

As we enter our ninth year as Delfini, we maybe see a little progress. The state of the medical literature is still unfortunate. (See November 2010 article in The Atlantic on Professor John Ioannidis by David H. Freedman.) We still see pre-test score results similar to those depicted in the charts below. But awareness of our healthcare information problem of misleading medical science appears to be growing.

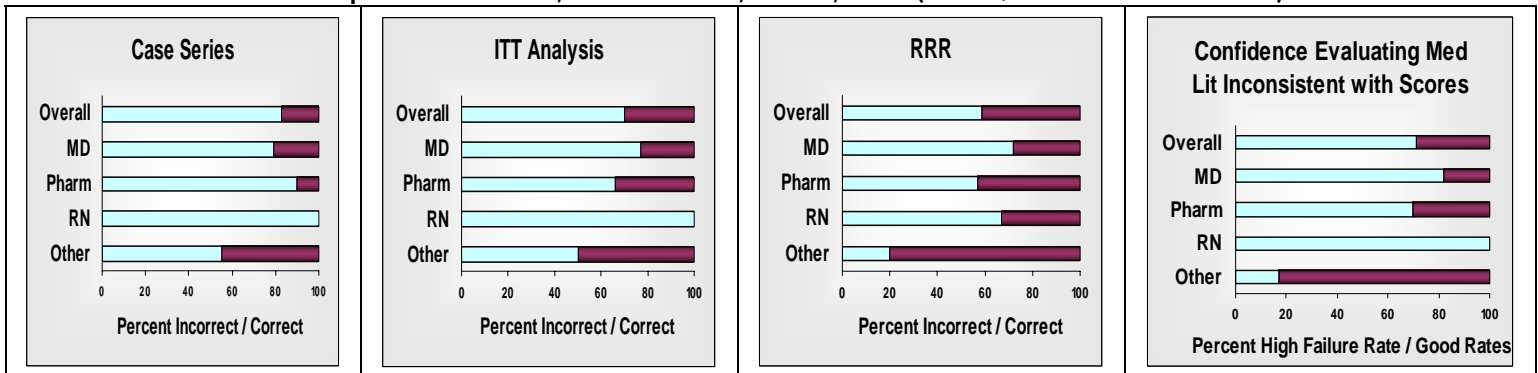
Just over a year after we formed Delfini, we started administering a very short 3-question pre-test to our critical appraisal training program attendees. The questions were very basic. Our initial findings from December 2002 to June 2003 shocked even us. While we discontinued formally tallying these scores, we have since that time administered the pre-test to 1,000s of healthcare professionals, seeing consistently high failure rates. You can take the test for Question 1 yourself at http://www.delfini.org/page_EBMTest.htm.

Report on “Using the Medical Literature” Program Pre-test Scores: June 6, 2003

Below are pre-test scores from seven Delfini programs done from December 2002 to June 2003, which are consistent with over 15 preceding programs, representing about 500 attendees from around the country. Participants consisted of mainly of physicians and clinical pharmacists, including many medical leaders and a few epidemiologists and evidence-based consultants. A high percentage of those who reported confidence evaluating the medical literature had high test failure rates, even when using “generous” criteria for correct answers and defining “failure” as two or three incorrect answers.

The Test	1. Requires recognizing the study as a case series in which an incorrect answer results in prescribing an antibiotic for a viral illness
	2. Requires understanding of the definition of Intention-to-treat (ITT) analysis or impact of missing values
	3. Requires understanding that Relative Risk Reduction (RRR) alone overstates effectiveness

Pre-Test Scores for 193 Respondents: MD=71, Pharmacist=90, RN=12, Other (often QI staff or EBM consultant)=20:



Following Delfini educational sessions and exercises, when reviewing test questions in class discussions, invariably respondents answer these questions correctly.

There is a need for nearly universal training in critical appraisal methods for all health care professionals involved in decisions affecting patient care. These skills apply not only to reading the medical literature, but can be used to help understand and raise questions about other sources of medical information ranging from advertisements to CME lectures. Until health care professionals have these skills, health care will continue to suffer serious problems such as accepting results from poorly-conducted case series and from thinking that a drug should be used just because it has a high relative risk reduction. Learning an approach to critical appraisal need not be difficult, but it is necessary to help improve health care quality and help to better utilize resources.