

PEER-REVIEWED CME ARTICLE: MEDICAL EDUCATION

Roles of Graphic Pathographies in Clinical Training

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Abstract

Although graphic pathographies have recently been recognized as playing an important role in medical care, they have not been formally incorporated in many medical school curricula. In this paper, I discuss current applications of graphic pathographies in medicine as well as some potential ethical and epistemological challenges that can arise when using these narratives. Health professionals and medical educators should understand when, why, and how to use graphic pathographies with the goal of enhancing medical education and patient care.

Origins of Graphic Medicine and Graphic Pathographies

The foundations of graphic medicine can be traced to the evolution of autobiographical comics along with the recent development of narrative inquiry and narrative medicine in the 1980s. Although the quest for discovery of notable medical figures was portrayed as a form of heroism in adventure comics of the 1940s [1], the American cartoonist Justin Green was credited with contributing to the autobiographical comic genre in 1972 when he published *Binky Brown Meets the Holy Virgin Mary*, a reflection on his suffering from a compulsive neurosis [2]. Contemporary narrative inquiry was established in the 1980s by Bruner and Sarbin [3]; Bruner [4] differentiated the scientific and narrative ways of knowing, and Sarbin [5] discussed narrative as “a root organising principle of human activity” [6]. In 2000, Charon formally established narrative medicine as promoting healing in medical practice [7]. However, it was not until 2007 that Williams coined the term “graphic medicine” to refer to the use of comics, including “graphic novels” or book-length narratives, in health care [8, 9]. Such comics provide a continuous reading experience and allow readers to briefly reflect on their values and experiences [8].

Recently, the term *graphic pathographies* (i.e., “illness narratives in graphic form”) was coined by Green and Myers to refer to a subgenre of comics that addresses the patient experience of illness [9]. These narratives typically are nonfiction and created either by

patients to reflect on their illness experience or by trainees or medical professionals to reflect on their training or to help patients learn more about their illnesses. Drawing on the principles of narrative medicine, comics and graphic novels allow patients and health care professionals to find meaning in suffering, form better connections, and identify any misconceptions stemming from cultural bias or inaccurate information that might affect the diagnosis and treatment of an illness [8]. For instance, a comic can help patients understand that anxiety symptoms might indicate the possibility of an anxiety disorder and are not merely part of life.

Although graphic pathographies offer many educational and clinical benefits, few empirical studies have evaluated their effectiveness, and medical educators have not widely incorporated them into medical school curricula [8, 10]. This paper explores current applications of graphic pathographies in patient care, medical education, and narrative inquiry. It also addresses some potential ethical and epistemological challenges that might arise when using these narratives in hopes that they might be properly integrated into medical school curricula and clinical care to help patients learn—and health professionals teach—about illness.

Value of Graphic Narratives in Medical Education and Patient Care

Patient care. Graphic pathographies have been used to [promote public awareness](#) of various diseases such as diabetes, mental illness, and HIV [11-13]. They are particularly suitable for this purpose as opposed to other media because they illustrate certain aspects of an illness through visuals and text. Combining images and text also allows patients to associate new information with existing knowledge, thereby enhancing visual understanding and knowledge recall [9].

Graphic pathographies have also been used to help patients better understand what to expect from their illnesses and find meaning in their experience [9]. For instance, a physician might recommend that adult patients with type 2 diabetes read *The Mysterious Symptoms: A Story about Type 2 Diabetes*, which follows the character Alicia from the onset of her diabetic symptoms to her diagnosis and the impact of diabetes on her daily life [14]. Graphic pathographies not only allow physicians to explain the diagnosis but also help patients feel more in control of their situation. For instance, diabetic patients experiencing the stress and fear of not knowing how to manage their diabetes might feel less apprehensive once they learn how to take care of themselves by reading *The Mysterious Symptoms*. Images from comics might also evoke certain questions for patients that could help them understand more about their disease. Health information comics also have the potential to support patients in understanding the social and psychological aspects of a condition [10], thereby helping them to gain more insight into their feelings and to interpret their experience. Despite these benefits, studies investigating the effectiveness of comics as [patient education tools](#) overwhelmingly

focus on whether comics properly convey the factual information about an illness rather than their narrative content [10].

Graphic pathographies have also been used as tools to promote patient awareness during the informed consent process. Furuno and Sasajima found that 68.8 percent of 16 family members of patients who had suffered from an intracerebral or subarachnoid hemorrhage believed that reading comics about these conditions was useful for understanding the doctor's explanation during the informed consent process, and 93.8 percent of respondents preferred using comics in other medical situations [15]. Another study demonstrated that using multimedia aids, including comics and animated videos, improved participant knowledge scores [16]. While more empirical studies are needed to further evaluate the effectiveness of comics in patient care, these initial findings suggest comics may help patients understand more about their illnesses.

Medical education. Comics have been used to illustrate complex concepts in various scientific courses, such as human anatomy. Instructors have reported that improvement in motor skills, visuospatial skills, writing, and course grades is associated with reading of educational comics [17-19]. Graphic pathographies have also been used to foster narrative competence—what Charon defines as “the set of skills required to recognize, absorb, interpret, and be moved by the stories one hears or reads” [20]—and empathy among medical trainees. Studies have shown that teaching with comics is associated with an improvement in a variety of doctoring skills and attitudes such as [empathy](#), communication, clinical reasoning, and an awareness of physician bias [21-24]. Many comics deconstruct diverse and complex issues in medicine and help trainees cope with profound experiences. For instance, for trainees who might feel overwhelmed when entering their clinical clerkships, comics could serve as useful guides for clarifying the fundamental principles of clinical examination and evaluation. Creating comics also provides medical students the freedom to reflect deeply and honestly about the values that are shaping their emerging professional identities, such as the importance of communication and collaboration [22]. Furthermore, because the visuals in comic drawings can be highly subjective, trainees' drawings could provide medical educators with insight into sources of trainees' dissatisfaction and what they might mean for medical training. However, more empirical studies are needed to rigorously evaluate these potential benefits, as comics have received little attention from health care and bioethics scholars until recently, and the social and emotional impacts of images and visual metaphors in comics are in need of further evaluation [8, 25]. Such studies could possibly encourage more medical educators to integrate comics into medical curricula.

Narrative inquiry. Many studies using comics have primarily focused on the experiences of patients and medical students [21, 22, 26]. For example, some have analyzed the messages expressed in trainees' comics and what they might mean for medical education [21, 27]. Some researchers have also used graphic pathographies to generate

data from patients and health care workers to promote reflective strategies of telling and understanding stories. For instance, Al-Jawad describes how comics provide a “strong narrative thread” that allows trainees to link their clinical experiences with their interpretations of sound clinical practice [26]. Moreover, the visual aspect of comics allows researchers to reflect on the symbols and literary devices being used and to make multiple, reasonable interpretations regarding complex issues in medicine, such as whether illness is viewed as a fight or a burden [25]. Comics can also be used to shed light on the experiences of multiple participants, as physicians, patients, and other health care workers play different roles in the interdisciplinary clinical environment, and each story reveals a different dimension of social professional narratives [28].

Ethical and Epistemological Challenges

As more medical educators use comics to enhance medical care, some ethical and epistemological challenges arise and should be addressed. For instance, researchers collecting comics created by patients and trainees should maintain confidentiality (“the principle of keeping secure and secret from others, information given by or about an individual in the course of a professional relationship” [29]) by obtaining consent from patients and trainees to use their comics before collecting them and not disclosing any details about the comics publicly. Another potential ethical issue is the [hierarchical culture of medicine](#), which has been defined as the ranking of medical professionals “based on level of authority and experience” that creates “constraints concerning who speaks up, when to speak up, and how to speak in order to be heard” [30]. These constraints are often applicable in situations that involve a power imbalance. For example, instructors and medical educators might not evaluate favorably or might punish students who illustrate comics that do not cast in a favorable light the challenges of becoming a physician. In such cases, it might be better to include an evaluator within the medical hierarchy who is both competent and impartial [30, 31].

Additionally, because comics might only illustrate certain aspects of an illness, they should not substitute for meaningful conversations between patients and doctors but rather serve as supplemental instruction about illness [9]. This goal could be achieved by training doctors to use only portions of the comic to describe the diagnosis and elicit the patient’s treatment preferences. Physicians should also be willing to arrange follow-up visits and conversations with patients, during which comics should be used sparingly to clarify certain aspects of an illness.

Conclusion

Graphic pathographies have recently been recognized as playing an important role in patient care and medical education. They have been used not only to help medical trainees reflect on the ethical practices of medical care but also to help patients learn more about their illnesses. Despite this development, graphic pathographies have not been widely integrated into medical school curricula. More robust methods should be

developed to evaluate educational comics' short-term and long-term educational impact, and ethical and epistemological challenges should be addressed as more educators use graphic pathographies to enhance medical care. Addressing these educational and ethical challenges would not only establish the potential therapeutic benefits of graphic pathographies in medical care but also promote empathy and reflection in medical professionals and patients.

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