

## Introduction

This paper will describe the use of the opening clip from the movie, *What's Eating Gilbert Grape?* to teach the assessment and treatment of chronic illness within a family context to third year medical students. The same clip from this movie can be easily used for educating family practice and other primary care residents and learners in this important area.

The use of film clips in medical education is one example of what is meant by “cinemeducation”. More broadly, cinemeducation refers to the use of movie clips or whole movies to help educate medical students and residents on the biopsychosocialspiritual aspects of health care (1). It is a teaching tool which is receiving considerable attention in medical literature (2,3,4,5). Film provides an engaging format for learning, particularly for residents raised in a video culture. Visual images are likely to be remembered more readily than didactic instruction and provide excellent triggers for group discussion and role play. Movie characters are likely to evoke empathic responses from learners not responsible for providing health care to these individuals and can be a bridge into the affective realm (6). Clips can be chosen to reflect under-represented populations. Unlike “real” patients who may not show up for a designated appointment that is being viewed by learners for teaching purposes, movie characters make reliable teaching cases: just turn on the DVD player and push start! While it is true that movie portrayals sometimes are prone to exaggeration and stereotyping for entertainment value, it is also true that screenwriters often use mental health experts and other psychological resources to ensure that their portrayals of the human condition are

accurate. A case in point is the movie, *The Aviator*, about the life of tycoon Howard Hughes. The movie depicts Hughes' struggle with Obsessive-Compulsive Disorder (OCD). The film's director, Martin Scorsese, hired Dr. Jeffrey Schwartz, a leading expert on OCD, to advise Leonardo DiCaprio, the actor portraying Hughes, on how to accurately portray an individual with OCD (7).

In this paper, we describe the use of a movie clip to construct an in-depth case study for learners. Similar use of movies to help students hone diagnostic and treatment formulation skills has been described previously in the literature (8).

### Description

The authors are residency educators in a Southeastern family practice residency program. Every two months, these authors are responsible for teaching the biopsychosocialspiritual approach (9) to chronic illness to third year medical students doing their four-week clerkship in family medicine. The didactic session is three hours in length and occurs on the one day each week when the students are not in their preceptor's medical practice. On the last day of their clerkship, students meet again with the authors to present a chronic illness patient with whom they have conducted a home visit. The case presentation needs to include psychosocialspiritual factors associated with the case, as well as pertinent treatment recommendations.

At the outset of the didactic session, the specific requirements for the chronic illness presentation are reviewed. After this review, the authors solicit discussion about the differences between chronic and acute illness in terms of what is required in each

circumstance by both the patient/family and the health care provider. A brief lecture is then given, contrasting the biomedical with the biopsychosocialspiritual model. After a brief break, learners are introduced to “Gilbert,” a Caucasian male who is described as seeing his physician repeatedly for low back pain with little resolution. Learners are then shown the opening clip from *What’s Eating Gilbert Grape?* and asked to closely observe Gilbert and his family.

*What’s Eating Gilbert Grape* was released in 1993. The film stars a young Johnny Depp and Leonardo DiCaprio, a fact that makes it of particular interest to current learners. It is also an excellent film that illustrates family dysfunction and problems related to obesity, developmental delay and unresolved loss. In the opening clip from *What’s Eating Gilbert Grape*, we are introduced to the Grape family by the second oldest son, Gilbert (as played by Johnny Depp). This introduction is done via a “voice over” in which Gilbert describes each family member and his own life situation in a flat, monotone voice. For the purposes of the learning session, the authors state that Gilbert sees a family doctor for recurrent back problems of unknown etiology. (After watching the clip, students realize that one possible cause of Gilbert’s back pain is frequent piggy-back rides he gives to his brother Arnie, as played by Leonardo DiCaprio).

The authors use the opening clip from *What’s Eating Gilbert Grape* for two purposes. The first is to teach students how to do genograms (10) and family circles (11), tools which are then used by them in their own chronic illness presentations. Genograms and family circles are commonly used by clinicians to “map” family backgrounds and social support networks. To facilitate the learning of these tools, students are asked, after viewing the clip, to construct a genogram of the Grape family, a family circle from

Gilbert's perspective and an assessment of family dysfunction patterns. Our approach to using this clip for family assessments is described in length in a previous article on cinemeducation (12).

The second purpose for showing the clip is to use the "case" to model for students an exemplary presentation on chronic illness in preparation for their own chronic illness presentations scheduled for the end of their clerkship month. In this regard, we have constructed the following written presentation based on the clip of Gilbert's hypothesized chronic back pain. This presentation is given to students at the close of the didactic session. As the reader will note, and as is so often the case (13,14), the authors hypothesize that Gilbert's back pain is associated with depression and family role selection. Making these links allows us to educate learners about the interface between physical and mental illness and family functioning in primary care.

What follows is the actual movie clip-based case study that the educators present to the students at the close of the learning session. In this case study, we extrapolate information from the clip, as though we had made a home visit with the family, and imagine that the movie character, Gilbert, is an identified patient in our medical practice.

### Exemplary Presentation on Chronic Back Pain

#### History of the Present Illness

*Presenting Problem:* Gilbert is a 21- year old Caucasian male who presents with low back pain of two years' duration. He describes the pain as between six and eight on a severity scale of ten. He can't identify any precipitating factors and denies radiation of

the pain. There is no associated weakness or numbness, bowel or bladder symptoms or sexual dysfunction. He takes Advil on occasion and reports some improvement, but the pain persists, and he has mixed feelings about taking the Advil because it upsets his stomach. There is no history of injury.

*Past Medical History:* No chronic illnesses or surgeries.

*Medications:* PRN Advil

*Family History:* Positive for alcoholism in father who committed suicide fifteen years ago. Mother is morbidly obese. Younger brother has mental disabilities and a congenital heart defect. In a home visit, it is observed that the fully grown younger brother likes to jump on Gilbert's back for piggy back rides. It is also observed that Gilbert is responsible for care of the house, grocery shopping and care-taking of his mentally disabled brother.

*Social History:* Gilbert lives at home with his mother, older sister, younger brother and younger sister. He has an older brother who lives outside the home and has little contact with his family. He works as a stock clerk at a local grocery. He is currently single.

*Drug and Alcohol Use:* Gilbert denies drug, alcohol and tobacco use.

### SCREEEM (15)

The SCREEEM mnemonic is used to elicit relevant contextual information about the patient.

S (Social Interactions): Gilbert has few social interactions, due to work, family obligations, fatigue and discomfort associated with his back pain.

C (Cultural Connections): Gilbert is a Caucasian young adult in a rural American community.

R (Religion or Spiritual Beliefs): Neither he nor his family have been to church in seven years.

E (Economic Stability): Family relies on Gilbert's limited income and mother's disability payments. They are barely making ends meet.

E (Educational Preparation): Gilbert has a high school degree and has no vision for his future.

E (Environmental Satisfaction): Gilbert does not like his work environment, since it feels cramped and underutilized by customers. As for his home, it is comfortable, but in constant need of repair.

M (Medical Resources): No health insurance. Family physician is in neighboring town fifteen miles away.

Genogram and Family Circle: See Table 1 and Table 2.

### Physical Exam

Gilbert has a striking resemblance to a very popular Hollywood star. He is healthy appearing, but his affect is notably flat. He does not appear to be in acute pain. His vital signs are normal.

*Back exam:* There is no tenderness along the vertebral spine or SI joint. There is moderate tenderness in the left and right lumbar muscles, but no palpable spasm.

He has a negative straight leg raise bilaterally. He has normal muscle bulk strength and tone in all his leg and foot muscles. He has normal sensation and reflexes in the lower extremities. He has normal range of motion in his back and hip joints. There is no sacro-sciatic notch tenderness. His gait is normal without limp. Urinalysis is normal.

### Assessment/Plan

*Back Pain:* Gilbert's physical findings are relatively unimpressive in contrast to the impact that the pain seems to be having on his life.

*Plan:* Noting Gilbert's ambivalence toward taking pain medication, it would be worthwhile to refer to physical therapy for stretching and strengthening exercises and postural counseling (16). If he declines this option, back strengthening maneuvers should be demonstrated, and patient education handouts given (16).

*Depression:* Given that low back pain is frequently associated with depression (17), and that Gilbert's flat affect is consistent in this regard, he is given the Beck Depression Inventory – II (BDI- II) (18) on which he scores a 20 (Moderate Depression).

*Plan:* When the results of the BDI-II were shared with Gilbert, he was receptive to the diagnosis of moderate depression. Upon further probing, Gilbert admits to having felt “low” and “uninterested in life” for the past three years. Over the past six months, his sleep disturbance and depressed mood have worsened. Using the results of the screening test and oral history, Gilbert was given the diagnosis of Major

Depression, Moderate Severity (DSM-IV, 296.22). He denies suicidal ideation.

### Plan

*Pharmacotherapy:* Consideration was given to the four categories of anti-depressants, namely: Tricyclic Antidepressants, Selective Serotonin Reuptake Inhibitors (SSRIs), Monoamine Oxidase Inhibitors (MAOIs) and Tetracyclic Antidepressants. Since keeping costs down is extremely important to Gilbert, who prefers a once-a-day drug, Fluoxetine (Prozac) is suggested. Gilbert declines, based on the fear of his sister seeing the much publicized medication and making fun of him. He is receptive to starting Citalopram (Celexa) at 20 mg a day. Given that prescription non-compliance is frequent, and that medication counseling and treatment monitoring improves adherence to medications, (19,20), Gilbert is encouraged to come back for follow-up in two weeks.

*Non-pharmacologic Therapies:* While cognitive-behavioral therapy has a benefit equivalent to anti-depressants for mild to moderate depression (21), Gilbert is unable to pay for such services. In severe depression, several studies show combination drug and psychotherapy has a better response than either alone but, again, Gilbert does not have access to these counseling services due to financial constraints. These same constraints preclude him from taking advantage of possible family counseling, recommended on the basis of family stressors noted on home visit. He is also doubtful that other family members would agree to family therapy and expresses concern about stigma associated with counseling. Gilbert is, however, receptive to scheduling one pleasurable activity per week at night, a recommendation that is written on a prescription pad for him to show his family. He also expresses willingness to add a half hour of walking three times a week

after work. Numerous studies show that exercise has a beneficial anti-depressant effect equivalent to pharmacotherapy or counseling (22).

*Two week follow up:* No adverse effects to Citalopram were noted. Gilbert is enjoying his exercise, and on his night out, meets a girl (as played by Juliette Lewis) whom he is now dating. He reports a four out of ten index for pain, but notes that he feels more flexible since doing the stretching and strengthening exercises. Gilbert is complimented for his adherence to the treatment plan and agrees to come back for a second follow-up in two weeks.

*Four week follow up:* Gilbert has continued his exercise program and is engaging in regular social contact with his new girlfriend. However, he expresses concern regarding his sexual performance with his girlfriend. He wonders if this is due to his anti-depressant medication. Overall, his outlook is much more positive and, as he believes that this girl is a “keeper,” wants to remove any impediment to his sexual functioning. As sexual dysfunction is a well-known side effect of SSRIs, Gilbert is advised to taper his Citalopram to 10mg for one week (tapering is advised rather than abrupt cessation of most SSRIs [20] followed by cessation before starting Bupropion (Wellbutrin), a norepinephrine and dopamine reuptake inhibitor known to have minimal sexual side-effects). He is scheduled for follow up in a month, but will come sooner for any problems.

*Two month follow up:* Gilbert feels better and is considering going back to the local technical college to study mechanics. He is satisfied with his sexual function and continues to spend quality time outside his family environment. Although there have

been no changes at home, he finds his time with his family is more tolerable and less wearing. He is administered a second BDI- II and scores a 6. He agrees to come back for follow up in three months or sooner for any more symptoms.

### Discussion

Our use of *What's Eating Gilbert Grape* has consistently been rated very highly by medical students (23). Building the didactic session around a movie character makes the entire session more fun and engaging, yet very much case based. The context of the dysfunctional family, so well-portrayed by this clip, illustrates to young students how important it is to always consider family context in the treatment of chronic medical conditions. Finally, connecting the chronic illness of back pain to the psychological condition of depression teaches students the importance of considering psychological factors in any somatic complaint.

The field of cinemeducation, while exciting and compelling, is in need of good research to demonstrate its utility and superiority over more didactic approaches to medical and graduate education. Innovative designs need to be developed to help assess this approach. An example of such a design might be to teach the same curriculum to two randomly assigned groups of students, one incorporating cinemeducation and another incorporating lecture, followed by assessment of understanding at the end of the curriculum, either by direct observation or questionnaire.

The need for more research in this area is relevant to the content of this paper. While our experience using *What's Eating Gilbert Grape* is a very positive one, we have not researched whether or not it makes a real difference to our learners. Are they more able to connect with their own patients after exposure to the video clip? Did experiencing the video-based case presentation make them more facile with their own case-based presentations than a more didactic approach? Given that the authors are part of a state-wide program that exposes medical students to similar course content (minus the video clip) at other sites, the authors hope to collaborate with other state-wide educators to attempt to answer these important questions.

REFERENCES

1. Alexander M, Hall M, Pettice Y. Cinemeducation: an innovative approach to teaching psychosocial medical care. *Fam Med* 1994;26:430-3.
2. Alexander M. The Doctor: a seminal video for cinemeducation. *Fam Med* 2002;34:92-4.
3. Blasco PG. Literature and movies for medical students. *Fam Med* 2001;33:426-8.
4. Alexander M, Lenahan P, Pavlov, A. Cinemeducation: a comprehensive guide to using film in medical education. Oxford: Radcliffe Publishing, 2005.
5. Con JJ. What can clinical teachers learn from *Harry Potter and the Philosopher's Stone?*. *Med Educ* 2002;36:1176-81.
6. Blasco PB, Moreto G, Roncoletta A et al. Using movie clips to foster learners' reflection: improving education in the affective domain. *Fam Med* 2006;38(2):94-6.
7. Gray R. The Aviator 'drove DiCaprio to the brink'. *Scotland on Sunday*. Feb 20, 2005.
8. Higgins JA, Denver S. The use of cinema in marriage and family counselor education. *Counsel Educ Supervis* 2001;40:183-93.
9. Hiatt JF. Spirituality, medicine and healing. *Southern Med J* 1986;79:736-43.
10. McGoldrick M, Gerson R. *Genograms in Family Assessment*. New York: Norton and Company, 1985.
11. Thrower SM, Bruce WE, Walton RF. The family circle method for integrating family systems concepts in family medicine. *J Fam Prac* 1982;15:451-57.
12. Alexander M, Waxman, D. Cinemeducation: teaching family systems through the movies. *Fam Syst Health* 2000;18:455-66.
13. Sinel MS, Deardorff WW, Goldstein TB. *Win the Battle Against Back Pain: An Integrated Mind-Body Approach*. New York: Bantam-Doubleday-Dell, 1996.

14. Currie SR, Wang J. Chronic back pain and major depression in the general Canadian population. *Pain* 2004;107(1-2):54-60.
15. Introduction to Patient Evaluation FAP400A syllabus, Department of Family and Community Medicine, University of California – Davis, Fall 2003, <http://medocs.ucdavis.edu/fap/400/fall2003.pdf>, September 22, 2006.
16. Hitt E. Spinal stabilization program may be most effective for low back problems. *Medscape Medical News*, [www.medscape.com](http://www.medscape.com), May 8, 2006.
17. Carroll LJ, Cassidy JD, Cote P. Depression as a risk factor for onset of an episode of troublesome neck and back pain. *Pain* 2004;107:134-9.
18. Beck AT, Steer RA, Brown, GK. Beck Depression Inventory® - II (BDI® - II). San Antonio: Harcourt Assessment, 1996.
19. Sutherland JE, Sutherland SJ, Hoehns JD. Achieving the best outcome in treatment of depression. *J Fam Prac* 2003;52(3):201-9.
20. American Psychiatric Association. Practice guideline for the treatment of patients with major depressive disorder. *Am J Psych* 2000;157(4 suppl):1-45.
21. Rupke SJ, Blecke D, Renfrow M. Cognitive therapy for depression. *Am Fam Phys* 2006;73(1):83-6.
22. Craft L, Perna F. The benefits of exercise for the clinically depressed primary care companion. *J Clin Psych* 2004;6(3):104-11.
23. Personal conversation, Beat Steiner, MD, North Carolina statewide director of family medicine medical student clerkship, 10/7/05.