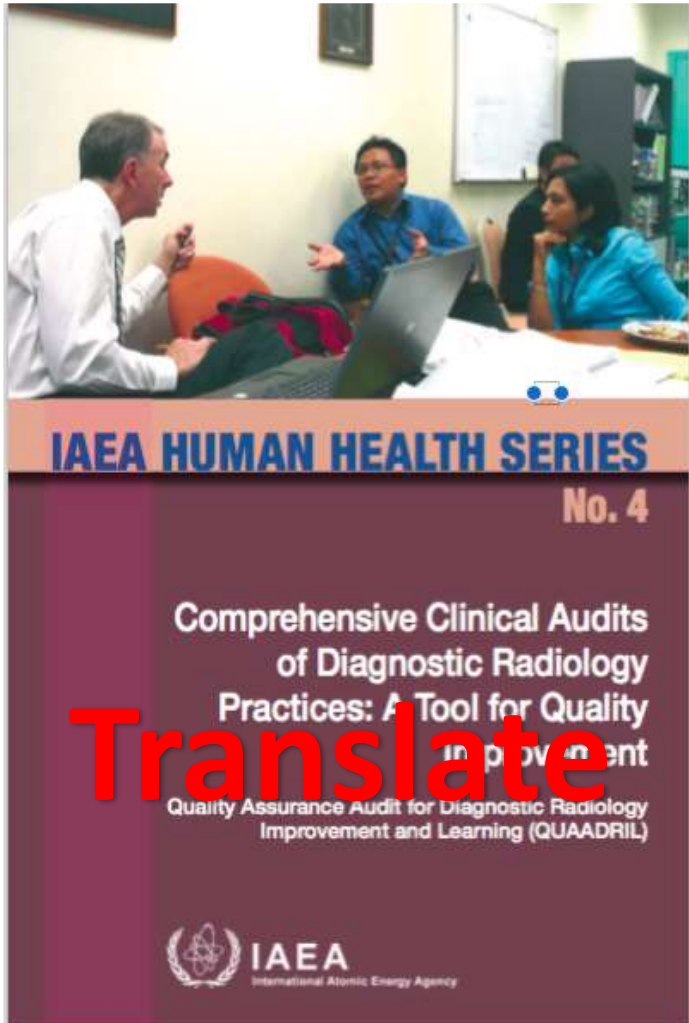
IAEA TC project 2014-2016 : Objective

Disseminate

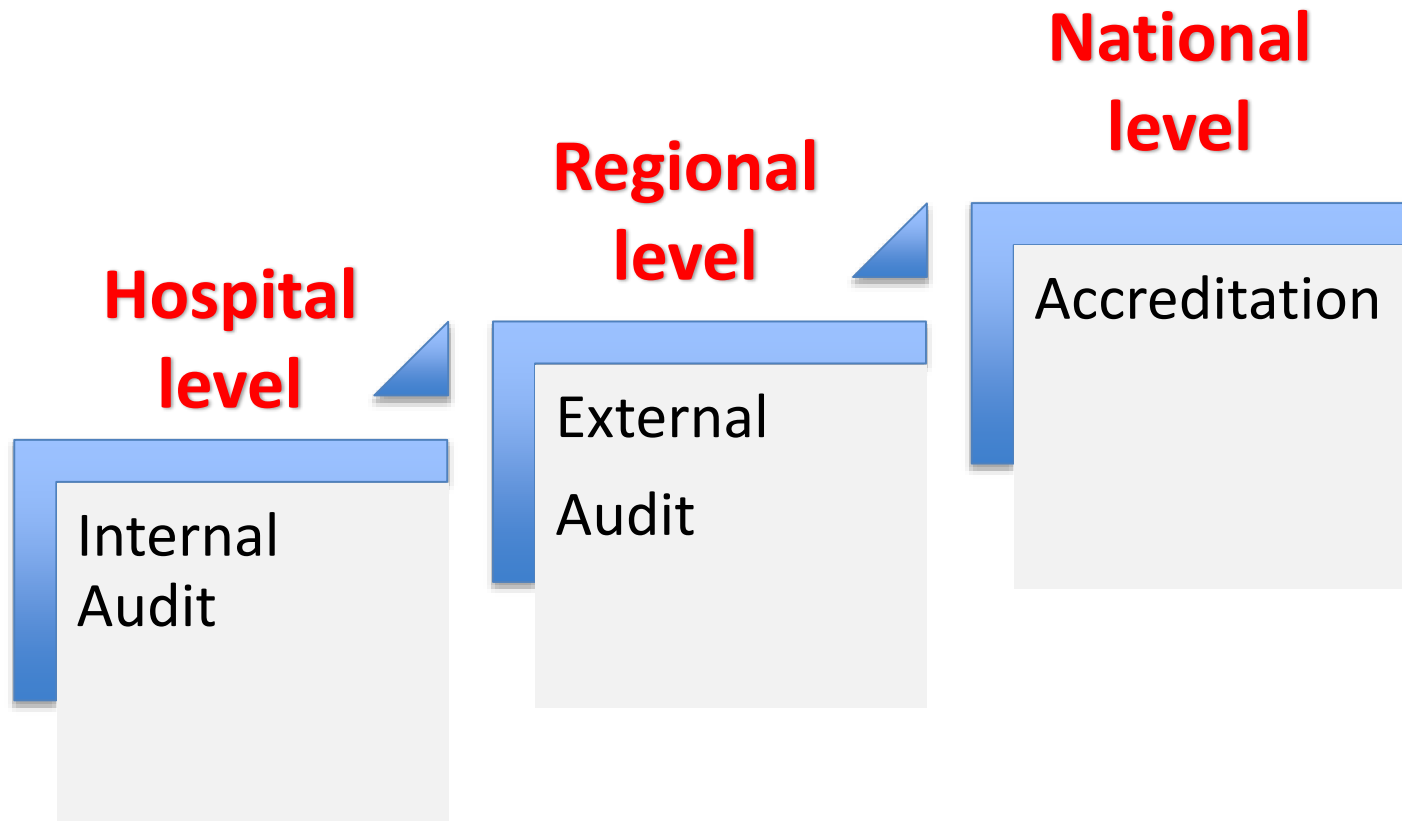
Radiologist, Radiographer, Medical Physicist
Societies, MOH, NERA



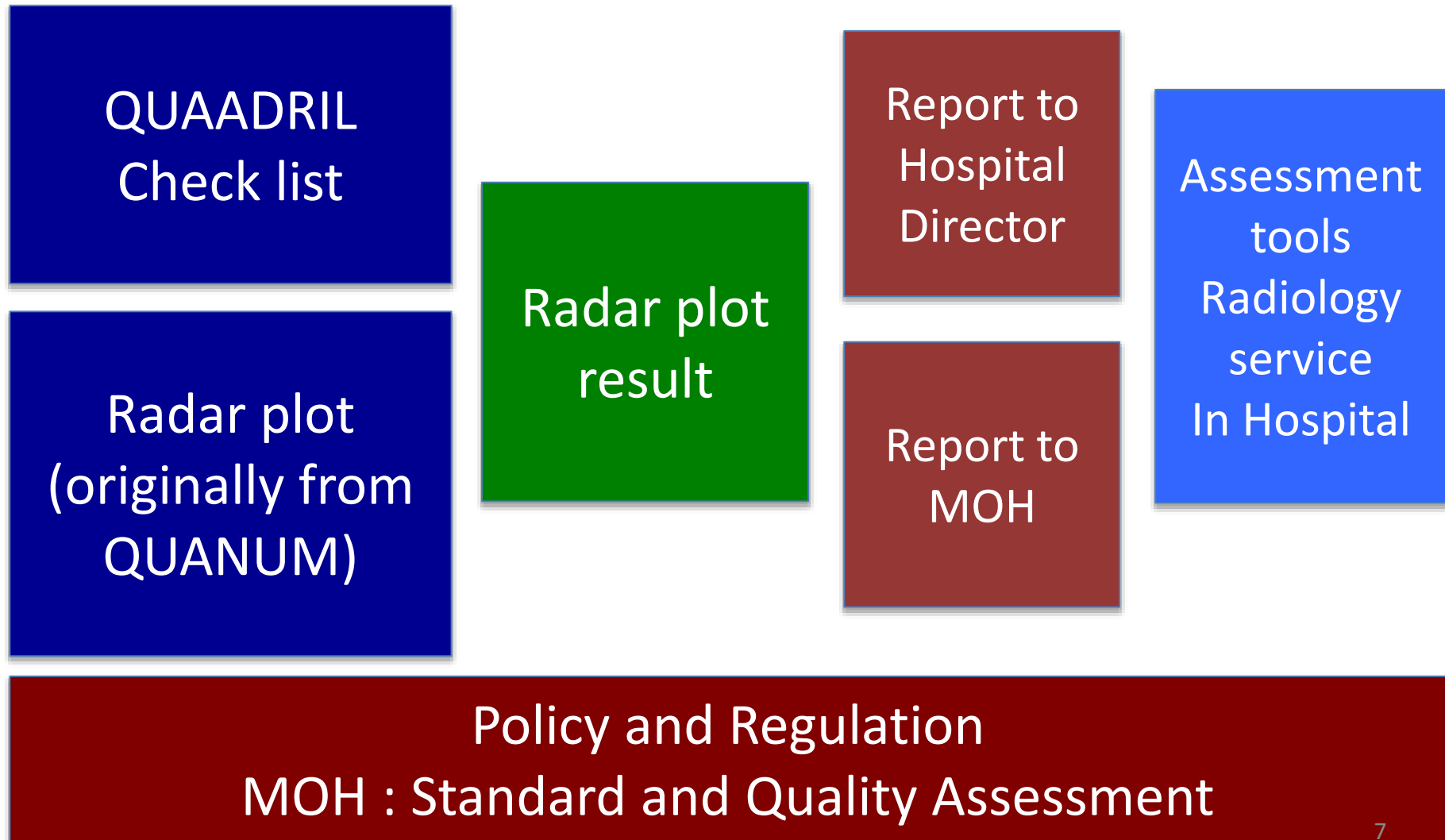
Quality Improvement Tool



Tahapan implementasi



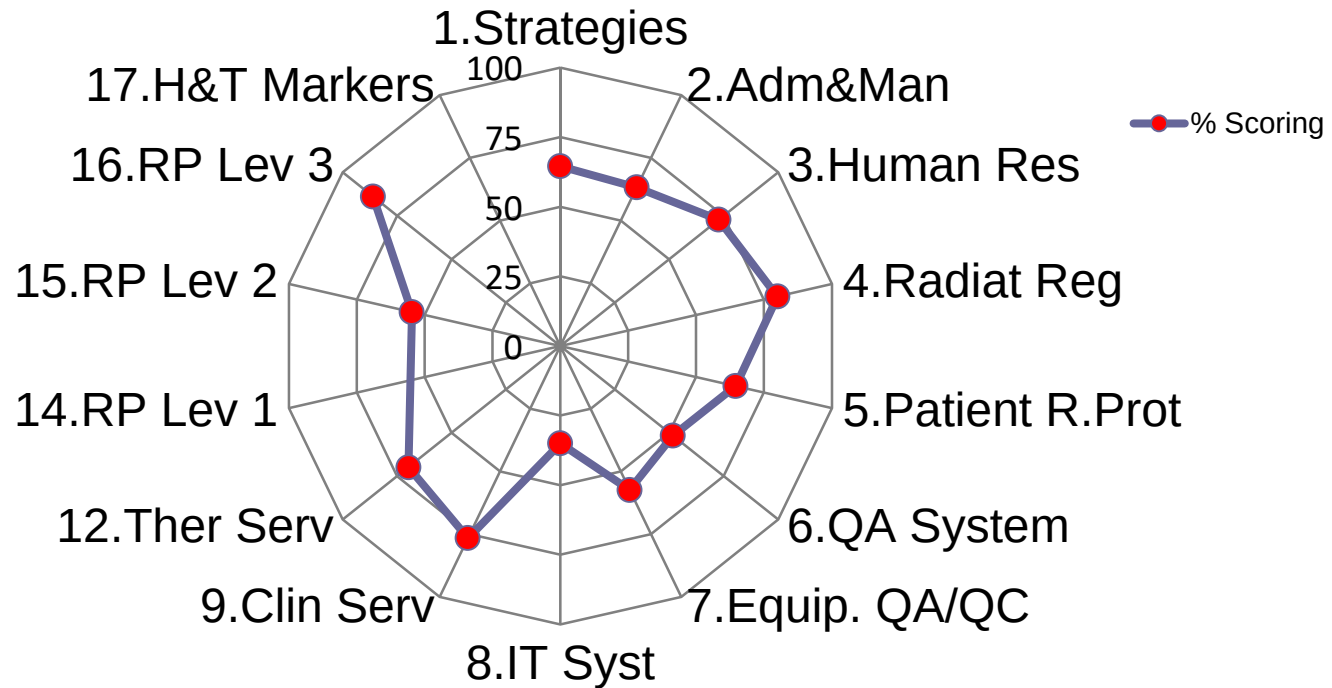
2018 : Preliminary trials in 3 hospital Medan, Semarang, Samarinda



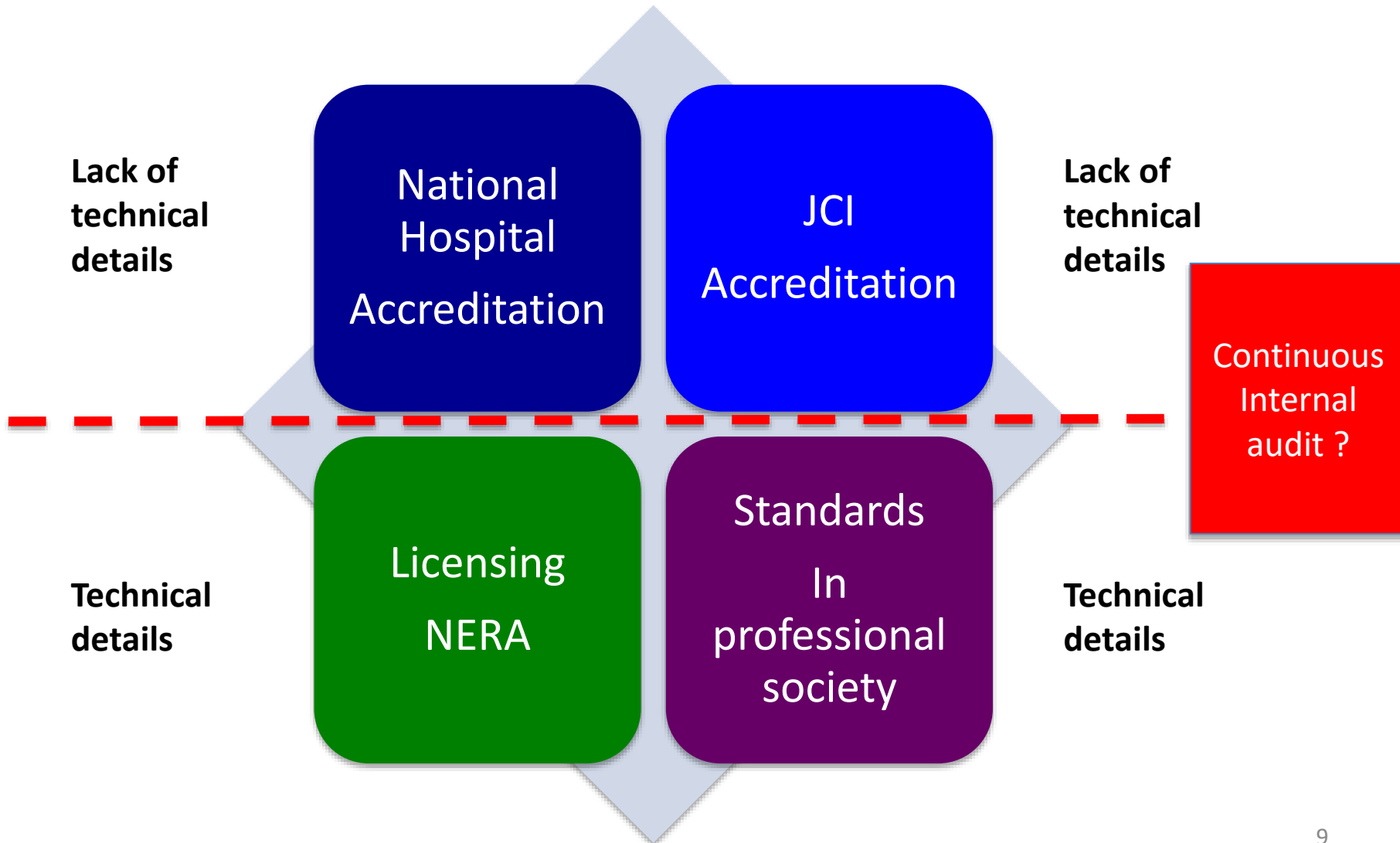
Radar Plot QUANUM

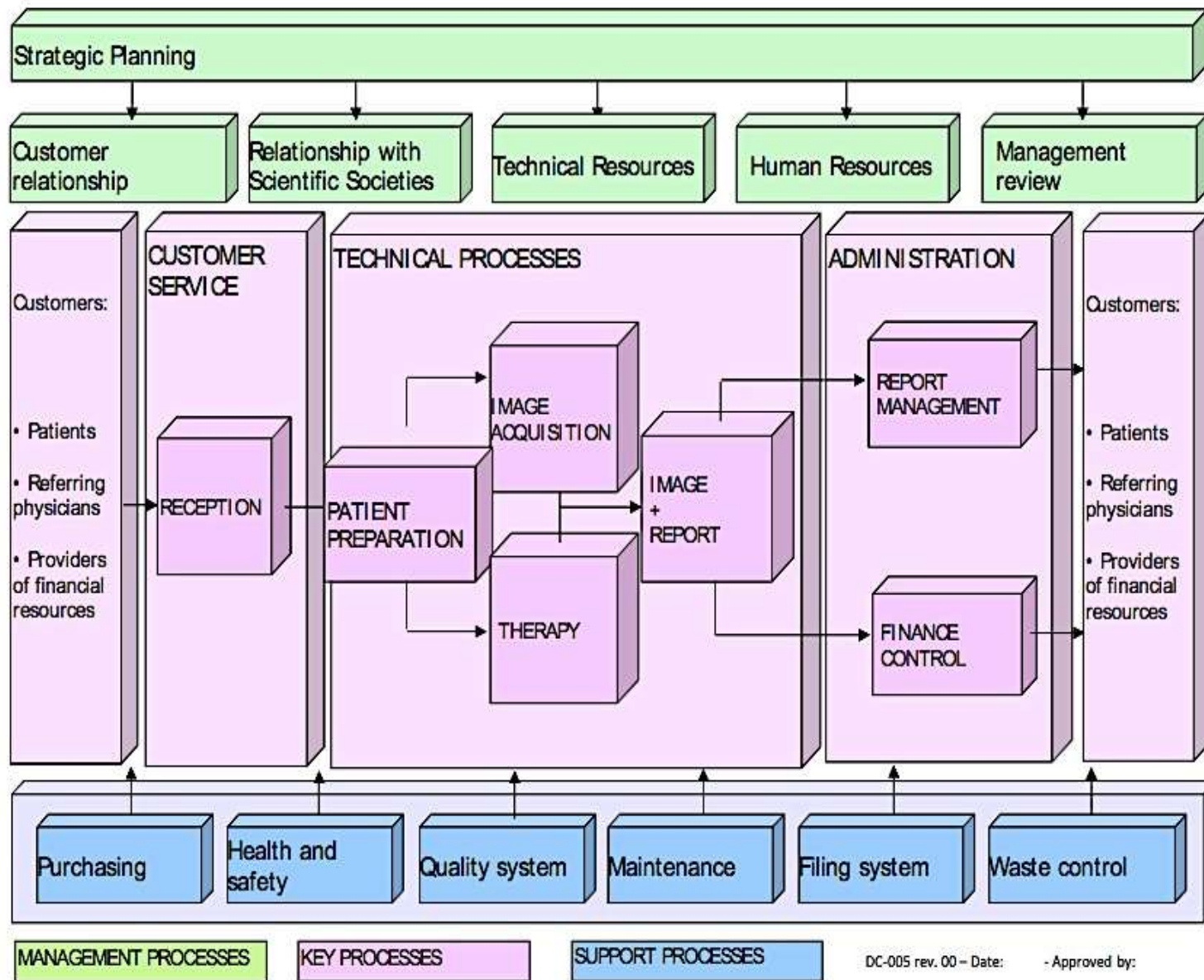
Summary of General Checklist

Radar Plot



Tantangan





Life Cycle of equipment

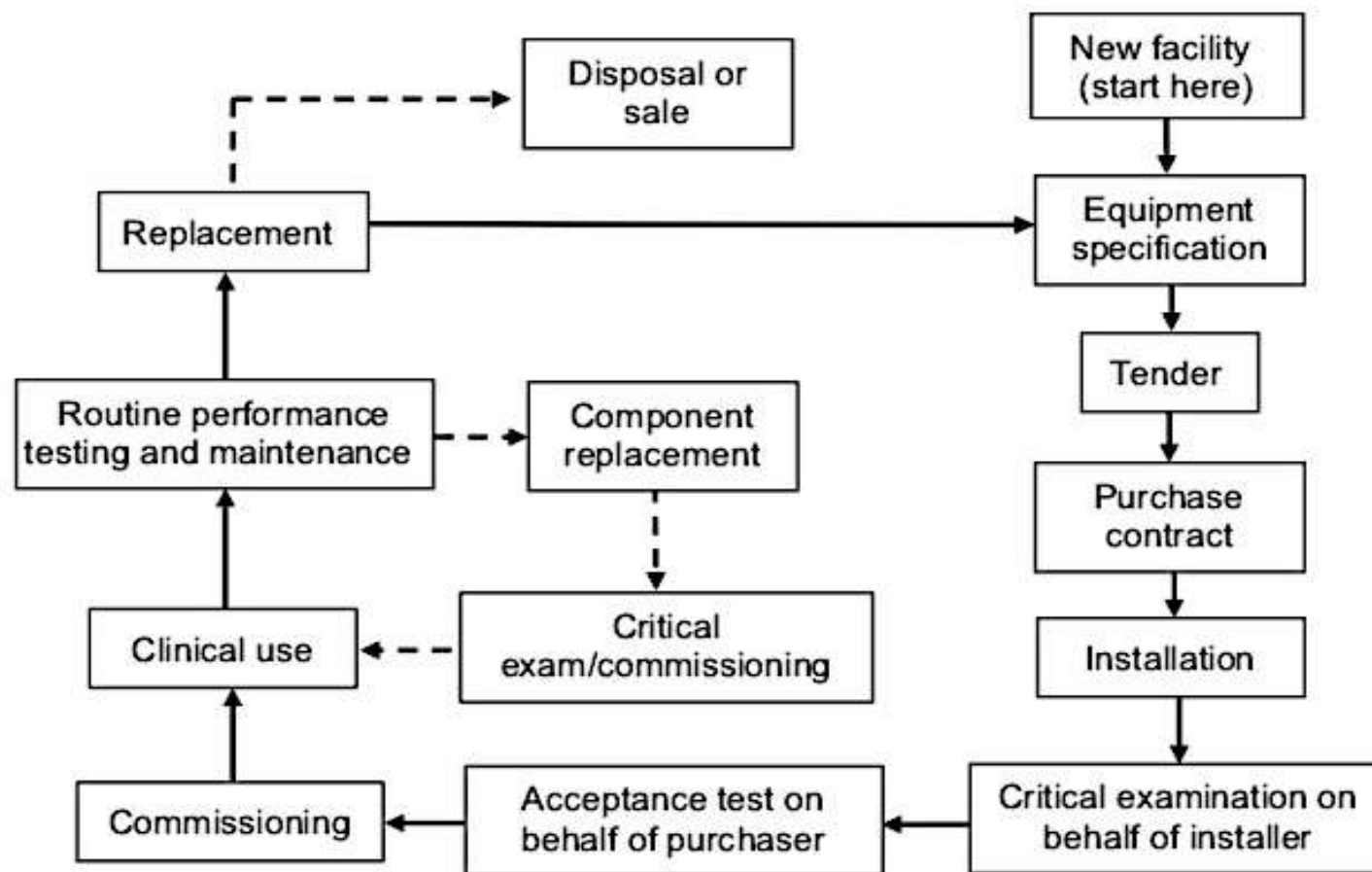


FIG. 6. Life cycle of a piece of equipment.

Peraturan terkait

- PERMENKES NOMOR 780/MENKES/PER/VIII/2008 : Penyelenggaraan Pelayanan Radiologi
- KMK no 1014/MENKES/SK/XI/2008 : Standar Pelayanan Radiologi Diagnostik di sarana Pelayanan Kesehatan
- KMK no 410/MENKES/SK/III/2010: Perubahan atas keputusan Menteri Kesehatan Republik Indonesia Nomor 1014/MENKES/XI/2008 tentang standar pelayanan radiologi diagnostik di sarana pelayanan kesehatan

Form A

- Perizinan : Dinas Kesehatan dan BAPETEN
- Pimpinan unit
- Ketenagaan
- Sarana dan Prasarana
- Persyaratan keamanan ruangan
- Standar kelengkapan alat
- Pencatatan dan pelaporan

CT Scan



Peraturan Keselamatan Radiasi

- PERKA BAPETEN No 8 tahun 2011:
Keselamatan Radiasi dalam penggunaan pesawat radiologi diagnostik dan intervensional
- PERKA BAPETEN No 16 tahun 2014 : Suarat Izin Bekerja di Instalasi yang memanfaatkan sumber radiasi pengion
- PERMENKES NOMOR 83 Tahun 2015 : Standar Pelayanan Fisika Medik

Pedoman Layanan Perizinan Radiodiagnostik dan Intervensional

Dokumen Teknis			
5.	Program Proteksi dan Keselamatan Radiasi	Mengacu <i>template</i> di www.bapeten.go.id → petunjuk permohonan izin → <i>template</i> dok program proteksi	
6.	Prosedur Tetap Pengoperasian Pesawat Sinar-X	Untuk radiografi umum dan mobile harus dilengkapi tabel eksposi	
7.	Spesifikasi Teknis Pesawat Sinar –X dari importir	Hanya disyaratkan untuk izin baru	
8.	Sertifikat proses produksi sesuai standard internasional tertelusur	Hanya disyaratkan untuk izin baru	
9.	Uji fungsi pesawat dan pengukuran paparan oleh importir	Hanya disyaratkan untuk izin baru	
10.	Uji kesesuaian	Hasil uji kesesuaian atau jadwal pelaksanaan uji	
11.	Laporan dosis 3 bulan terakhir	Atau bukti pengiriman/pembelian TLD Dokter bedah harus memiliki TLD	
12.	Bukti kalibrasi dosimeter saku (min.2 buah)	Hanya untuk fluoroskopi	
13.	Hasil pemeriksaan kesehatan (fisik, darah, urin, kimia dan resume)	Masih berlaku untuk 1 tahun	
14.	Ijazah pekerja	Radiografer minimal D3 radiologi	
	Petugas proteksi radiasi	PPR medik Tk. II dengan SIB masih berlaku	
	Dokter spesialis radiologi	Jika dokter tetap: lampirkan hasil pemeriksaan kesehatannya Jika konsulen: lampirkan surat pernyataan konsulen dari dokter.	
	Dokter gigi	Dapat menggantikan dokter Sp.Rad tetapi hanya untuk pesawat gigi	

Sistem Informasi Data Dosis Pasien

The image is a screenshot of the official website of the Badan Pengawas Tenaga Nuklir (BAPETEN), the Nuclear Energy Regulatory Agency of Indonesia. The website has a green header with the BAPETEN logo and name in Indonesian and English. Below the header is a navigation bar with links: Beranda, Profil, Layanan, Publikasi, Webmail, and Kontak Kami. A search bar is located on the right side of the navigation bar. The main content area features a large banner for 'NAWA CITA 9 AGENDA PRIORITAS' with a sub-header 'Program Prioritas 1' and the title 'Penguatan Jaminan Perlindungan Keselamatan Pasien Radiologi'. A black arrow points from a text box to the 'Sistem Informasi Data Dosis Pasien' link in the left sidebar. The right sidebar contains a 'Pengumuman' (Announcement) section with several notices regarding training, licensing, and examinations.

BADAN PENGAWAS TENAGA NUKLIR
Nuclear Energy Regulatory Agency

Beranda Profil Layanan Publikasi Webmail Kontak Kami

Layanan Publik

- Website Licensing and Regulatory System Online
- SISTEM AKUNTANSI LIMBAH TERPADU
- SISTEM INFORMASI DATA DOSIS PASIEN**

Bapeten Link

- Jaringan Dokumentasi dan Informasi Teknik BAPETEN

Aplikasi Si-Intan
Klik disini....

NAWA CITA
9 AGENDA PRIORITAS

Program Prioritas 1

Penguatan Jaminan Perlindungan Keselamatan Pasien Radiologi

Pengumuman

- Pengumuman KELULUSAN Pelatihan Petugas Keamanan Sumber Radioaktif BAPETEN, 17 – 19 Oktober 2017
- Hasil Ujian Lisensi PPR Tanggal 07 Oktober 2017 di Sulthan Hotel International Banda Aceh (UNDIP)
- Ujian Ulang untuk PPR Bidang Medik Tingkat 1, 2, Industri Tingkat 1, 2 dan 3

MRI



Table 1
Requirements for Colored MR Icons*

Icon geometric shape and appearance	Meaning
A square	MR safe
 or 	
An equilateral triangle with radiused outer corners	MR conditional
	
A circle with a diagonal bar	MR unsafe
	

*Reprinted, with permission, from ASTM F2503-05 (6).

MRI Safety Program Assessment Checklist

Site: _____

The site's written MRI safety policy addresses the following:

	Yes/No/NA
1. Designated MR medical director	
2. Site access restrictions (MR zones)	
3. Documented MR Safety education/training for all personnel	
4. Patient and non-MR personnel screening	
5. Pediatric patients	
6. Magnet quench	
7. Cryogen safety	
8. Acoustic noise	
9. Pregnant patients and staff	
11. Contrast agent safety	
12. Sedations	
13. Thermal burns	
14. Emergency code procedures	
15. Device and object screening	
16. Designation of MR safe/MR conditional status	
17. Reporting of MR safety incidents or adverse incidents	
18. Patient communication	
19. Infection control and medical waste	

ACR criteria for compliance:

	Yes/No/NA
1. Written policies are present and readily available to facility staff.	
2. Written policies are reviewed and updated on a regular basis.	
3. Facility has appropriate MR safety warning signage and methods of controlled access.	
Overall Pass/Fail	

Name: _____ Date of Birth: _____ Weight: _____ kg Height: _____ cm

It is very important that you answer the following questions truthfully as we need to assess any possible dangers that may present to you during your scan. Patients who have heart pacemakers, metal implants, or metal chips or clips in or around the eyeballs cannot be scanned with an MRI because of the risk that the magnet may move the metal in these areas. Please complete the following questions by ticking Yes or No. If you have any queries please ask the staff.

Have you ever:

- | | |
|-------------------------------|--|
| Had heart surgery | ☐ Yes ☐ No |
| Had brain surgery | ☐ Yes ☐ No |
| Had ear surgery | ☐ Yes ☐ No |
| Been a metal worker? | ☐ Yes ☐ No |
| Had metal in your eyes? | ☐ Yes ☐ No |
| Suffered from claustrophobia? | ☐ Yes ☐ No |
| Had an MRI scan in the past? | ☐ Yes ☐ No |

Please list all of the operations you have ever had

Female patients:

- | | |
|---|--|
| Is there any possibility you may be pregnant? | ☐ Yes ☐ No |
| Are you currently breastfeeding? | ☐ Yes ☐ No |
| Do you have any intrauterine device? | ☐ Yes ☐ No |

Please note there are no known risks to the developing foetus from MRI. However, complete safety has yet to be fully established.

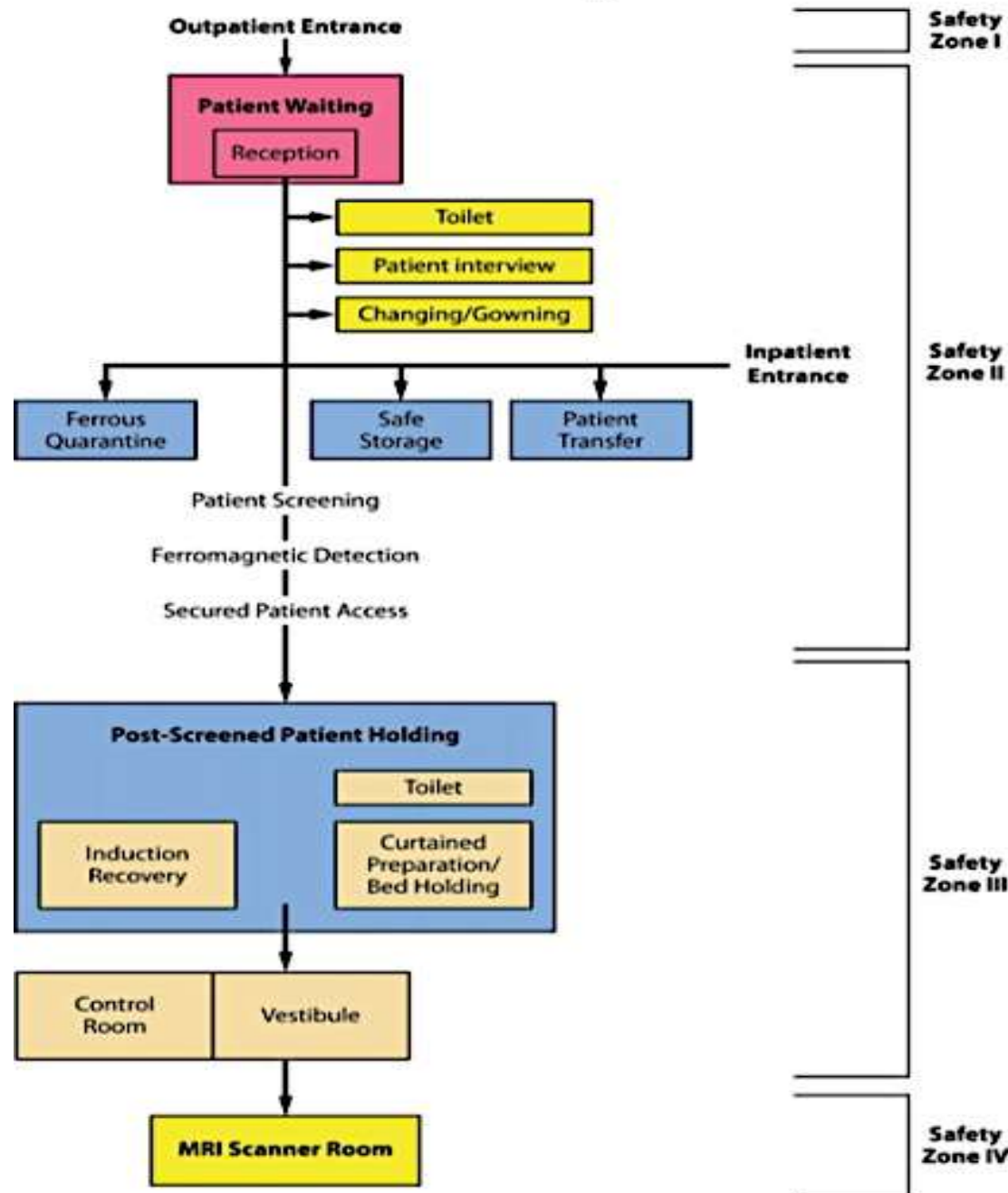
WorkCover / TAC Details / 3rd Party Insurers: (please tick which)

- | |
|--|
| ☐ Insurance Company: _____ |
| ☐ Employer: _____ |
| ☐ Claim Number: _____ |

Do you have (or have you ever had) the following?

- | | |
|--|--|
| Pacemaker | ☐ Yes ☐ No |
| Pacing wires / defibrillator / PICC line | ☐ Yes ☐ No |
| Brain aneurysm clip | ☐ Yes ☐ No |
| Cochlear Implant | ☐ Yes ☐ No |
| Artificial heart valve | ☐ Yes ☐ No |
| Neurostimulator / Biostimulator | ☐ Yes ☐ No |
| IVC filter | ☐ Yes ☐ No |
| Any type of intravascular coils, filters or stents | ☐ Yes ☐ No |
| Swanz-Ganz catheter | ☐ Yes ☐ No |
| Brain shunt tube | ☐ Yes ☐ No |
| Metal pin, plates, rods, screws, prostheses | ☐ Yes ☐ No |
| Ocular (eye) prosthesis | ☐ Yes ☐ No |
| Stapes (ear) implant | ☐ Yes ☐ No |
| Any other form of implant | ☐ Yes ☐ No |
| Hearing Aid | ☐ Yes ☐ No |
| Dentures, braces (including magnetically activated dentures) | ☐ Yes ☐ No |
| Transdermal (skin) patches eg. Nicotine patches | ☐ Yes ☐ No |
| Shrapnel or bullet wounds | ☐ Yes ☐ No |
| Wig, toupee, hairpiece | ☐ Yes ☐ No |
| A tattoo (including tattooed eyeliner) | ☐ Yes ☐ No |
| Any type of body piercing | ☐ Yes ☐ No |
| Implanted pain relief pump | ☐ Yes ☐ No |
| Implanted Insulin Pump | ☐ Yes ☐ No |
| Asthma | ☐ Yes ☐ No |

MRI Functional Diagram



Kesimpulan

- Survei terfokus mendukung terlaksananya manajemen mutu layanan di Instalasi Radiologi
- Data dukung yang berasal dari audit internal instalasi secara berkala dapat mencerminkan pelaksanaan manajemen mutu radiologi
- Dengan pelaksanaan terintegrasi akreditasi rumah sakit diharapkan adanya percepatan peningkatan mutu layanan radiologi

Quality is not an act, it is a habit.

Aristotle, Greek Philosopher (384-322 BC)

Quality means doing it right when no one is looking.

Henry Ford, American Industrialist (1863-1947)