

**Free Online
Life Expectancy
Calculators
vs.
21st Services'
Life Estimates:
A Doctor's
Perspective**

21st Services
White Paper

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Free Online Life Expectancy Calculators vs. 21st Services' Life Estimates: A Doctor's Perspective

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Today is the day of seeking good health care. Today is the day of fitness. Today is the day of self-awareness. Today is the day of wondering how long we will live. Today is the day of wondering whether or not our wealth will last as long as we will.

Each of us at some time has considered the question of how long we will live. This may have come after a family member died, after someone close to us has developed a life-threatening illness, or it may be out of sheer curiosity.

As our population ages, with more and more people living to well beyond their 70s, the topic of longevity and what contributes to it is a common one. Currently there is more emphasis on a healthier lifestyle than ever before. We join smoking cessation and weight loss programs, go to gyms and fitness clubs, seek advice from self-help writers on diet, exercise and wellness – all in an attempt to partially reverse the damage that has already been done by poor lifestyle choices.

As a reaction to this increased awareness, several groups have developed commercially available longevity screening methods to help people assess their life expectancy. Several such “longevity calculators” can be found online and completed rapidly.

These calculators are easy to use and are actually quite entertaining. The question, however, is how accurate are they in predicting one's longevity? I have

done a self-test on several of the calculators and have some observations.

Observations after using the online calculators

The calculators, although seemingly all drawing from the salient factors of my health picture, were not all consistent, one with the other, in their determinations of my longevity. Values varied by up to 11 years.

It is easy to see why such variability exists: the calculators do not all use the same parameters for making the estimates. Although they all include some lifestyle modalities, they don't all use the same ones, and it is not clear how these variables are weighted. A few take into account one's engagement in activities such as teeth flossing. Others consider such safety issues as using seat belts. What is universally lacking is any detailed interrogation into one's medical history.

The calculators are only as “truthful” as the answers entered. If a person wants to present a healthy picture that generates a longer life expectancy, it's easy to guess how to answer the questions. One calculator even generates applause when a “healthy” answer is given. It's easy to do a “do-over,” and keep doing-over until one gets what is felt to be a desirable longevity prediction. It's also easy to go to a different calculator, trying out as many as it takes to get a desirable result. Where does that leave us?

Overall, the commercial calculators do have some benefit: they create more awareness of good health and positive lifestyle. For example, for those who have no idea what their cholesterol level is, finding out that cholesterol is an issue in calculating longevity might prompt them to have it checked. The calculators make it clear that smoking is dangerous, merely by asking if you smoke. The calculators that ask about seatbelt usage remind us of the importance of using seatbelts.

Can the calculators' results be used for serious planning?

That being said, the next question to be answered is whether or not these calculators give us the sort of longevity expectation that could be of serious value – as a basis for retirement planning, for example. Since they don't capture a full or accurate picture of one's health, the free calculators miss the most critical part of the picture. We all agree that lifestyle, diet, safety measures and activity level are very important in predicting longevity. However, without an evaluation of the medical facts, the true basis for such a longevity determination is lost.

Here is a comment about the online calculators that a reader sent to syndicated columnist Scott Burns*:

“Yes, I know there are sites where one can enter such information as how many beers you drink, whether you smoke, how fat you are, that you drive your car without the seatbelt buckled . . . But I have a variety of medical conditions and can't seem to find any expectancy information.”

At one of the meetings of 21st Services' Medical Advisory Board, I asked the members for their take on

the online calculators. Here are a few of their comments:

“The larger question is how much do these lifestyle factors affect the ultimate life expectancy prediction? Also, the lifestyle responses represent a snapshot of behavior at a specific time, so it is uncertain how valid they are in drawing conclusions about long-term effects of these behaviors.”

“None is based on any sound evidence or any model of multiple variable analysis putting it all together. And none is based on any substantial real data with follow-up to death.”

“I took the [brand name deleted] one, and it didn't even ask if I had personally been diagnosed with cancer! I think that's a big goof.”

“Without scientifically reviewed information about this calculator's accuracy, I would regard it as entertainment and marketing, not the basis for taking actions related to my health.”

The quote from the *Boston Globe* reader echoes the frustration that many people feel who would like to be able to plan for the future in a scientific manner. The comments from the members of the 21st Services Medical Advisory Board are based on these physicians' approach from a medical viewpoint.

A better tool for planning: the life expectancy evaluation

A carefully calculated life expectancy (LE) evaluation is an invaluable tool for doing such future planning. At 21st Services, life expectancy evaluations are generated by carefully assessing the medical history and correlating the findings with actuarially generated mortality tables.

* Reader comment quoted by Scott Burns in the *Boston Globe*, December 1, 2007

Our Medical Advisory Board's input has helped 21st Services refine the assessment process. We are fortunate to have a Medical Advisory Board comprised of nationally and internationally renowned physicians who are board-certified in the disciplines of geriatrics, oncology, nephrology, cardiology, neurology, endocrinology and infectious diseases. Some of the members have expertise in public health and epidemiology within their fields. All are highly qualified to provide advice to use on the medical issues of aging.

Our chief actuary, Vincent Granieri, has worked in the life settlement and life insurance industries for decades, and his knowledge of mortality statistics is invaluable. Vince worked with our Medical Advisory Board to launch our study of senior mortality based on millions of Medicare records. We routinely monitor our actual-to-expected (A-to-E) results, with the help of two international actuarial consulting firms. (This is the "follow-up to death" our MAB member cited in the quote above.) The results of our A-to-E studies – and soon the results of the study of the Medicare records – will enable us to refine our tables and our underwriting processes.

Our underwriters have been carefully chosen and come to us with many years of experience from backgrounds in life insurance, long-term care insurance, disability, reinsurance and health insurance. From the mountains of medical data we collect on a client, the underwriters select that which has a bearing on their longevity.



Experts in Longevity Analysis

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The selected data is then input into our proprietary underwriting software system, MedDiag, which assigns debits and credits to approximately 230 variables. We apply the actuarial and statistical insights we gain from our A-to-E studies, from Medical Advisory Boards input and, starting in 2009, from the Medicare records study, to the factors and their debit and credit values in MedDiag to continually refine the underwriting system.

The result of all this is life expectancy evaluations with ever-improving reliability. 21st Services has created tens of thousands of them in 10+ years in business. Whether the LE is being ordered because the client is considering a life settlement or for any other financial purpose, an accurate LE will provide extremely valuable information.

There is, of course, a cost difference between a 21st Services life expectancy evaluation and the results from a longevity quiz. We have heard the expression, "Why buy the cow when the milk is free?" Allow me to play on a popular TV commercial:

Online longevity calculator: Free

21st Services' calculated LE: PRICELESS!

Charlotte Lee, MD, FLMI, is consulting medical director for 21st Services and a member of its Medical Advisory Board. Dr. Lee is board-certified in insurance medicine. She was chief medical officer at Generali USA Life Reassurance Company and medical director for Empire General Life Assurance Corporation (now West Coast Life). She was also the medical director for Osborn Laboratories.

Dr. Lee received her MD degree from Indiana University Medical School. She was in private practice for several years and taught at the University of Minnesota School of Medicine.

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