Nutrition in Medical Education: Where do we stand and what needs to be explored?

Rachel Flint, Kathleen Kline, Zhiyong Han, Mark Elliott, Natalie Nicolas, & Rosaly A. Jurjus
School of Medicine and Health Sciences

INTRODUCTION

Dietary interventions and nutrition care are important strategies to prevent diseases, improve patient outcomes, and reduce healthcare costs. Despite status as a necessary topic in medical school education, many U.S. medical schools do not adequately prepare future physicians for everyday nutritional challenges in clinical practice. Out of 86% of U.S. medical schools that responded to a 2010 nutrition education survey, only about 25% required a dedicated nutrition course and only 27% of schools met the required 25 hours set by the National Academy of Sciences. These are both decreases from the same survey in 2004 where 30% required a dedicated nutrition course and 38% met the required 25 hours.1 Most intern in medicine, surgery, and obstetrics have reported that they feel unprepared to handle cases requiring knowledge of clinical nutrition2,3,4,5. There is a lot of literature stating that nutrition education is essential6,7,8 but little concerning the methods of implementing this change. The purpose of this work was to review the current innovations of nutrition curriculum in the literature and discuss future directions for our medical school.

METHOD

A systematic search of the literature was performed to examine the current state of nutrition curriculum in medical schools and identify current methods of improving nutrition curriculum. Key words used in this search were: “nutrition curriculum”, “medical school”, “medical students”, “nutrition education”, “clinical nutrition” and “nutrition care”. A database search of the undergraduate GW SMHS curriculum was performed to help map where nutrition is currently taught and investigate methods of further expansion and integration. Keywords used for this search were: “nutrition” and “diet.”

RESULTS

Shortcomings in sufficient nutrition education result from lack of proficient faculty, low funding, and lack of established core curricula with guidelines and protocols. Additionally, international medical schools have recognized their deficiency in nutrition education compared to U.S. standards. U.S. institutions making headway in new nutrition education programs include The University of North Carolina, Chapel Hill; Boston University School of Medicine; Southern Illinois School of Medicine; University of Nevada School of Medicine; Northwestern University Feinberg School of Medicine; University of Colorado School of Medicine; Mercer University School of Medicine; and various institutions introducing “culinary medicine”: hands-on training that combines cooking with nutrition topics. Brief descriptions of the key features of these programs are displayed in Table 1. Successful nutrition integration should be spread longitudinally across all years with an emphasis on active-learning techniques over rote memorization. Creativity, senior support, an established taskforce, trained faculty, learning objectives, and evaluation methods are essential tools to enhance medical curriculum. Looking specifically at GW SMHS curricula, nutrition is concentrated in the Pre-Clinical years with little emphasis in the Clinical years, a common trend across most medical schools. Table 2 indicates the previous nutrition curriculum at GW SMHS for academic year 2015-2016. Since then, GW SMHS has revised some of their nutrition curricula and added sessions in nutrition topics relevant to today’s most common nutrition-related conditions for the current 2016-2017 academic year as seen in Table 3.

CONCLUSION

Medical students may be more confident incorporating nutrition into patient care if nutrition were spread proportionally across all years to combine basic foundations with clinical application. Time constraints and lack of faculty are the primary obstacles to expanding nutrition education but the initiatives modeled above can pave the way for improvement. Expanding nutrition curriculum at GW SMHS could involve utilizing the NIM project developed by The University of North Carolina, Chapel Hill since it is web-based and portable. An additional option is creating a fourth-year elective focused on clinical nutrition topics that integrate the latest nutrition research in a clinical context. Considering culinary medicine, it could be beneficial to bring in internationally renowned chef José Andrés to expand on his previous culinary courses at GWU and incorporate nutrition fundamentals into the medical curriculum. Future directions need to evaluate existing programs, current initiatives, and their effectiveness in order to be able to improve programs across the continuum. It should also be acknowledged that since different medical specialties have different roles for nutrition in their practice, each should adopt expected nutrition competencies and develop methods of training and evaluation to ensure that these minimal competencies are achieved and maintained so that interns of these specialties feel more confident providing nutrition counseling when necessary.

Table 1. Results from a systematic search of scientific literature databases to identify current methods of improving nutrition curriculum in medical schools in the U.S.

Table 2. Results from the database search of undergraduate GW SMHS curricula from the 2015-2016 academic year. The sessions are listed in Pre-Clinical and Clinical years to map the assortment of nutrition-focused sessions across all years of medical education.

Table 3. Changes made to the GW SMHS curricula for the 2016-2017 academic year.

REFERENCES

1 Adams, Kohlmeier, & Zeisel. Acad. Med. 2010, 85(9), 1537