

Real-World Experiences of Medical Physics Interventions - let's show the world what we do!

A call for book contributions

There is an expression saying that a medical physicist is "a person that solves problems you didn't know you had in a way you can't possibly understand". It made me smile when I first heard it but I do find it to be quite true.

Medical physics is a wonderful profession but, let's be honest, most of the time it is hidden in the shadows of healthcare. As medical physicists, we contribute, amongst many other things, to the struggle against cancer, we help ensure the diagnostic quality of medical images and that all those minimally-invasive interventional procedures are done with the least risk for developing deterministic effects. We also help protect auxiliary staff and patients from the effects of ionizing radiation, mechanical waves in sonography and electromagnetic fields in MRI. We teach, train, help deepen the medical research and, occasionally, even solve problems that go beyond the medical field (anyone ever asked you to fix the printer or a software bug lately?). By the same token, we are used to getting strange looks from people when introducing ourselves as "the physicist working in the hospital" and many times we get mistaken for a physician or physiologist.

I believe we all have our ways of explaining to the general public in a simplified manner what we do. After all, physics has been a part of medicine long before William Roentgen discovered X-rays. But what happens when we get the same looks and questions from the people we're supposed to work in the same team with? Isn't it surprising when your very colleagues (Radiation Oncology and Radiology medical doctors, managers, administrators, radiographers or even some of the radiation safety officers and service engineers), who are supposed to cooperate with us, are 'convinced' that medical physicists are not necessary and that we are only in their way? Sometimes their attitude is somewhat on the side of ignorance: "if I don't understand it then it's not important!"

These questions and problems are similar all over the world. I had the privilege of talking to many medical physicists with different backgrounds, from different hospitals, countries and, although our equipment, staffing level and way of managing the quality and safety might not be the same, we all have something in common and that is the constant need to justify on a daily basis why our presence is crucial to the healthcare ecosystem. In many countries, we are still not recognized as a scientific and healthcare profession which is just a reflection of the same problem but at the national level.

It is nothing new and it is something we like to talk about during social dinners after our training meetings or conferences, giggle about it and compare experiences. These are also an excellent way of learning new things and getting ideas about how to solve problems in our department or hospital - seeing how other people dealt with them in theirs. Those abilities can be sharpened even more if one attends a leadership-focused course such as EUTEMPE Module MPE01 'Leadership in Medical Physics, development of the profession and challenges for the medical physics expert' (www.eutempe-net.eu/mpe01). I attended it myself this year and I can already see its significant contribution in my daily practice with special emphasis on the fact that this course also helped my motivation and determination to stand up for myself as a medical physics professional. Sometimes, we get stuck in our problems and difficulties and this course showed me a practical way in which I can start solving multidisciplinary-team related problems step by step. It showed me that everything can be done with the right means, approach and reasoning and helped me get a better grasp of my profession while encouraging me to look beyond just my guild, to expand my horizons. That expanded way of thinking is the reason why I am writing this article.

Together with a few wonderful colleagues I met during this course (Andreea Dohatcu (US) - as co-editor, Brenda Byrne (IE), Nathan Dickinson (UK) and Henrik Sundström (SE) - as specialty peer-reviewers), I decided to start a book project about showing in a useful, usable and non-assuming manner to a wide audience, how medical physicists are making a difference in our working environment. We want to present situations (quick cases, short stories, anecdotes...) where the presence of a medical physicist had an impact and made a change in patients' or non-MP colleagues' lives.

But, for this, we need your help in collecting them directly from the frontline. This book would focus on items (findings, processes, pieces of advice, etc.) that you helped your clinics with and that show in a direct practical manner our usefulness as medical physics professionals. We want all of the stories that you are willing to share whether it is something "small", like finding out, when you were doing your regular quality checks, that the filter was missing from an X-ray machine

(and that the machine had been used like that for months or even years without anyone else noticing) or something “more serious” like discovering set-up errors for the radiation oncology patients. This collection targets an extended readers’ community made of public, patients, friends, families, science lovers, future MP students as well as non-MP clinical colleagues, and we hope to contribute with it to our Medical Physics branding.

To put this idea in motion we host a Google form, a template (link: <https://forms.gle/4w2LCo6KmybI8oKZA>), designed together with Prof. Carmel Caruana, for collecting your thoughts, but you are also welcome to e-mail your free-style stories to the following address: medphy.experiences@gmail.com. The language should not be academic, but one accessible to all. The stories will be published without any information about your hospital’s name or location. We will include the author’s name only if requested by the author.

We are looking forward to your kind assistance and future contribution to this project that is committed to the benefit of all of our profession and patients.



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