

Employment Position Description – Consultant Medical Physics Specialist - Level 1

Role Summary

The Consultant Medical Physics Specialist (CMPS Level 1) works independently as an ACPSEM Registered¹ medical physicist specialist, in the Medical Physics Specialists business unit, within the policy and procedure framework of Health STEM Solutions. This includes both setting service delivery requirements and directing medical radiation technical officers (MRTO), as well as directly delivering medical physics services for clients in radiology, nuclear medicine and radiation oncology. This may include regulatory advice, routine data collection and presentation, dosimetry calculation, physics equipment support, quality system and records management, the use of both clinical information systems and clinical imaging/treatment systems.

A Level 1 CMPS is expected to work with a degree of autonomy for routine tasks and to provide appropriate guidance and support to MRTO staff. Interactions with clients for the provision of professional consultant advice is an expectation of the role.

From time to time, participation in similar activities but with broader scope across healthcare may be required for Health STEM Solutions clients.

Provision of all services is subject to compliance with Health STEM Solutions Policy & Procedure. This position description applies across medical physics sub-specialties (radiation oncology, radiology, nuclear medicine). Where specific radiation modalities and related services are referenced, this should be understood it is only on the basis that all necessary training/certifications/approvals/licences and registrations have been obtained, as may be required by local regulatory jurisdictions. In addition, duties only apply where they fall within the scope of practice for the sub-specialty in which the CMPS is Registered²

¹ ACPSEM Register of Qualified Medical Physics Specialists, or ACPSEM Certification where appropriate. ACPSEM is the Australasian College of Physical Scientists & Engineers in Medicine, the professional college for medical physicists and radiopharmaceutical scientists in ANZ.

² With appropriate Certifications/Approvals/Licences/Registrations as required for local regulatory jurisdictions

Specific Duties

Specific duties may include but are not limited to any of the following:

Client Service Support

- Develop and provide client advice and/or service requirements for:
 - Client solution packages and service proposals
 - Radiation regulatory management and compliance including:
 - Radiation Management Licences
 - Radiation Use Licences (or equivalent documents)
 - Acts & Regulations
 - Codes of Practice & Safety Guides
 - Australian Standards
 - Best practice guidelines
 - Ionising Radiation Management Plans (or equivalent documents in the relevant jurisdiction)
 - Management of Personal Radiation Monitoring Systems data and processes
 - Compliance with Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) Codes of Practice.
 - Compliance requirements of Radiation Management Plans (or equivalents) and regulatory requirements.
 - Prepare, deliver and/or manage basic radiation safety education including providing refresher training and staff on-boarding for different craft groups.
 - Provide general radiation safety advice:
 - as required for specific circumstances arising.
 - to manage pregnancy declarations and advice on work arrangements
 - National Diagnostic Reference Level (NDRL) Surveys for each appropriate modality.
 - Facility Reference Level (FRL) program, dose and image quality optimization
 - Ongoing quality assurance and control programs to comply with RANZCR and manufacturer recommendations for medical imaging, including nuclear medicine and PET facilities.

- Regulatory Reporting:
 - Advice on mandatory incident reporting requirements.
 - Prepare (or assist RSO/authorised licence representative prepare) incident report content.
 - Provide frontline helpdesk and administrative services to clients with respect to “Medical Physics Specialists” services.
 - Advice on personal protective equipment (PPE) for radiation safety.
- Assist with basic client administration when necessary, such as compiling service proposals & quotations; generating customer service cases and work orders; completing time entries for time tracking; preparing invoices for billable client activities performed.

Review and sign-off the following where prepared by a Medical Radiation Technical Officer (MRTO) or prepare these directly and submit to clients where necessary

- Radiation Shielding Design & Shielding Survey (Regulatory Compliance):
 - Assist with design and calculations for radiation shielding for new installations and existing site reviews, including radiology, nuclear medicine/PET and radiation oncology facilities.
 - Assist with physical and radiological measurements of radiation shielding installed for radiology, nuclear medicine/PET and radiation oncology facilities.
- Dose Calculations (Medical Imaging, including radiology, nuclear medicine and PET) – incidents/reporting including but not limited to:
 - Peak skin doses
 - Fetal doses from exposure of pregnant staff, patients and carers to ionising radiation
 - Unplanned exposures
- Dose Calculations (Medical Imaging, including radiology, nuclear medicine and PET):
 - other clinical purposes, as required
 - For research purposes, as required
- Radiation Measurements: Diagnostic Imaging
 - System Characterisation
 - Regulatory/Standards compliance testing
 - Acceptance testing and commissioning
 - Quality assurance
 - Additional measurements for dose calculation purposes / dose estimates / research / staff exposures
 - Additional measurements as required

- Review and make recommendations about research projects involving irradiation of humans:
 - Dose calculation per clinical research protocol
 - Completion of medical physics risk assessment, including recommended risk wording in accordance with RPS 8.

- Radiation Measurements: Radiation Oncology
 - Delivery system characterisation, quality assurance or patient specific quality assurance.
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- Physics Education:
 - Physics training for medical imaging technologists (MIT) and interns, radiology registrars, or other medical specialists and craft groups.

- New System Assessment:
 - Advice on proposed new medical imaging systems, including nuclear medicine and PET.

- Image Protocol Review:
 - For dose and image quality optimisation.

Internal Support

Equipment

- Provide advice and support for medical physics equipment procurement requirements, ongoing quality assurance and management.

Quality Management

- Provide advice and support for policy and procedure and overall quality management, as defined in the Health STEM Solutions documentation.
- Oversee quality management programs and activities such as quality review, audits and multi-disciplinary team meetings.

Radiation Safety

- Provide advice and support the maintenance of personal radiation monitors and records.
- Provide advice and support for the maintenance of records for radiation system safety and technical notices; regulatory records for acquisition, storage and disposal of radiation sources;
- Other duties as assigned from time to time by the Company's Radiation Safety Officer

Safety and Wellbeing - Staff

- Participate actively and positively in the area of OHS to reduce all hazards and incidents within the workplace
- Comply with all Company OHS policies, protocols and safe work procedures at all times
- Ensure your actions do not put yourself or others at risk (as per Sections 21 & 22 under the OHS Act 2004)
- Report all hazards, incidents, injuries and near misses immediately to your manager.
- Participate in and complete mandatory safety training on an annual basis and as required
- Actively participate and contribute to the OHS consultation processes

Processes & Software

- Assist with development and continuous improvement of the Health STEM Solutions' scientific & business processes, including:
 - Documentation
 - Implementation
 - Quality Review
- Where suitably skilled, assist with implementing process automation, low code software tools and small-scale software tools to support business processes.

Promotional Activities

From time to time, support the Company's promotional activities by:

- Attending conferences, meetings and trade shows as a Health STEM Solutions representative to promote the Company's services.
- Assisting with the preparation of materials for these activities.
- Contributing to promotional marketing material including social media.

General Work Requirements

- Independent travel to/from and work at client sites may be required, including in regional and interstate, including overnight stays. This generally requires independent transport (i.e. motor vehicle and drivers licence) to access clients sites with the necessary medical physics equipment.
- Independent work on weekends or outside of normal business hours may sometimes be required.

Minimum Requirements

- Degree in Physics, Engineering, Mathematics or similar Degree in Science (as recognised by ACPSEM for enrolment in the medical physics training program – TEAP).
- Registration on the ACPSEM Register of Qualified Medical Physicists in the applicable speciality.
- Hold or be eligible to hold a Victorian Department of Health Radiation Use Licence (and equivalents in other States).
- Hold or be eligible to hold a Victoria Department of Health “Testers Approval” for medical X-ray equipment (and equivalents in other States).
- Hold or be eligible to hold a Victoria Department of Health “Approved Medical Physicist for the Purposes of the RPS8 Code” for radiology & nuclear medicine (and equivalents in other States).
- Hold or be eligible to hold:
 - ACPSEM Certification in Mammography Equipment Testing (for Radiology CMPS)
 - ACPSEM Certification in Position Emission Tomography Acceptance Testing and QC (for Nuclear Medicine CMPS)
- Hold a valid Australian driver's licence.
- High level of skill with Microsoft Office 365 applications, in particular Word and Excel.
- Working knowledge of Microsoft Sharepoint 365, Microsoft Dynamics 365, and Microsoft Teams.
- Ability to complete routine work independently and provide routine direction to Medical Radiation Technical Officers.
- Ability to lift or move basic medical physics and scientific equipment (with appropriate aids) for transport and when conducting measurements.
- Excellent written and verbal communication skills, especially with respect to technical writing.
- Excellent customer service skills.

Desirable but not essential

- ACPSEM Certification in Medical Physics in the sub-specialty applicable (or ACPSEM recognised equivalent) to the specific employment position.
- Working knowledge of modern programming languages such as C#, C++, python, Javascript
- Working knowledge of Microsoft 365 data analysis, app design and automation tools (e.g. PowerBI, Power Automate, Power Apps/Power Platform).

Employment Position Description – Consultant Medical Physics Specialist - Level 2

Role Summary

The Senior Consultant Medical Physics Specialist (CMPS Level 2) works highly independently as an experienced qualified (ACPSEM Registered¹) medical physicist, within the policy and procedure framework of Health STEM Solutions. This includes both setting service delivery requirements and directing medical radiation technical officers, as well as directly delivering medical physics services for clients in radiology, nuclear medicine and radiation oncology. This may include regulatory interpretation, routine data collection and presentation, dosimetry calculation, physics equipment support, quality system and records management, the use of both clinical information systems and clinical imaging/treatment systems.

A Level 2 CMPS has significant post-Certification experience and as such is expected to work with a large degree of autonomy for routine tasks and to provide appropriate guidance, support and leadership for more junior CMPS and MRTO positions. Interaction with client senior and executive management for the provision of professional consultant advice is an expectation of the role.

From time to time, participation in similar activities but with broader scope across healthcare may be required for Health STEM Solutions clients.

Provision of all services is subject to compliance with Health STEM Solutions Policy & Procedure. This position description applies across medical physics sub-specialties (radiation oncology, radiology, nuclear medicine). Where specific radiation modalities and related services are referenced, this should be understood it is only on the basis that all necessary training/certifications/approvals/licences and registrations have been obtained, as may be required by local regulatory jurisdictions. In addition, duties only apply where they fall within the scope of practice for the sub-specialty in which the CMPS is Registered².

¹ ACPSEM Register of Qualified Medical Physics Specialists, or ACPSEM Certification where appropriate. ACPSEM is the Australasian College of Physical Scientists & Engineers in Medicine, the professional college for medical physicists and radiopharmaceutical scientists in ANZ.

² With appropriate Certifications/Approvals/Licences/Registrations as required for local regulatory jurisdictions

Specific Duties

Specific duties may include but are not limited to any of the following:

Client Service Support

- Take a lead/oversight role for the development of client advice and/or service requirements for:
 - Client solution packages and service proposals
 - Radiation regulatory management and compliance including:
 - Radiation Management Licences
 - Radiation Use Licences (or equivalent documents)
 - Acts & Regulations
 - Codes of Practice & Safety Guides
 - Australian Standards
 - Best practice guidelines
 - Ionising Radiation Management Plans (or equivalent documents in the relevant jurisdiction)
 - Management of Personal Radiation Monitoring Systems data and processes
 - Compliance with Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) Codes of Practice.
 - Compliance requirements of Radiation Management Plans (or equivalents) and regulatory requirements.
 - Prepare, deliver and/or manage basic radiation safety education including providing refresher training and staff on-boarding for different craft groups.
 - Provide general radiation safety advice:
 - as required for specific circumstances arising.
 - to manage pregnancy declarations and advice on work arrangements
 - National Diagnostic Reference Level (NDRL) Surveys for each appropriate modality.
 - Facility Reference Level (FRL) program, dose and image quality optimization
 - Ongoing quality assurance and control programs to comply with RANZCR and manufacturer recommendations for medical imaging, including nuclear medicine and PET facilities

- Regulatory Reporting:
 - Advice on mandatory incident reporting requirements.
 - Prepare (or assist RSO/authorised licence representative prepare) incident report content.
 - Provide frontline helpdesk and administrative services to clients with respect to “Medical Physics Specialists” services.
 - Advice on personal protective equipment (PPE) for radiation safety.
- Assist with basic client administration when necessary, such as compiling service proposals & quotations; generating customer service cases and work orders; completing time entries for time tracking; preparing invoices for billable client activities performed.

Review and sign-off the following where prepared by a Medical Radiation Technical Officer (MRTO) or prepare these directly and submit to clients where necessary

- Radiation Shielding Design & Shielding Survey (Regulatory Compliance):
 - Assist with design and calculations for radiation shielding for new installations and existing site reviews, including radiology, nuclear medicine/PET and radiation oncology facilities.
 - Assist with physical and radiological measurements of radiation shielding installed for radiology, nuclear medicine/PET and radiation oncology facilities.
- Dose Calculations (Medical Imaging, including radiology, nuclear medicine and PET) – incidents/reporting including but not limited to:
 - Peak skin doses
 - Fetal doses from exposure of pregnant staff, patients and carers to ionising radiation
 - Unplanned exposures
- Dose Calculations (Medical Imaging, including radiology, nuclear medicine and PET):
 - other clinical purposes, as required
 - For research purposes, as required
- Radiation Measurements: Diagnostic Imaging
 - System Characterisation
 - Regulatory/Standards compliance testing
 - Acceptance testing and commissioning
 - Quality assurance as required
 - Additional measurements for dose calculation purposes / dose estimates / research / staff exposures
 - Additional measurements as required

- Review and make recommendations about research projects involving irradiation of humans:
 - Dose calculation per clinical research protocol
 - Completion of medical physics risk assessment, including recommended risk wording.

- Radiation Measurements: Radiation Oncology
 - Delivery system characterisation, quality assurance or patient specific quality assurance.

- Physics Education:
 - Physics training for technologist interns, radiology registrars or other medical specialists and craft groups.

- New System Assessment:
 - Advice on proposed new medical imaging systems, including nuclear medicine and PET.

- Image Protocol Review:
 - For dose and image quality optimisation.



Internal Support

Equipment

- Provide advice and implementation support for medical physics equipment procurement requirements, ongoing quality assurance and management

Quality Management

- Provide advice and implementation support for policy and procedure and overall quality management, as defined in the Health STEM Solutions documentation
- Oversee quality management programs and activities such as quality review, audits and multi-disciplinary team meetings.

Radiation Safety

- Provide advice and implementation support for the maintenance of personal radiation monitoring records. Facilitate ordering, distribution and collection of monitors when required.
- Provide advice and implementation support for the maintenance of records for radiation system safety and technical notices; regulatory records for acquisition, storage and disposal of radiation sources;
- Other duties as assigned from time to time by the Company's Radiation Safety Officer

Safety and Wellbeing - Staff

- Participate actively and positively in the area of OHS to reduce all hazards and incidents within the workplace
- Comply with all Company OHS policies, protocols and safe work procedures at all times
- Ensure your actions do not put yourself or others at risk (as per Sections 21 & 22 under the OHS Act 2004)
- Report all hazards, incidents, injuries and near misses immediately to your manager.
- Participate in and complete mandatory safety training on an annual basis and as required
- Actively participate and contribute to the OHS consultation processes

Processes & Software

- Assist with development and continuous improvement of the Health STEM Solutions' scientific & business processes, including:
 - Documentation
 - Implementation
 - Quality Review

- Where suitably skilled, assist with implementing process automation, low code software tools and small scale software tools to support business processes.

Promotional Activities

From time to time, support the Company's promotional activities by:

- Attending conferences, meetings and trade shows as a Health STEM Solutions representative to promote the company's services.
- Assisting with the preparation of materials for these activities.
- Contributing to promotional marketing material including social media

General Work Requirements

- Independent travel to and work a client sites may be required, including in regional and interstate, including overnight stays. This generally requires independent transport (i.e. motor vehicle and drivers licence) to access clients sites with the necessary medical physics equipment.
- Independent work on weekends or outside of normal business hours may sometimes be required.

Minimum Requirements

- Degree in Physics, Engineering, Mathematics or similar Degree in Science (as required by ACPSEM for enrolment in the medical physics training program – TEAP) or in medical radiation science.
- Registration on the ACPSEM Register of Qualified Medical Physicists in the applicable speciality.
- Three years post-Certification experience as a Medical Physics Specialist
- Hold or be eligible to hold a Victorian Department of Health Radiation Use Licence (and equivalents in other States)
- Hold or be eligible to hold a Victoria Department of Health “Testers Approval” for medical X-ray equipment (and equivalents in other States)
- Hold or be eligible to hold a Victoria Department of Health “Approved Medical Physicist for the Purposes of the RPS8 Code” for radiology & nuclear medicine.
- Hold a valid driver's licence.
- High level of skill with Microsoft Office 365 applications, in particular Word and Excel
- Working knowledge of Microsoft Sharepoint 365 (online) and Microsoft Dynamics 365 (online)
- Ability to work independently and provide supervision to Consultant Medical Physics Specialists and Medical Radiation Technical Officers.
- Ability to lift or move basic medical physics and scientific equipment (with appropriate aids) for transport and when conducting measurements.
- Excellent written and verbal communication skills, especially with respect to technical writing.
- Excellent customer service skills.

Desirable but not essential

- ACPSEM Certification in Medical Physics in the sub-specialty applicable (or ACPSEM recognised equivalent) to the specific employment position.
- Working knowledge of modern programming languages such as C#, C++, python, Javascript
- Working knowledge of Microsoft 365 data analysis, app design and automation tools (e.g. PowerBI, Power Automate, Power Apps/Power Platform)