An Argument for Development Of An Alternative Method To Post-Graduate Education for Optometry

A Statement of the Problem
February 2012
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THE OPTOMETRIC RETINA SOCIETY
CONSTITUTION AND BYLAWS

PURPOSE

Article II, Section 1
A. The mission of the not-for-profit Optometric Retina Society is to promote excellence in the care of patients and the advancement of vitreo-retinal knowledge for ophthalmic educators and clinicians through professional education and scientific investigation.

B. The major objectives of this Society are:
1. To promote vitreoretinal education to all optometrists.
2. To promote the acquisition of new knowledge in the area of vitreoretinal disease, in part through the encouragement of clinical research within optometry, ophthalmology and among allied health personnel.

Introduction
The bylaws of the ORS clearly state that our primary objective is to disseminate relevant information to improve the diagnosis and management of vitreo-retinal disorders. I would challenge the fact that this educational process is being effectively achieved with current modalities. I would contend that a more Socratic Approach to post-graduate education would be more effective in achieving the objectives of the ORS and other organizations charged with the process.

The Quest For Higher Standards of Public Performance and Integrity

“One faculty member in a professional school referred to continuing education as “shouting out of windows,” and an analysis of the programs at his institution shows the aptness of his metaphor: Faculty members who can be persuaded to do so give lectures on subjects of their own choosing to audiences they do not know, who have assembled only because they want to put in enough hours of classroom attendance so that they can meet a re-licensure requirement. As a result, every profession now has members who vigorously oppose what they regard as the excessive promotion of continuing education.”
Cyril O Houle, Continuing Learning in the Professions. San Francisco, Calif: Jossey-Bass;1980:266
Statement of the Problem Associated With Translational and Integrative Education in The Professions

Translation and Integration of Knowledge
Research and development of new technology, pharmaceuticals and clinical patient management protocol is outstripping the ability of most practitioners' to assimilate the information and institute protocol changes. That coupled with government regulations and "cuts" in reimbursement further tax the physicians to provide more care in less time to more patients. Time constraints and information overload in today's society have encumbered the dissemination of meaningful applicable clinical ideas to the majority of doctors. The mode of delivery of the information is often less than desirable and the translation of the information to every day practice becomes a burden without a standardized plan. The printed word is often obsolete by the time it is published. The typical method of information delivery to the practicing physician has been didactic presentations that have been proven to have little to no benefit. Another option for delivery is in the form of a sales representative offering their version of "the truth," or a "dinner speaker-for-hire" extolling the virtues of the product of the contracting company. Because of information overload, physicians are often not engaged in provision of care consistent with evolving standards of care. Optometry could contribute significantly to the general public health of our country with more effective translation of knowledge both to practitioners, optometry students and residents with subsequent integration into the standards of daily practice. The integration of that knowledge into everyday practice must also be addressed.

In regard to adult education, it has been shown that the approach of “ASK, TELL, ASK” appears to be the most effective in modifying behavior in compliance with glaucoma treatment. GAP'S IOVS 2007;48:5052-5057 In essence, this represents an application of the Socratic Approach. With the Socratic Approach the mentor is using the knowledge base within the individual to “teach" and expand that knowledge base.

SOCRATIC
Based on excerpts from The Expert Educator by Anthony Dallman-Jones, the Black River Group 1994 Three Blue Herons Publishing, Inc.

Definition and Description
The Dictionary of Education describes the Socratic method as "a process of discussion led by the instructor to induce the learner to question the validity of his reasoning or to reach a sound conclusion." The strategy derives its name from the approach used by Socrates as he assumed the role of intellectual midwife. The Socratic approach was built upon the assumption that knowledge was within the learner and proper questioning and commentary could cause this knowledge to surface. Socrates, as instructor, attempted to follow the student's argument wherever it led. The key to the Socratic approach is that the teacher's comments and questions must enable the learners to discover meaning for themselves.
When viewing this Socratic Approach from the standpoint of vitreo-retinal disorders, is it more advantageous for the practitioner to understand why something is occurring or for that doctor to try to match what is seen to an atlas picture? The “atlas picture mentality” is an archaic approach to diagnosis and management and does not provide a critical thinking exercise for learning.

**Inclusion of Inappropriate Information in the Knowledge Base-Or Garbage in Garbage Out**

Sturgeon’s Law “Ninety-Five percent of everything is crud (crap).” Theodore Sturgeon, “The Claustrophile”, Galaxy August 1956

Not only is knowledge not being translated effectively, but also apparently a large portion of the knowledge base may be totally inappropriate. A system must be developed to effectively filter what is true, what is evidence-based, what is off label with no proof of efficacy, and what is valid and should be applied as a part of standard of care. Peter McDonnell in an editorial in Ophthalmology Times February 15, 2006 discussed “Are you skeptical of the latest peer-reviewed results?” Dr. McDonnell cites an article by Ioannidis regarding the fact that he reviewed 49 “important” research articles published in top medical journals between 1990 and 2003 and further cited 1000 times. Over 33% of these articles were found to be wrong. According to Ioannidis over “50% of peer-reviewed biomedical science is crap.” Ioannidis JPA (2005) Why Most Published Research Findings Are False. PLoS Med 2(8): e124. doi:10.1371/journal.pmed.0020124. Critical review of new ideas prior to translation of the information to the general health care delivery team is critical in the evolution of any educational model.

**A Smattering of Studies Supporting the Problem**

JAMA 1999;282:867-874

Based on a small number of well-conducted trials, didactic sessions do not appear to be effective in changing physician behavior. Data shows some evidence that interactive CME sessions that enhance participant activity and provide the opportunity to practice skills can effect change in professional practice and, on occasion, health care outcomes.

JAMA 2002;288:1057-1060

To achieve its greatest potential, CME must be truly continuing, not casual, sporadic, or opportunistic. Essentially, this means that CME must be self-directed by the physician, including management of the content of and context for learning. In turn, the opportunities for self-directed learning must enhance the knowledge and skills required for critical reflection on practice and measurement of improvement.

JAMA 2001;284:2578-2585
None of the popular models for improving clinical performance appear to be superior. Therefore, bridges must be built and models must be integrated to be truly effective.

**A Review of Effects of Different Strategies to Improve Patient Care**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>No. of Reviews</th>
<th>Conclusions</th>
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<tbody>
<tr>
<td>Educational materials, mailed information</td>
<td>9</td>
<td>Limited Effects</td>
</tr>
<tr>
<td>Continuing Medical Education</td>
<td>4</td>
<td>Limited Effects</td>
</tr>
<tr>
<td>Total quality management and continuous quality improvement</td>
<td>1</td>
<td>Limited Effects and Weak Study Designs</td>
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<tr>
<td>Use of opinion leaders</td>
<td>3</td>
<td>Mixed Effects</td>
</tr>
<tr>
<td>Feedback on Performance</td>
<td>7</td>
<td>Mixed Effects</td>
</tr>
<tr>
<td>Patient-Oriented interventions</td>
<td>7</td>
<td>Mixed Effects</td>
</tr>
<tr>
<td>Educational outreach visits</td>
<td>8</td>
<td>Affects Prescribing and Prevention</td>
</tr>
<tr>
<td>Reminders</td>
<td>5</td>
<td>Mostly Effective</td>
</tr>
<tr>
<td>Interactive educational meetings</td>
<td>4</td>
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<td>Use of computer systems</td>
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</tr>
<tr>
<td>Combined and multifaceted interventions</td>
<td>16</td>
<td>Mostly Very Effective</td>
</tr>
</tbody>
</table>

It appears from the above table that interactive events using self-directed computer technology-combined events would be more effective in the modification of the knowledge base and of behavior.

*JAMA* 2002;287:226-235

Current assessment formats for physicians and trainees reliably test core knowledge and basic skills. However, they may underemphasize some important domains of professional medical practice, including interpersonal skills, *lifelong learning, professionalism, and integration of core knowledge into clinical practice.*

*JAMA* 2001;285:2871-2879

Achievable Benchmarks of Care are standards of excellence that are measurable against existing performance data. The use of these benchmarks enhances the effectiveness of physician performance feedback in the setting of quality performance improvement intervention-continuing medical education.

*JAMA* 1998;280:2020-2027

Interventions to improve physicians’ testing practices based on multiple behavioral factors versus single behavioral factors were more successful.

*JAMA* 2001;285:2009-2012
The pharmaceutical industry has gone too far in assuming a role in continuing medical education. It is inappropriate for an industry with a vested interest in selling prescription drugs. The true purpose of pharmaceutical support of CME is perhaps most clearly revealed by the growing new industry called Medical Education and Communication Companies (MECC), which now number over 100. The medical profession’s Accreditation Council on Continuing Medical Education (ACCME) accredits many MECCs. Of course this practice has now ceased with the advent of the Pharma Guidelines.

JAMA 2000;283:373-380
The present extent of physician-industry interactions appears to affect prescribing and professional behavior and should be further addressed at the level of policy and education.

JAMA 2000;283:391-393
AMA Council on Ethical and Judicial Affairs (CEJA) opined that regarding CME, the educational value of the activity must be the primary consideration in the physician’s decision to attend. Also speakers must disclose financial ties and the industry was not to exert control over the choice of presenters. While funding from industry is not totally desirable, the fiscal aspects of the provision of CME dictate that outside support is necessary or the costs would be too great.

The pharmaceutical industry serves the overriding mutual interest to ensure that patients receive the most up-to-date and appropriate care. The pharmaceutical industry and the medical profession are obligated to do all they can to ensure that physicians, the key prescribers of prescription medicines in the health care system, are thoroughly informed about the latest medical developments. Industry support of CME is crucial, particularly as funding from other private and government sources becomes increasingly uncertain. Data gathered by ACCME showed industry support of CME in 1999 was half of the $1.1 billion spent. One third of medical schools that provide CME received more than 40% of their CME revenue from industry.

JAMA 2003;289:2418-2420
The ACCME proposal for new guidelines for commercial support of CME is analyzed in this commentary. In this article it is cited that the Wall Street Journal reports that more than 60% of the total support for CME in 2001 came from industry. A strong argument is presented to separate industry supported CME from non-industry supported CME.

JAMA 1999;282:861-866
High-technology simulations may provide a method for physicians to become self-directed lifelong learners. Some of the benefits of simulation technology include acquisition and retention of knowledge compared to traditional lectures.

JAMA 1998;280:1013-1014
Internet and journal-based efforts accounted for less than 1% of CME credits in 1996. The assurance of quality of these programs continues to create some issues in the accreditation process.

**JAMA 1998;279:1358-1363**  
The influence of local medical opinion leaders in the diffusion and adoption of new medical treatments may be beneficial in the establishment and enhancement of local standards of care.


In the 2008 issue of *The Journal of Continuing Education in the Health Professions*, one can review a report on recommendations from the Conjoint Committee on Continuing Medical Education. In summarizing the committee’s recommendations, the article found that learner-focused CME with measurable outcomes enhances the medical profession’s effort to place emphasis on core competencies, training and assessment. If such CME is part of a system of continuous professional development that includes assessment, remediation and reassessment—essential components for improved CME and health care performance, according to the article’s research—it has the potential to be a viable tool in helping ensure ongoing physician competence. The report emphasized the need for a CME system that supports each individual physician’s continuous needs for periodic re-licensing, re-credentialing, re-privileging and Maintenance of Certification.

**Chest. 2009;135. www.chestjournal.org.**

In 2009 the American College of Chest Physicians (ACCP) has made available evidence-based guidelines that make recommendations on the effectiveness of CME based on the largest review of the literature to date. As a result, the Agency for Healthcare Research and Quality (AHRQ) awarded the Johns Hopkins Evidence-based Practice Center the task of performing a systematic review of the literature.….  
**In contrast to traditional didactic (lecture based) education, which the ACCP evidence review identified as the least effective form of learning when used as the sole means of instruction,** formative assessment that incorporates diverse CME activities within teaching modalities was found by the report to be the most effective and promising approach.

**Summary**

Our system of provision of Continuing Medical Education is broken and ineffective as proven by numerous studies. It is an expensive system for the physicians that must be supplemented by industry. The supplementation by industry likewise brings potential issues into the equation. The studies currently...
support the following activities as the most effective method of provision of education to adult professionals in training and in practice.

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I would propose the solution must involve a Socratic Approach utilizing current technical advances.

‘The Stockdale Paradox’

From Good to Great
By Jim Collins
Harper Business 2001 pp 83-87

Admiral Jim Stockdale was the highest-ranking United States military officer in the “Hanoi Hilton” prisoner-of-war camp during the Viet Nam war. He was tortured over twenty times during his eight-year imprisonment from 1965 to 1973. At one point, he beat himself with a stool and cut himself with a razor, deliberately disfiguring himself, so that he could not be put on videotape as an example of a “well-treated prisoner.”

During an interview he said to Jim Collins “I never lost faith in the end of the story. I never doubted not only that I would get out, but also that I would prevail in the end and turn the experience into the defining event of my life, which, in retrospect, I would not trade.”

Mr. Collins queried, “Who didn’t make it out?”

Stockdale replied “Oh that’s easy, the optimists. The optimists. Oh they were the ones who said, ‘We’re going to be out by Christmas.’ And Christmas would come, and Christmas would go. Then they’d say. ‘We’re going to be out by Easter.’ And Easter would come and Easter would go. And then Thanksgiving, and then it would be Christmas again. And they died of a broken heart.”

Stockdale continued, “This is a very important lesson. You must never confuse faith that you will prevail in the end—which you can never afford to lose—with the discipline to confront the most brutal facts of your current reality, whatever they might be.”

THE STOCKDALE PARADOX
Retain faith that you will prevail in the end, regardless of the difficulties... And at the same time... Confront the most brutal facts of your current reality, whatever they might be.

THE ALEXANDER PARADOX
Optometry must recognize that there is a problem in translation and integration of knowledge and in the development of meaningful clinical research....But Optometry has tremendous resources and excellent accessibility to technology.....So Optometry must re-invent themselves and use innovative approaches in the provision of educational opportunities to practicing Optometric Physicians.
The next presidential letter will address potential solutions to the problem stated herein. That being said, the marriage of industry to the professions must be maintained but not sullied by blatant abuses. Industry benefits from inclusion in the plan by educating physicians regarding their innovations. Doctors benefit by obtaining educational opportunities at a reasonable rate. But the regulatory boards must consider other options such as internet-based interactive opportunities that may offer more educational benefits to the doctors. The argument could be made that there is no assurance that the physician is attending to the education when internet-based, but that occurs in the current “controlled” environment as well. Sitting in a room reading the paper should not qualify for relicensure. As previously quoted “Faculty members who can be persuaded to do so give lectures on subjects of their own choosing to audiences they do not know, who have assembled only because they want to put in enough hours of classroom attendance so that they can meet a re-licensure requirement.” Cyril O Houle, Continuing Learning in the Professions. San Francisco, Calif: Jossey-Bass; 1980:266. The assumption with the current system is that this behavior will be assimilated, regurgitated and will modify behavior to deliver improved patient care. How erroneous is this assumption?

The ORS must take a leadership role in the development of a “Techno-Savy Socratic Approach” to “to promote vitreoretinal education to all optometrists.”