

American Osler Society, William B. Bean Student Research Award
Medical Humanities Research Project Proposal

Graphic Medicine: Comics as a Therapeutic and Teaching Tool in Gynecologic Oncology Clinics

Graphic medicine, a coin termed by Dr. Ian Williams in 2007,¹ is a relatively new field that merges the disciplines of medicine and graphic narrative. Through the visual medium of comics and graphic novels, these healthcare stories give voice to patient narrative and can enhance patient-provider communication. In recent years, many acclaimed graphic medicine novels have been published, including M.K. Czerwiec's *Taking Turns* and Brian Fies' *Mom's Cancer*. Indeed, several authors have even written extensively about the potential benefits of implementing comics as a mode of communication in healthcare settings.^{1,2} For example, because the discipline explores health topics through the visual aid of comics, it may appeal more to visual learners and can reinforce healthcare providers' verbal discussions. This reinforcement may be especially helpful for explaining complex topics such as chemotherapy. Moreover, this type of educational material may be more accessible for patient audiences facing low literacy rates or language barriers. Such accessibility issues are particularly relevant in Louisiana, where this project will be implemented. Indeed, Louisiana has an average reading level of 4th grade, below that of the national public;³ therefore, parsing the medical jargon and paragraphs of typical informational brochures may be especially detrimental to this patient population.

Despite graphic medicine's numerous advantages, there is a paucity of research data on the topic, particularly clinical research literature. While some promising research projects have developed health

¹ Williams, Ian C M. "Graphic medicine: comics as medical narrative." *Medical Humanities* vol. 38, 1 (2012): 21-7. doi: 10.1136/medhum-2011-010093.

² King, Andy J. "Using Comics to Communicate About Health: An Introduction to the Symposium on Visual Narratives and Graphic Medicine." *Health communication* vol. 32, 5 (2017): 523-524. doi:10.1080/10410236.2016.1211063.

³ "NAEP State Profiles." *The Nation's Report Card*, https://www.nationsreportcard.gov/profiles/stateprofile/overview/LA?cti=PgTab_OT&chort=1&sub=MAT&sj=LA&fs=Grade&st=MN&year=2022R3&sg=Gender%3A+Male+vs.+Female&sgv=Difference&ts=Single+Year&tss=2022R3&sfj=NP.

comics for educational purposes,^{4,5,6} very few have collected quantitative data on the usefulness of a graphic medicine intervention in clinical settings. Notable exceptions exist both in the United States and abroad;^{7,8,9,10,11} despite their encouraging results, however, the field is largely unexplored. Therefore, a graphic medicine research project has great potential to contribute to a current knowledge gap both in the field of medical humanities and also more broadly in medicine.

As such, this project aims to investigate the potential usefulness of comics as a therapeutic and teaching tool for patients in gynecologic oncology clinics. The ultimate objective is to create a narrative about a patient with a newly diagnosed cancer. Through a series of pamphlets styled as comics, readers will follow this patient through her initial diagnosis and cancer journey. Along the way, the story will explore topics such as resilience, coping, treatment options, surgery, chemotherapy, radiation therapy, and clinical trials, to name a few potential options. These pamphlets will be distributed in various oncology clinics, and patients will then be surveyed on the usefulness of this educational material.

The initial goal will be to create, implement, and collect data on one pamphlet by August 1st. Phase I (Comic Creation) will involve surveying, interviewing, and possibly conducting focus groups with gynecologic oncologists, oncology nurses and staff, and oncology patients to determine patient need and the direction of comic development. A first draft of the comic will be produced, and readability

⁴ Araya, Benjamin, et al. "Developing a Health Education Comic Book: The Advantages of Learning the Behaviours of a Target Audience." *Journal of Visual Communication in Medicine* vol. 44, 3 (2021): 1–10. <https://doi.org/10.1080/17453054.2021.1924639>.

⁵ Tarver, Talicia, et al. "A Novel Tool for Health Literacy: Using Comic Books to Combat Childhood Obesity." *Journal of Hospital Librarianship* vol. 16, 2 (2016): 152–159. <https://doi.org/10.1080/15323269.2016.1154768>.

⁶ Lee, Tzu-I, et al. "Developing a Web-Based Comic for Newly Diagnosed Women with Breast Cancer: An Action Research Approach." *Journal of Medical Internet Research* vol. 21, 2 (2019). <https://doi.org/10.2196/10716>.

⁷ Arya, Ritu, et al. "Communicating the External Beam Radiation Experience (CEBRE): Perceived Benefits of a Graphic Narrative Patient Education Tool." *Practical Radiation Oncology* vol. 10, 4 (2020). <https://doi.org/10.1016/j.prro.2019.09.001>.

⁸ Hanson, Aaron, et al. "The Feasibility of Utilizing a Comic for Education in the Emergency Department Setting." *Health Communication* vol. 32, 5 (2016): 529–532. <https://doi.org/10.1080/10410236.2016.1211076>.

⁹ Joshi, Aditya, et al. "Comics as an Educational Tool on a Clinical Clerkship." *Academic Psychiatry* vol. 43, 3 (2019): 290–293. <https://doi.org/10.1007/s40596-018-1016-1>.

¹⁰ Leung, Angela Y., et al. "Improving Health Literacy and Medication Compliance through Comic Books: A Quasi-Experimental Study of Chinese Community-Dwelling Older Adults." *Global Health Promotion* vol. 25, 4 (2018): 67–78. <https://doi.org/10.1177/1757975918798364>.

¹¹ Leung, May May, et al. "Fight for Your Right to Fruit: Psychosocial Outcomes of a Manga Comic Promoting Fruit Consumption in Middle-School Youth." *Health Communication* vol. 32, 5 (2016): 533–540. <https://doi.org/10.1080/10410236.2016.1211074>.

will be tested using the Flesch-Kincaid readability test. Another focus group will be convened before the final version of the comic is created. A last review will conclude Phase I. Phase II (Field Testing) will involve recruiting participants from several oncology practices, gathering demographic data, and distributing a pre-intervention questionnaire to assess patients' initial anxiety (via the STAI scale) and knowledge levels. After patients are given adequate time to review the comic, a post-intervention questionnaire will be distributed to assess change in anxiety and knowledge levels as well as the comic's perceived relatability, likability, and helpfulness.

Because this project will explore new territory, it will require the involvement of multiple individuals from a broad array of backgrounds. Two artists have already committed to the project. Additionally, Dr. Jason Mussell (LSUHSC Department of Cell Biology and Anatomy) and Dr. Ronja Bodola (LSUHSC Department of Psychiatry)¹² have agreed to mentor the project alongside several gynecologic oncologists practicing in Louisiana (Dr. Cheng, Dr. Jernigan, Dr. Castellano, and Dr. Nair). This research is a very exciting opportunity to make a real impact and contribute to the existing medical literature, and I would be very grateful to do so with help from the American Osler Society.

¹² Dr. Mussell has taught several medical humanities courses at LSUHSC School of Medicine in New Orleans. Meanwhile, Dr. Bodola specializes in medical humanities research, including graphic medicine, and has received several awards for her work in the field.