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LE COLLÈGE CANADIEN DES PHYSICIENS EN MÉDECINE

57 (4) octobre/October 2011

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InterACTIONS

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Cover Image

Jacob Van Dyk was the recipient of the COMP Gold Medal Award at the COMP ASM in Vancouver earlier this year. You can read Jake's acceptance speech on page 107 and Jerry Battista's introduction of Jake on page 105.

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Message from the COMP President

Clearly the most significant event since the previous message was the Annual Scientific Meeting (ASM) in Vancouver, held jointly with the American Association of Physicists in Medicine (AAPM). The last time our two organizations met together in Canada was at the *Palais des Congres de Montreal* in 2002. That event resulted in wonderful memories people still talk about today and, from what I have heard so far, those memories are being augmented by the Vancouver event. While many were involved and their contributions are much appreciated, I would like to acknowledge in particular that such a success would not have been realized without the tireless efforts of Nancy Barrett, our Executive Director, and Gisele Kite, our Administrator. As for the meeting itself, there were two main highlights from my perspective. One was the awarding of the Gold Medal to Jake Van Dyk. Our community is truly fortunate to be able to count physicists of Jake's calibre amongst its ranks. The other was the President's Symposium entitled *The Future of Medical Physics Research*. The topic for the symposium was selected by the President of the AAPM, Dr. J. Anthony Seibert, and, given the response of the audience, proved to be both timely and provocative. I cannot resist mentioning that Dr. Seibert acknowledged that it was in part the acceptance speech of the winner of last year's AAPM Coolidge Award, our own Dr. David W. O. Rogers, that prompted selection of the topic. Dave was also one of the four invited speakers and in his own inimitable fashion, speaking from the heart and with only a microphone (what, no slides?), made a very eloquent case for the importance of research being integral to the practice of Medical Physicists. Medicine continues to evolve at a seemingly ever increasing pace, and our field is one that is not only impacted by change but actually promotes it. The panel provided background, context, a framework of future challenges, and a promotion of inclusiveness that certainly stimulated discussion in which I believe COMP will need to become more fully engage. The important aspect of the symposium now having been stated, I will also admit that part of the reason I dwell upon the session has to do with something a bit closer to home. It was held in a room of substantial capacity with well over 1000 in attendance—largest crowd I have ever addressed, and not even an anonymous bunch as it was essentially comprised of colleagues. COMP and the AAPM certainly do operate on different scales. (For those of you in the know, although apparently cruising through it in the end, *that* is where I thought I was going out on a limb. With regard to the other unexpected event, my sincere appreciation for the concern expressed and assistance rendered, and a special thank you to Jason Schella for his company and support throughout the ordeal.) Beyond having survived the honour of the address, most impressive to me was the regard with which contributions of the Canadian medical physics community are held by the AAPM and the synergistic relationship that is enjoyed by both societies. The opportunity for COMP to have a significant profile before such a large audience is always beneficial. Better yet, the Vancouver weather was uncharacteristically cooperative, which left our American colleagues with a most positive impression of how fortunate we are in this country.

Dr. Peter McGhee

The Annual General Meeting (AGM) was, of course, a centrepiece of COMP activity. While the AAPM organizing committee is certainly accommodating when conducting joint meetings with COMP, there remain logistical challenges when scheduling the annual Canadian events, such as the AGM. As a result, some conflicts with the overall meeting agenda are unavoidable. That said, because it continues to be an issue I still would like to underscore the importance of attending AGMs when you are a Member (whether COMP or CCPM). Attendance of these meetings is critical, particularly when a quorum is required to finalize decisions.

The Minutes of the AGM are published in this issue of InterACTIONS, but there are a number of highlights that I would like to touch upon. The process for awarding Fellow of COMP (FCOMP) continues to be refined, and implementation in 2012 remains a target. Expect to see further communication on this topic. The Canadian Partnership

continued on page 118

Message from the CCPM President

At the recent COMP/AAPM meeting in beautiful downtown Vancouver, I was asked to give a presentation to the Joint AAPM/COMP Student Symposium on the topic of CCPM certification and strategies for success. Of course, the real topic on the minds of the audience was: How can I pass the exam? While I was understandably circumspect in my talk to this group, careful not to reveal specific exam content or provide information which would give anyone an unfair advantage, some general comments and personal observations regarding success in the CCPM certification process were shared with the audience. I thought it would be useful to repeat this information here for the benefit of anyone considering applying for the CCPM membership exam in 2012 (which for the first time will be offered in both official languages).

An interesting observation is that candidates who are COMP members at the time of applying for CCPM certification are far more likely to succeed than those who are not. This year, candidates who were COMP members at the time of application had a 20% rate of failure or withdrawal prior to the exam. Among those who were not COMP members at the time of application, the rate of failure or withdrawal was 50%. The reasons for this can be guessed at upon reflection – those who have joined COMP as students or residents are more likely to have attended and/or presented at the Annual Scientific Meeting, interacted with the broader medical physics community, read interesting articles (like this one) in InterACTIONS, and perhaps trained in a department where emphasis on these things was part of the culture. While the evidence is correlative in nature and does not prove cause and effect, I will nevertheless take the liberty of boiling it down to a facile slogan: Increase your chance of passing the CCPM exam by joining COMP now.

It should come as no great surprise that training in a CAMPEP-accredited residency program also increases a candidate's chance of success. This year, of those who came from a CAMPEP program, 32% failed or withdrew, whereas amongst those coming from an unaccredited program, 48% failed or withdrew. An even more striking trend is evident in the USA, where the pass rate for first-time takers of the ABR oral in radiological physics is 95% for graduates of CAMPEP-accredited residency programs, compared with less than 60% for all candidates.

Radiation safety continues to pose pitfalls for many candidates in both the written and oral exams. While it is relatively straightforward to study Canadian regulations, ICRP documents and other standard sources, it is more of a challenge for a candidate to get practical experience in radiation safety. In many departments, radiation safety is handled by one individual, with others happy enough to let that person quietly take care of things so that the rest don't have to. For residents preparing for certification, it is important to make an effort to spend quality time with your Radiation Safety Officer (fresh baked cookies often help). Learn about the issues of the day, the incidents and odd circumstances that have cropped up over the years, work through licence applications and local documentation, or ask if you can attend a meeting of the radiation safety committee or review the minutes.

Another excellent source of practical radiation safety information is the regular column by CNSC contributors in InterACTIONS. Over the past few years, almost every issue has contained a short article about some commonly occurring

Dr. David Wilkins

radiation safety issue, upcoming changes in regulations, etc. Reviewing these articles in past issues of InterACTIONS is an excellent way of learning about what the CNSC considers important. And please, learn what CNSC stands for. It continues to amaze me how many oral exam candidates confidently report that radioactive materials in Canada are regulated by the Canadian National Safety Committee.

Preparation is obviously critical for CCPM success. While everyone has different ways of studying and different schedules, some generalizations are useful. The application deadline is early January for the written exam in early March. If you have not started serious preparation by the application deadline, you might be leaving it a bit late (Christmas is for studying, not feasting!). The question banks for Parts III and IV of the exam need to be worked through and practiced. Time is limited during the exam; there is little opportunity for working things out on the fly. Practice answering these questions under time pressure, and make sure you can write good answers in the time available.

continued on page 118

Message from the Executive Director of COMP/CCPM

I can't believe how quickly time passes and that fall is now upon us. A lot has happened since the July issue.

The joint meeting with the AAPM was a huge success with a record number of delegates in attendance in breathtaking Vancouver. At this year's annual general meeting (AGM) we had the opportunity to thank two outgoing Board members – Bill Ziegler and Joe Hayward. Bill's term as COMP Treasurer will be ending at the end of December and Crystal Angers of the Ottawa Hospital will be stepping into this role. Joe Hayward served as the Councillor for Professional Affairs and Chair of the Professional Affairs Committee for the past 4 years. Craig Beckett of the Allan Blair Cancer Centre will be replacing Joe in this role. More details on both Bill and Joe's contributions and about Crystal and Craig are available in separate articles.

It was an honour to celebrate Jake Van Dyk as this year's Gold Medal recipient. Jake's accomplishments are highlighted in a special article written by Jerry Battista that can be found in this issue. As well, the Sylvia Fedoruk prize was presented to Frédéric Tessier for the paper: Tessier F. and Kawrakow I., ***"Effective point of measurement of thimble ion chambers in megavoltage photon beams,"*** Medical Physics, Vol. 37, No. 1, January 2010.

Following the AGM and the Awards Ceremony, COMP hosted a boat cruise on the Vancouver harbour which provided a front row seat to the Celebration of Lights fireworks display. Thanks go out to Conrad Yuen for his work organizing the cruise.

Plans are well underway for the 2012 Winter School that will be taking place from January 29th to February 2nd in Whistler, BC. The Winter School has been endorsed by the Canadian Association of Radiation Oncology and the Canadian Association of Medical Radiation Therapists. One of the objectives of this event is to bring professionals from all interested groups (including government and industry) together in an intimate setting so that issues can be discussed in an open and collegial format with an emphasis on peer-to-peer learning and interactivity. Registration is now open – don't miss out on this excellent continuing education opportunity.

The Science and Education Committee is looking for ways to improve and expand the annual scientific meeting to include a continuing education component. Thank you to all of you who completed the ASM survey. The aggregate results will be published in the January issue of InterACTIONS and your input will help the SEC incorporate changes to the 2012 ASM that will be taking place in Halifax from July 11th to the 14th.

Ms Nancy Barrett

Building on the success of the 2006 session, the Board will be engaging in another strategic planning process in late November in conjunction with the mid-year meeting. An important part of the process is getting input from our members so thank you for supporting our efforts. The new strategic plan will be shared with the membership in early 2012.

In closing, I would like to thank my colleague, Gisele Kite for all of her work behind the scenes to help COMP (and CCPM) run smoothly. As always, please feel free to contact me or Gisele or at any time with your feedback and suggestions.

CNSC Feedback Forum
ACFD Decision on Emergency Stop Devices in a Class II Facility

Sonia Lala

Accelerators and Class II Facilities Division
Canadian Nuclear Safety Commission
Ottawa ON

A Bit of Context

For those of you who have been involved in the CNSC licensing or inspection process for a Class II facility, it is clear that great importance is placed on the description, location, quality assurance testing, and operational use of safety systems associated with prescribed equipment and treatment rooms. In particular, the *Class II Nuclear Facilities and Prescribed Equipment Regulations* ("the Regulations") require emergency stop devices, or "E-stops" that return the equipment to a safe state and require some form of manual reset from within the room or area in which they were activated. The Regulations also specify the minimum number of locations at which these must be installed.

In the case of a teletherapy machine, the Regulations stipulate that E-stops should not be placed where they can be potentially in the direct path of the beam. In wanting to avoid the regions of highest dose rate when activating an E-stop, it follows that you should also be able to reach one from anywhere in the treatment room without having to cross through the path of the primary beam. In recent years, Inspectors from the Accelerators and Class II Facilities Division (ACFD) have been verifying that E-stops are situated accordingly.

Two of the three major brands of accelerators and all Cobalt teletherapy units have E-stops built into both sides of the gantry stand. In typical older style treatment rooms, these allow a person in either rear quadrant of the room to access an E-stop without needing to cross a laterally oriented beam. However, in many newer teletherapy facilities, these E-stops have been enclosed in a "modulator room" created by placing a thin wall across the rear of the room that extends up to the front corners of the gantry stand. The third major brand of accelerator is designed in this manner. It has been noted during the inspection of many of these facilities that rather than installing additional E-stops on the treatment room side of these thin walls, licensees consider it acceptable to terminate the beam by opening the interlocked modulator room doors.

While this appears to fulfill the regulatory intent for E-stops, there are a number of potential problems for this configuration. Consequently, ACFD policy is that for newly constructed or renovated treatment rooms, this practice is not acceptable. This article provides the rationale behind this decision.

Safety Critical Systems

The extensive use of computerized systems and their corresponding human-machine interfaces have introduced higher levels of complexity to various medical procedures such as radiotherapy. While increased complexity implies improved precision, accuracy and consistency, it also makes systems more prone to failure. Because failures in these types of systems hold potential for high consequences such as serious injury or death, they can be considered "safety-critical" systems.

In the design and operation of a safety-critical system, "defence-in-depth" is a strategy that calls for multiple layers of protection with the intent to prevent and mitigate accidents. The Prediction-Prevention-Detection-Response cycle shown in Figure 1 is a useful framework for our discussion. This has been derived from practices in a number of high-risk industries such as information-technology disaster recovery and critical infrastructure security. It should be noted that the systems safety domain is continuously evolving and this is a high level overview of only one of many frameworks.

Defence-in-Depth in Class II Facility Safety Systems

We can look at the operation of safety systems in a radiotherapy treatment room as an integrated system of safety-critical functions, which supports the ALARA principle by limiting the likelihood and magnitude of unintentional non-clinical radiological exposure to individuals. The following demonstrates how defence-in-depth can be achieved in the design and

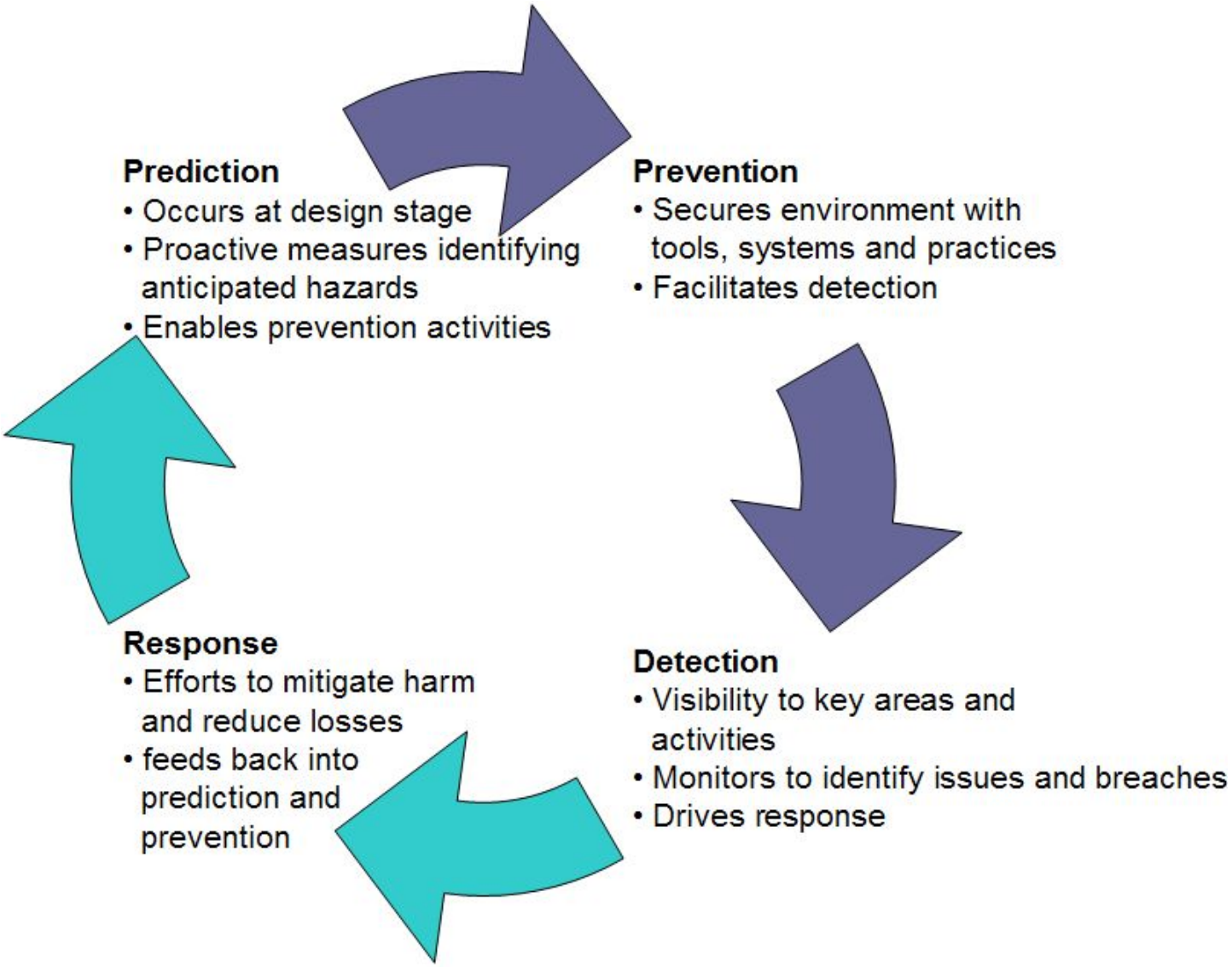


Figure 1: Prediction-Prevention-Detection-Response Cycle for Systems Safety

operation of safety systems for a Class II facility, using Figure 1 as a framework.

In the *prediction* stage, designers try to anticipate scenarios that may lead to accidental exposure of staff or members of the public. Assuming that facility shielding is adequate, this largely includes unintentional occupancy of, or attempted access to, the treatment room while the beam is on. A service technician may be working unnoticed in the back modulator room; a radiation therapist may dash back in to retrieve an object left behind after setting up a patient; or a family member may wander into the maze by mistake. These are all examples of situations that could result in harm to people through unintended exposure to the beam.

These predictions enable means of *prevention* to be designed, which could include physical barriers, door interlocks, last person out buttons, and warning signs designed to ensure that only the patient remains in the room when the beam is on. Procedures and training to use the *prevention* tools, systems and practices appropriately would also be a part of the prevention approach.

Should these systems fail, there must be means of *detection* in place to alert someone remaining in or entering the room that the beam or beam initiation sequence has been activated. Illuminated irradiation state indicators are typically located in the room to be visible from all areas. Additionally, some facilities have a brief audible alarm that signals the activation of a door interlock; in others a flashing light is connected to an area radiation monitor to further indicate that the beam is on. These all have the intent to warn and inform the person in the room of the hazard. In situations involving a member of the

general public who is not trained to recognize these warning signals, *detection* methods such as in-room cameras connected to monitors at the control console can alert the operator to potential danger.

E-stops come into play in the final part of the cycle, where an individual initiates a *response* to revert the system back to a safe state by terminating the beam. This individual may either be the person in danger, or the operator in the control area. The operational experience and lessons learned from the *response* stage can be fed back into the *prediction* and *prevention* stages of the cycle, to strengthen the safety provisions.

Where humans carry out actions related to *prevention, detection,* and *response,* human factors considerations are essential in the engineering and implementation of safety systems. As *response* signifies the "last resort" stage of defence-in-depth in terms of systems failures that result in unintentional radiation exposure, this is especially true for the design and operational use of E-stops.

Emergency Stop Device Considerations in a Class II Facility

The Regulations allow for the use of devices other than buttons for emergency stop purposes, provided there are a minimum number at specified locations, and that they are unobstructed and accessible at all times. There are, however, a number of internationally recognized standards such as IEC60947-5-5 and CSA Z432-04 that govern the design of emergency stops in machines and which should be taken into consideration when choosing a device.

According to these standards, an individual must be able to initiate an emergency stop function by a single action using a manually actuated control device. The E-stop must be self-latching in that it remains in the actuated position until reset. It should not be possible to latch in the actuator without generating an emergency stop signal. Resetting the electrical system should only be done by first releasing the E-stop from its activated position through a deliberate action. This reset should not allow the equipment to restart, but only permit it to be restarted by other controls. Generally, the mechanical and electrical requirements, as well as the robustness and durability testing of E-stops are much more rigorous than for non-safety critical switches.

Failure analysis in its earlier days often focused on the equipment alone. In complex systems where human factors may contribute significantly to adverse events, human factors in design methodologies are needed to minimize the risks associated with human error. When designing any safety-critical device, the user interface should convey the means of correct operation through its look and feel so that safe and effective use is intuitive. This is especially important because users are often less able to react appropriately in stressful urgent situations that occur infrequently.

If the user interface is not intuitive, users will need to rely on procedures, labeling, and training to ensure the appropriate response. Opening a back modulator room door to initiate an emergency stop falls into the category of 'unintuitive', because the usual function of a door is not that of an E-stop. An important characteristic of a user population to consider is the expectation that a device will operate consistent with previous experience. Most radiotherapy and medical physics staff have considerable experience with push button types of E-stops, and little to none regarding opening a door for the same function, so written procedures and training are especially important. Appropriate signage on the door is needed to indicate its function as an E-stop, and must be readable in low light conditions and not easily removed. Lastly, daily quality assurance checks must ensure that these doors remain unobstructed and readily accessible.

The Bottom Line

ACFD has decided that if, during the course of one of our inspections of a Class II facility, it is found that there are no accessible and unobstructed E-stops in either rear quadrant of the treatment room, the licensee will *not* be cited for a non-compliance with Section 15(9) of the Class II Regulations <u>if and only if:</u>

a) the room was constructed or renovated prior to February 28, 2011, and

b) the licensee has demonstrated an equivalent level of safety through the use of an effective modulator room door interlock system <u>including:</u>

   i. equipping the doors with suitable signage indicating the beam will be interrupted, <u>and</u>

   ii. verifying daily that the doors remain unobstructed, <u>and</u>

   iii. training staff to trigger the door interlock in the event they are trapped in the rear quadrant of the room when the beam is initiated

However, the use of the interlocked modulator room doors as E-stops will not be acceptable for rooms constructed or renovated after this date.

We encourage you to contact your Class II Project Officer should you have any questions or comments regarding this decision.

COMP 2011
Annual General Meeting Minutes

2011 Annual General Meeting – MINUTES

Location: Fairmont Waterfront Hotel, Vancouver, BC
Date: August 3, 2011
Chair: P. McGhee Secretary: I. Gagne

Meeting called to order by P. McGhee at 4:45 pm

1. **Adoption of the Agenda**
   Motion to adopt: J. Schreiner/R. Corns **Carried**

2. **Minutes of 2010 AGM, Ottawa, ON**
   Motion to adopt: I. Gagne/M. Carlone **Carried**

3. **Report of the President** (P. McGhee)

FCOMP Award

- The Awards Committee is working on the criteria and process for this award which should be introduced in 2012

Strategic Planning

- The next planning session will take place in the Fall of 2011

Canadian Partnership for Quality Radiotherapy (CPQR)

- Partnership includes CPAC, CARO, CAMRT and COMP
- CPQR is looking at the development and implemention of a pan-Canadian radiation treatment quality program through a series of coordinated short and long-term initiatives

Safety Code 35

- COMP is working on developing a position statement
- Safety Code 35 is an opportunity to promote imaging physics in Canada
- As we are still in the early days, there is no immediate plan to expand Safety Code 35 into nuclear medicine although it is acknowledged that this is an important consideration
- The COMP Board will be working with Ting Lee, COMP's representative on Healing Arts Radiation Protection (HARP) Commission, to determine the best role for COMP.

Inter-Society Relationships

- COMP is participating in the organization of the Union for International Cancer Control (UICC) World Congress which will be taking place in Montreal from August 27-30, 2012
- COMP, in partnership with the CMBES, will be hosting the World Congress on Medical Physicists and Biomedical Engineering which will be taking place inToronto from August 22-29, 2015
- COMP will be participating in Canada Imaging Day, an intiative to draw attention among other health professionals and the public to the imaging team and the crucial role its members play in the delivery of health services. In addition to COMP, other participating organizations include: the Canadian Association of Medical Radiation Technologists, the Canadian Association of Radiologists, the Canadian Society of Nuclear Medicine, the Canadian Interventional Radiology Association, and The Canadian Society of Diagnostic Medical Sonographers.

4. **CCPM President's Report** (D. Wilkins)

4 new Fellows and 27 new Members were welcomed into the College. Two of the new members are in the nuclear medicine specialty. There are now a total of 237 Members and 151 Fellows of the CCPM.

The CCPM translation initiative has cost approximately $24,000. A bilingualism policy has been adopted and the CCPM is committed to offering the membership exam in French in 2012, written and oral in all sub-specialties. Requests for the fellowship exam in French will be accommodated if possible.

5. **Treasurer's Report** (W. Ziegler)

The 2010 financial statements were presented. The statements were audited by the firm Nephin Winter and found to be in good order. The 2011 statements to June 30, 2011 as well as the draft budget for 2012 were also presented.

Motion to appoint Nephin Winter to audit the 2011 financial statements.
(W. Ziegler/D. Mason) **Carried**

6. **Secretary's Report** (I. Gagne)

There were no by-law change requests this year. There is a new Not-For-Profit Corporations Act which may require by-law changes.

Membership report: At the time of the AGM the membership was as follows:

Category	June 2008	July 2009	June 2010	August 2011	Change 10-09
Full	437	453	466	497	+31
Associate	12	14	19	19	even
Student	94	80	102	93	-9
Retired	9	10	9	14	+5
Emeritus	8	9	9	9	even
Corporate	21	19	20	17	-3
Totals	**581**	**585**	**625**	**649**	**+24**

7. **Communications Committee Report** (T. Popescu)
- The committee is working on a new look for InterACTIONS. The layout is now done by an outside company so that the efforts of the Editor can be focused on content.
- Including a Point/Counterpoint article as a regular feature of InterACTIONS
- As part of fulfilling COMP's mission to be the "voice of Canadian medical physicists" and within the mandate of the Communications committee to facilitate communications between members, we are in the process of developing a strategy regarding the use of social media platforms, similar to those used by AAPM and ESTRO.
- We have assigned tasks within our committee to initiate COMP presence on LinkedIn, Twitter and Facebook
- We will formulate a social media use policy, referring to the use of the COMP logo and branding and emphasizing that the COMP website remains the only official reference for COMP position statements.
- Members are encouraged to provide input and feedback.
- We would like to acknowledge Nancy Barrett and Gisele Kite for maintaining and updating the COMP website.

8. **Professional Affairs Committee Report** (J. Hayward)

The PAC advises the COMP Executive on issues of professional concern to Medical Physicists in Canada including but not limited to:
- Remuneration
- Status
- Working Conditions
- Inter-professional relations
- Standards, and
- Maintenance of professional data and statistics with particular responsibility for conducting the national Professional Survey

The membership of the Committee is as follows:

- Chair:Joseph Hayward
- Chair of COMP *(ex officio)*: Peter McGhee
- Executive Director of COMP *(ex officio)*: Nancy Barrett
- President of the CCPM *(ex officio)*: David Wilkins
- Cupido Daniels, Horacio Patrocinio, Konrad Leszczynski, Daniel Rickey, Craig Beckett, Colin Field, Narayan Kulkarni, William Ansbacher, Alan Cottrell
- Additional members can be added.

The PAC is working on the following initiatives:

- Professional Survey
- Physics Assistants and Associates
- Professional Representation
- Technical Survey
- Ontario Bill 68

9. Quality Assurance and Radiation Safety Committee Report (J.P. Bissonnette)

Current initiatives:

- Revision and drafting of quality control documents
- The draft cycle is completed for QC for CT-based IGRT technologies (Toronto) and LDR seed implants (Québec; pending review)
- There is a firm commitment for new QC docs: Conventional linacs (Lethbridge, Ottawa), Treatment planning systems (Calgary) and Physics plan review (Mississauga)
- Identified the following QC docs to be drafted: Major dosimetry equipment, HDR afterloaders, CT-simulators, Conventional simulators and Orthovoltage
- Participation in CNSC public hearing process

10. Science and Education Committee (M. Carlone)

<u>CAMPEP</u>

- Canadian sponsoring organisation for CAMPEP was changed from CCPM to COMP in 2010
- Canadian contribution to CAMPEP
- 2 seats on the CAMPEP board (Wayne Beckham & Gino Fallone)
- Graduate Education Program Review Committee (Brenda Clark & James Robar)
- Residency Education Program Review Committee (Peter Dunscombe & Wayne Beckham)
- Principle issues facing CAMPEP is from the increased interest in programs due to ABR & CCPM requirements
- ABR 2012: applicants must come from a CAMPEP accredited graduate or residency program.
- ABR 2014: applicants must come from a CAMPEP accredited residency program.
- CCPM 2016: applicants must come from a CAMPEP accredited graduate or residency program.

<u>Student Council</u>

- Chaired by Nadia Octave & Alejandra Rangel Baltazar.
- Meets every year at the ASM.
- This year the SC met jointly with the AAPM student council
- Working on a proposal for an exchange among senior PhD Students.

<u>Winter School</u>

- 2011 Winter School was held at Mt. Tremblant.
  - o Well attended (~85 people)
  - o Multi Disciplinary representation (Physics, Rad Oncs, Rad Therapy, Admin & Industry)
  - o Profitable
- 2012 Winter School will be in Whistler
  - o Chaired by Stephen Breen
  - o Format Change (more interactive sessions, less lectures)
  - o Watch for call for abstracts

COMP ASM

- Formerly, the COMP conference committee reported directly to COMP Board.
- Conference committee will now be a sub-committee of the SEC.
  - o TOR are being adjusted
- We are looking at adjusting the meeting to increase CE content.
  - o We are just finalising a survey that we will send to the COMP membership in the next few weeks.
- We are hoping to start increasing the CE content of the ASM in 2012, and ramp up over several years.

11. Nominations Committee (J. Schella)

This year there were 2 board positions to fill: Treasurer (three year term beginning January 2012 and Councillor for Professional Affairs (four year term beginning in August 2011).

Crystal Angers MCCPM a medical physicist at the Ottawa Hospital will be filling the position of Treasurer and Craig Beckett, FCCPM, Site Manager Medical Physics of the Allan Blair Cancer Centre in Regina will be filling the position of Councillor for Professional Affairs.

12. Executive Director's Report (N. Barrett)

N. Barrett thanked the COMP Board and the committee volunteers for their support and encouraged members who might be interested in volunteering to contact the COMP office. N. Barrett also thanked Conrad Yuen for his work organizing the banquet cruise and Gisele Kite for all of her work on behalf of COMP and CCPM.

13. Future Conferences (P. McGhee)

2012:
Jan 29 – Feb 2: Winter School, Whistler
Aug 27 – 30: UICC World Congress, Montreal
July 11 – 14: COMP Annual Scientific Meeting
2013: Joint with CARO in Montreal
2014: Looking for proposals
2015: Toronto - World Congress with CMBES

14. Other Business

Outgoing Board members Joe Hayward and Bill Ziegler were presented with plaques in recognition of their service to COMP.

Joe Hayward

- served as Councillor of Communications and Chair of the PAC for 4 years
- two professional surveys
- moved forward the process for comparison/evidence of competency for medical physicists trained outside of Canada
- solidified COMP's support for Physics Assistants
- finalized an updated scope of practice
- expanded the committee membership to include all regions across Canada to ensure that the committee stays abreast of provincial issues
- represented COMP on the Ontario Bill 68 issue

Bill Ziegler

- served as Treasurer for 3 years – an often thankless job!
- was an excellent steward of COMP resources
- introduced clearer processes for both setting and monitoring the annual budget

Gisele Kite and Nancy Barrett were each presented with a gift from both COMP and CCPM members in recognition of their work on behalf of both organizations.

15. Adjournment

Motion: That the 2011 AGM be adjourned.
(J.P. Bissonnette) **Carried**

Canadian Medical Physics Staffing for Radiation Treatment

Brenda G. Clark

Radiation Medicine Program
The Ottawa Hospital Cancer Centre
Ottawa

Jerry J. Battista

London Regional Cancer Program
London

Introduction: The January 2010 articles in the New York Times have generated intense focus on patient safety in radiation treatment, with physics staffing identified frequently as a critical factor for consistent quality assurance. In Ontario, we have recently updated an algorithm to guide the determination of minimum staffing recommendations. To test that this algorithm provides realistic calculations of the staffing required, we invited input from 37 radiation treatment centres across Canada and received 32 responses (86%). This article will first describe the existing staffing situation in Canada with data from our survey and then compare the results of applying our algorithm to the existing staffing.

Existing Radiotherapy Physics Staffing in Canada

The survey was sent across Canada in November 2010 so that the data is assumed correct for 2010. During 2010, very few medical physics positions were vacant so the assumption is that the staffing reported is equal to the number of positions funded.

Table 1: ***Categories Considered by the Ontario Algorithm***

Clinical Procedures and Services
- All radiation beam/source therapy(external beam therapy and brachytherapy) (cases/yr)
- Complexity bonus increment for inverse IMRT (including tomotherapy), clinical trial protocols, gated beams, 4D plans, multi-modality image fusion (cases/yr)
- External beam special procedure bonus (TBI, SRS, SBRT) (cases/yr)
- Brachytherapy - LDR or HDR (fractions/yr)
- Brachytherapy - interstitial seed implants (cases/yr)

Radiotherapy Equipment Support
- Accelerators (all linacs, including tomotherapy and robotic linacs)
- Major ancillary RT equipment: TPS (1/vendor/10 licenses), HDR, PET-CT, MR-Sim, 4DCTsim,
- Minor ancillary RT equipment: X-ray Sim, CT-Sim, LDR unit, Cobalt unit, Gamma Knife, orthovoltage unit, ultrasound unit, gating/motion monitoring device

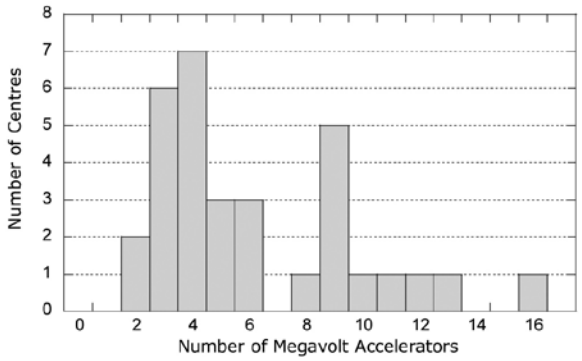
Training and Education of Specialists
- Clinical Physics Residents
- Medical Physics Graduate Students
- Radiation Oncology Residents
- Radiation Therapy Students

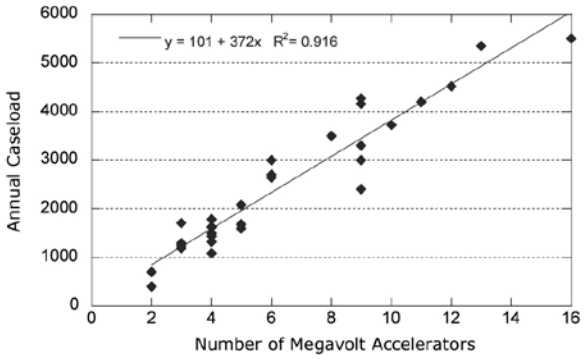
Administration & Other Duties
- Administrative workload per staff category (Human Resources)
- Administration (by Chief, Radiation Safety Officer)
- Clinical development, conference attendance, courses, site visits
- Time away for paid holidays and vacation (FTE per employee)

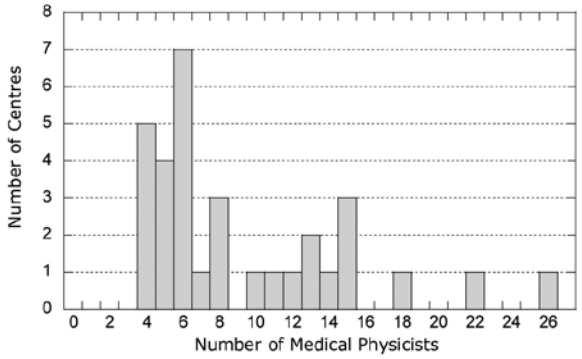
The respondents were asked to provide numbers according to the categories listed in Table 1, as well as current staffing numbers.

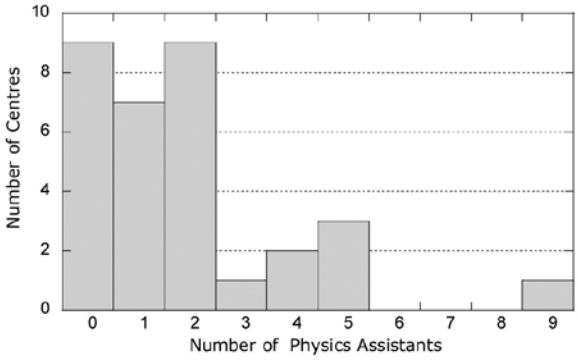
Thirty two centres responded to the survey corresponding to 76,927 annual treated cases, 22.3% of which were classified as complex (IMRT, etc.), 2.9% were classified as special procedures (TBI, SRS, SBRT, etc.) and 14.5% were brachytherapy treatments.

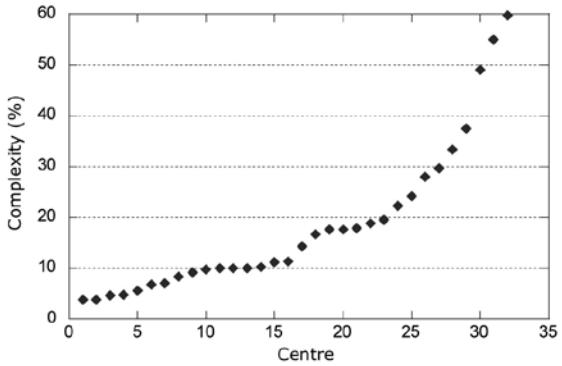
These patients were treated on 198 megavolt accelerators with support from a total of 301.4 medical physicists. Many of these physicists participated in supporting the training of a total of 639 "students", listed as 153 medical physics graduate students, 45 medical physics residents, 158 radiation oncology residents and 284 radiation therapy students. The plots below describe a snapshot of the staffing in Canada for 2010 from these 32 centres.

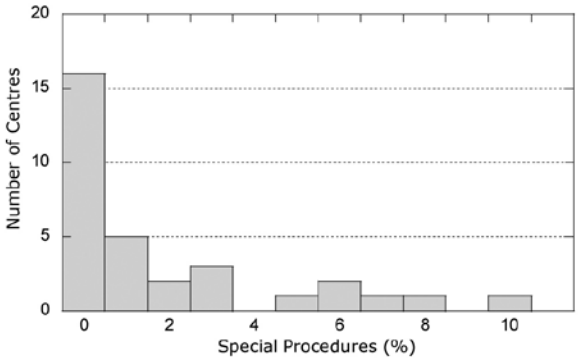


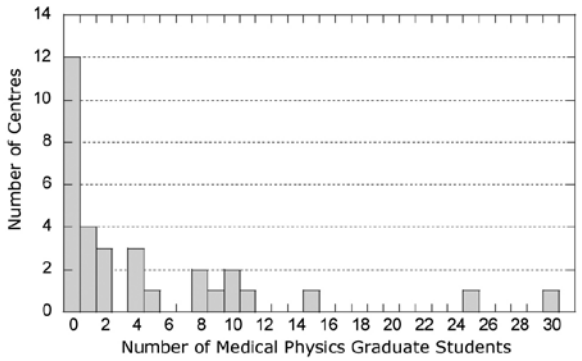


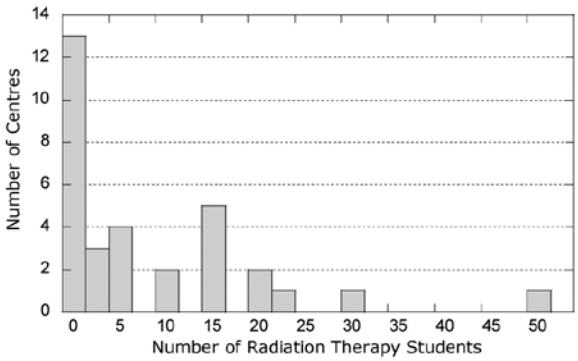


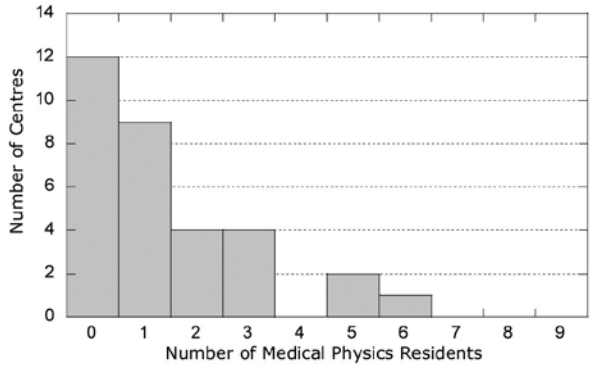


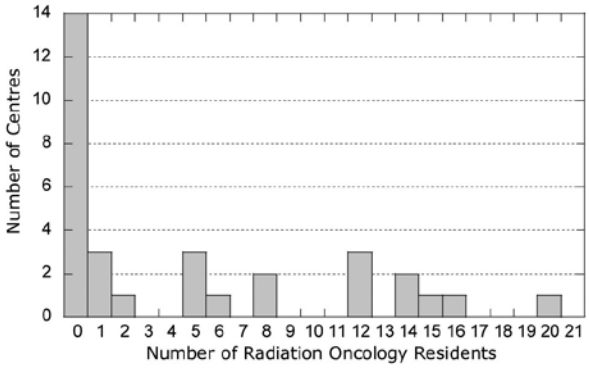






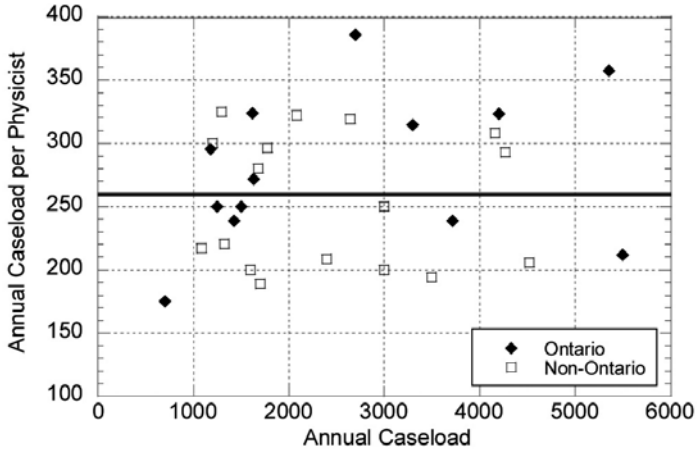




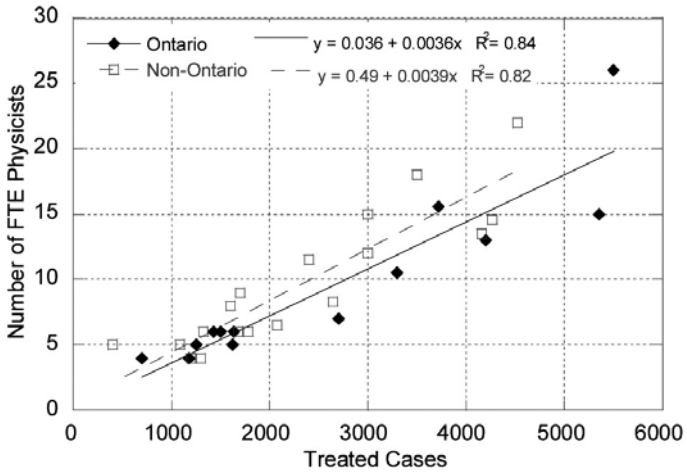


Of particular note in these plots is the relatively low adoption rate of IMRT, with half of the centres reporting 10% or less IMRT workload while three centres reported rates between 50% and 60%. Also, the relatively wide range of annual caseload reported by the centres with either 4 or 9 accelerators is most likely due to the variation in definition of a "treated case". Although the survey specified annual treated cases, the precise counting of cases varies somewhat across Canada, particularly with respect to the inclusion of retreats and skin cancer treatments.

For the last 10 years or more, it has been generally accepted that the annual caseload, i.e., total number of patients treated by radiation in a given fiscal year, is a suitable first-order parameter to determine physicist staffing. According to our responses, the mean Canadian value of treated cases per physicist in 2010 was 260, with values ranging from 80 to 386. The plots below illustrate that the caseload per year per physicist is independent of the annual caseload and that the total number of physicists on staff is only weakly correlated with annual caseload (R2 = ~0.83).

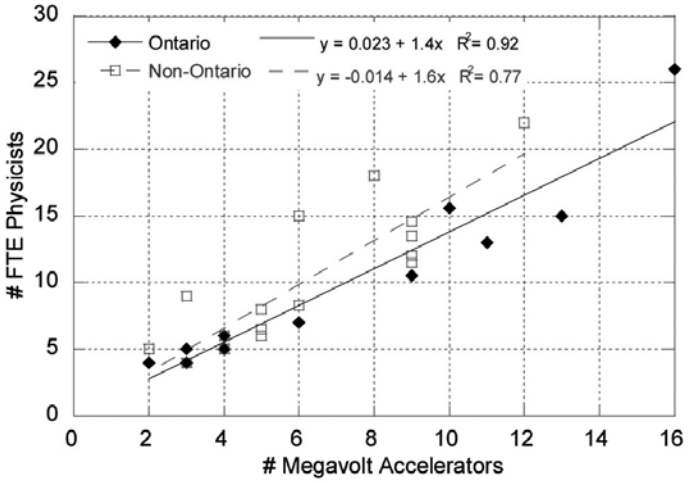


Variation of caseload per year per physicist with magnitude of annual caseload

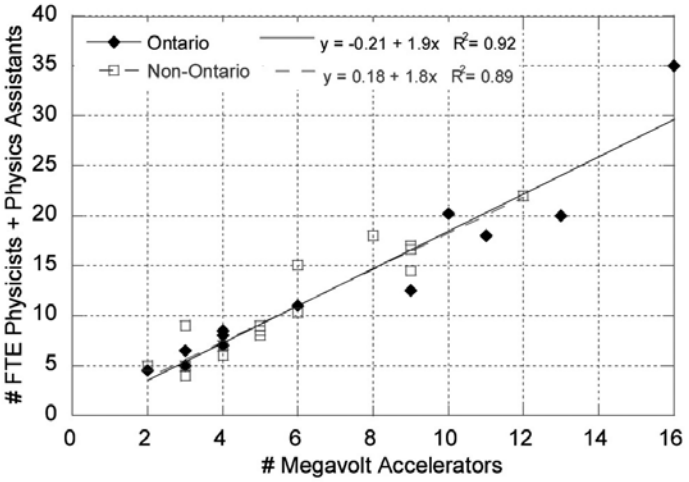


Number of Physicists as a function of annual caseload

The difficulties inherent in using annual caseload as the sole parameter to determine local physics staffing in a cancer centre include variation in definition of "treated case", lack of consideration of treatment complexity, equipment inventory and hours of clinical operation. Equipment may be considered an alternative driving force, although this also tracks with caseload - the ill-defined parameter. Our results indicate the average number of full-time-equivalent (FTE) physicists per megavolt accelerator in Canada is 1.52 with value of 1.50 for Ontario and 2.1 for the rest of Canada. Another confounding factor in this analysis is the employment in many centres (23 of those responding) of physics assistants (or technologists or associates). If these data are plotted using the sum of the number of physicists plus physics assistants, the regression lines superimpose nicely, indicating a common rate of approximately 2 physicists and assistants per accelerator (R2 = ~0.9).



Number of physicists as a function of number of accelerators



Total of physicists plus physics assistants as a function of number of accelerators

The Ontario Physics Staffing Algorithm

The weights assigned by the algorithm to the clinical services, equipment inventory and educational activities (Table 1) were based on published data, modified by local experience and first "beta-tested" in the 12 established Ontario cancer centres to give an estimate of centre-specific physics staffing. (Data from the three additional centres either under construction or commissioning were not included in this study.) The results of calculated staffing levels for different staff categories averaged from the 32 Canadian centres are given below.

The algorithm calculates a requirement of an average of 260 cases per year per physicist with a range from 163 cases per year, for a large academic centre with a high IMRT workload (30%) and large number of trainees, to a maximum of 418 cases

Table 2: ***Average Algorithm Calculations for 32 Canadian Centres (Annual caseload/FTE)***

	Physicist	Physics Assistant	Planner	Engineering		IT Support
				Electronics	Mechanical	
Average (Canada)	263.3	692.7	317.7	626.1	1269.5	2508.0
Standard Deviation	55.0	110.4	52.9	142.1	219.9	776.0
Minimum	163	421	199	277	679	1427
Maximum	418	877	409	915	1665	4812
Average (Ontario)	254.7	694.9	300.1	601.3	1252.0	2143.8
Ontario SD	29.1	72.2	50.5	117.9	163.0	596.0
Minimum	202	582	199	419	994	1452
Maximum	316	818	365	803	1554	3292
Recommended	**260**	**700**	**300**	**600**	**1200**	**2000**

per year for a small centre with 6% IMRT workload and no students. This average is almost identical to the current actual value but the distribution differs. The plots below show the differences between the calculated and actual and the desired and actual number of FTE physicists, where the centres are ordered according to increasing (algorithm calculated) physicist staffing numbers. In general, the staffing algorithm performs consistently with the current staffing situation, with 30/32 (94%) of calculations being within ±3 FTE of the current physicist staffing and 23/32 (72%) within ±2 FTE. Several of the smaller centres appear to be staffed more generously than our algorithm calculates, most likely due to baseline requirements and FTE rounding (difficult to recruit partial FTE physicists). Two of the larger centres, designated by numbers 29 and 31, appear to be severely under-staffed for the declared complexity of cases and heavy teaching workload.

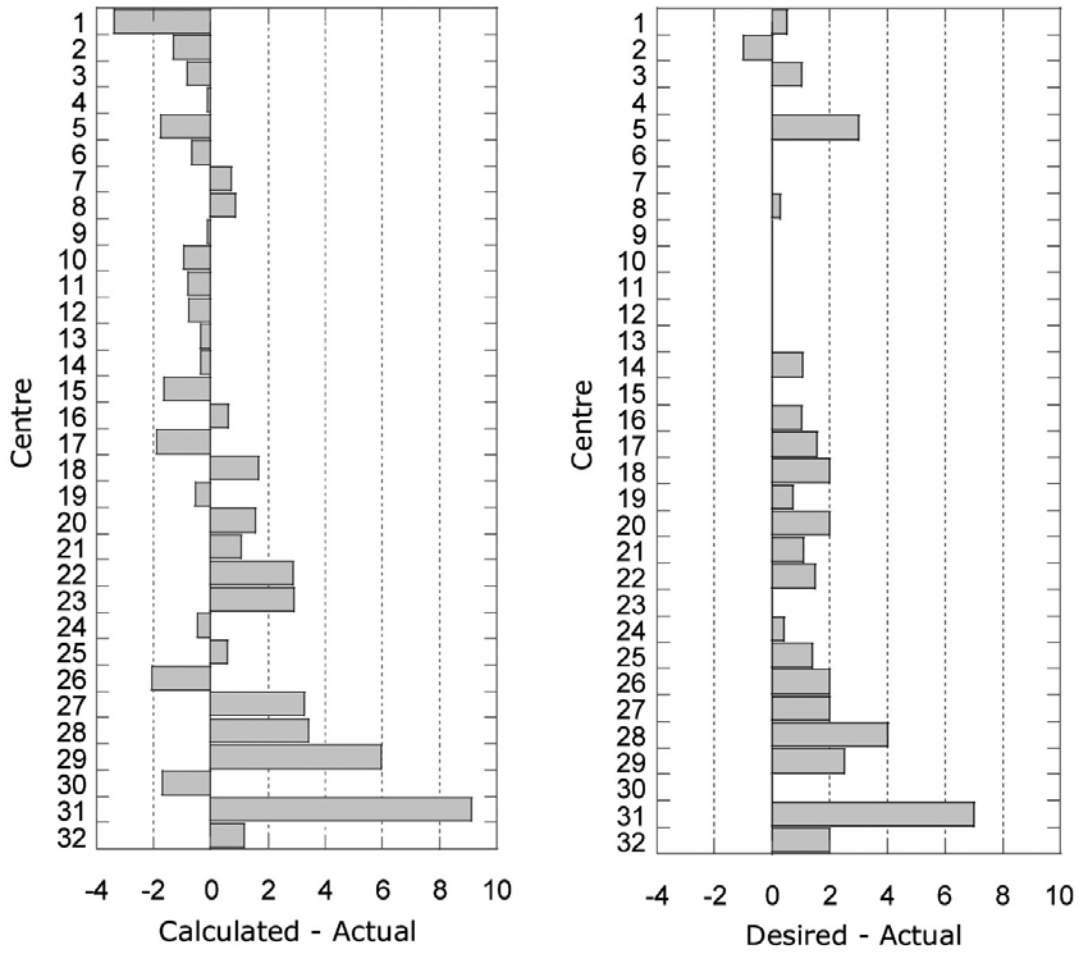
Only one centre admitted to having more physicists than "desired", 11 of the 32 centres didn't feel the need for additional physicists and the remaining 20 centres expressed a need for a few additional staff

Summary

We have developed an algorithm to estimate physics staffing according to specific workload parameters which may be used on a centre by centre basis and adapted for local conditions. The average figure of 260 treated cases per year per physicist may be used for workforce planning on a large scale (e.g. provincially). However for local centre workload planning the detailed algorithm should be used. Numbers for associated professionals are estimated using a spreadsheet which is available from the authors on request.

Acknowledgements:

Michael S. Patterson, Luc Beaulieu, Michael B. Sharpe, L. John Schreiner, Miller S. MacPherson, Jacob Van Dyk provided valuable feedback and testing during the Ontario phase of this project. We also thank all the individuals who responded to our survey.



Plots showing the differences between the actual staffing and the calculated and "desired" number of FTE physicists in 32 Canadian centres, ordered according to increasing number of physicists calculated by the algorithm from the workload parameters submitted.

Are you an experienced Medical Physicist seeking a change of lifestyle?
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Our ideal candidate will have:

- MSc qualification
- At least two years clinical post grad experience
- A background in a radiation oncology environment
- Registration with one of the following bodies is essential: CCPM, ABR, HPC, ACPSEM

If you meet these criteria, we would welcome the opportunity to speak with you.

New Zealand offers a relaxed way of life many can only dream of. Whether you are interested in outdoor pursuits such as hiking or skiing, or prefer more sedate pastimes such as wine tasting or watching rugby or cricket, New Zealand has something for everyone. How would you like to live in a coastal city with all the amenities you need but without the traffic jams and the usual hassle of city life? Quite simply, New Zealand is a beautiful country to discover and a convenient base to explore neighbouring pacific islands and Australia.

Global Health Source is an established allied health recruitment consultancy actively sourcing experienced physicists for our public and private clients throughout Australia and New Zealand. GHS is committed to providing a quality professional service including:

- Accurate and current registration guidance
- Practical relocation assistance
- In house migration advisers

Our immigration advisers will work with you every step of the way and help you choose the right visa for your age and family circumstances.

"Although exciting, the mammoth task of emigrating would have been so daunting without the continued and unwavering support of GHS. No question was too trivial and their obvious empathy for the enormity of moving to a new country was always apparent with their consistent attention to detail, constant communication and an unrelenting drive to ensure that we achieved what was right for us." *Sandra, Medical Imaging Professional*

What are you waiting for?!
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COMP Gold Medal awarded to Jake Van Dyk

J. Battista, PhD., FCCPM, FAAPM

At the recent joint meeting of COMP and AAPM in Vancouver, Jake Van Dyk was honoured with the COMP Gold Medal, recognizing his major national and international contributions to medical physics in research, education, and administration.

Jake obtained his undergraduate degree from McMaster University and his M.Sc. degree at the University of Western Ontario in 1971, working under the supervision of Dr. J.C.F. MacDonald (Gold Medal winner of 2007). He then joined the Clinical Physics group at Princess Margaret Hospital as a valuable member of the Johns & Cunningham "power house" in medical physics (photo on the left). He was subsequently elected President of the CCPM (1991-1995) and then relocated to the London Regional Cancer Centre to become the Head of Clinical Physics. In 1999, Jake became full Professor at the University of Western Ontario, a rank rarely attained by M.Sc. faculty. He will become Professor Emeritus at Western on October 27th, 2011 – ironically coinciding with the 60th Anniversary of the world's first Cobalt cancer treatment in London, Ontario. During his time in London, he worked closely with Dr. Tomas Kron (now in Melbourne, Australia) to ensure that tomotherapy would "go clinical". Jake has been an excellent teacher and mentor for a very diverse group of students and residents, winning awards of excellence at both the University of Toronto and Western. He has produced the first two volumes of the book *The Modern Technology of Radiation Oncology*; a third volume is in preparation. This set sits on bookshelves around the world and has become the "Quick Start" reference material for newcomers to the field. Jake has served on numerous committees and task forces of CCPM, COMP, and AAPM and he capably represented Canadian medical physics internationally at the IOMP. In recent years, he has served as Senior Consultant to the IAEA, living in Vienna and reaching out to assist developing nations with nascent medical physics facilities. Jake has authored over 150 peer-reviewed publications and presented over 180 invited lectures in 26 countries on all the major continents. In 2003, he published 16 articles (in that year alone!) and his collective works have been cited extensively. He is best known for radiobiology research on radiation–induced lung toxicity with clinically-relevant applications, quality assurance (QA) and uncertainty analysis of modern radiotherapy. Jake holds several patents for the design of QA phantoms distributed worldwide by Modus Medical Devices. Personally, I have had the

Jerry Battista and Jacob (Jake) Van Dyk

Photo courtesy of Rob Barnett.

Gold Medal Award Recipients present at COMP Awards Ceremony, Vancouver. Jake Van Dyk (2011) J.R. (Jack) Cunningham (2006), Ervin B. Podgorsak (2008) and Aaron Fenster (2010)

continued on page 114

Message from the Councillor for Science and Education

Improving the continuing education that is offered by COMP was one of the goals of COMP's 2007 strategic planning process, To this end, COMP formed the Science & Education Committee, which began operating informally in the summer of 2008. Forming a COMP committee required a change to our bylaws, which were passed at COMP's AGM in 2009. The committee's original three goals were to:

1. Begin a COMP Winter School.
2. Start a Student Council
3. Increase the amount of continuing education that is offered at our ASM.

The COMP Winter School is intended to be a world class continuing education opportunity available to COMP members. The idea was to offer something complementary to other continuing education courses, such as the AAPM summer school, and not to compete with them. It was felt that winter time would distinguish the school as a uniquely Canadian activity.

The strategy that we decided for the Winter School was to offer a theme over several years, as opposed to one-time subjects. This makes the administration of the event a little simpler, and also allows the popularity of the event to build over several years and to develop into a world-class event. The subject of the first series of Winter Schools "Quality and Safety in Radiation Oncology," is more professional than scientific, and thus appeals to members that have a large clinical component to their responsibilities. It is also a subject that is multi-disciplinary in nature, and opens the field of potential attendees outside of COMP. At the last Winter School at Mont Tremblant, Québec, COMP members made up about 30% of the attendees, with the rest of the attendees being radiation oncologists, therapists, administrators, government regulators and industry representatives.

The next Winter School will be held in Whistler, B.C. January 29 to February 2, 2012, and will be significantly different in structure than the first two. We anticipate more group learning sessions, workshops and interactive sessions. There will also be a call for abstracts so that attendees can learn from each other, as well as from a top-notch faculty.

The COMP Student Council has been active since the inception of the SEC. The committee has been chaired jointly by Nadia Octave, of Université Laval, and Alejandra Rangel from the University of Calgary. They have organised student council meetings at the COMP ASM for the past three years, where issues that are important to students were discussed. At the ASM in Ottawa, representatives from COMP, the CCPM and CAMPEP were invited to discuss the different roles of these organisations, and the types of paths to certification that were available to people entering the profession. More recently, the student council has put together a proposal for a student exchange where senior Ph.D. students could be involved in an "exchange," between different labs. The benefit to the students would be that they can get exposure to a different environment and learn new techniques, and the benefit to their supervisor is that two labs with a good collaboration could potentially improve this collaboration. COMP's role would be mainly as a "match maker," leaving most of the details up to the students, their supervisors and the Universities. COMP would also help this by supporting travel costs. The final details have not yet been formalised, however we are hopeful that this concept will move forward quickly.

The next item the SEC will tackle is to improve the value that our Annual

Marco Carlone

Scientific Meeting (ASM) offers COMP members. In its current format, our ASM offers some continuing Education (through the CCPM symposium), scientific talks, student talks, and poster sessions. To meet our members' needs, we are looking at ways to deliver content that remains relevant to our profession and practice. To this end, we would like to introduce more continuing education sessions on a variety of clinical and professional topics. The format of our ASM has not changed much recently (for at least as long as I have been a COMP member), and so we would like to evolve this carefully and prudently, to make sure we improve it, and not go backwards. The SEC has developed a survey that was sent out in late August. I hope that you have had a chance to respond to this survey to help us better understand how to make the ASM more valuable to all COMP members.

The last issue I wanted to report on was that of CAMPEP sponsorship. The

continued on page 110

2011 COMP Gold Medal Acceptance Speech

Excerpt from Gold Medal acceptance speech by J. Van Dyk at the COMP Annual Meeting in Vancouver, 3 August 2011.

Dr. McGhee, Chairman of COMP; Members of the COMP Gold Medal Committee;Family, Colleagues and Friends:

It is indeed a tremendous honour and privilege to be the recipient of this award. I would like to begin by thanking Jerry Battista for that very kind and nicely worded introduction. In addition, I would like to thank others who have nominated me and were the instigators for this to happen, as well as the members of the Awards Committee for bestowing this honour on me.

What I would like to do in the acknowledgment of this award is to briefly describe some of the individuals who have had a significant influence on various activities during the course of my career. I will outline briefly some historical vignettes including people of influence followed by some brief words on my perspective on future activities and needs in Medical Physics.

This award has been granted for the last 6 years. In the first year, 2006, the award was granted in Saskatoon to 3 recipients: Doug Cormack, Jack Cunningham and Sylvia Fedoruk, all of whom had been graduate students of Harold Johns in Saskatoon at the University of Saskatchewan during the late 1940s and early 1950s. In 2007, John MacDonald received the award and I had the privilege of nominating and introducing him. This was followed by Ervin Podgorsak in 2008, Margaret Young in 2009 and Aaron Fenster in 2010. I have had the good fortune of having had direct working and collegial relationships with 4 of the 8 awardees: Jack Cunningham, John MacDonald, Ervin Podgorsak and Aaron Fenster. It is truly an honour to be considered in this category with these great names in Medical Physics.

My career as a working Medical Physicist started in 1971, exactly 40 years ago. Things were different then. As Jerry indicated, I received my Masters in Radiation Physics under John MacDonald. After that I was fortunate to receive 2 months of clinical training before being "let loose" in the clinic.

My first job was at the Princess Margaret Hospital/Ontario Cancer Institute. The letter of offer was sent by Harold Johns. To quote from the letter, "Perhaps I should tell you a little bit about the philosophy of the Physics Division of the Ontario Cancer Institute. None of the people in our Division is on a fixed salary schedule, and all promotions depend on the individual's performance. Your major responsibility will be in the clinical area, but we hope that you will tackle this area in such a way that something new would periodically come out of it. Your initial salary will be $8,500 per annum, …". How times have changed!

In 1980, I was amongst the first batch of six candidates to sit the CCPM Fellowship exams. This examination was especially traumatic for me since I was being examined by my bosses, Harold Johns and Jack Cunningham. I felt that my career was on the line since they would discover all the things that I did not know. I remember the date of the written exams clearly, 29 March 1980, since my wife, Christine went into labour during that evening and our youngest daughter, Amy, was born early the next morning. At this point I need to acknowledge and thank Christine and my four children, Tonia, Jon, Ben and Amy, since they unwittingly sacrificed family time due to my professional commitments while they knowingly shared their love and support.

Jacob (Jake) Van Dyk, MSc, FCCPM, FAAPM

One vignette from my career, and the people in it, relates to research activities that involved going from "bedside" to "bench" and back to "bedside". This relates to the implementation of CT scanning for therapy planning (1979…), to lung density measurements (1982-1988), to analysis of radiation pneumonitis dose-response data (1981…), to laboratory isoeffect analysis (1988-1994), and back to clinical application of the resulting data. Individuals involved in that research included Kathy Mah who was the key person in the clinical study in which dose-response data were generated using CT measurements as an endpoint. Chris Newcomb performed the ~600 rat experiment in which isoeffect formulae were analyzed. Dick Hill continued with the laboratory experiments adding a more biological/mechanistic emphasis on this research. In the early 2000s Vitali Moiseenko was involved in a more theoretical analysis of "out-of-field" lung

irradiation effects that were discovered in the animal experiments. He also generated clinical dose-response data in a review of thymoma patients who developed radiation pneumonitis. The original half-body irradiation pneumonitis data from 1981 are still considered reference data as indicated in the recent QUANTEC (QUantitative Analysis of Normal Tissue Effects in the Clinic) review published in the International Journal of Radiation Oncology Biology and Physics in 2010.

There has been significant discussion at this conference (e.g., AAPM President's Symposium) as to what medical physicists do … or what they should do. Traditionally we have considered our work as comprising clinical service, teaching and research. In the hospital context, where only clinical service is funded, we probably should label "research" as "clinical development" since it is clear that the rapid evolution of technology requires this kind of developmental work (research) to advance our clinical capabilities to better serve our patients. However, there are two other components of medical physics activities that are often understated. The first is "administration" which in these times of increased regulatory requirements is requiring increased time and effort. The second I will call "other". Included in this "other" category are services that we perform in the context of involvement with professional organizations, certifying bodies and national and international agencies which often develop reports, protocols and guidelines related to activities within our field. Some of us have also been involved as consultants to cancer agencies often making recommendations on new technologies and future directions. This "other" category is often not recognized as being part of our role and yet it is a role that has a strong impact on the direction in which our field and profession moves.

During the last two years, I have had the privilege of working as a consultant at the International Atomic Energy Agency (IAEA) in Vienna. Much of my work involved providing resources for enhancing radiation therapy capabilities in low-to-middle income countries, be it in the form training programs or purchase and implementation of new or improved radiation treatment technologies. While at the IAEA, some disturbing statistics were made evident. For example: (1) Cancer kills more people each year than HIV/AIDS, malaria and tuberculosis combined; (2) By 2020, cancer is expected to kill more than 10 million people a year, worldwide; (3) More than 75% of new cancer cases and cancer deaths will be in the low-to-middle income countries, with the increases in these countries being very significantly higher than those in the high income countries; (4) Radiation therapy is largely unavailable in many low-to-middle income countries. So the question is, "What can we do?" A thought, which is at a very early stage of formation, has occurred to me (… and it adds to the "other" category of our vocation). I propose that we develop an organization known as *"Medical Physicists Without Borders"*. This organization would provide support (in the form of collaboration and development, e.g., training, helping with room design, purchasing, commissioning, QA/QC, etc.) to clinics, hospitals, organizations or countries with fewer resources than our own, which could make use of our expertise in enhancing their capabilities. There is a French organization known as *"Physicien Médical Sans Frontières"* that has existed since 1998. However, this organization is not known in the English speaking world. I have contacted the president of *Physicien Médical Sans Frontières,* Daniel Taisant, and raised the idea with him, acknowledging that *Medical Physicists Without Borders* would be a sister organization and that a close communications link between the two organizations should be maintained. Daniel's response, "I think the idea is exciting, would it be possible for you to come and present it to the next General Assembly, October 5 in Paris?" Anyone interested in participating in this effort can contact me at vandyk@uwo.ca.

I would like to make some comments about people of influence in my career. One measure of significance of interactions with colleagues and students is to look at the number of times specific names appear in my CV. The top 11 names are Jerry Battista (175), Glenn Bauman (81), Slav Yartsev (72), Eugene Wong (56), Tomas Kron (48), Dick Hill (47), Tim Craig (35), Jeff Chen (27), Tom Keane (27), Kathy Mah (26), and Vitali Moiseenko (24). In addition there are well over another 150 people who have been an influence on my career. These people are from a range of professions including Medical Physicists, Radiation Oncologists, Research Associates/Post-Doctoral Fellows, Radiobiologists/Basic Scientists, Graduate Students, Dosimetrists/Medical Radiation Technologists, Hematologists, Scientific Programmers, Biostatisticians, Radiation Oncology/Medical Physics Residents, Electronics Technologists/ Machinists, and Co-op/Undergraduate Students. It is these interactions with many individuals of different professional backgrounds that have made Medical Physics so interesting for me. In this context I would like to single out two individuals. First, Jack Cunningham who by example demonstrated that Medical Physics is much more than just a career. Last, and most important, I would like to acknowledge the influence of Jerry Battista on me and my career. Jerry encouraged me to go to London, Ontario. I accepted that offer in 1995. The following words are just a few descriptors of Jerry: "Collaborator", "Mentor", "Sounding board", "On the same wavelength", "Stepped in … when I fell short", "Always positive", "Always supportive", "True colleague". In addition to that, Jerry provided the musical leadership for the annual staff Christmas parties held at our home. Thank you, Jerry!

It is only with the support, encouragement and wisdom of all those with whom I have worked that I am able to stand here today. Thank you all!

Physics Associates - Not Just the Hired Help

Results of the 2010 COMP Survey of Physics Associates in Canada

Silvia Neuteboom, B. Sc
Physics Technologist
The Ottawa Hospital Cancer Center

In June 2010, for the first time, COMP conducted a survey of physics associates (aka physics technologists, assistants, and/or technicians) across Canada. The purpose was to obtain baseline information about the professional experience and status of these members of the medical physics community. PAs play an essential role in quality assurance, radiation safety, and other areas, especially in larger treatment centers where the demands on physics resources are intensive. As such, it is in the interests of COMP to have an understanding of the professional make-up of this group, and of the work challenges PAs face. Results were indicative of a workforce that is seasoned, educated, and interested in advancement – not just the 'hired help', so to speak.

The survey was conducted online using Survey Monkey.com. Out of a possible 55 respondents, 29 replied, for an over all response rate of 52.7%.

Question 1.1 Age: Results have been tabulated into age ranges.

20 – 29 years of age:	6	20.7%
30 – 39 years of age:	13	44.8%
40 – 49 years of age:	8	27.6%
50 – 59 years of age:	2	0.07%

Question 2.2 Gender:

Male	16	55.2%
Female	13	44.8%

Question 3.3 Where do you live?

BC	4	13.8%
Manitoba	2	6.9%
Ontario	21	72.4%
Quebec	1	3.4%
Nova Scotia	1	3.4%

The number of respondents for all other provinces and territories was 0.

Question 4.4 Please indicate the highest level of education obtained.

Bachelor's degree	17	58.6%
Master's degree	10	34.5%
Doctorate	0	0%
Other	2	6.9%

The two respondents categorizing their response as 'other' listed their education as a diploma, without giving further detail.

Question 5.5: How many years of experience do you have in your field?

Less than 5 years	6	20.7%
5 - 10 years	13	44.8%
11 - 15 years	5	17.2%
16 - 20 years	3	10.3%
20+ years	2	6.9%

Question 6.6: What is your primary function within your workplace?

Clinical Service	20	69.0%
Radiation Safety	2	6.9%
Other	7	24.1%

Question 7.7: What was your gross income from your primary source of employment in 2009?

28 replies, 1 respondent did not answer. Two respondents gave non-defined answers. Results have been tabulated into salary ranges. Only ranges with responses are shown.

$40,000 – 49,999	1	3.6%
$60,000 – 69,999	14	50.0%
$70,000 – 79,999	6	21.4%
$80,000 – 89,999	4	14.3%
$90,000 – 99,999	1	3.6%

Question 8.8: How many hours do you work in a normal work week?

28 replies, 1 respondent did not answer. One respondent noted that their position was part time.

35 or less	1	3.6%
36-40	23	82.1%
41-50	4	14.3%

No respondents indicated working more than 50 hours a week.

Question 9.9: How is overtime paid?

Time in lieu	23	82.1%
Financial compensation	12	42.9%
Other	5	17.9%

Respondents in the 'other' category were asked to indicate via comment what constituted 'other'. Two respondents overtime compensation at their workplace was the employee's choice of paid out or time in lieu, one indicated that they don't claim overtime, and one remarked that overtime is not fully compensated at their workplace. The fact that the number of responses is for this question is higher than the total number of respondents would seem to indicate that for many PAs, overtime is compensated in a choice of ways.

Question 10.10: Are you expected to be on call for evenings or weekends?

28 replies, 1 respondent did not answer.

Yes	9	32.1%
No	19	67.9%

Question 11.11: How many vacation days do you get during a year (exclusive of statutory holidays)?

28 replies, 1 respondent did not answer.

15 or less Vacation Days	3	10.7%
16-20 Vacation Days	20	71.4%
21-25 Vacation Days	4	14.3%
26-30 Vacation Days	1	3.6%

No respondent indicated a vacation allowance of more than 30 days.

Question 12.12: Do you have opportunities for professional development and advancement (i.e. professional allowance, reimbursement for memberships or travel to conferences, training, etc)?

Yes	17	60.7%
No	12	42.9%

7 respondents included comments in regards to this question. Samples indicative of the general trend are listed below.

1. Only occasionally and not every year.
2. Been promised for last 3 years, but never happened… Soon thinking to change (employment).
3. There is money available but insufficient to cover the full cost of a conference.
4. These opportunities have become more available at my workplace in the last year; however, there is no systemic plan for upgrading our qualifications and/or advancing our professional standing within the department. Prior to 2009, professional development opportunities were non-existent or ad hoc at best.

Question 13.13: Do you belong to a union or professional organization?

28 replies, 1 respondent did not answer

No	14	50.0%
Yes	14	50.0%

Respondents were asked to list organizations they belonged to, as detailed below:

COMP	4	14.3%
Health Sciences Assoc. of BC	4	14.3%
CAP	1	3.6%
MAHCP[1]	1	3.6%
OPSEU[2]	4	14.3%
CUPE	1	3.6%
PIPSC[3]	1	3.6%

These results indicate that PAs in Canada have gained significant experience in the field. They are a well-educated group and make a sizable contribution to the practice of medical physics. Thus the apparent lack of professional development opportunities for PAs, as evidenced by the comments submitted, is doubly disappointing. This underlines the importance of recent COMP initiatives to engage physics associates in the organization, as well as the potential benefits of PAs having their own professional group. For the retention and improvement of professional PA staff, professional development must be promoted by all and for all. In the modern medical physics department, PAs can no longer be viewed as the 'hired help'.

[1] Manitoba Association of Health Care Professionals
[2] Ontario Public Service Employees' Union
[3] Professional Institute of the Public Service of Canada

Message from the Councillor for Science and Education

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Medical Physics community in Canada has had representation on the CAMPEP Board since the late 1990s when the CCPM became a sponsoring organisation of CAMPEP. Last year, Canadian sponsorship of CAMPEP was adopted by COMP, which both the COMP and CCPM boards felt was more appropriate. Management of the relationship between COMP and CAMPEP was given to the Science and Education Committee. I am very excited about this model, as it allows COMP to be a more effective advocate for training issues that are relevant in Canada. COMP, as the Medical Physics advocacy organisation in Canada, is more suited to promote graduate and residency education than the CCPM, whose mandate is to certify individual competence in Medical Physics. This is the same model as in the United States where it is the AAPM, and not the ABR, that sponsors CAMPEP.

A recent issue that the SEC is looking into is Health Canada's Safety Code 35 Report, which outlines practice recommendations in the area of x-ray based medical imaging. This is a topic of obvious importance to COMP members. If this report becomes adopted by any province it is important that COMP have a strategy to assist its members in becoming compliant with its practice recommendations. Having a good relationship and dialogue with CAMPEP is an important part of this strategy.

The COMP Science and Education Committee is responsible for promoting and supporting the science of medical physics, facilitating good practice in all aspects of education, training and professional development for those within the profession, and for organizing educational programmes of high quality. It is a fairly new committee for COMP, I am proud of its achievements; but much work remains to be done in many areas. As with all committees, it relies very much on the strength of its volunteers. The current members of the SEC are: Marco Carlone, Alejandra Rangel & Nadia Octave, Luc Beaulieu, Stephen Breen, Wayne Beckham, Jason Schella, Boyd McCurdy and Philippe Després. In addition, there are four sub-committees of the SEC: The Winter School sub-committee (Chair: Stephen Breen), the Student Council (Co-Chairs: Nadia Octave & Alejandra Rangel), The Conference Committee (Chair: Jason Schella), and the CAMPEP sub-committee. The CAMPEP group is very active carries a heavy load for volunteers. I would like to recognise the people who do this on your behalf: Wayne Beckham, Gino Fallone, Brenda Clarke, Peter Dunscombe and James Robar.

If you are interested in serving on any committees, please contact me or Nancy Barrett. As well, my term as Chair of this committee will end next summer; if you would like to nominate anyone to be the new chair, please contact me, Nancy Barrett or Jason Schella.

Chief Examiner's Report, 2011

Robert Corns
CCPM Chief Examiner

Membership Exams

The MCCPM written exam is a year-long process, starting in the late summer/early fall where the questions banks are organized for publishing on the CCPM website. We have been and are continuing to work on each of the four question banks, with the goal to re-organize the questions from a large-thematic-multipart format to individual questions. This work has been completed for the Radiation Oncology and Magnetic Resonance Imaging question banks and is progress for Nuclear Medicine and Diagnostic Radiology Imaging question banks.

The candidates apply and are processed by January and the exam is set and organized for March. This year, we had 35 candidates writing in 14 different cities. Exams are couriered to and from each centre and marked within a few weeks because candidates need early notification for travel arrangements. A total of 29 candidates passed the written exam.

Oral exams were held in Montreal (Radiation Oncology) and Ottawa (Nuclear Medicine) this year, with 30 candidates taking Radiation Oncology and 2 taking Nuclear Medicine. Both Nuclear Medicine candidates passed and 25 Radiation Oncology candidates passed. Those who failed are eligible to take the exam the following year. This year' successful candidates are:

Jean-Francois Carrier	Maritza Hobson	Ante Mestrovic	Charles Schroeder
Daria Comsa	Weihong Huang	Michael Oliver	Luc Serré
Samantha Eustace	Ferenc Jacso	Piotr Pater	Richard Wassenaar
Christophe Furstoss	Runqing Jiang	Alexandra Rink	Marcin Wierzbicki
Stewart Gaede	Aliaksandr Karotki	Mark Ruschin	Xiangsheng Yan
Mehran Goharian	Harald Keller	David Sasaki	Yingli Zhao
George Hajdok	Claudia Leavens	Bryan Schaly	

Fellowship Exam

The FCCPM oral exams were held in Vancouver in July. A total 6 candidates presented and were examined in two parallel sessions over one day. All 6 candidates were in the Radiation Oncology specialty and 4 candidates passed.

The successful candidates for this year's FCCPM examination were:

Elizabeth Henderson	Kyle Malkoske	Jose Eduardo Villarreal-Barajas	Shuying Wan

On behalf of the CCPM I would like to congratulate all new Members and Fellows.

Finally, I would like to point out the tremendous level of support I have received from the Board and the CCPM community at large in running this exam. Whenever I have asked for help it has always been forthcoming, and the strength and success of the CCPM is a reflection of the commitment of its members. In particular I would like to thank the following people that helped out either as invigilators, with logistical support, on the exam committee, the marking committee, the appeals committee, as MCCPM oral examiners, as FCCPM oral examiners and fellow Board members (apologies if I missed anyone)

Clement Arsenault	Orest Ostapiak	Michael Evans	Stephen Sawchuck	Ting Lee
Sherry Connors	Jeff Richer	Vicky Huang	David Wilkins	Boyd McCurdy
Curtis Caldwell	Alasdair Syme	Brian Keller	Ian Cameron	Cathy Neath
Nicola DeZanche	John Schreiner	Konrad Leszczynski	Fred Cao	Will Parker
Robert Doucet	Keith Wachowicz	Peter McGhee	Cheryl Duzenli	Rasika Rajapakshe
Brad Gill	Chantal Boudreau	Horacio Patrocinio	Peter Dunscombe	Matt Schmid
Robin Kelly	Maria Corsten	Russel Ruo	Idris Elbakri	Glenn Wells
Renee Larouche	Linda Crelinsten	Ingrid Spadinger	Gisele Kite	Atiyah Yahya
Darcy Mason	Francois Deblois			

Question Bank Expansion

Finally, we are working on a new question bank for Part I of the exam. This is a general question set that all four disciplines write. We recently changed its format to multiple-choice and we are looking to expand this question bank. If you are interested in writing new multiple choice questions, please contact me via email at rcorns@bccancer.bc.ca by Oct 15th and I will send you guidelines for writing questions. Participation can be listed for your recertification credits.

3rd ANNUAL COMP WINTER SCHOOL

Quality and Safety in Radiation Oncology

January 29th - February 2nd, 2012
Hilton Whistler Resort and Spa, Whistler, BC

The Winter School

Every practitioner in radiotherapy has had the experience of catching an error or correcting a mistake before that error could harm a patient. Relying on "good catches" is not enough to provide safe, high-quality care; we must adopt practices, tools, and philosophies that reduce the incidence of errors and improve the quality of radiotherapy for our patients. The COMP Winter School on Quality and Safety in Radiation Oncology teaches tools and methods that you can use to improve quality and safety in your radiotherapy department.

We bring together experts in quality, safety, human factors, ethics, and law to apply their expertise to the radiotherapy setting. With a new emphasis on peer-to-peer learning and interactivity, the 2012 Winter School is an exciting forum to learn the methods that you can apply to your radiation oncology program.

Subjects

Quality Management
Failure Modes
Ethics
Process Control
Legal Aspects
Human Factors
Root Cause Analysis
Incident Reporting

New for 2012

Proffered papers
Peer-to-peer learning
Case studies
New workshops.

Proffered Workshop Submissions

We want you to share your *Quality Success Stories*. Abstract submission will open from September 12th to November 4th, 2011 so you can showcase your centre's quality improvements. Throughout the meeting, attendees will tell their Quality Success Stories so that you can learn from the best practices of your peers.

Registration

Registration Opens: October 1, 2011
Early Scientific Registration until Dec. 18, 2011: $845 CDN
Regular Scientific Registration after Dec. 18, 2011: $1045 CDN
Daily Registration: $400 CDN

Dates to Remember:

Discounted Registration ends December 18, 2011
Hilton Whistler room block drops: December 30, 2011

Conference Venue

The Hilton Whistler Resort and Spa. Guests can contact the Hotel locally at (604) 932-1982 or Toll Free at 1-800-515-4050 and must specify the event name: COMP Winter School 2012 to receive the discounted room rate of $214 for Hilton Room or King/Queen Junior Suite.

Contact Information

winterschool@medphys.ca
Tel: 613-599-3491

COMP 2011 Treasurer's Report

Bill Ziegler, Regina, SK

The financial report was presented at COMP's annual general meeting in Vancouver. Nephin & Winter Chartered Accountants audited the financial statements for the year of 2010. It was moved and passed that Nephin & Winter be retained to audit the 2011 statements. Due to the $31,951 surplus from 2010 (see Comparative Income Statement), the total equity at the end of 2010 was $232,512 (see Balance Sheet). The 2010 surplus was mainly created by the $36K profit of the ASM in Ottawa. The 2010 Winter School basically broke even and this year (2011) the Winter School turned a profit of $7.4K. There is a projected deficit of ~$20K for this year due to the approval of onetime expenditures of strategic planning and starting to go bilingual. For 2012, close to a balanced budget is predicted. COMP is financially stable and doing well.

If there are any questions about any of the numbers, do not hesitate to send me a message (bill.ziegler@saskcancer.ca).

Canadian Organization of Medical Physicists
Comparative Income Statement Fiscal Year 2012 Budget

	Budget 2012	Budget 2011	Actual 2010	Actual 2009
REVENUE				
Total Advertising	**28,000.00**	**37,000.00**	**29,212.82**	**42,786.91**
Total ASM	**134,000.00**	**54,000.00**	**154,609.33**	**117,335.93**
Total Winter School	**75,625.00**	**71,500.00**	**38,804.00**	
Interest Income	2,500.00	2,500.00	3,133.80	4,625.55
Membership Dues & Processing Fees	114,000.00	114,000.00	114,924.09	85,745.83
Subscriptions	0.00	0.00	3,869.17	5,660.00
Award Sponsorship Revenue	2,000.00	0.00	2,000.00	2,000.00
Misc. Revenue	0.00	0.00	1,555.90	
TOTAL REVENUE	**356,125.00**	**279,000.00**	**348,109.11**	**258,154.22**
EXPENSES				
Total - Committees & Executive/Board	**21,600.00**	**31,900.00**	**16,897.84**	**12,411.09**
Travel to represent COMP/CCPM	**3,000.00**	**3,000.00**	**500.00**	**1,720.66**
Travel for CAMPEP	**5,000.00**	**6,100.00**	**5,771.75**	
Total - Annual Scientific Meeting	**115,300.00**	**43,000.00**	**117,965.43**	**110,561.22**
Total - Winter School	**65,500.00**	**64,000.00**	**39,175.77**	
Directory	0.00	8,000.00	0.00	7,783.65
Newsletter	20,000.00	20,000.00	17,121.26	20,484.64
Website	4,000.00	9,500.00	5,024.65	2,049.65
Bilingual	3,000.00	7,000.00		
Professional Survey	4,000.00	3,500.00	3,928.80	0.00
Total - Office & Administration	**97,630.00**	**95,130.00**	**96,896.29**	**83,540.24**
Total - Awards & Support	**15,600.00**	**12,600.00**	**12,875.44**	**11,903.53**
TOTAL EXPENSES	**354,630.00**	**303,730.00**	**316,157.23**	**250,956.39**
SURPLUS (DEFICIT)	**1,495.00**	**(24,730.00)**	**31,951.88**	**7,197.83**

Canadian Organization of Medical Physicists
Balance Sheet As at 12/31/2010

ASSET		
Current Assets		
TD Canada Trust Chequing		81,954.94
Beanstream Holding Account		22,576.68
ING Savings Account		201,334.51
Accounts Receivable		9,085.70
Prepaid Expenses		23,148.68
Total Current Assets		338,100.51
TOTAL ASSET		338,100.51
LIABILITY		
Current Liabilities		
Accounts Payable		8,843.44
Accrued liabilities		2,000.00
Deferred Income - Advertising		8,745.00
Deferred Income - Dues		29,410.00
Deferred Income - Subscriptions		1,000.00
Deferred Income - H.E. Johns		685.00
Deferred Income - Winter School		55,720.00
TD Visa Payable - N. Barrett	0.00	
TD VIsa Payable - W. Ziegler	0.00	
Total Credit Card Payables		0.00
GST/HST Charged on Sales	18,280.19	
GST/HST Paid on Purchases	-19,095.94	
GST Owing (Refund)		-815.75
Total Current Liabilities		105,587.69
TOTAL LIABILITY		105,587.69
EQUITY		
Retained Earnings		
Retained Earnings - Previous Year		200,560.94
Current Earnings		31,951.88
Total Retained Earnings		232,512.82
TOTAL EQUITY		232,512.82
LIABILITIES AND EQUITY		338,100.51

Canadian medical physicists receive awards

Congratulations to the following Canadian medical physicists who received awards at the Joint AAPM/COMP Annual Scientific Meeting held in Vancouver:

Award	Name	Institution
Gold Medal	Jacob Van Dyk	University of Western Ontario
Sylvia Fedoruk Prize	Frédéric Tessier	National Research Council of Canada
John R. Cameron/ John R. Cunningham Young Investigators Competition (1st Place)	Melissa Hill	Sunnybrook Research Institute
Farrington Daniels Award – Best Scientific Paper – Dosimetry	Bryan Muir	Carleton University
	David Rogers	Carleton University
AAPM Summer School Scholarships	Esmaeel Ghasroddashti	Tom Baker Cancer Centre
	Nicolas Ploquin	Ottawa Hospital Cancer Centre

COMP Gold Medal awarded to Jake Van Dyk

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privilege and benefit of learning and working alongside Jake for almost 40 years and can attest that he has been a driving force in our research and educational efforts. He is blessed with an inquisitive scientific mind, an honesty to admit when he does not understand something fully, attention to detail, leadership and organizational qualities, and a strong work ethic that brings key issues to a decisive resolution and fitting conclusion. In his retirement years, Jake will drop in at the London Regional Cancer Centre, take on limited assignments with the IAEA, continue to travel the world, and spend plenty of time with his highly supportive family. It was wonderful to see family members, including a young grandchild, in attendance when Jake was honoured by his colleagues with the best gift of all – genuine respect for an outstanding career with far-reaching accomplishments.



Chief Medical Physicist

Waikato is one of New Zealand's most beautiful regions, with a pleasant temperate climate. It combines the best of city, community and rural life. Waikato District Health Board plans, funds and provides health services across a district of more than 364,000 people. It leads regional cancer, MRI, trauma, emergency care coordination and screening services for the Midland health region of more than 830,000. Waikato Hospital is a 600-bed tertiary and teaching hospital in Hamilton city. There are several smaller private and public hospitals in the region, as well as many rural and community based health services.

Waikato Regional Cancer Centre
Waikato Hospital, Hamilton, New Zealand
40 hours per week
Position No. 51109-344478

New Zealand opportunity – great lifestyle and career move!
Our high-quality regional cancer service seeks an experienced Chief Medical Physicist to lead and develop its radiation oncology medical physics team, consisting of seven medical physicists and two registrars. This is an innovative leadership role based in the city of Hamilton, known for its respected educational facilities, scientific research, events, parks and gardens, fine cuisine, cafes and culture. Beautiful beaches are in close proximity and are easily accessible, as are many other outdoor pursuits.

The Waikato Regional Cancer Centre (WRCC) is based at Waikato Hospital and provides tertiary-level care through site-specialist multidisciplinary teams to a population of approximately 550,000 from a wide geographical area. WRCC utilises an Eclipse treatment planning system, a dedicated wide-bore CT scanner and four Varian linear accelerators with OBI (including cone beam CT), VMAT and gating capabilities. Mature IMRT, IGRT, TBI, TSET, I-131 and HDR-brachytherapy programmes are in place.

What you need:
- Experience managing a medical physics team within a hospital environment or similar.
- A passion for leadership, and the ability to inspire a team of professionals.
- 10+ years of clinical radiation therapy experience, including involvement with commissioning, maintenance and QA of machines and treatment techniques. Extensive experience with IMRT, VMAT, IGRT and HDR brachytherapy is desirable.
- Radiation therapy accreditation with ACPSEM or equivalent.

What we offer:
- Ongoing professional and leadership development training.
- An opportunity to further develop the existing culture of research and progression of ideas.
- An attractive remuneration package that will be negotiated, as well as relocation assistance where applicable.

Further information is available on our website: www.waikatodhb.govt.nz/radiationtherapystaff
Also check out: www.hamiltoncity.co.nz

We welcome your enquiries about this exciting opportunity, so please contact us:
Dr. Matthew Seel, Clinical Director of Radiation Oncology – matthew.seel@waikatodhb.health.nz or
Ms. Puleng Moleme, Medical Physicist – puleng.moleme@waikatohdb.health.nz

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Waikato District Health Board

Welcome New Board Members

Craig Beckett will be serving on the Board as Councillor for Professional Affairs and will be Chair of the Professional Affairs Committee (PAC).

Craig received his M.Sc. in Physics from the University of Regina in 1996. Following his graduate work he immediately went to work for the Allan Blair Cancer Centre as a Junior Medical Physicist. He was promoted to Physicist in 1998, Senior Physicist in 2002 and Director of Physics in 2004.

Craig currently holds the position of Site Manager, Medical Physics at the ABCC. Craig was elected as a member of the Canadian College of Physicists in Medicine (CCPM) in 1998, a diplomat of the ABR in 2001 and a Fellow of the CCPM in 2010.

Throughout the years his focus at the Allan Blair has been innovative solutions for patient benefit. Prior to moving into this position on the Board, Craig served as a member of the PAC

Crystal Plume Angers will be serving as the Treasurer of COMP effective January 1, 2012. Crystal began her career in 1992 as a Junior Medical Physicist at the Nova Scotia Cancer Centre in Halifax. In 1994 she joined the Computer Products group at Theratronics where she played a significant role in the development and release of multiple versions of Theraplan Plus. Crystal has worked in Software Development, Product Management, Process and Product Engineering, Safety Analysis, and Therapy Systems Engineering. In 2007 Crystal returned to Medical Physics at the Ottawa Hospital Cancer Centre where she is currently designated Infrastructure Lead at the TOHCC and as such she is responsible for the equipment QA/QC program.

Crystal became a member of the Canadian College of Physicists in Medicine (CCPM) in 2008 and was a member of the Local Arrangements Committee for the 2010 COMP ASM.

Thank You to Our Outgoing Board Members!

Joe Hayward served as Councillor of Communications and Chair of the Professional Affairs Committee for 4 years and much was accomplished during his tenure. Under Joe's leadership, two professional surveys were conducted and an updated Scope of Practice was finalized and published on the COMP website. Joe also played an important role in solidifying COMP's support for Physics Assistants so that they would have a forum to connect and discuss professional issues. Due to the contribution of committee volunteers and Joe's encouragement, the PAC was also able to move forward the complex process of the comparison/ evidence of competency for medical physicists trained outside of Canada. Joe also expanded the committee membership to include representation from all regions across Canada to ensure that the committee stays abreast of provincial issues. Joe also served as COMP's representative on the Ontario Bill 68 issue.

Bill Ziegler served as the COMP Treasurer for 3 years. Bill's tenure began as the initiatives from the COMP Strategic Plan were being implemented. Bill served as an excellent steward of COMP resources, supporting new programs while ensuring that they were financially viable and accountable. Bill took a leadership role in introducing clearer processes for both setting and monitoring the annual budget. Serving as Treasurer can often be a thankless job and Bill did not hesitate to challenge the Board to change policies and processes when necessary. COMP is in a very sound financial position because of Bill's contribution.

New COMP Members

Please welcome the following new members who have joined COMP since our last issue:

Last Name	First Name	Institute	Member Type
Brodeur	Marylène	CSSS de Gatineau	Full
Bush	Karl	BC Cancer Agency - VIC	Full
Ceusan	Florin	CHRTR	Full
Chin	Lee	Sunnybrook Health Sciences Centre	Full
Dubrowski	Piotr	BC Cancer Agency - Fraser Valley	Full
Furstoss	Christophe	Hôpital Maisonneuve-Rosemont	Full
Glennie	Diana	Juravinski Cancer Centre	Student
Gonzalez	Marjorie	University of British Columbia	Student
Granton	Patrick	Maastro Clinic	Student
Halsall	Tracy	Kingston General Hospital	Associate
Huang	Weihong		Full
Keller	Harald	Princess Margaret Hospital	Full
Landry	Guillaume	Maastro Clinic	Student
Mahmood	Tariq	SAAD Specialist Hospital	Full
Oliver	Michael	Sudbury Regional Hospital	Full
Serré	Luc	Odette Cancer Centre	Full
Shahgeldi	Kaveh	Sahlgrenska University Hospital	Associate
Watson	Peter	McGill University	Student
Yan	Xiangsheng	King Faisal Specialist Hospital	Full

Dates to Remember

COMP 2012 Winter School

January 29 - February 2, 2012

Whistler BC

2012 COMP/CCPM Annual Scientific Meeting

July 11-14th, 2012

Halifax, NS

Message from the COMP President

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for Quality Radiotherapy (CPQR) is proceeding with its efforts and COMP is continuing to invest significant effort, particularly with the Steering Committee (our representatives being Jean-Pierre Bissonnette and Jason Schella) and the development of the Technical Quality Assurance documents. I will provide a teaser that the AAPM has expressed strong interest in this initiative, so there is likely more to come on that front, perhaps leading to another of those synergies to which I was previously alluding. Related good news was the renewal of the five-year mandate of the Canadian Partnership Against Cancer (CPAC), which has provided sponsorship essential to the activities being undertaken by the CPQR. Efforts are also continuing with establishing a travel award for those interested in making a contribution in developing countries, formalizing representation with the International Electrotechnical Commission (IEC), and developing a formal statement with regard to Health Canada *Safety Code 35: Radiation Protection in Radiology—Large Facilities.* A brief reminder of some future events is also warranted. Although it's unlikely you are not already aware, the next COMP Winter School, entitled *Quality and Safety in Radiation Oncology,* will be conducted in Whistler, British Columbia, from January 29 to February 2, 2012. Not to belie the tremendous success of the two previous sessions but this one is promising to be the best to date, and, for those of you interested, the venue does have much to offer for the entire family. Also for potential consideration in your calendar, the Union for International Cancer Control (of which COMP is a member) will be hosting its World Congress in Montreal, August 27-30, 2012, and, along with the Canadian Medical and Biological Engineering Society, COMP will be hosting the World Congress on Medical Physicists and Biomedical Engineering in Toronto, August 22-29, 2015. Another event of note that I have previously mentioned is the strategic planning session to be conducted in November of this year. Your input is needed, whether or not it is solicited. While I believe that we will provide ample opportunity for input (i.e., we will be knocking at your door in a variety of ways, so please answer), do not hesitate to contact me or any member of the Board if you have an idea or suggestion that you feel is not being incorporated into the process.

Finally, I would like to close with an expression of deep gratitude to Drs. William (Bill) Zeigler and Joseph (Joe) Hayward for their service to COMP. The contributions of both were acknowledged at the AGM. Bill will be winding down his term as Treasurer at the end of the year and has done an exemplary job on your behalf, particularly with the more onerous task as "gatekeeper". Joe has numerous accomplishments under his belt as Councillor for Professional Affairs. In fact, his success is such that apparently he has found he is unable to fully extricate himself and will, to his credit, remain on the committee. His new focus will be to represent COMP in the ongoing efforts he initiated with the Joint Engineering and Natural Science Task Force (JENSTF), a topic on which we will be seeking your feedback in the near future. So, to close, please allow me to once again encourage you to contact me or any member of our Executive if you have interest in participating formally in any of the COMP committees or activities. It's always rewarding when you have opportunity to work with such good and committed people.

Message from the CCPM President

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Many questions in Parts 1 and II are multiple choice or short answer, but Parts III and IV are handwritten long answers. Thumbs seem to be getting more dexterous in this smart phone era, at the expense of pen and paper skills. Two and half hours of vigorous writing is not part of a normal day for most people. Practice. Time management is critical in the written exam. Answers must be legible and comprehensible to the markers, but there are no extra marks given for flowing prosaic style or adventurous adjectives. Just get the basic points down. Move on. Come back and refine with more detail later if there is time.

Be precise in your use of terminology. We are physicists – we define terms properly, use units, label the axes of our graphs, communicate what we know with precision and openly admit what we don't know (but hopefully know where to look to find out).

The oral exam is a challenge for most candidates, and examiners are well accustomed to nerves and jitters. Calm down, take a deep breath, listen to the question being asked, and clearly state the obvious. There are no trick questions – sometimes candidates won't believe the answer could be that simple, and look for some angle. Provide the obvious answer to show that you understand the fundamentals, then flesh it out with some details and nuance if there is time. Don't be afraid to ask the examiners for clarification, or to pause in your answer to ask if you are on the right track.

This is not an adversarial process, nor is it an initiation rite or a trial by fire. The certification process is intended to determine that the candidate has mastered the required knowledge, can communicate that knowledge clearly, and has a prudent and professional approach to clinical medical physics. The College is not out to get you, and we would honestly like to see you succeed.

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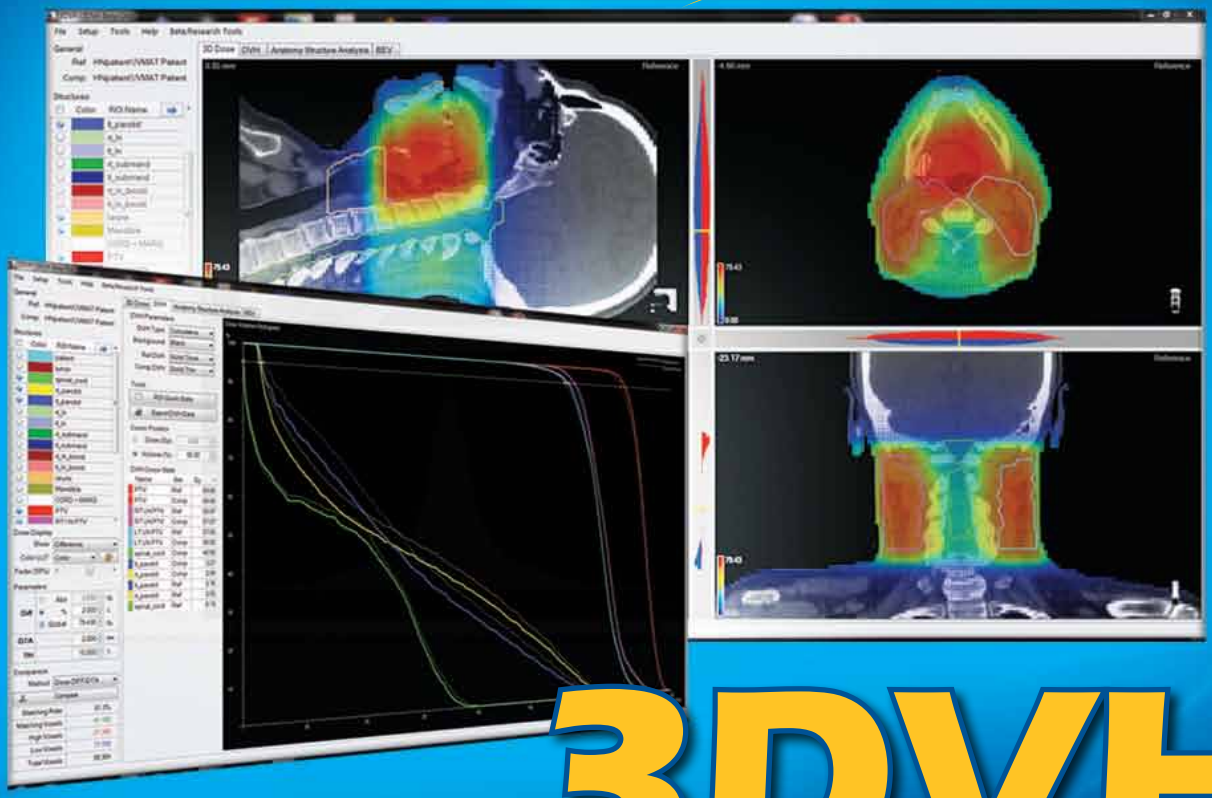

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*ArcCHECK support for 3DVH is planned for early 2011

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