

International Organization for Medical Physics

www.iomp.org

How IOMP can help in global adoption and propagation of qualitative change in medical physics?

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Every patient to get benefit of medical physics


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Global Scenario in medical radiation
 United Nations Scientific Committee on Effects of Atomic Radiation (UNSCEAR) 2010

- **3.6 billion medical X ray procedures/year**
- About 35 million nuclear medicine examinations
- About 5 million patients radiotherapy treatments



Controlled situation



Challenging situation

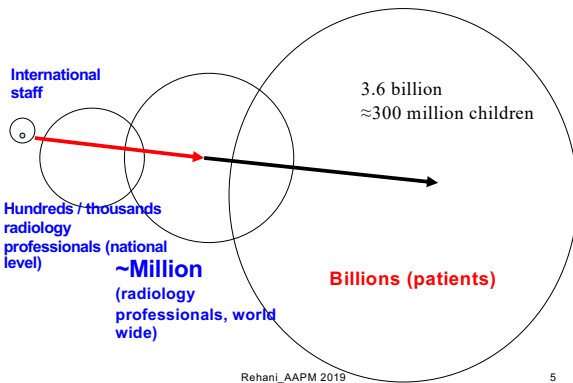
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How successful we are?

- In optimization in radiation therapy to more than 5 million patients annually
- In optimization in imaging to nearly 5 billion imaging procedures annually

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Medical Radiation Protection

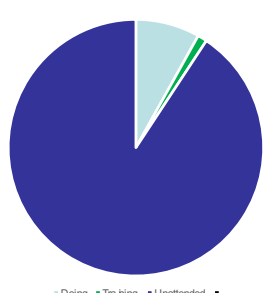


International staff
 Hundreds / thousands radiology professionals (national level)
 ~Million (radiology professionals, world wide)

3.6 billion
 ≈300 million children

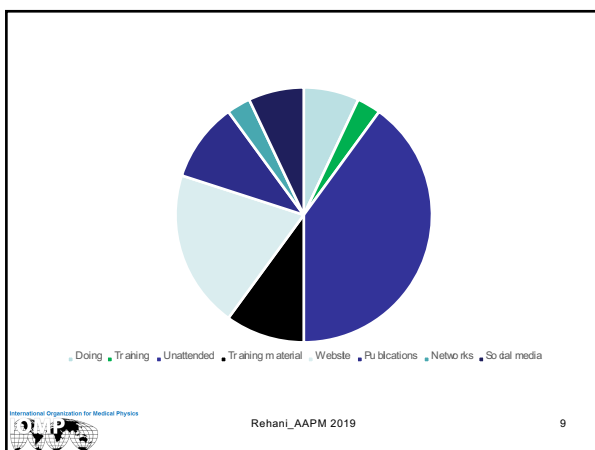
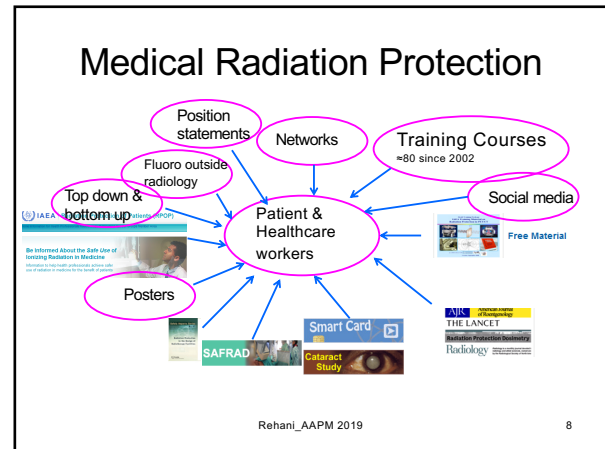
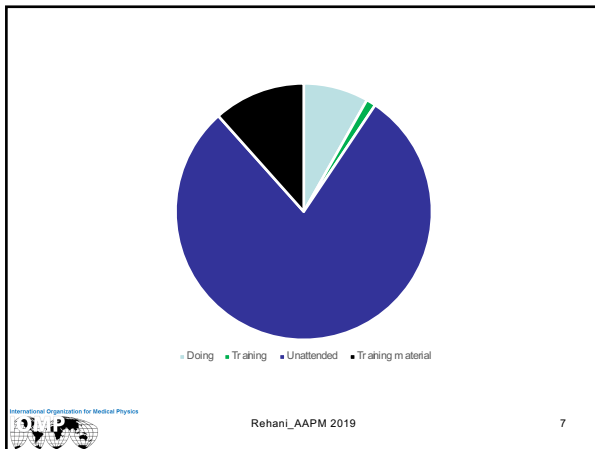
Billions (patients)

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Doing Trying Unattended

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- ### Typically
- What to do? Research done by developed countries
 - How to do? Actions developed by developed countries
 - Adaptation process involved in wider implementation to developing countries
 - Slow process (unimaginable)
 - Role for various organizations
- International Organization for Medical Physics
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- ### Numbers
- Assuming that everyone is a patient sometime the extension in numbers may not be much but Qualitative change is the issue
 - To question ourselves "Are we attending to around 5 billion imaging exams?"
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- ### Overview
- What is Qualitative change in medical physics: Partly covered in Med Phys 3.0
 - What can IOMP do?
 - Prepare medical physicists globally on what is coming
 - Global adoption (reduce the time gap in adoption)
- International Organization for Medical Physics
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The International Organization for Medical Physics

- Founded in 1963
- Members: 86 National (including AAPM)
- 6 Regional
- Corporate
- Representing over 26,000 Medical physicists worldwide
- NGO status with IAEA and WHO



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What drives Qualitative change?

in professional performance for improving patient care

1. **Qualitative research**
2. **Regulatory requirements**
3. **Trends in literature (communication)**



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Same data (numbers), same situation
Different response (Qualitative)

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Same question to different doctors with same quantitative figures of reports

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Medical physicists

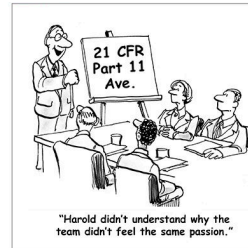
- More emphasis on quantitative data
- Qualitative research: development of tools to deal with human variability



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Change



- Follow-up of patients with $K_a, r > 5$ Gy
- NCRP provided recommendations 10 years back!!!

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[BMJ](#). 2000 Jan 8; 320(7227): 114–116.

doi: [10.1136/bmj.320.7227.114](https://doi.org/10.1136/bmj.320.7227.114)

Qualitative research in health care

PMCID: PMC1117368

PMID: [10625273](https://pubmed.ncbi.nlm.nih.gov/10625273/)

Analysing qualitative data

[Catherine Pope](#), lecturer in medical sociology,^a [Sue Ziebland](#), senior research fellow,^b and [Nicholas Mays](#), health adviser^c

[J Gen Intern Med](#). 1998 Mar; 13(3): 195–199.

doi: [10.1046/j.1525-1497.1998.00054.x](https://doi.org/10.1046/j.1525-1497.1998.00054.x)

PMCID: PMC1496926

PMID: [9541377](https://pubmed.ncbi.nlm.nih.gov/9541377/)

Making Use of Qualitative Research Techniques

[Michael Berkwitz](#), MD¹ and [Thomas S Inui](#), ScM, MD²

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What drives Qualitative change?

in professional performance for improving patient care

1. Qualitative research

1. Falls within the domain on National members
2. International organizations
 1. Motivate,
 2. Create the need,
 3. Communicate with international organizations like WHO, IAEA
 4. Create Agenda and projects
 5. Communicate with member countries to bridge the gap between developed and developing countries



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What drives Qualitative change?

in professional performance for improving patient care

1. Qualitative research
2. Regulatory requirements
3. Trends in literature (communication)



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What drives Qualitative change?

in professional performance for improving patient care

1. Qualitative research

2. Regulatory requirements

1. IOMP works with organizations that create regulations at international level (IAEA).
2. "Recognition" of the role of Medical Physicist through international organizations
3. Providing assistance to members from LMI countries to help them seek recognition

Not regulatory but helpful

- Roles and responsibilities (IOMP Policy statements)



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What drives Qualitative change? in professional performance for improving patient care

1. Qualitative research
2. Regulatory requirements
3. Trends in literature (communication)
 1. IOMP communication Channels
 1. Formal (official journals)
 2. Qualitative change
 1. eMPW
 2. MPI
 3. Social media
 4. IOMP Newsletter, **Newest** (started April 2019)



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IOMP
NEWSLETTER
Vol.1, No. 1, April 2019



IOMP PRESIDENT'S MESSAGE

Medical knowledge doubles every few months. Whereas the doubling time was estimated to be 50 years in 1950, it accelerated to 7 years in 1980, 3.5 years in 2010, and a projected 73 days by 2020.

MEDICAL PHYSICIST: APPROVED AS A HEALTH PROFESSIONAL IN CROATIA

On October 31 2018, the Croatian parliament finally voted in favour of recognition of medical physics as a healthcare profession.



FREE download of IAEA publication: [Medical Physics Staffing Needs in Diagnostic Imaging and Radionuclide Therapy: An Activity Based Approach](#)



FREE download of IAEA publication: [Radiation Protection and Safety in Medical Uses of Ionizing Radiation](#)



IAEA - IOMP
WEBINARS
Register for webinar FREE



24TH INTERNATIONAL CONFERENCE ON MEDICAL PHYSICS (ICMP)
Santiago, Chile, 8-11 Sep 2019

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IOMP
NEWSLETTER
Vol.1, No. 2, June 2019



IOMP PRESIDENT'S MESSAGE

Are we reaching out to people we serve? Are we listening to them? In this P-message, I want to deliberate on these issues.



IS FLASH RADIOTHERAPY COMING?

The hypothesis is that very high dose rates (100-1000 Gy/second) may lead to enhanced normal tissue sparing.
Image Courtesy: Kristoffer Petersson and Physics World



IOMP STRATEGIC PLAN

Please read IOMP Strategic Plan for 2018-2021



IOMP INTRODUCES INTERNATIONAL MEDICAL PHYSICS WEEK

Following the success of the International Day of Medical Physics (IDMP), IOMP has introduced celebration of International Medical Physics Week (IMPW) starting May 2020.



IOMP CONDUCTS SURVEY ON DEANS OF MEDICAL FACULTY

Medical physicists who rose to become Deans of medical and paramedical faculty. Please provide information using [this link](#) or <http://bit.ly/2XduRQ>



FREE download of AAPM publication: [Performance Evaluation of Computed Tomography Systems - The Report of AAPM Task Group 233 \(2018\)](#)

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Bounce rate

- The percentage of visits to your website where only 1 page was viewed.
- "bounce," means, they viewed a page of the site or a landing page but didn't engage further.
- They didn't click on links or view more pages.



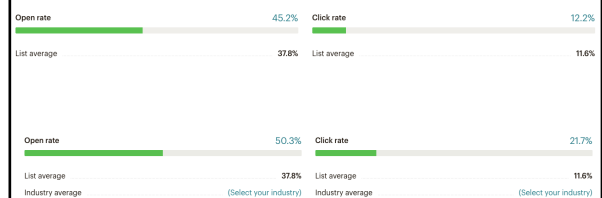
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Industry	Open rate	Click rate
Education & Trg	21.8 %	2.5 %
Health & Fitness	20%	2.2 %
Travel & Transport	20%	2%
Sports	23.8%	2.9%
Arts/Artist/Govt	≈ 26%	≈ 3.6
IOMP Newsletter	50.3%	21.7%

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1.	 United States	1,454 (21.90%)
2.	 India	369 (5.56%)
3.	 Japan	357 (5.38%)
4.	 Brazil	215 (3.24%)
5.	 Iran	197 (2.97%)
6.	 United Kingdom	180 (2.71%)
7.	 Nigeria	164 (2.47%)
8.	 Malaysia	163 (2.46%)
9.	 Canada	158 (2.38%)
10.	 Italy	130 (1.96%)

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What we monitor & what we do?

- Top links clicked
- Subscribers with most opens
- Country/city of clicks
- Dates of clicks
- Campaign related versus without campaign
- Campaign management



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Official relationship with WHO

- World Health Assembly
- Executive Board meetings
- Publications of WHO



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IOMP plays role in

- Creating agenda
- organizing training events
- Motivating professionals to collect data & publish
- Disseminating the work
- Provide expertise to international organizations
- Provide leadership in creating and propagating outreach programs.



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Thank You



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