

Original Publication

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Physician Time Management

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Abstract

Introduction: Time management is an essential skill set for physicians. The importance of time management is not routinely emphasized in undergraduate or graduate medical education curricula, often resulting in the development of poor time-management practices early in training. Improving time-management practices may lead to decreased stress, increased productivity, and improved well-being for physicians. **Methods:** This interactive workshop targeted trainees and junior faculty. It aimed to highlight common physician knowledge gaps with respect to cognitive limitations and to teach effective time-management strategies. It also aimed to educate learners about how time management may increase physician career satisfaction. The workshop included a detailed presentation with structured resources to reinforce skill development. **Results:** This workshop was given four times to 54 residents in two different training paradigms. Evaluations were based on a 4-point Likert scale (1 = *Strongly Disagree*, 4 = *Strongly Agree*). Overall, participants indicated that the workshop addressed an educational need ($M = 3.72$) and would recommend this workshop to a colleague ($M = 3.83$). Follow-up survey results at 4 months indicated that most workshop participants had noticed some degree of improved productivity and well-being, that only a small minority had not incorporated new elements of time management into routine practices.

Discussion: This workshop offers an effective way to teach time-management strategies to physicians. Our results imply that this workshop meets an early career physician need by addressing a necessary skill set. Effective time-management skills may promote physician career sustainability.

Keywords

Faculty Development, Time Management, Professional Development, Career Satisfaction, Physician Well-Being

Educational Objectives

By the end of the workshop, participants will be able to:

1. Recognize the critical value of effective time management for physicians.
2. Describe cognitive limitations and common practices that contribute to mismanaged time.
3. Discuss the importance of identifying and maintaining prioritized goals.
4. Compare strategies for structuring workflow to effectively manage time.

Introduction

Time management is a constant personal and professional challenge for physicians. Duty to the patient is a unique professional responsibility that regularly challenges physician time management. The duty of patient care and the unpredictability of work given interruptions, unforeseen patient-care-management changes, emotional and physical fatigue, and erratic schedules or work duties, may not be entirely controllable or changeable. Time-management resources available from other industries, largely business, often fail to fully address time-management needs that result from duty to the patient. Thus, the conceptual framework for time-management strategies presented in this workshop is derived in part from these business-centered concepts but, more importantly, from the medical literature, where time-management strategies have been adapted to the unique environment of clinical and academic medicine settings.^{1,2}

Appendices

- A. Physician Time Management.pptx
- B. Productivity Reflection.docx
- C. Tim Urban TED Talk 2016 .mp4
- D. Multitasking Exercise.docx
- E. Time-Management Inventory.docx
- F. Values, Goals, Priorities .docx
- G. Allocating Time.docx
- H. Structuring Workflow.docx
- I. Workshop Evaluation Form .docx
- J. Follow-Up Evaluation Form .docx

All appendices are peer reviewed as integral parts of the Original Publication.

As rates of physician burnout rise, teaching effective time-management skills may become a priority. A recent report surveying over 14,000 physicians found that from 2013 to 2017, burnout rates had risen in every specialty.³ The top two cited contributors to burnout were “too many bureaucratic tasks” and “spending too many hours at work.”³ Both of these causes contain elements that relate to time management. Therefore, as health care institutions try to address systems issues that contribute to burnout, medical education must develop training strategies that improve time-management skills. Literature supports the idea that improving individual schedule control correlates positively with physician career satisfaction. Leigh, Tancredi, and Kravitz showed that limiting clinical hours and controlling lifestyle correlate with increased physician career satisfaction.⁴ Furthermore, increased career satisfaction is associated with decreased physician burnout.^{5,6}

Teaching physician time-management skills may better prepare resident and junior faculty physicians to enter the workforce. Gordon and Borkan’s review of the medical literature found that strategies for improving physician time management were lacking; they went on to offer examples of time-management techniques that might be appropriate for physicians.² Undergraduate and graduate medical education curricula do not consistently incorporate physician time-management skills. In fact, medical education tends to focus so heavily on mastery of knowledge and skill that trainees frequently neglect individual time allocation and task prioritization in order to achieve professional mastery. By failing to routinely identify individual limits with respect to allocation of time and energy, trainees may develop poor time-management habits that ultimately lead to increased stress and decreased productivity.

Understanding the behavioral science that supports commonly taught time-management and productivity strategies may motivate physicians to use effective time-management practices. Locke and Latham’s modern goal-setting theory supports setting specific and challenging goals.⁷ Sweller’s cognitive load theory argues both against multitasking and for proper time allocation.^{8,9} Moreover, studies of the physician workplace have demonstrated the frequency of interruptions routinely experienced by physicians, highlighting the importance of professional time-management skills.^{10,11} However, we found few publications in the medical literature regarding physician-specific personal and professional time-management skills, and no such resources for teaching these skills.

This interactive workshop is submitted as part of the Fundamentals of Mentoring training series designed to assist mentors and instructors in teaching mentees (i.e., trainees and junior faculty) the core professional sustainability skills that promote work-life integration.^{12,13} Specifically, this session aims to highlight the important relationship between time-management skills and physician career satisfaction, and explores the importance of utilizing strategies that promote efficient time management.

Methods

The target audience for this workshop included resident, fellow, and junior faculty physicians. The workshop was offered as part of program-specific (emergency medicine and transitional year) professional development didactics. Specific attendance at this session was not required. No prerequisite knowledge, skills, or resources were required to attend the workshop. Instructors leading these sessions were physicians who possessed both an understanding of the time-management strategies described in this workshop and firsthand experience of the challenges that arise in managing the time of a practicing physician.

As mentioned previously, the duty of patient care and the unpredictability of work for physicians may not be entirely controllable or changeable. Additional training and mastery of an electronic medical record (EMR) system or use of scribes, advanced providers, or other medical assistants may provide further help with patient-care duty, but such resources are not universal across medical specialties. Because limiting clinical hours and controlling lifestyle have been shown to correlate with increased physician career satisfaction and because physician patient-care resources are not universal across the spectrum of

medical practice, we elected to focus workshop content on time-management skills that may be applied to the controllable elements of any physician's personal schedule and life.⁴

We began with a 60-minute didactic presentation that focused on content collected from personal experiences, anecdotal physician-colleague experiences, academic faculty development about time-management concepts, and behavioral psychology literature. After both incorporating learner feedback and contemplating workshop efficacy in February 2017, we selected the interactive workshop model to enhance learner participation, maximize knowledge retention through active learning, and focus on individual learner needs. We also reorganized and augmented the original content, adding literature regarding the demand for the physician's time and on physician well-being. Additionally, this session was lengthened to a 90-minute workshop that allowed for small-group activities to emphasize learning objectives. We created all appendices in this resource to support the workshop format and followed the suggested time line outlined in [Table 1](#) when delivering the workshop.

Table 1. Suggested Time Line for 90-Minute Workshop

Time	Item	Presentation Slides and Activities	Appendix	Educational Objective
8 min.	Introduction, framing, and learning objectives	Slides 1-7 Slides 3 & 5 large-group responses	A	1
7 min.	Productivity reflection and discussion	Slide 8 Work in groups of 2-3 (pair) to discuss, then share in large group.	A, B	1, 2
5 min.	Time management and physician well-being	Slides 9-11	A	1
8 min.	Procrastination	Slide 12	A, C	2, 3
5 min.	Priorities and goals	Slides 13-14	A	3
5 min.	Multitasking myth	Slides 15-16 Ask participants to complete activity, then discuss.	A, D	2
5 min.	Cognitive load theory	Slides 17-18	A	2
3 min.	Where is time spent?	Slide 19	A	2, 3
5 min.	Managing workflow	Slides 20-22	A	4
5 min.	Time-Management Inventory	Slides 23-24	A, E	4
30 min.	Small-group activities	Slide 25	F, G, H	3, 4
1 min.	Conclusion and summary	Slides 26-27	A	1, 2, 3, 4
3 min.	Q&A and program evaluation	Open to discussion. Complete evaluation.	I	

When leading this workshop session, instructors used the Physician Time Management (Appendix A) PowerPoint presentation. We designed this detailed, self-contained presentation to deliver comprehensive background content framing the topic of physician time management, and to provide suggested presentation language, cues for interactive activities, and citations in the notes section of each slide. We provided copies of Appendices B, and D through I, for each workshop participant. We designed the Productivity Reflection (Appendix B) as an early workshop reflection exercise to stimulate engagement and discussion by inviting learners to consider individual time-management needs and common barriers to effective time-management practices. To generate discussion about the practice of procrastination, we also incorporated portions of the Tim Urban TED Talk 2016 (Appendix C), an impactful TED Talk titled "Inside the Mind of a Procrastinator." To demonstrate the limits of human cognitive load, we adapted the Multitasking Exercise (Appendix D) from Crenshaw to challenge learners to match productivity in two different cognitive environments: one that allows for singular task completion and one that introduces competing tasks.¹⁴ Following the presentation of physician time-management concepts and of the supporting literature, we used the Time-Management Inventory (Appendix E) to guide participants in both identifying their greatest time-management needs and developing a personal time-management strategy. Participants were then able to join a small group of their choice based on needs identified by the Time-Management Inventory. The small groups, led by us, used the Values, Goals, Priorities (Appendix F), Allocating Time (Appendix G), and Structuring Workflow (Appendix H) guides to build skills and facilitate discussion in these respective areas of time management, using topics generated by participants to drive small-group discussions.¹⁵⁻¹⁹ Finally, we used the Workshop Evaluation Form (Appendix I) and Follow-Up Evaluation Form (Appendix J) to gain valuable participant feedback on the workshop objectives, content, and practical applications.

Results

This workshop was delivered four times in the emergency medicine and transitional year residency training programs. A total of 54 workshop evaluations were collected from 15 transitional year residents and 39 emergency medicine residents, yielding a response rate of 65.9%. Overall, the workshop was well received. Participants strongly agreed or agreed that the session was presented in an organized manner and provided an opportunity for interactive learning. In terms of content, participants strongly agreed or agreed that the workshop met its stated objectives and addressed a specific educational need. In addition, all participants strongly agreed or agreed that they would recommend this workshop to their colleagues. Table 2 summarizes evaluation data from the four groups of workshop attendees.

Table 2. Average Time-Management Workshop Evaluation Scores for Four Different Workshops

Evaluation Question ^a	EM Residents	TY Residents	TY Residents	EM Residents	Overall Average (N = 54)
	08/03/17 (N = 31)	08/02/17 (N = 12)	01/04/17 (N = 3)	02/10/16 (N = 8)	
This session met its stated objectives.	3.81	3.75	3.67	4.00	3.81
This session information was presented in an organized manner.	3.90	3.75	4.00	3.88	3.87
The presenter created an opportunity for interactive learning.	3.86	3.92	4.00	3.88	3.87
This session referenced current practices and evidence.	3.77	3.67	4.00	3.75	3.76
The scope of topic(s) was relevant to my level of training.	3.68	3.83	3.67	3.88	3.74
This session addressed a specific educational need.	3.65	3.83	4.00	3.75	3.72
I will use information learned in this session to enhance my practice.	3.81	3.83	4.00	3.75	3.81
I would recommend that my colleagues attend this session.	3.81	3.83	4.00	N/A	3.83 ^b
Overall rating of session (1 = Poor, 4 = Excellent)	3.87	3.75	4.00	3.88	3.85
Overall rating of presenter (1 = Poor, 4 = Excellent)	3.90	3.75	4.00	3.88	3.87
Was this session fair-balanced and free from commercial bias? (1 = No, 4 = Yes)	4.00	4.00	4.00	4.00	4.00

Abbreviations: EM, emergency medicine; TY, transitional year.

^aExcept where indicated, scoring was based on a 4-point Likert scale (1 = Strongly Disagree, 4 = Strongly Agree).

^bAverage based on N = 46 after excluding evaluations with N/A response to this question.

Participants were asked two open-ended questions on the evaluation form in order to provide qualitative feedback: “What was the best thing about this session?” and “What one thing about this session would you like to see improved?” Over half of the participants cited the small-group discussions as the best thing about the session, followed by the specific time-management tools and practical advice. In terms of improvement, the most common feedback was to provide more time for the small groups and workshop activities. The main themes of these results are summarized in Table 3. In addition, at the completion of two of the workshops, attendees were asked to create a word cloud for the following question using Poll Everywhere software: “What is one thing you learned and plan to use after this workshop?” The most common words collected were *goals, calendar, apps, tasks, priorities, and time*.

Table 3. Qualitative Evaluation of Four Different Time-Management Sessions

Evaluation Question	Main Themes (N = 54)
“What was the best thing about this session?”	<ul style="list-style-type: none"> • Small-group work/sessions • Time-management tools and resources provided • Practical advice • Real-life applications • Technology tools and phone apps • Interactive nature of the workshop
“What one thing about this session would you like to see improved?”	<ul style="list-style-type: none"> • More time for group discussion • More time to complete all three worksheets • More technology/phone app examples

Participants in the two August 2017 workshops were asked to complete a follow-up survey 4 months after the workshop. A total of 14 follow-up evaluations were collected from 65 participants, yielding a response rate of 21.5%. Participants were asked the following question: “Please list any formal time-management education prior to your attendance at this workshop.” No participants reported any formal time-management education prior to attending this workshop. Four additional questions were asked, and they are provided along with participant responses in Table 4.

Table 4. Qualitative 4-Month Follow-Up Evaluation of August 2017 Time-Management Workshops

Evaluation Question	Main Themes (N = 14)
"Have you incorporated any specific elements from this workshop into personal time-management practices?"	<ul style="list-style-type: none"> • Scheduling tasks and allocating time (71.4%) • Identifying individual values and priorities (64.3%) • Task prioritization (42.9%) • Generating effective goals (42.9%) • Leveraging technology (35.7%) • Preparing a mission statement (21.4%) • Defining specific goal-related tasks (21.4%) • Capturing ideas and tasks (14.3%) • No, I have not incorporated any (14.3%)
"What barriers have impeded implementation of recommended time-management practices?"	<ul style="list-style-type: none"> • Hijacked time or competing priorities (42.9%) • Time wasters (42.9%) • No perceived barriers (28.6%) • Procrastination (21.4%) • Lacking goals or goal clarity (21.4%) • Recommendations felt overwhelming and I didn't know where to begin (14.3%)
"What additional resources could this workshop have provided to better promote effective time-management practices?"	<ul style="list-style-type: none"> • Effective time allocation in the workplace • Recommended implementation plan for incorporating strategies and tools • Listing of recommended time-management tools • Listing of outside work activities
"In the 4 months since this workshop, what differences have you noticed relative to stress, productivity, and well-being as a physician?"	<ul style="list-style-type: none"> • Improved productivity, improved well-being, or decreased stress (8 comments) • No change (4 comments) • Positive impact of applying at least one new time-management strategy (3 comments) • Decreased productivity (1 comment)

Discussion

This time-management workshop provides mentors and instructors in academic medicine a method to teach key skills and assist trainees and junior faculty in improving career satisfaction as a result of increased productivity and decreased stress through a variety of time-management strategies. The current medical practice environment in the United States generates unprecedented physician time demands from elements such as high patient volumes and regulatory requirements. In such a practice climate, the importance of physician time management cannot be overstated. The literature suggests that both high-volume practices and EMR use may erode career satisfaction and contribute to physician burnout.^{20,21} The literature also suggests that improving physician career satisfaction may lead to decreased burnout and attrition rates.⁵ Therefore, time-management education for physicians can potentially provide ongoing benefits not only to the physician but also to employers and patients.

Workshop evaluation results indicated that the session was well received by the target audience and that it provided a specific educational need. Follow-up survey results indicated that the majority of respondents noticed improved productivity and well-being after attending the workshop. Additionally, results suggested that this workshop offers practical time-management strategies that participants can employ immediately. Results indicated that the most commonly incorporated element was scheduling tasks and allocating time. A minority of respondents indicated that they had not incorporated any new elements of time-management practices. However, results suggested that both time wasters and hijacked time continued to limit effective time management for respondents. These results imply that addressing time management early in a physician's career provides a necessary skill set.

Reflections From the Instructors

The qualitative evaluation feedback reinforces the structure and content of the workshop and provides ideas to incorporate for improvement. While the small-group sessions and tools were praised, participants wanted more time to spend in these discussions and hands-on work with the tools. In the future, we plan to expand the time of the workshop by 30 minutes to accommodate this feedback. Additional time could also allow participants to engage in multiple small groups during the workshop. Based on feedback, we will consider adding specific incremental implementation strategies for learners. Although these data were collected by offering the session as part of residency didactic series, we feel that the session will also work well as a stand-alone workshop.

In facilitating the small-group sessions, we recommend using this resource to identify individual learner needs and then facilitate group discussion to identify common needs. Focusing small-group discussion on one or two common needs allows the group to generate concrete application examples specific to the strategy under discussion. Focusing on commonalities within the group also improves learner engagement and may allow the facilitator to demonstrate specific examples of application.

Longitudinal anecdotal observations from collectively teaching the topic for over 30 years include the following: Very few learners had ever received any formal training in time-management skills in high school, college, medical school, or residency; very few learners had any intentional experience with retrograde planning of large projects or with how to effectively manage calendar deadlines; very few learners had ever written goals or defined a mission statement; the majority of learners did not routinely engage in task prioritization or in linking tasks to larger goals; and the majority of learners self-rated their ability to multitask as good or better while simultaneously endorsing problems with procrastination. Interestingly, these observations have held steady over 30 years, except for an increasing observation of learners who self-rate their multitasking skills as good or better.

Limitations/Challenges

While the workshop was developed for junior-level faculty as well as residents, there was no formal assessment of any faculty participants, and therefore, we are unable to assess the content's potential impact on this audience. There was limited longitudinal assessment of impact on career satisfaction, success, and mitigation of potential burnout. Finally, while participants rated the quality and content of the workshop, we collected only qualitative data regarding learner incorporation of recommended time-management strategies and potential impact on learner stress management, productivity, and well-being.

Conclusion

Time-management education is important for all physicians, beginning early in their careers as students or trainees. This workshop provides the background information and tools to teach these important time-management skills in an effort to increase productivity, decrease stress, and ultimately improve career satisfaction and personal well-being. With greater career satisfaction, physicians experience less burnout. Thus, time-management skills are one key to personal and professional success for physicians.

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Ethical Approval

Reported as not applicable.

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