



From Data to Stories: Humanizing Medicine in the Age of Technology

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ARTICLE INFO

Received : 13/10/2013
Accepted : 16/12/2013
Published : 09/03/2014

KEYWORD

Stories
Data
Cross-cultural
Communications
Narrative

ABSTRACT

Stories make up an important part of our daily lives. When engaging in conversations, stories are often shared, to illustrate certain points, to get a message across or just to share our experiences. Stories represent a powerful communications tool. They can frame our proposition with narration of a real life situation, which will enable our audience to reflect and think about certain subjects. This paper discusses the use of stories in Medicine; in teaching and training, sharing experiences, enhancing cross-cultural healthcare communications, public health education and continuing medical education. Sharing of ideas and research on the use of stories can help to rigorously evaluate the impact of stories on educational and clinical outcomes.

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Introduction

Stories make up an important part of our daily lives. When engaging in conversations, stories are often shared, to illustrate certain points, to get a message across or just to share our experiences. Stories represent a powerful communications tool. They can frame our proposition with narration of a real life situation, which will enable our audience to reflect and think about certain subjects. There are also various ways and platforms for sharing these stories. In more formal sharing, how the content and context of the stories are framed and put across also requires planning and thought. It is often said, 'content is king', but the way the story is communicated, is also critical (1, 2).

A story refers to the telling of an event, an account or narration. It can also be an imaginative writing, an anecdote, memoir, fiction, epic or saga. The story-teller is one who narrates the story (3). Story-telling is also associated with the process of learning, reading, expanding our knowledge and imagination. It has the power to persuade, educate and connect people from all walks of life and background. The process of story-telling, the language used, reference to analogies and getting listeners involved are critical for the best possible impact of stories. Stories involving people, characters and realistic day-to-day applications will appeal to people who can identify with these. The shared experiences can add value and meaning to their lives.

Stories must also be of the appropriate length and duration, to cater to the average attention span of the audience/ listener. Audience participation and empowerment during storytelling can help engage them for a slightly longer period (1, 2, 4, 5).

Using Stories in Medicine

Stories are important tools in healthcare communications. There are many compelling life and illness stories in the practice of Medicine; stories of healing, pain, frustration, struggles and many others. Narrative Medicine, or medicine practiced with narrative skills, utilizes stories of patients and their caregivers, as an integral part of caring and healing. The medical knowledge is embedded in the narrative schema presented, and medical treatment and care is put into action by making sense of these stories or narratives, customized to each patient (2, 4-6). The use of narratives is the way to connect patient illness stories and evidence-based clinical practice. Indeed, our patients' lives are a collection of stories. The stories help healthcare personnel understand ideas and thoughts of their patients. With stories, healthcare personnel are brought closer to the realization that there are real persons attached to them. It is completely humanistic and involves life experiences, feelings and emotions (6-8).

Patients routinely tell doctors their stories during history taking. It is their form of connection; communicating and explaining their situation, illness and symptoms. Their stories represent a valuable resource for the practitioner to filter, put together and make the diagnosis as well as plan the treatment and management. These stories are very real and very human, as patients tell them with openness and trust, knowing that what they say may help their doctors solve their symptoms or problems. In the process of telling their stories, patients use both verbal and non-verbal communications technique and it is critical for doctors to be vigilant and pay attention to these cues. Each patient is unique in their story-telling process; some more vocal than others, whilst some are more reserved and only respond to direct questions from the doctors. In patients

who are unable to tell their stories (e.g., those with altered mental states, unresponsive), doctors have to use their clinical skills and acumen to examine and reach the diagnosis. In such cases, relatives and next-of-kin tell collateral stories on behalf of the patients.

The way patients tell their stories will enable us to know which aspects they are most concerned about. For example, they may repeat points and reinforce symptoms which are bothering them. Doctors, on the other hand, have to listen and acknowledge these stories and then combine the information with what they get from the physical examination and tests, to come up with the diagnosis and management plans.

Doctors use stories for a variety of purpose. They can teach using anonymous stories to illustrate certain learning points. Using stories in its entirety can encourage discussion with medical students, nurses and other healthcare personnel, as healthcare is very much a team-based practice (7, 8).

Story-telling programmes and activities can also help change medical students perspectives in diseases such as dementia. The creative story-telling programme at Pennsylvania State College of Medicine, created substantial improvement in students' attitude. The original perception of dementia patients as being difficult to work with and extract information from, was completely changed after the programme, 'Timeslips', was introduced. This involved creative story-telling in groups, with active participation in a supportive environment. Pictures or surreal images were used as cues to build stories and poems by dementia patients. 'Timeslips' enabled these patients to express themselves and others to understand them. It helped the medical students to have a richer sense of who the dementia patient really is. The College hopes to expand this programme to other healthcare staff in view of its success (9).

Stories help medical students and doctors develop empathy which can have a significant positive effect on patient satisfaction. (2,6-17) Hojat et al showed in their study of 891 diabetic

patients that patients whose physicians had high empathy scores were significantly more likely to have good control of their HbA1c and LDL (low density lipoprotein) levels. The study also found the level of empathy to have a unique impact contribution in predicting positive patient outcomes (7, 17).

Today, more healthcare organizations and institutions are using stories to connect the 'head' and the 'heart', personalizing cold hard facts into stories that evoke emotions and elicit connections. Some have even set up 'story-banks' or databases, which serve as a valuable learning and teaching resources. These certainly make a greater impact than just reading from medical textbooks alone. There are also training programmes on story-telling. During under- and post-graduate medical examinations, standardized patients or actors are called upon to participate to 'tell their stories' as 'patients'. This makes the examination setting similar to day to day practice and thus, more realistic. Doctors remember the stories better and both the content and context provide elements for better reflection (6, 13, 15, 18).

Stories and Persuasion

Doctors can also use stories to engage the general public during public education sessions. These stories get the points across and can inspire to bring about positive change in food choices and lifestyles. These stories can be used to motivate, explain and illustrate certain points. Narratives are more persuasive than statistical formats. They can make use of characters and imageries. Narratives can be used to its best advantage in various health and clinical context such as clinical training (medical student residency and continuing education), for counseling and health education, as entertainment-education for the public and on health related websites. Narrative communications enable health care personnel to really see and feel what constitutes an illness experience (13-16).

Presenting evidence is also important in persuading individuals to change attitudes and

participate in behavior change. Exemplification theory is one explanation for the persuasive powers of narratives. It utilizes heuristics processing (i.e., generalizations made based on experience). It is similar to a 'short-hand' method to reach a decision. There is of course a tendency to process a single bit of information (e.g., a character in the narrative) as representative of the whole big picture. This, of course, can have its disadvantages (20-22).

Narratives with characters within a health context are persuasive due to cognitive processing, as long as characters are representative, issues are pertinent to the public and the information is presented in a clear and vivid way (20, 22).

Graphic stories too can have an important role in patient care and medical education. Simply put, these are similar to comics, which have been around for over a hundred years. More recently, a graphic form of illness narratives has evolved. These are called graphic pathographies and they are helpful for patients who want to learn more about their illnesses or find a community of similarly affected people. They can also provide insight into personal experience with illness, misperception about illness and treatment. The visual messages are able to convey powerful messages that conventional texts cannot (21, 23-4).

Graphic stories can also be used to improve observational skills. To read a comic effectively one must be able to understand what is overtly said and what is implied. This is because much happens outside the comic panels in a space called 'gutter'. Thus readers of comics, just like doctors performing consultation, must be able to infer what happened 'out of sight' and not spoken by the patients (24).

Stories and Cultural Competency

With multi-ethnic societies and frequent international travels these days, cross-cultural understanding and competency becomes very crucial. In healthcare institutions too there is a growing diversity of patients and colleagues. It

is thus, important to be sensitive and knowledgeable about different cultural practices. Some of the factors related to healthcare which is influenced by culture include the adoption of the sick role, understanding of diseases and their causation, treatment seeking behavior, beliefs which affect compliance with treatment and stimulus or motivation to seek consultation. Are we ready to communicate with and manage our patients who have different ways of conceptualizing health and diseases?

The stories shared by patients can help healthcare personnel understand some of these factors. Discussions through narratives are more useful and practical in terms of daily clinical exposure than just a detailed list of general cultural characteristics. The latter may in fact be counter-productive and tend to perpetuate stereotyping. In fact, this very curricular approach brings about passive acquisition of knowledge about behavior and attitudes towards certain groups of patients. Doctors must be open to listen to these stories and understand their underlying motivations as well as accept certain ways their patients approach things. The approach should be a 'patient-centric' one which allows for self-reflection and flexibility in responding to certain aspects of diversity. They also need to be respectful of these differences and ensure cultural inclusiveness. If doctors do not approach cultural disparity appropriately, they can be viewed as lacking in empathy (16, 25-8).

Using Stories in Continuing Medical Education (CME)

In the healthcare industry, there is a spectrum of doctors, from the junior interns to the senior and very experienced consultants. The latter would have many stories to share and lessons learnt from their patient encounters over the years. Some would be very memorable and these are the stories that can bring the practice of medicine to 'live'. Story 'banks' and databases for sharing as well as scenario based clinical examples are useful resources for continuous learning and professional development. Using narratives and stories in continuing education conferences and

seminars will add a stimulating and exciting dimension that motivates learning which is life-long. These stories can also be adapted to include advances and new practices as well as evidence-based findings. Going one step further there can also be courses planned for training doctors on the framework to use stories to use in their teaching.

Using these stories in CME serves as reminder to doctors that despite their busy and hectic practices, clinical choices are not isolated from all else that happens in people's lives, but a part of the ongoing narrative. Some medical institutions are also embarking on training in medical humanities, with the same objectives in mind. Indeed stories can offer a new perspective to the CME process for doctors. Having said that, a word of caution is needed as well as at times the use of narratives and stories can make the doctor feel uncomfortable, for a variety of reasons (e.g., having been through the same experience).

Telling Stories with Health Statistics and Data: Stories to Drive Behaviour Change

Numbers and statistics can add credibility to stories, but it is important to bear in mind that the patients or your audience can only recall 1-2 statistics at most. Stories have profound effect on humans as we retain stories longer and more completely than mere facts and figures. Our minds understand stories at a deeper level. When we recollect a portion of a story we have heard before, we are able to recall the whole story (2, 13, 19).

Healthcare organizations can use stories to drive results. Statistics and facts are added to and used in stories. Stories incorporating this evidence are very powerful. To be able to drive home the message, stories used must be simple, memorable and coupled with values that keep the stories 'alive'. The storyteller should, preferably be, someone who practices these values, so the influence and impact can be greater.

Stories can help to 'package' complexities into a nice and interesting presentation. The challenge

is always to make data tell a story and convey what is most important, effectively and efficiently. Prior visualization of how to use the data available in the story is important so that concepts can be easier to grasp and their effect on people can be greater. In healthcare, raising awareness, changing behavior and lifestyle are positive changes we want to see from some of these stories. Exploratory research works behind the stories are important but may take time. During this process, the story planner must take into account the type of audience and their characteristics so that the stories planned can be persuasive and impactful on them. It is also relevant to know how much the audience/listener already know about the topic. The story must be objective, balanced, and credible. The message must be clear. The planner must also decide on how best to present the message; qualitatively or quantitatively (25, 26-30).

Conclusion

The patient-physician relationship is at the heart of the practice of medicine. Healing relationships between patients and doctors serve as the basis of quality healthcare. There exists today a widening gap between patients' expectations and doctors' performance. Many forces restrict the doctors' ability to reflect on clinical experiences and relationships. The marketplace that requires speed, technology and medical informatics complicates the picture further. 'Cut and paste' from electronic records can undermine face to face story-telling and communications. Indeed stories and proper listening techniques can fill these gaps. The effective practice of medicine requires a narrative competence that is the ability to absorb, interpret and act appropriately on the stories and plights of others. This is a major part of trust building between patients and their doctors. Sharing of ideas and research on the use of stories can help to rigorously evaluate the impact of stories on educational and clinical outcomes.

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