AN INTRODUCTION TO THE SOCIETY OF DIRECTORS OF ACADEMIC MEDICAL PHYSICS PROGRAMS (SDAMPP)

H.A. Al-Hallaq^{1,8}, S.G. Armato III^{2,8}, E.I. Parsai^{3,8}, W.D. Newhauser^{4,5,8}, B.A. Schueler^{6,8}, and R.E. Wendt III^{7,8}

Dept. of Radiation and Cellular Oncology, The University of Chicago, Chicago, IL USA
Dept. of Radiology, The University of Chicago, Chicago, IL USA
Dept. of Radiation Oncology, University of Toledo Health Sciences Campus, Toledo, OH USA
Dept. of Physics, Louisiana State University, Baton Rouge, LA USA
Dept. of Physics, Mary Bird Perkins Cancer Center, Baton Rouge, LA USA
Dept. of Radiology, The Mayo Clinic, Rochester, MN USA
Dept. of Imaging Physics, The University of Texas MD Anderson Cancer Center, Houston, TX USA
SDAMPP, Alexandria, VA USA

Abstract— The paper introduces the Society of Directors of Academic Medical Physics Programs, which is dedicated to advancing medical physics education worldwide. We describe the Society's mission, focus areas, selected activities and resources, and organizational structure. The Society is a volunteer organization that fosters collaboration, cooperation, and coordination on a wide variety of topics in medical physics education. We describe several membership options and benefits, as well as ways for non-members to participate in many activities. The Society, which originated in the United States, has always welcomed international participation and membership, and with increased prevalence of online access, we anticipate this will increase in future.

Keywords— medical physics education, professional society, international, graduate, residency, clinical training, research training

I. Introduction

The Society of Directors of Academic Medical Physics Programs (SDAMPP) is a volunteer organization whose prime objective is the advancement of education in the applied scientific field of medical physics. This objective is pursued through discussions, meetings, collaboration, and the sharing of perspectives of those engaged in academic medical physics programs. The Society:

- 1. Promotes advancement of medical physics education worldwide;
- 2. Encourages coordination among academic medical physics programs;
- 3. Fosters establishment of best practices in medical physics education;
- 4. Monitors production of medical physics trainees relative to the job market;
 - 5. Assists new academic medical physics programs;
- 6. Fosters coordination of the graduate and residency elements of medical physics training;
- 7. Provides a forum for discussion among leaders of academic medical physics programs;

- 8. Serves as a voice for leaders of academic medical physics programs;
- 9. Engages leaders of academic medical physics programs around the world to provide better and more consistent training.

After beginning as a task group within the American Association of Physicists in Medicine (AAPM), SDAMPP was formed in 2008 as a non-profit organization. It is governed by elected officers and an elected board of directors according to its By-laws and Rules. Most of the Society's activities are member-initiated and conducted under the auspices of its 10 standing committees. The Society relies on volunteers for the vast majority of its operation. Additional information is provided on the Society's website (www.sdampp.org), and a word cloud pictorially reveals the main emphasis areas (Fig. 1).

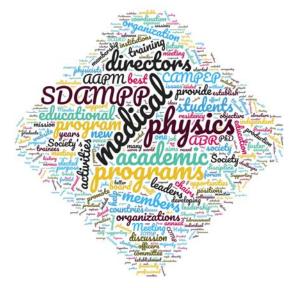


Fig. 1. A word cloud created in wordclouds.com using text from the "Home," "Purpose/Vision," and "History" pages of the SDAMPP website reveals the major focus areas in medical physics education.

The Society's activities continue to evolve in response to the needs of our members, our discipline [1] and our sister organizations, including the AAPM (www.aapm.org), the Commission on Accreditation of Medical Physics Education Programs, Inc. (CAMPEP) (www.campep.org), and the American Board of Radiology (ABR) (www.abr.org), with which SDAMPP has developed integrated, complementary relationships (Fig. 2). CAMPEP defines medical physics accreditation standards for education programs, the AAPM establishes standards and definitions of best practices for the medical physics profession, ABR provides professional certification of clinical medical physicists, and SDAMPP works with these and other societies to advance medical physics education. In the early years, the Society's activities mainly focused on its Annual Meeting. In recent years, the Society has expanded the scope of benefits to its members and increased access through the website and other online platforms. Specifically, SDAMPP has published reports [2], hosted topical webinars, hosted a discussion forum using an electronic bulletin board, liaised and cooperated with other organizations, served as a clearinghouse for electronic resources, co-sponsored surveys [3], and performed various other activities in support of our members. To facilitate responsiveness and rapid communication, AAPM, CAMPEP, and ABR appoint liaisons to SDAMPP and vice

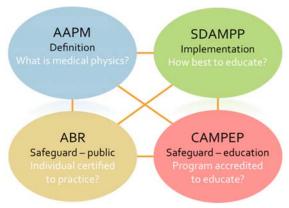


Fig. 2. The organizational interfaces among SDAMPP and the three societies with which it collaborates (SDAMPP 2016).

II. Uniqueness among medical physics organizations

SDAMPP is unique among its sister organizations in several ways. First, it is the only organization that advocates for the interests of medical physics education programs, including the interests of both students and faculty. It is also broadly inclusive and representative of medical physics education programs, as ensured by its rules on voting membership and Board membership. Its members hail predominantly from North America (Fig. 3); international participation has been limited by travel constraints. Because the Society does not accredit programs, certify individuals, or regulate any aspect of medical physics education (Fig. 2),

it remains impartial and free from conflicts-of-interest while advocating on behalf of its members for important issues in medical physics education. For example, SDAMPP frequently provides feedback to CAMPEP and AAPM on curriculum matters and to ABR on issues pertaining to board certification. The Society has played a leadership role in helping program directors navigate the potential impacts of COVID-imposed restrictions on instruction, accreditation, and recruiting. The Society has also effectively identified emerging and latent issues in medical physics education, a topic receiving increased attention [4].



Fig. 3. Geographic distribution of all SDAMPP members as of November 1, 2020. Map data copyright 2020 Google, INEGI

The Society is well suited to connect educators with resources and to move urgent efforts forward quickly. One recent example is the publication in 2019 of an open-access scheduling calendar to facilitate coordination of residency programs' interview dates. Voluntary use of this resource by programs and applicants has been substantial, with 38% of therapy residency programs and 49% of imaging residency programs using it during its inaugural year.

III. Membership

The state of the Society is strong. Membership has steadily grown each year since 2013, reaching 180 in 2020 (Fig. 4).

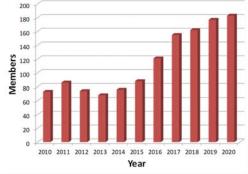


Fig. 4. SDAMPP membership numbers over the past 10 years.

There are ample opportunities for aspiring members to assume roles on committees that are active in their area of interest. Elected offices and appointments have terms of one to three years. Prospective volunteers typically contact a committee chair or vice versa to explore opportunities. The Society welcomes participation from educators from around the world. The Society affords its members the opportunity to network and share knowledge, which in turn opens opportunities for career development, program enhancement, and ultimately improved education of students and trainees (Table 1). One recent example occurred within the Outreach Committee when a residency program director inquired about how others remediate struggling residents and discovered that many other program directors were interested in this same issue. It became apparent that there are welldeveloped frameworks for remediating residents within medical residency programs, and a medical physics program director had attended a lecture on this topic at her institution. With involvement from a knowledgeable and experienced speaker, these program directors developed a webinar on this topic that was recorded and is available to members through the website.

"SDAMPP is a 'connecting' not a 'commanding' body."		
"SDAMPP is a very nimble organization that is focused solely on		
medical physics education."		
"SDAMPP provides a voice for program directors and their		
counterparts with other professional organizations."		
"Due to a membership roster of hundreds rather than thousands, I		
found it easy to meet education luminaries in our field through		
SDAMPP and to become a leader in the Society."		

Table 1. Quotes from past and present Board members in response to "What stands out to you about SDAMPP as an organization?"

All individuals who are involved in medical physics education are eligible to become a member of the Society. Our members include program directors, associate program directors, aspiring future education leaders, faculty, and support staff. The Society recognizes the vital roles played by all these professionals and encourages them to join the Society as one of four types of member (Table 2).

Membership Category	Description
Regular	Currently engaged in senior leadership positions within academic medical physics programs
Emeritus	Formerly held positions of senior leadership within academic medical physics programs
Honorary	Rendered outstanding service in the field of medical physics education, but who would not otherwise qualify for membership
Associate	Interested in medical physics education and in the purposes of the Society, but ineligible for other categories of membership

Table 2. SDAMPP membership categories.

The Society plays a major role in ensuring that future education leaders are developed to achieve the long-term success of the medical physics education enterprise. The

Society encourages junior members, including those just beginning their careers in medical physics education, to join and to learn from our more experienced members. International participants do not necessarily need to become members to participate.

IV. COMMITTEES

The *Board of Directors* comprises leaders in medical physics education who represent graduate, residency, and certificate programs. The Board helps to set the vision and approves activities in accordance with the by-laws, rules, and policies and procedures, which are openly available on the website.

The *Annual Meeting Committee* organizes and runs the Society's annual meeting, business meeting, and associated events.

The Awards and Honors Committee plays a key role in recognizing outstanding members of the community of medical physics educators, solicits nominations from the membership, reviews submissions, and prepares recommendations to recognize outstanding educators who have distinguished themselves through exemplary service to medical physics education.

The *Education Practices Committee* considers and makes recommendations on education practice to the Board, including investigating and bringing forward to the Board issues of concern identified by members.

The *Executive Committee* supervises the business of the Society in the interval between Board meetings.

The *Finance Committee* prepares the annual budget for presentation to the Board, negotiates contracts for services by external organizations, recommends changes in revenue and expenditures, and maintains overall financial viability so that the goals of the Society may be achieved.

The *Membership Committee* is responsible for developing and maintaining a vibrant and effective membership of medical physics educators from around the world.

The *Nominating Committee* is responsible for identifying and recruiting effective future leadership for the Society by annually submitting names of eligible candidates for officers and directors.

The *Outreach Committee* promotes application of the latest education methods and curricula necessary for the successful training of medical physicists worldwide for employment in education, research, and clinical specialties.

The *Professional Issues Committee* promotes policies that support program directors and provides recommendations on professional policies.

The *Publications Committee* manages online publication of materials necessary to foster the aims of the Society.

V. Conclusion

SDAMPP is a society of medical physics educators whose members have historically been located in North America. As technological advances enable more networking across the globe, we anticipate that international collaborations will increase in order to facilitate the exchange of best practices regarding medical physics education. Thus, we strongly encourage medical physics educators located beyond North America to consider participating in the Society's activities. Because the Society is member governed, opportunities exist to form new committees to address new areas of interest that may be region specific.

VI. REFERENCES

- $1.\ WD\ Newhauser:\ The\ medical\ physics\ workforce.\ Health\ Physics\ 112(2):139-148,2017.\ https://doi.org/10.1097/HP.0000000000000014$
- 2. Education and Training Report, SDAMPP, 2017. https://www.sdampp.org/documents/SDAMPPMPEducationAndTrainingReportFinal.pdf
- 3. B Loughery, G Starkschall, K Hendrickson, J Prisciandaro, B Clark, G Fullerton, G Ibbott, E Jackson, J Burmeister: Navigating the medical physics education and training landscape. Journal of Applied Clinical Medical Physics 18(6):275-287, 2017. https://doi.org/10.1002/acm2.12202

4. A Fielding, JI Prisciandaro, CG Orton: Changes and demands in the higher education sector are increasingly making advanced degree medical physics programs nonviable and the profession will have to develop a new model for delivering such education. Medical Physics 45(1):1-4, 2017.

Author: Hania A. Al-Hallaq, PhD, FAAPM, President-Elect SDAMPP, Institution: The University of Chicago, USA, halhalla@uchicago.edu Author: Samuel G. Armato III, PhD, FAAPM, FSPIE, Secretary SDAMPP, Institution: The University of Chicago, USA, s-armato@uchicago.edu

Author: E. Ishmael Parsai, PhD, FAAPM, FIOMP, FACRO, Past Chair of the Board SDAMPP, Institution: University of Toledo Health Sciences Campus, USA, e.parsai@utoledo.edu

Author: Wayne D. Newhauser, PhD, FAAPM, FAAAS, President SDAMPP, Institution: Louisiana State University, Mary Bird Perkins Cancer Center, USA, newhauser@lsu.edu

Author: Beth A. Schueler, PhD, FAAPM, FACR, Chair of the Board SDAMPP, Institution: The Mayo Clinic, USA, schueler.beth@mayo.edu Author: Richard E. Wendt III, PhD, FAAPM, Treasurer SDAMPP, Institution: The University of Texas MD Anderson Cancer Center, USA, rwendt@mdanderson.org

Acknowledgments: We would like to thank the founders of SDAMPP for their foresight in forming this Society and to AAPM for their support in its creation. The Society acknowledges with gratitude the collegial and tireless collaborations with AAPM, CAMPEP, and ABR. We would like to acknowledge the members of our committees and our membership-at-large, who contribute much to medical physics education and training.