COMP
Canadian Organization of Medical Physicists

OCPM
Organisation canadienne des physiciens médicaux

COMP/OCPM Commentary on the CNSC Nuclear Substances Report 2014

L. John Schreiner, Ph. D., FCOMP, FCCPM

Medical Physicist, Chair of QARSAC's CNSC Liaison subcommittee, RSO at the Kingston General Hospital

David Wilkins, Ph. D., FCOMP, FCCPM

Medical Physicist, Member of QARSAC's CNSC Liaison subcommittee, RSO at The Ottawa Hospital Cancer Centre

COMP thanks the Commission for giving us the opportunity to comment on its draft 2014 Annual Nuclear Substances Report.

Today we will describe for the CNSC:

- COMP and its membership,
- COMP's role in radiation protection
- COMP's impressions of the CNSC's annual report, and
- COMP's intent to engage more fully with the CNSC and other stakeholders in the Medical Sector.

COMP OCPM
Canadian Organization of Medical Physicists
Organisation canadienne des physiciens médicaux

WHO ARE MEDICAL PHYSICISTS?

- Health care professionals with specialized training in the medical applications of physics (including the use of ionizing radiation for diagnosis and treatment).
- Training of Medical Physicists includes significant training in Radiation Safety.
- To become certified by the *Canadian College of Physicists in Medicine,* Medical Physicists must demonstrate competence in Radiation Safety, including thorough knowledge of CNSC regulations.

COMP OCPM
Canadian Organization of Medical Physicists
Organisation canadienne des physiciens médicaux

The CANADIAN ORGANIZATION of MEDICAL PHYSICISTS

- Is the main professional body for medical physicists practicing in Canada.
  - Formed in 1989 by the Division of Medical Biophysics of the Canadian Association of Physicists and the Canadian College of Physicists in Medicine
- Membership is composed of professional physicists and scientists at hospitals, cancer centres, universities and government research facilities
- Every member has an educational or professional background in physics or engineering as it applies to medicine.

VISION: COMP is the recognized leader and primary resource for medical physics in Canada.

COMP
Canadian Organization of Medical Physicists

OCPM
Organisation canadienne des physiciens médicaux

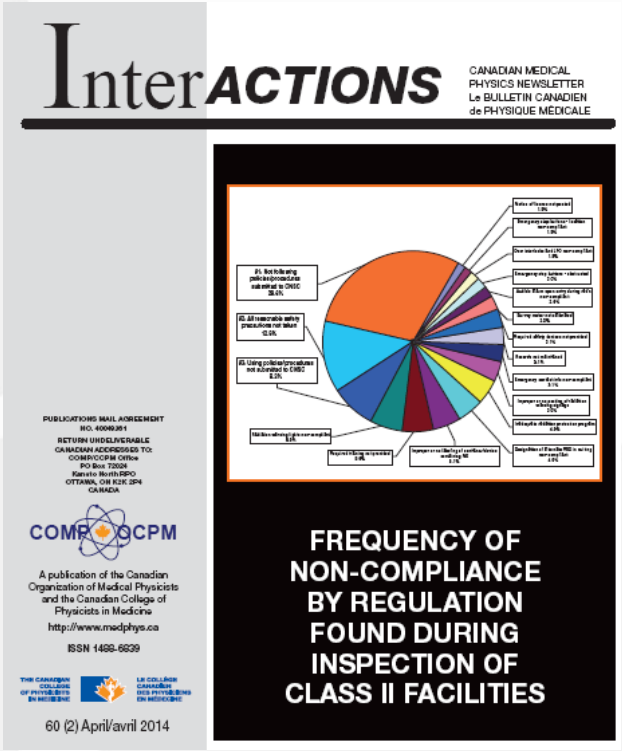
COMP has six stated objectives to encourage the application of physics in medicine:

- To promote the development of standards, policies, guidelines and research related to physics in medicine.
- To provide members with timely, accessible and relevant programs and services to support their roles in medical physics.
- To be the national/international voice for medical physics in Canada.
- To attract a wide breadth of members committed to patient care excellence through medical physics.
- To develop strategic alliances with organizations with similar objectives.
- To promote and encourage certification by the Canadian College of Physicists in Medicine.

COMP OCPM
Canadian Organization of Medical Physicists
Organisation canadienne des physiciens médicaux

The COMP membership in 2015 stands at 622 active members:

- 518 full members (18 associate)
- 86 student members
- (also 30 retired or emeritus and 14 corporate members)



Most COMP members work in CNSC licensed facilities.
About 30 or so COMP members act as Radiation Safety Officers (RSOs) in their respective institutions.

MISSION: COMP champions medical physicists' efforts for patient care excellence through education, knowledge transfer, advocacy and partnerships.

COMP OCPM
Canadian Organization of Medical Physicists
Organisation canadienne des physiciens médicaux

Collaborative milestones in last year:

The CNSC Report reviews how the CNSC reached out to COMP in 2014 (and earlier) to better engage our community.

- Four CNSC Feedback Forum articles in COMP's quarterly newsletter InterACTIONs, authored by CNSC staff.
- Workshop at the COMP Winter School (February): Improving Communication Between the CNSC and Licensees in Radiation Therapy Centres. (David Wilkins, The Ottawa Hospital Cancer Centre). (3rd year of CNSC attendance)
- Draft national Technical Quality Control (TQC) Guideline for Safety Systems in Radiation Therapy Facilities released for public consultation (March).

COMP recognizes and appreciates this effort, and we realize that we should reciprocate by participating more fully in consultative processes initiated by the CNSC.

COMP has formed a new CNSC Liaison Committee tasked to:

- Connect COMP RSOs from across Canada
- Facilitate discussion and provide consolidated feedback on behalf of COMP pertaining to reports, draft documents, draft regulations, etc.
- Work with the CNSC and partner organizations to improve the compliance with, and relevance of, safety regulations in the hospital setting.
- Report to the COMP board through COMP's Quality Assurance and Radiation Safety Advisory Committee (QARSAC)

COMP Canadian Organization of Medical Physicists

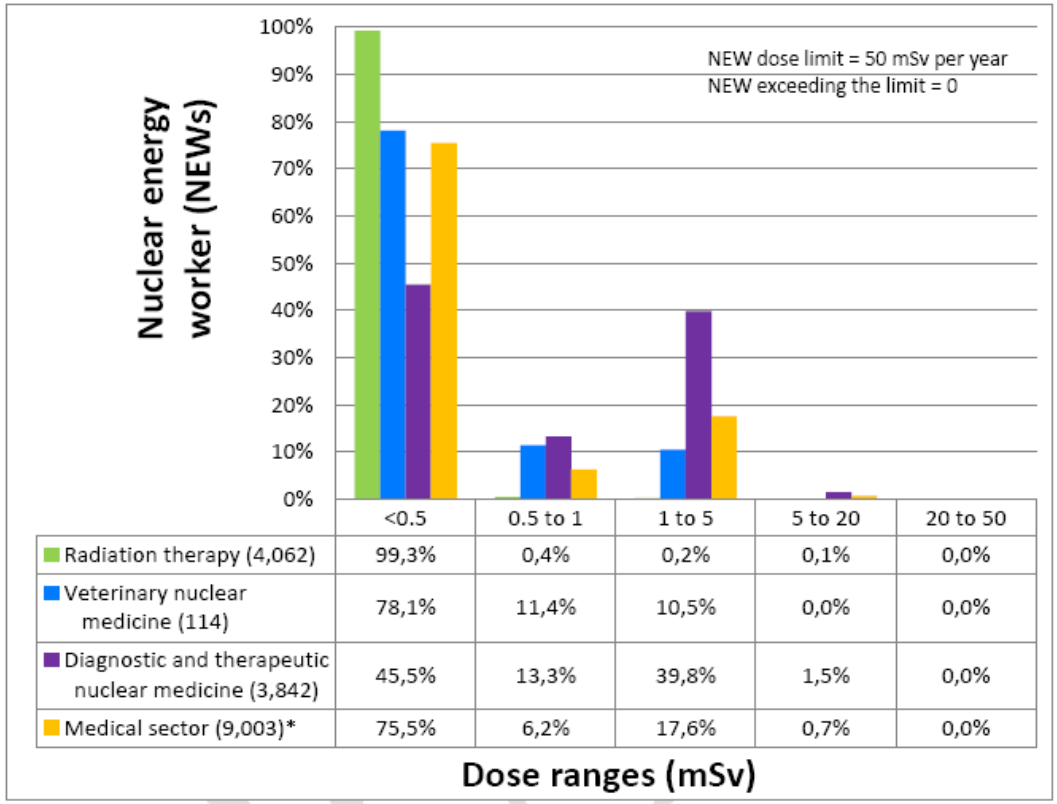
OCPM Organisation canadienne des physiciens médicaux

COMP's Review of the draft Nuclear Substances report:

COMP was encouraged to see that compliance in the medical sector shows we have safe radiation environments in our hospitals and cancer centres for workers, patients and the public.

e.g. staff effective doses:

Figure 20: Medical sector performance comparison with select subsectors, effective doses to NEWs in 2014



	<0.5	0.5 to 1	1 to 5	5 to 20	20 to 50
Radiation therapy (4,062)	99,3%	0,4%	0,2%	0,1%	0,0%
Veterinary nuclear medicine (114)	78,1%	11,4%	10,5%	0,0%	0,0%
Diagnostic and therapeutic nuclear medicine (3,842)	45,5%	13,3%	39,8%	1,5%	0,0%
Medical sector (9,003)*	75,5%	6,2%	17,6%	0,7%	0,0%

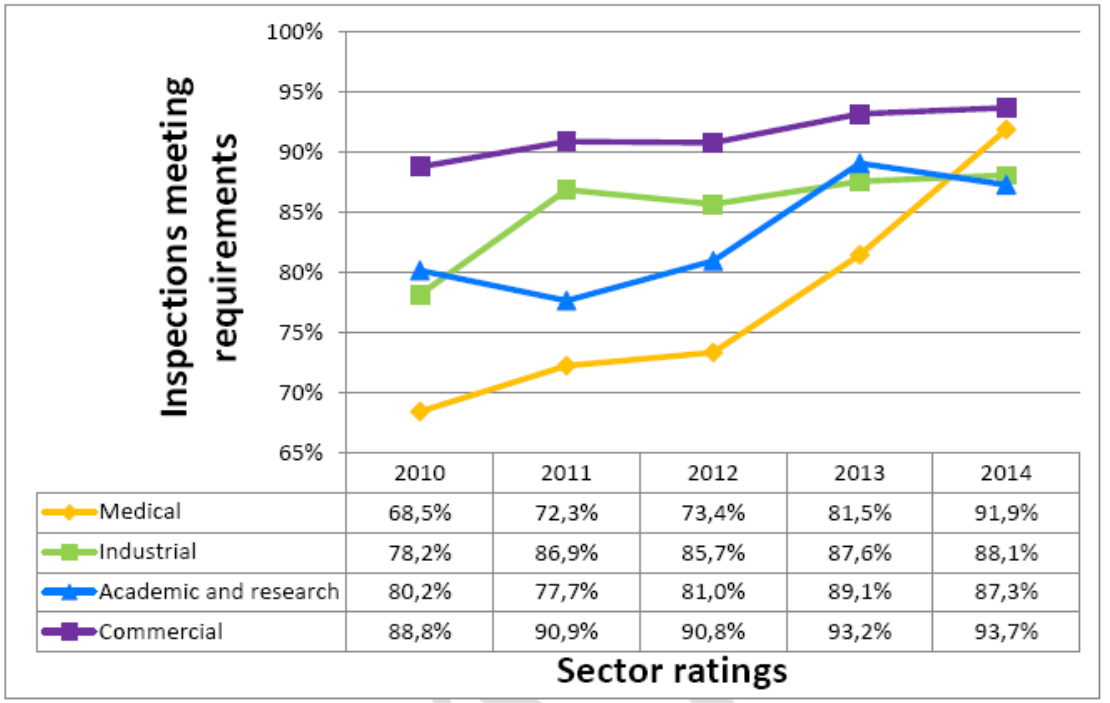
COMP OCPM
Canadian Organization of Medical Physicists
Organisation canadienne des physiciens médicaux

COMP's Review of the draft Nuclear Substances report :

e.g., inspection ratings:

Perhaps CNSC staff are conservative when they state in the report (p.44) that the safety performance of the medical sector 'remained stable'

Figure 17: Sector-to-sector comparison of inspection ratings for radiation protection from 2010 to 2014



	2010	2011	2012	2013	2014
Medical	68,5%	72,3%	73,4%	81,5%	91,9%
Industrial	78,2%	86,9%	85,7%	87,6%	88,1%
Academic and research	80,2%	77,7%	81,0%	89,1%	87,3%
Commercial	88,8%	90,9%	90,8%	93,2%	93,7%

COMP OCPM
Canadian Organization of Medical Physicists
Organisation canadienne des physiciens médicaux

COMP's Perspective on the Medical Sector's strong performance:

- A strong radiation safety culture exists in hospitals with highly trained staff and well defined policies (much of this environment being established by members of COMP).

- Impacted by the move of the CNSC Class II Division to multi-day Type 1 inspections -- reports are more detailed and reflect the local radiation safety environment and recommend opportunities for improvement.

- Inclusion of senior hospital administration in the inspection process adds support to local RSOs enabling a strong safety culture.

COMP
Canadian Organization of Medical Physicists

OCPM
Organisation canadienne des physiciens médicaux

COMP's Perspective on the Medical Sector's strong performance:

- There is room for improvement and we continue to work as partners to improve regulatory compliance and implement best practices.

- There are unique challenges in the medical sector:
  - Staff, patients, and families (general public) in controlled areas.
  - Focus on patient safety.
  - Increasing complexity of technology/procedures, particularly in times of fiscal restraint and reduced staff resources.
  - Appropriate balancing of security concerns.

- It is clear that a strong radiation safety environment does benefit patient safety, but there are times when priorities may be deflected from the concerns regulated by the CNSC. Regulations must not impose barriers on patient access to timely, high quality care.

COMP OCPM
Canadian Organization of Medical Physicists
Organisation canadienne des physiciens médicaux

This is not to say that the medical sector should be held to looser regulatory standards.

It further supports the need for ongoing dialogue and consultation as the CNSC moves its regulatory framework forward.

COMP is committed to working with the CNSC in this regard.

COMP OCPM
Canadian Organization of Medical Physicists
Organisation canadienne des physiciens médicaux

Current areas of expertise and mutual interest:

- Connecting regulations to national TQC guidelines and ensuring appropriate interpretation.
- Security in isotope facilities.
- Guidelines for deceased radionuclide therapy patients (cremation).
- Reducing administrative burden for CNSC and licensees.
- Establishing compliance measures that better account for changes in technology.
    - e.g., adopting Time Averaged Dose-Equivalent Rates (TADR) for shielding criteria in radiotherapy bunker design

COMP
Canadian Organization of Medical Physicists

OCPM
Organisation canadienne des physiciens médicaux

Thank you.