Evidence-Based Practice as If Your Life Depended on It (Last Revised 17 December. 2007)

Leonard Gibbs, Ph.D., and Betsy McDougall Gibbs with help from Dr. Eamon Armstrong

We are writing this letter to help others learn from what has happened recently to our family. Betsy and I hope you will read our letter carefully and will forward it to others dear to you. We intend that something positive will yet come out of a very unfortunate turn of events in our lives. It is possible that, had I (Len) just followed the process of evidence-based practice to my own care--as I have helped others with their questions and taught my students--my family and I might have averted this event that has so profoundly affected our lives.

Perhaps you are like me (Len). Throughout my life, I have been very conscientious about my health. I get annual checkups, exercise, and eat healthful foods. I have never smoked or abused alcohol or drugs. I have everything to live for. I have been happily married to my wife, Betsy, whom I consider to be the most complex and beautiful creature on the planet, for the past 17 years. We have two wonderful sons, Martin and Jeff. I have the support of many old and dear friends and relatives. I have taught at the University of Wisconsin—Eau Claire for 28 years and was hoping for at least 22 more years of life (the mean ages of my parents and grandparents at their deaths was 83). I estimated that I might have even more years ahead of me, because I had maintained such good health habits.

Might you be thinking the same kinds of thoughts? I was looking forward to retiring soon and then traveling and engaging in my favorite activities, such as biking, camping, canoeing and fishing with my family, skiing at least another twenty-five American Birkebeiners, flying as a volunteer search and rescue pilot, as well as continuing to write about evidence-based practice in the helping professions. In fact, I have been invited to speak on this topic at Oxford University this November.

Suddenly, everything has changed. I have been diagnosed with an aggressive form of prostate cancer. A biopsy done at the Mayo Clinic has discovered that it has metastasized beyond the prostate to a lymph node next to my aorta and is thus inoperable presently. I have discovered that my life

expectancy, even with optimal medical treatment, has most likely been substantially reduced.

Why This Letter to You?

I believe absolutely that what matters in life is not how long we live, but how we live the life we have. Something good can still come of this. Consequently, I have been thinking about how we may help others who might have the same hopes and aspirations that I did for a long and healthy life. I would like to outline for you what steps I would take if I could go back in time, steps that might have prevented my current situation—metastatic prostate cancer—applying what I know about evidence-based practice. Although it is too late for me to go back in time to detect my cancer at a much earlier stage, when it might have been more easily curable, it is not too late for you to learn from this regarding your own care, be it relative to cancer or some other problem or potential problem.

A word of caution: the steps and Internet sources below will take time and much study. I have been teaching the skills described below for many years; so I know how difficult these tasks are, but if you stay with the effort; read through this letter carefully, and take your time, you may gain information that can help yourself and loved ones. Love motivates us to help; scientific evidence shows us how.

What Went Wrong and Our Current Dilemma

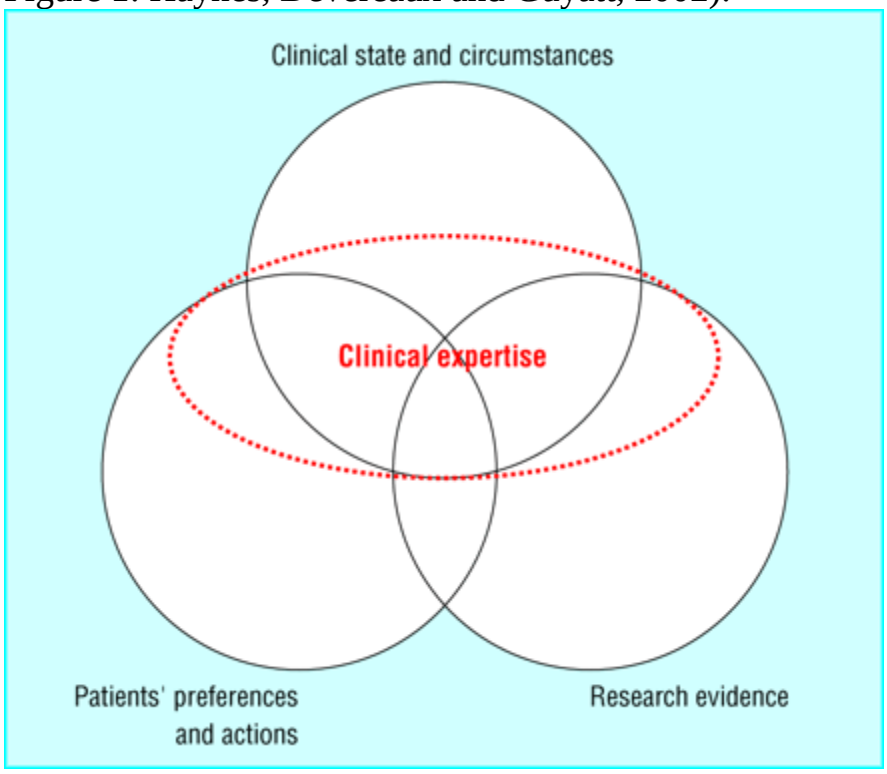
I have been with my present physician for the past 25 years. He had always been there for me, had listened to all my concerns and had helped me through some very tough times. In fact, I give him credit for saving my life earlier. He has been, and still is, a trusted friend. Unfortunately for me and my family, we missed an opportunity to apply evidence-based practice in a way that might have benefited me and my family. If I had collaborated with him as a partner in my own care, we might have taken action early enough to avoid metastatic cancer.

Evidence-Based Practice Defined

Evidence-based practice (EBP) is a *process* that can aid decision making critical to one's care, based on the best scientific evidence. This is as opposed to operating from gut feelings, tradition, prior education, or even a

particular helping professional's experience. Helping professionals (physicians, nurses, counselors, social workers, dentists, etc.) can use EBP to pose specific questions of vital significance to their clients/patients, then search electronically quickly and efficiently for the current best evidence to answer the specific question (Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000). Evidence-based practice is possible now because of increased speed, accessibility, and utility of electronic access to evidence. This letter will help you to locate such evidence specific to your own concerns. Ideally, evidence-based helping professionals include three elements in the helping process including: the practitioner's clinical expertise, the current best research, and the *patient's knowledge*, preferences and actions (see the figure 1 below).

Figure 1: Haynes, Devereaux and Guyatt, 2002).



I could have performed more effectively in my role as patient in the evidence-based practice process. You can too. You have every reason to. The electronic resources are readily available to you, ones I could have consulted. The figure above shows that ideally, those who write about evidence-based practice include you and I as an important element in the process. Helping professionals who subscribe to the EBP process, welcome what strong evidence we can share with them, as my doctor would have.

Steps That You and Your Family Might Follow to Extend Your Life

Step One: Schedule regular check ups.

I did have annual check ups and flight physicals. I cannot be faulted here.

Here are arguments against and for such regular check ups:

Arguments Against and For Regular Check Ups	
Arguments Against Them	*Arguments Favoring Them*
• Evidence has shown that annual physical examinations and extensive blood tests in persons without symptoms do not prolong life.	• This might be why one would share a family history to alert for particular tests and screening (next step). Recommendations in the attached *Counterarguments and Recommendations* file address this concern.
• I don't have the time for check ups.	• Consider losing as much as half a day for the check up relative to the chance you may extend your life expectancy by years if you discover a treatable problem. • Consider how long you will be dead.
• I don't have the money to pay for a check up.	• Consider the cost of a check up relative to costs of just one visit to the Mayo Clinic in Rochester for us ($193 in travel expenses alone).
• I don't care that much about what happens to me.	• You cannot fully imagine the pain and inconvenience that a life-affecting illness causes dear ones until you see it.

Step Two: Share Your Current Medical History

No helping professional, who may see twenty patients in a day, can possibly keep in mind even a fraction of the salient features of your medical history. In my case, my maternal grandfather died of prostate cancer, Mom and my sister had breast cancer, and Dad died with adenocarcinoma of the esophagus. These are elements in my family history I did share with my doctor occasionally during regular checkups, but I did not emphasize these events as forcefully and systematically as I might have. You can play the odds in your favor by paying special attention to your family history, whatever it may be, to help your doctor. You can--by carefully completing a Patient/Family History Form such as the one provided at the Mayo Clinic link below and by referring to it frequently with your doctor. For similar forms see the following:

http://www.mayoclinic.com/invoke.cfm?objectid=385FC65E-F961-49BA-99B799A3A0DAF885

https://familyhistory.hhs.gov/

Such forms should list health problems and causes of death and age of diagnosis for your blood relatives including your maternal and paternal grandparents, parents, brothers and sisters and cousins, nieces and nephews (three generations).

One additional form, specific to prostate cancer, is the PSA Tracker below. Other conditions might be tracked similarly.

Date	PSA Level	Testosterone	Free/Total%
From The Center for Prostate Cancer PSA Tracker, Mayo Clinic, Rochester, MN			

For a direct assessment of cancer risk and risk from other diseases, consult this Harvard website:

http://www.harvardpilgrim.org/portal/page?_pageid=213,38394&_dad=portal&_schema=PORTAL

For a direct assessment of risk for general health matters, consult (if you speak French) this website:

http://www.hegp.bhdc.jussieu.fr/esper/login.jsp

For another risk calculator specific to prostate cancer detection, see this nomogram (be careful; it does not include PSA Velocity).

http://www.drslawin.com/nomogram.html#

And this one has just been provided by Catherine Tangen, lead biostatistician for the Prostate Cancer Prevention Trial:

http://www.compass.fhcrc.org/edrnnci/bin/calculator/main.asp

The PCPT trial may provide the most methodologically sound nomogram. Catherine pointed out these features of the nomogram immediately above: "It includes the usual risk factors, and doesn't predict high grade, but it does incorporate the best knowledge we have about prevalence of prostate cancer based on the end of study biopsy from PCPT. No other dataset or risk model has that feature." (Tangen, March 6, 2006). The article that describes the methodological basis for the nomogram above is listed in the bibliography (Thompson, Pauler, Chen, Goodman, Tangen, Lucia, Feng, Parnes & Coltman, 2006. Accrording to this study, PSA Velocity did not increase predictive accuracy over variables in the nomogram.

When filling out the PCPT nomogram, it might be wise to check the box for family history of prostate cancer if you have any blood relative with prostate cancer, given the discussion in Step 4, Question 3 below, given Bruner et al., 2003 evidence regarding relative risk. Cathy Tangen does not support doing so because this would violate the way the family history variable was defined in the PCPT study cited above.

Step Three: Learn how to pose a well-built clinical question regarding your own care.

Even medical educators say that learning how to pose a well-built question is the most difficult step in the evidence-based practice (EBP) process (Armstrong, 1999; Counsell, 1997; Ely, Osheroff, Ebell, Chambliss, Vinson, Stevermer, & Pifer, 2002; Richardson, Wilson, Nishikawa, & Hayward, 1995). In a quarter century of teaching question posing skills, I have found that learning how to pose specific answerable questions challenges my students more than any other task. Still, clear questions can be formulated by including just four elements in your question as follows: Patient/Client Condition, What You Might Do (treatment, assess risk, prevent, evaluate/diagnose), Alternate Course of Action, and What You Want to Accomplish. Instructions for posing such questions are available in the book by Sackett and his colleagues and in my book's website

http://www.evidence.brookscole.com/

Nothing is for sure, in life or in medicine. Most answers have some sort of statistical element in them. Be prepared to ask and think in terms of probabilities. In general, you will be looking for the likelihood of something that you can not be completely sure of, based on things that you do know.

Here is how my doctor and I might have posed vital questions including four elements in a well-built question. My doctor had been checking my prostate specific antigen (PSA), a marker for prostate cancer, every two years. On June 6 of 2001 it was .8; on March 21 of 2003 it was 1.9. When it was 1.9 my doctor said, "We will have to watch that [PSA values]." He did not check it again until April 29th of 2005 when it was 5.8. My doctor was using 4.0 as the criterion. My diagnosis with cancer came in May of 2005.

First Question: One question based on my family history might have been:

> For a sixty year old male nonsmoker, what is the most common form of cancer?

Second Question: Regarding PSA change, my question might have been:

> For a sixty year old with a family history of cancer, with a PSA of .8 moving to 1.9 in 20 months, does this indicate a higher probability of prostate cancer?

Third Question: Regarding my medical history, my question might have been:

Is there a tendency for prostate cancer to be inherited?

Do learn to pose vital questions that concern your own care. Help your helper to help you. I am certain my doctor would have welcomed such a contribution on my part. My doctor has always been open to my questions and concerns. If yours would not or does not apply this process, find another doctor.

Step 4: Search for the current best evidence regarding your question.

Eamon Armstrong, a family medicine doctor, and champion of evidence-based medicine at the point of care, has produced a website that patients can use to become more informed regarding their questions. Many of his sources are worded in plain language. Here is the address for Dr. Armstrong's website (for Dr. Armstrong's you may need to copy and paste the address into the URL box):

http:www.myhq.com/public/f/l/flagstaff/

Dr. Armstrong has provided these additional resources:

http://www.montana.edu/wwwrjf/healthinfo/resources.htm

http://www-hsl.mcmaster.ca/tomflem/ill.html Health Care Information Resources McMaster

http://www.rcpsych.ac.uk/info/index.htm Royal College of Psychiatry Patient Info

http://www.doctorupdate.net/du_toolkit/du_patientleaflets.asp Doctor Update

http://www.wisdomnet.co.uk/patient_information.asp Wisdom Library Patient Information

http://www.besttreatments.co.uk/btuk/home.html Best Treatments for Patients and Physicians NHS Direct

http://www.patient.co.uk/pils.asp Patient Information Patient UK

My book's website contains instructions for planning an electronic search, including terms (methodological filters that I call MOLES) that will locate the best evidence specific to different types of questions. This website includes links to professional literature across the helping professions including the behavioral sciences:

http://www.evidence.brookscole.com/ .

To keep current with news regarding medical advances:

http://www.medicalnewstoday.com/

My Search Regarding My Questions (Ones I Might Have Done Quickly)

Question 1: For a sixty year old male nonsmoker, what is the most common form of cancer?

Method: I went to my book's website (see above), Select a Database, under the Medicine column clicked on Cancerlit, National Cancer Institute, SEER Cancer Statistics Review, looked under Lifetime Risk of Being Diagnosed with Cancer (finding prostate cancer far and away the greatest risk for all males, 17.39%, next closest is lung and bronchus at 7.58%), elapsed time less than ten minutes.

Question 2: For a sixty year old with a family history of cancer, with a PSA of .8 mg/mL moving to 1.9 mg/mL in 20 months, does this indicate a higher probability of prostate cancer?
Method: I went to my book's website, Select a Database, and at the bottom of medical column found the National Guideline Clearinghouse for the American Urological Association Education and Research , Inc. dated February 2000. The guidelines list an absolute value of 4 mg/mL or PSA Velocity of .75 mg/mL per year as criteria for biopsy. I went into Google and asked "How can I interpret PSA levels as a test for prostate cancer?" A National Cancer Institute website appeared with reference to PSA Velocity, and many more sites regarding PSA testing. I searched Google for the term

"PSA velocity" and discovered pages of sources addressing PSA Velocity including a PSA Velocity calculator:

http://www.urologychannel.com/HealthProfiler/healthpro_psaVel.shtml

The sources generally agreed that PSA Velocity (PSA change is an important indicator, but estimates of its critical value ranged from .5 mg/mL to 2 mg/mL in one year. This search took an hour because I started reading sources, but executing the logic of the search took less than ten minutes.

Here is another calculator that does not take into account PSA Velocity, one I have not had time to investigate fully for its mathematical underpinnings:

http://www.drslawin.com/nomogram.html#

There is also a Harvard Risk Calculator that includes prostate cancer and others:

http://www.yourdiseaserisk.harvard.edu/hccpquiz.pl?lang=english&func=home&page=cancer_index

Incidentally, Dr. Robert Myers at the Mayo Clinic referenced work by Dr. William Catalona (soon to be published). Dr. Catalona and his colleagues have analyzed recent results from 26,000 prostate cancer patients. Their study supports the .5 PSAV for one year criterion over the more widely accepted .75 PSAV cut off to determine a need for more conservative testing (biopsy) for prostate cancer. This work can be located at this address (may need to copy and paste):

http://www.drcatalona.com/quest/Spring05/quest_spring05_2.asp

Here are data from an abstract of this article (Antenor, Roehl, Misop & Catalona, 2005).

PSAV Cutoffs and Cancer Detection Rate			
PSA Velocity	No. of Men	% Men with	P-value

Cutoffs		Cancer	
>0.5	1274	45	<.0001
>0.75	1030	46	<.0001
>1.0	842	46	<.0001
>2.0	386	46	<.0001

In addition, here is another article not yet published that also supports the PSAV cut off of .50 for younger men:

Control/Tracking Number: 06-AB-96341-AUA
Activity: Paper Submission
Current Date/Time: 10/17/2005 9:45:43 PM

PSA Velocity Threshold for Predicting Prostate Cancer in Young Men with PSA < 4 ng/ml

Author Block: *Stacy Loeb*, Washington, DC; Kimberly A Roehl, Saint Louis, MO; Theresa Graif, Davis Viprakasit, William J Catalona, Robert B Nadler, Chicago, IL*

Introduction and Objective: Longitudinal changes in PSA over time are increasingly used to guide the recommendation for biopsy. Traditionally, a PSA velocity (PSAV) of 0.75 ng/ml/year was proposed as a means to distinguish prostate cancer from benign conditions. However, there is evidence that for men with PSA levels < 4 ng/ml, this threshold is too high (Smith DS et al. J Urol, 1994. 152: 1163; Fang et al. Urology, 2002. 59: 889).
Methods: From 1989 to 2001, ~36,000 community men participated in a prostate cancer screening study. 6844 participants were < age 60 at study entry, of which 346 were subsequently diagnosed with prostate cancer. PSAV was calculated using regression analysis during the year prior to diagnosis. PSAV thresholds were examined for prediction of prostate cancer risk. Multivariate analysis was then performed to determine whether PSAV is an independent predictor of prostate cancer in men < 60 years of age.
Results: The median PSAV was significantly higher among men who were later diagnosed with prostate cancer and those who were not (0.840 versus 0.094 ng/ml/yr, $p<0.0001$). On multivariate analysis, a PSAV greater than 0.5 ng/ml/year was more predictive of prostate cancer than age, total PSA level, family history, or race. A multivariate analysis restricted to the subgroup of men with total PSA levels less than 2.5 ng/ml had similar results. Overall, a cutpoint of 0.5 ng/ml/yr was associated with a 62% sensitivity, 85% specificity, 18% positive predictive value, 98% negative predictive value, and AUC of 0.73 for prostate cancer detection in young men. Conclusions: The traditional PSAV threshold of 0.75 ng/ml/yr is too high for men under age 60, and its use would result in missing a substantial proportion of prostate cancers. Young men with a PSAV greater than 0.5 ng/ml/yr are at a significantly greater risk for prostate cancer, and close follow-up is warranted.

PSAV Cutpoints					
PSAV Cutpoints ng/ml/yr	AUC	Sensitivity	Specificity	PPV (%)	NPV (%)
0.3	.740	.723	.757	14	98
0.4	.743	.673	.812	16	98
0.5	.734	.621	.847	18	98
0.75	.710	.523	.898	21	97

Multivariate Analysis		
	OR (95% CI)	**p-value**
PSAV >0.5 ng/ml/year	7.1 (5.5-9.3)	<0.0001
Race	1.7 (1.2-2.6)	0.005
PSA at Diagnosis	1.1 (1.05-1.15)	<0.0001
Age (50's versus 40's)	1.9 (0.9-3.8)	0.09
Family history	1.2 (0.9-1.6)	0.24

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Keyword - Indexing (Complete): PSA ; Screening ; Age
Topic (Complete): 41 Detection and Screening
Source of Funding (Complete):
Funding Source: : Urological Research Foundation and Beckman Coulter, Inc.

Question 3: *Is there a tendency for prostate cancer to be inherited?* I searched Medline under the MeSH thesaurus for "inherit" and found "heritable OR genes dominant or genes recessive or genetic basis" and searched in Medline for this string of terms: ((heritable OR genes dominant OR genes recessive OR genetic basis) AND prostate cancer AND (systematic review or meta analysis or metaanalysis or meta-analysis)) finding 68 references, some investigating a possible genetic marker or gene specific to prostate cancer. There were 114

documents regarding "inherited prostate cancer." This entire search took fifteen minutes.

Below is recent evidence—unavailable to me earlier at the time of my decisioun—that the relative risk for a man with *any* blood relatives who has had prostate cancer is 1.93, or about twice as likely as someone in the general population. The relative risk for someone with a father or brother with prostate cancer is 2.2. The study cited below is good evidence, because it is based on a meta-analysis of 24 studies with relatively robust findings (consistent across studies).

Relative risk of prostate cancer for men with affected relatives: systematic review and meta-analysis.

Author(s): Bruner DW; Moore D; Parlanti A; Dorgan J; Engstrom P

Author's Address: Department of Population Science, Fox Chase Cancer Center, Philadelphia, PA 19102, USA. D_watkins-***bruner***@fccc.edu

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MeSH Terms: Prostatic Neoplasms/*epidemiology
Prostatic Neoplasms/*genetics
Diet; Family; Humans; MEDLINE; Male; Meta-Analysis; Models, Statistical; Nuclear Family; Risk; Risk Factors

Abstract: An increased risk of prostate cancer associated with a family history of prostate cancer has been documented in multiple published reports. Risk has been shown to vary by degree of relationship and age of onset of disease in the affected relative. Several studies, using various designs, have estimated the relative risk (RR) for these associations. The purpose of our study was to identify and summarize published reports on the relationship between risk of prostate cancer and family history, which is defined as having a father, brother, any first- or second-degree relative or other relative affected with prostate cancer. A Medline and manual search from 1982 to 2000 identified 24 studies that reported RR and confidence intervals (CI) and satisfied inclusion criteria. Pooled RR estimates based upon a

> weighted average model were as follows: any affected family member RR = 1.93, CI 1.65-2.26; affected first-degree relative RR = 2.22, CI 2.06-2.40; affected second-degree relative RR = 1.88, CI 1.54-2.30; father with prostate cancer RR = 2.12, CI 1.82-2.51; and brother with prostate cancer RR = 2.87, CI 2.21-3.73). Statistical comparison of pooled data demonstrated that the RR is significantly higher for affected brother than for affected father ($p < 0.03$). A sensitivity analysis demonstrated that these results are robust with respect to population bias. This meta-analysis confirms that risk of prostate cancer is associated with family history of disease and improves the quantification of this risk. (Copyright 2003 Wiley-Liss, Inc.)

A Word of Caution Regarding This Search

Any of my students would be able to easily spot the fallacy in my reasoning labeling my error—hindsight bias! This fallacy involves the tendency, knowing what has happened, to look for confirming evidence to show how one should have known. Baruch Fischhoff (1995) coined this term and explains that he intended to say that hindsight does not equal foresight (Gibbs & Fishhoff, 1996). Obviously, knowing what I know now, I would have posed a well-built question and searched diligently. I did not. You can regarding matters specific to your condition and family history.

Step 5: Critically appraise the evidence for its implications for action.

This step presents a formidable problem even for members of helping professions who take courses in research methods and clinical reasoning. Still, if you are highly motivated to appraise evidence for yourself, because you need to answer a question of vital importance, there is help.

If you use my book's website to plan and execute a search, and you apply the MOLES in the book they will dig up excellent evidence for you.

The book *Evidence-Based Medicine: How to Practice and Teach EBM* contains chapters regarding how to appraise different types of evidence. My book does too, but it concerns social/behavioral problems and their treatment. For a quick guide to rating evidence, you might go to the Critical Appraisal Skills Program (CASP) at this address:

http://www.phru.nhs.uk/casp/casp.htm

Click on Learning Resources, then Critical Appraisal Tools. Each of the rating forms will provide criteria specific to these types of studies: *systematic reviews* (syntheses of many research studies that are often called "metaanalyses or meta analyses or meta-analyses"); *randomized controlled trials* (the best form of evidence when evaluating treatment impact); *qualitative studies* (ones that delve deeply into how people experience treatment, particular problems, etc.); *cohort studies* (how groups of people experience treatment over time); *case control studies* (ones less rigorous than the randomized controlled trial but still useful to evaluate treatment); *diagnostic test studies* (ones that evaluate the accuracy and reliability or consistency among diagnosticians as in my concern over PSA interpretation), and finally *economic evaluation studies* (studies that concern the impact of treatment relative to costs of various types of treatment).

In Conclusion Regarding Myself

(General recommendations for clinics are in the Counter Arguments to This Letter and Recommendations attachment.)

No one can know after-the-fact what evidence my doctor and I would have found, how it would have been interpreted, nor what action we might have taken. Still, I urge that you consider applying the process outlined here if confronted with a vital question regarding your care or that of someone whom you love. Our lives might have been substantially different if we had. You may benefit from our experience, but benefiting will require considerable time and study as you follow the process described here. The most powerful motivation to spend the time and effort will, no doubt, be love for someone dear to you.

Specific to early detection of my prostate cancer, it might have been wise to:

- Take into account my family history of cancer to watch for it more closely in someone with such a history.
- Play the odds by looking for the most likely form of cancer (prostate cancer in men).
- Check PSA *annually*, not biannually to plot trends.
- Check PSA velocity that may be a more sensitive indicator of early prostate cancer applying .5 mg/mL or at least .75 mg/mL.

- In younger men, such as myself, watch PSA velocity particularly closely and interpret it liberally (get a more definitive test) because of a greater potential pay off in life-years.

Still, a far more definitive report will come out soon regarding whether PSA screening affects mortality. Here is that source soon to come out through the Cochrane Library at this address:

http://www.cochrane.org/index0.htm

It will come out as a complete review in 2006:

[Protocol]

Screening for prostatic cancer

D Ilic, S Green, D O'Connor, T Wilt

The Cochrane Database of Systematic Reviews 2006 Issue 1

DOI: 10.1002/14651858.CD004720 This version first published online: 19 April 2004 in Issue 2, 2004
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Next >

Abstract

This is the protocol for a review and there is no abstract.

Wider Implications

For the first time in human history, recipients of care, who know how, can get vital information specific to their care by quick electronic means. Eileen Gambrill, of the University of California at Berkeley, says that the greatest force supporting movement toward evidence-based practice will come, not from the helping professions themselves, but more from recipients of care whose lives depend on it. If we can learn the skills outlined in this letter, we can share what we find regarding our own condition and that of those whom we love in collaboration with our helpers, but very bit as important, we can demonstrate the process outlined here for the benefit of others.

Do please share this letter with others whom you hold dear and advocate that they practice and learn the process outlined here.

Acknowledgments

Anyone who truly believes in evidence-based practice actively seeks counter argument (see attached file). Consequently, I have solicited counter arguments and suggestions from Dr. Eamon Armstrong (Nothern Arizona University – Fronske Health Center, Dr. Eileen Gambrill (University of California at Berkeley); Brian Seemann, Jessie Wolf, Joanne Becker, Bill Swan and Dr. Aron Shlonsky (University of Toronto). Our thanks to you!

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