Of Checklists and iPatients: Some Suggestions for Cancer Educators

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I have always admired the work of the late Ernie Boyer, former US Commissioner of Education and president of the Carnegie Foundation for the Advancement of Teaching. His writings, including *Ready to Learn*, *The Basic School*, and *Scholarship Reconsidered*, are some of the most important treatises on education that I have ever seen. Ernie had an incredible speaking ability that enabled him to explain very difficult concepts while making them understandable and accessible.

One memory I have of him concerns his tales of his time as commissioner. He recounted that when he needed advice or recommendations for innovation, he seldom would consult the academy, but rather sought advice from the private sector to glean practical wisdom. Indeed, he would note that some of the most influential perturbations of the last century came from outside the academy—from voices like Ralph Nader (*Unsafe at Any Speed*), Rachel Carson (*The Silent Spring*), Betty Friedan (*The Feminine Mystique*), Michael Harrington (*The Other America: Poverty in the United States*), or the works of the great civil rights leaders like Martin Luther King and others.

Similarly, I have been impressed with how one individual living in academe yet publishing mainly outside of the academy (most frequently in *The New Yorker* magazine), Dr. Atul Gawande, has proven an incredible voice for change recently. His works like “Letting Go” [1] shook up the palliative care world like no other work in the medical literature. His article “The Cost Conundrum” [2], on the differences in costs of care in two Texas regions, became a required reading for the Obama healthcare planners. His

most recent salvo into the irrationality of healthcare spending, entitled “The Hot Spotters” [3], detailed the high-spending zones in Camden, New Jersey. In this piece, Gawande makes the rational argument that deploying resources strategically to high-cost hot spots in order to modify care expenditures makes good sense. This article, like the others, is full of amazing, applicable, practical wisdom, and some of it could be considered eminently achievable “low-hanging fruit.”

Dr. Gawande has compiled his essays into wonderful, insightful, high-impact books such as *Better, A Surgeon's Notes on Performance*, which was one of Amazon.com's ten best books of 2007, and *Complications, A Surgeon's Notes on an Imperfect Science*, which was one of the finalists for the National Book Award in 2002. Both of these are well worth reading by cancer educators.

I have just finished reading (and want to highly recommend) Dr. Gawande's latest book called *The Checklist Manifesto*. I feel that it should be a *required* reading for all medical educators. In Malcolm Gladwell's review of this work on Dr. Gawande's website, he notes that “*The Checklist Manifesto* begins on familiar ground, with Gawande's experiences as a surgeon. But before long it becomes clear that he is really interested in a problem that afflicts virtually every aspect of the modern world—and that is how professionals deal with the increasing complexity of their responsibilities. It has been years since I read a book so powerful and so thought-provoking” [4].

Gawande begins the book by making a distinction between errors of ignorance (mistakes we make because we do not know enough) and errors of ineptitude (mistakes we make because we do not make proper use of what we know). Failure in the modern world, he writes, is really about the second of these types of errors, and he walks us through a series of examples from medicine showing how

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the routine tasks of surgeons have now become so incredibly complicated that mistakes of one kind or another are virtually inevitable: it is just too easy for an otherwise competent doctor to miss a step, or forget to ask a key question or, in the stress and pressure of the moment, to fail to plan properly for every eventuality. Gawande then visits with pilots and the people who build skyscrapers and comes back with a solution. Experts need checklists—literally, written guides that walk them through the key steps in any complex procedure. In the last section of the book, Gawande shows how his research team has taken this idea, developed a safe surgery checklist, and applied it around the world with staggering success [5].

Gawande thinks that the modern world requires us to revisit what we mean by expertise: that experts need help, and that progress depends on experts having the humility to concede that they need help [5].

Now here is the rub that I see. Most doctors (indeed, most medical professionals) desire and crave autonomy. But autonomy and safety are inversely correlated!

In this editorial, I want to make the point that cancer medicine ought to have more checklists, and we as cancer educators ought to create them. We need checklists for what tests to do and when to do them to get screening done “right” for our patients. We need lists that include effective strategies for changing unhealthy behaviors, when to order genetic testing, what to include in a comprehensive “h&p” for a specific cancer, or what staging tests to order or what chemotherapies to choose from (with the risks and benefits of each) as well as checklists for how to order and deliver these agents and modalities safely, and how to monitor the results...among other things. Lists will help us to be safer *and* more effective!

I know some will reject these thoughts as “cookbook medicine” and ask, “when is it time to break the rules, stray off the path, or deviate from the checklist and use our autonomy?” This set of important questions is exactly what we need to spend more time on in cancer education, and checklists may make it easier to “go there.” We need to know more about encouraging our students to be “present,” to adapt general rules to a specific situation, and to better elicit patient values and not confuse these with our own.

I think a solution to this lies with another prolific writer—physician named Abraham Verghese who, like Gawande, often uses the popular press as his bully pulpit. In the paragraphs below, I borrow his important words and thoughts generously. In a recent article in *The New York Times* called “Treat the Patient, Not the CT Scan” [6], Verghese lamented the appearance of Watson, I.B.M.’s supercomputer, on “Jeopardy!” He was worried that Watsons “were trying to replace us humans in the medical encounter,” and that: “On our rounds of the wards, Watson would see lots of other computers with humans glued to

them like piglets at a sow’s teats” [6]. He noted that Watson would be a potent and clever companion as we made our rounds.

But he also lamented that “the complaints he was hearing from patients, family and friends were never about the dearth of technology but about its excesses” [6]. His own experience as a patient in an emergency room helped him to see this. His nurse would come in periodically to visit the computer work station in his cubicle, her back to him while she clicked and scrolled away. Over her shoulder she would say, “On a scale of one to five, how is your ...?” He opined that “the electronic record for his three-hour stay would have looked perfect, showing close monitoring, even though it lacked a human dimension” [6]. He did not fault the nurse because at his hospital, despite the best of intentions, he too was spending too much time in front of the computer. He noted that the computer record created what he called an “iPatient,” and this iPatient was threatening to become the real focus of attention, while the real patient in the bed was often feeling neglected, “a mere placeholder for the virtual record” [6].

In the article, Verghese also noted that “we still teach medical students how to properly examine the body. In dedicated physical diagnosis courses in their first and second years, students learn on trained actors, who give them appropriate stories and responses, how to do a complete exam of the body’s systems (circulatory, respiratory, musculoskeletal and the rest). Faculty members stand by to assess that the required maneuvers are performed correctly” [6].

But all that training can be undone the moment the students hit their clinical years. Then, they discover that the currency on the ward seems to be “throughput—getting tests ordered and getting results, having procedures like colonoscopies done expeditiously, calling in specialists, arranging discharge. And the engine for all of that, indeed the place where the dialogue between doctors and nurses takes place, is the computer” [6].

Verghese felt that the “consequence of losing both faith and skill in examining the body is that we miss simple things, and we order more tests or subject people to the dangers of radiation unnecessarily” [6]—a danger that might be worsened by checklists without checkpoints.

Verghese likens the well-done exam to a ritual. He notes that “patients from almost any culture have deep expectations of a ritual when a doctor sees them, and they are quick to perceive when the doctor gives those procedures short shrift by, say, placing the stethoscope on top of the gown instead of the skin, doing a cursory prod of the belly and wrapping up in 30 seconds. Rituals are about transformation, the crossing of a threshold, and in the case of the physical exam, the transformation is the cementing of

the doctor–patient relationship, a way of saying: ‘I will see you through this illness. I will be with you through thick and thin.’ It is paramount that doctors not forget the importance of this ritual” [6].

Verghese ended his op-ed piece with this thought. “An answer that might have been posed on ‘Jeopardy!’ is, ‘An emergency treatment that is administered by ear.’ I wonder if Watson would have known the question (though he will now, cybertroller that he is), which is, ‘What are words of comfort?’ USE THOSE WORDS OF COMFORT FREQUENTLY!!!!!!” [6].

These are some of the hardest tasks for us as educators, but creating checklists and learning how not to treat patients as iPatients will make cancer medicine safer and more effective, and combine the competence and compassion to achieve the best results.

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