

AAPM Medical Physics Practice Guidelines

Dan Pavord

Chair AAPM Subcommittee on Practice Guidelines

Conflict of interest

- None

Learning objectives

- A. To learn about the purpose of MPPGs.
- B. To learn about how MPPG topics are identified.
- C. To learn about the differences between an MPPG and a TG.
- D. To learn about recently published and upcoming MPPGs.

A little history

- Subcommittee on Practice Guidelines (SPG) formed in 2007
- Maria Chan was first chair
- Original focus was on reviewing TG reports for professional issues
- From the first meeting minutes in 2008:
 - Proposal for the establishment of Minimum Practice Recommendations (MPR). The MPR, similar to Clinical Implementation Guide, can serve as a supplement to the TG report, if needed.
- This evolved into the Medical Physics Practice Guideline (MPPG)
- In 2012 it was decided to make MPPGs the sole focus of SPG and TG reviews were made the responsibility of the Practice Environment Subcommittee

Purpose of MPPGs

- Goal is that practice guidelines is to set minimum guidance for physics, but will discuss role of other team members involved in the practice
- MPPG's should not be at the level of task group report recommendations but at the level of minimum practice. Past issue has been incorporation by regulatory agencies.
- Medical Physics Practice Guidelines (MPPG) Intended to provide the medical community with a clear description of the minimum level of medical physics support that the AAPM would consider to be prudent in all clinical practice settings.
- Staffing, equipment, machine access, and training.
- Not designed to replace extensive Task Group reports or review articles, but rather to describe the recommended minimum level of medical physics support for specific clinical services.

Difference between MPPG and TG

TG	MPPG
Provides complete educational and scientific basis for recommendations	Uses expertise of group members to establish minimum procedural guidelines
Recommendations include all potential tests and narrow tolerances for items	Recommendations include minimum practice and safety standards for implementation
Several years to develop	1 year to develop
Should be used by clinics with more bandwidth and resources	Should be used by clinics with less bandwidth and resources
Should not be used to inform regulators of QA standards	Should be used to inform regulators of minimum QA standards

Coordination of TGs and MPPGs

- Current work on TG/MPPG process
- Create explicit process for TG and MPPG coordination
- Need for MPPG considered as part of TG creation
- Parallel work to shorten time frame

Structure of SPG

- The SPG membership will include one standing member each from the Therapy Physics Committee (TPC) and Imaging Physics Committee (IPC) of Science Council, and the Government and Regulatory Affairs Committee (GRAC) of Administrative Council.
- The SPG leadership structure will include a Chair, a Vice Chair for Imaging Physics Guidelines, and a Vice Chair for Therapy Physics Guidelines.
- Other members of the SPG will be selected by its Chair(s) or the parent committee, CPC, Chair(s).
- MPPG chairs are members of SPG until publication

Selection of MPPG topics

SPG is responsible for developing a list of appropriate subjects, including a prioritization for their development.

The Clinical Practice Committee (CPC) is responsible for reviewing the list, the prioritization, and for providing suggested revisions.

PC is responsible for final review and approval

Selection of MPPG topics

- Where does SPG get ideas for topics?
 - MPPGs must be updated every 5 years
 - SPG members
 - AAPM members, see BBS page (Y90)
 - Science Council
 - Survey of existing guidance for gaps (HDR)

MPPGs published as of 3-1-2022

- [AAPM Medical Physics Practice Guideline 3.b: Levels of supervision for medical physicists in clinical training](#) published in the [Journal of Applied Clinical Medical Physics \(JACMP\)](#). Volume 22, Number 6 (2021). [ISBN: 978-1-936366-45-3]
 - [AAPM Medical Physics Practice Guideline 3.a: Levels of supervision for medical physicists in clinical training](#) published in the [Journal of Applied Clinical Medical Physics \(JACMP\)](#). Volume 16, Number 3 (2015). [ISBN: 978-1-936366-45-3]
- [AAPM Medical Physics Practice Guideline 2.b: Commissioning and quality assurance of X-ray-based image-guided radiotherapy systems](#) published in the [Journal of Applied Clinical Medical Physics \(JACMP\)](#). Volume XX, Number X (2021). [ISBN: 978-1-936366-27-9]
 - [AAPM Medical Physics Practice Guideline 2.a: Commissioning and quality assurance of X-ray-based image-guided radiotherapy systems](#) published in the [Journal of Applied Clinical Medical Physics \(JACMP\)](#). Volume 15, Number 1 (2014). [ISBN: 978-1-936366-31-6]
- [AAPM Medical Physics Practice Guideline 1.b: CT Protocol Management and Review Practice Guideline](#) published in the [Journal of Applied Clinical Medical Physics \(JACMP\)](#). Volume 22, Number 6 (2021). [ISBN: 978-1-936366-27-9]
 - [AAPM Medical Physics Practice Guideline 1.a.: CT Protocol Management and Review Practice Guideline](#) published in the [Journal of Applied Clinical Medical Physics \(JACMP\)](#). Volume 14, Number 5 (2013). [ISBN: 978-1-936366-27-9]

MPPGs published as of 3-1-2022

- AAPM Medical Physics Practice Guideline 7.a.: Supervision of medical physicist assistants published in the Journal of Applied Clinical Medical Physics (JACMP). Volume 21, Number 7 (2020).
- AAPM Medical Physics Practice Guideline 8.a.: Linear accelerator performance tests published in the Journal of Applied Clinical Medical Physics (JACMP). Volume 18, Number 4 (2017).
- AAPM Medical Physics Practice Guideline 6.a.: Performance characteristics of radiation dose index monitoring systems published in the Journal of Applied Clinical Medical Physics (JACMP). Volume 18, Number 4 (2017).
 - *MPPG 6.a has been extended until the TG report comes out for an MPPG group to review.*
- AAPM Medical Physics Practice Guideline 5.a.: Commissioning and QA of Treatment Planning Dose Calculations — Megavoltage Photon and Electron Beams published in the Journal of Applied Clinical Medical Physics (JACMP). Volume 16, Number 5 (2015). [ISBN: 978-1-936366-48-4]
- Medical Physics Practice Guideline 4.a: Development, implementation, use and maintenance of safety checklists published in the Journal of Applied Clinical Medical Physics (JACMP). Volume 16, Number 3 (2015). [ISBN: 978-1-936366-46-0]

MPPGs published as of 3-1-2022

- [AAPM Medical Physics Practice Guideline \(MPPG\) 12.a: Fluoroscopy Dose Management](#) published in the [Journal of Applied Clinical Medical Physics \(JACMP\)](#). Volume XX, Number X (2022).
- [AAPM Medical Physics Practice Guideline \(MPPG\) 11.a: Plan and Chart Review in External Beam Radiotherapy and Brachytherapy](#) published in the [Journal of Applied Clinical Medical Physics \(JACMP\)](#). Volume 22, Number 9 (2021).
- [AAPM Medical Physics Practice Guideline 10.a.: Scope of practice for clinical medical physics](#) published in the [Journal of Applied Clinical Medical Physics \(JACMP\)](#). (2018).
- [AAPM-RSS Medical Physics Practice Guideline 9.a. for SRS-SBRT](#) published in the [Journal of Applied Clinical Medical Physics \(JACMP\)](#). Volume 18, Number 4 (2017).



MPPG citations

Number of citations for MPPGs

MPPG	Year	Topic	as of 6-24-20	as of 11-3-21	AM score
1a	2013	CT Protocol Management	14	14	3
1b	2021	CT Protocol Management	na	0	3
2a	2014	X-ray Based IGRT	18	21	0
2b	2021	X-ray Based IGRT	na	0	2
3a	2015	Levels of Supervision	4	4	0
3b	2021	Levels of Supervision	na	0	2
4a	2015	Safety Checklists	12	18	0
5a	2015	Commissioning and QA of TPS	57	97	3
6a	2017	Radiation Dose Index Monitoring Systems	7	12	4
7a	2020	Supervision of MPAs	0	1	1
8a	2017	Linac Performance Tests	20	39	14
9a	2017	SRS-SBRT	22	44	11
10a	2018	Scope of Practice	4	9	5
11a	2021	Plan and Chart Review	na	0	6

For details see the Information section on the MPPG article page in JACMP

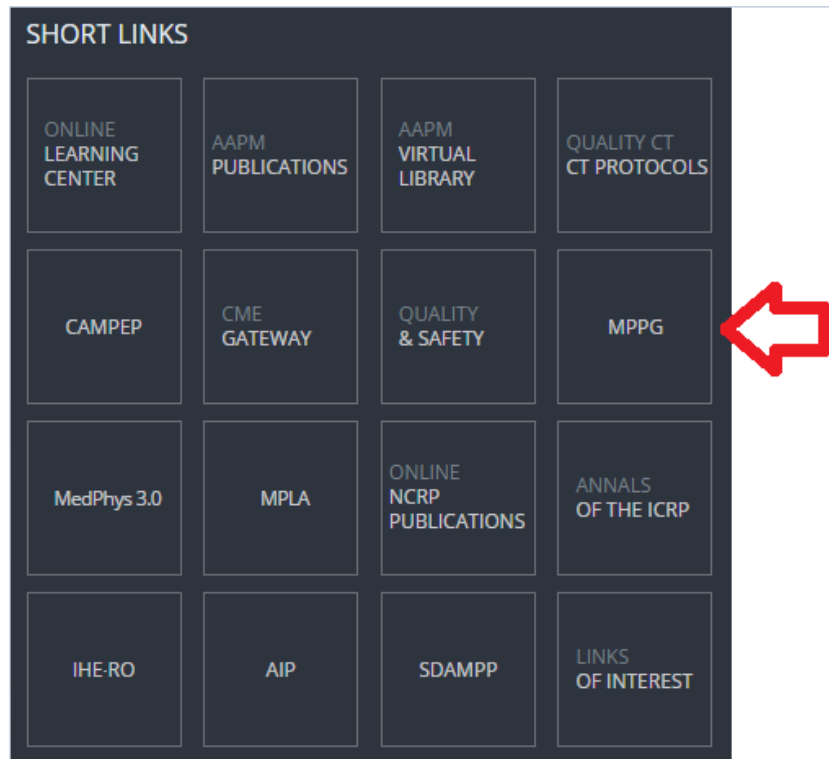
The AM score is highly correlated with Tweets and Facebook mentions

MPPG process

- Identification of topic
- Selection of chair and members
- Topic approval (day 0)
- Preparation of draft (day 90)
- Report to SPG for approval (day 210)
- Concurrent CPC and PC approval (day 240)
- Member comment (day 270)
- SPG approval (day 300)
- Concurrent CPC and PC approval (day 330)
- EXCOM approval (day 365)
- Submit for publication (day 400)
- Publication (day 490)

MPPG resources

- MPPG link on AAPM web site



Medical Physics Practice Guidelines

Scope

MPPGs are intended to provide the medical community with a clear description of the minimum level of medical physics support that AAPM would consider to be prudent in all clinical practice settings. Support includes but is not limited to staffing, equipment, machine access, and training. These MPPGs are not designed to replace extensive Task Group reports or review articles, but rather to describe the recommended minimum level of medical physics support for specific clinical services.

To help identify gaps in guidance on various clinical topics, the Subcommittee on Practice Guidelines invites AAPM members to propose Medical Physics Practice Guideline (MPPG) topic ideas and to comment on proposed topics. You can do so in the [MPPG Ideas forum](#) on the BBS. Please read the [stickied post](#) there for more information on the MPPG initiative and the topic proposal process.

If you have any questions or suggestions, please contact [Nicholai Wingreen](#) who will coordinate all questions and suggestions for consideration to the leaders of the Council and committee.

Published Guidelines

MPPG resources

- BBS link
- <https://www.aapm.org/bbs/forums/forum-view.asp?fid=152>

BULLETIN BOARD

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Welcome, user Pavord_117

There are **0 other users** online (0 registered, 0 guests).

MPPG Ideas

MPPG resources

- Newsletter article

AAPM Newsletter | November/December 2021
Volume 46, No. 6

SO, WHAT ARE MPPGs AND WHY SHOULD I BE AWARE OF THEM?

SUBCOMMITTEE ON PRACTICE GUIDELINES REPORT

Daniel C. Pavord, MS | Allegheny General Hospital

Arthur J. Olch, PhD | Children's Hospital of LA

Mary A. Keenan, DMP | Vanderbilt University Medical Center



D. Pavord,
Subcommittee Chair



A. Olch,
Subcommittee Vice Chair



M. Keenan,
Subcommittee Vice Chair

Email:

dan.pavord@gmail.com

aolch@chla.usc.edu

mary.a.emmons@vanderbilt.edu

AAPM Subcommittee on Practice
Guidelines **Members:**

Muthana S.A. L. Al-Ghazi, PhD

Nathan C. Busse, MS

Leigh A. Conroy, PhD

Ryan F. Fisher, PhD

Jonas D. Fontenot, PhD

Mark W. Geurts, MS

Eric L. Gingold, PhD

Per H. Halvorsen, MS

Robert F. Krauss, DMP

Susan L. Richardson, PhD

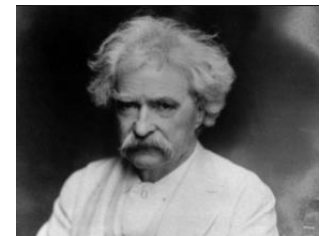
John M. Wait, MS

A concise description is found on the MPPG web page:

"MPPGs are intended to provide the medical community with a clear description of the minimum level of medical physics support that AAPM would consider to be prudent in all clinical practice settings. Support includes but is not limited to staffing, equipment, machine access, and training. These MPPGs are not designed to replace extensive Task Group reports or review articles, but rather to describe the recommended minimum level of medical physics support for specific clinical services." AAPM has made a clear and

AAPM Policy on MPPGs

- AP 115-A, Guidelines for Presentation of TG, WG, and MPPG Reports at AAPM Meetings
 - Requirements for presenting
 - Presentation of final results/recommendations of the Group
 - Reports/papers must have minimally reached **the stage of Council level approval** by the time the invitation to present is issued. (SPG practice is accepted for publication by time of presentation)
 - **All presentations must be SAM** and recorded for inclusion in the virtual library
 - For presentations in which the Group is requesting feedback from the medical physics community to help them address their charges:
 - The Group must have support for the presentation by their parent organization (WG, subcommittee, committee, or Council).
 - The title of the meeting presentation and abstract must make it clear that this is not a presentation of final findings/recommendations. The speaker must also state the same during the presentation.
 - AAPM reports/papers may not be submitted or presented as proffered talks. **Reports will be presented as invited symposia.**
 - All reports will be presented at only **one national AAPM meeting.**
 - Additional presentation at AAPM Chapter meetings is allowed.



What can you do?

- Be a member of SPG
- Contribute as a member of MPPG writing group
- Implement in your clinic
- Give feedback during public comment period for initial publication and that can be incorporated into 5 year updates
- Make your regulators and accreditation bodies aware of the existence of and your use of MPPGs

Acknowledgements

- Previous chairs
- Brent Parker 2017-2019
- Russ Tarver 2014-2016
- Maria Chan and Joann Prisciandaro 2012-2013
- Maria Chan 2007-2012

Acknowledgements

Leigh Conroy
Mark Geurts
Eric Gingold
Per Halvorsen
Mary Keenan
Robert Krauss
Art Olch
Dan Pavord
Susan Richardson
Matt Wait
Nick Wingreen

VOTING Appointments There are 10 voting members.



Leigh A. Conroy, PhD
leigh.conroy@mp.sibs.cnl.ca
12/1/2019 - 12/31/2022 Chair, Task Group
No. 344 - Medical Physics Practice Guideline
4.b (ex officio)



Mark W. Geurts, MS
mark.geurts@espinus.org
9/20/2019 - 12/31/2022 Chair, TG347 -
MPPG 5.b: Commissioning and QA of
Treatment Planning Dose Calculators (ex
officio)



Eric L. Gingold, PhD
eric.gingold@yellerson.edu
9/5/2017 - 12/31/2023 Member



Per H. Halvorsen, MS
per.halvorsen@gmail.com
1/1/2021 - 12/31/2022 Chair, Medical
Physics Practice Guideline 75.a: Peer Review in
Clinical Physics (TG.25A) (ex officio)



Mary A. Keenan, DMSc
mary.keenan@vaia.org
3/23/2017 - 12/31/2022 Subcommittee Vice
Chair - Imaging



Robert F. Krauss, DMSc
rob.krauss@cmethhealth.com
5/25/2021 - 12/31/2022 Chair, Medical
Physics Practice Guideline 8.b: Linear
accelerator performance tests (ex officio)



Arthur J. Olch, PhD
aolch@chla.usc.edu
8/2/2017 - 12/31/2023 Subcommittee Vice
Chair - Therapy



Daniel C. Pavord, MS
dan.pavord@gmail.com
1/1/2020 - 12/31/2022 Subcommittee Chair



Susan C. Richardson, PhD
Susan.Richardson@sonedsh.org
6/11/2020 - 12/31/2022 Chair, Task Group
No. 348: MPPG 13.a: HDR Brachytherapy (ex
officio)



James M. Wait, MS
johm.wait@kp.org
9/5/2017 - 12/31/2023 Member



NON-VOTING Appointments

There are 0 non-voting members and guests.

HQ Team Appointed to Committee

There are 1 staff.



Nicholas Wingreen, BA
nicholai@vaia.org
5/1/2017 - 12/31/2022 Programs Manager (ex officio, nonvoting)

