

Questions for the Economists

Thomas R. Ireland and Stephanie Rizzardi Pearson

Kathy Pouch RN CCM CNLCP LNCC, asks this issue's experts about health economists' work and their projections.

Thomas R. Ireland Ph.D. and Stephanie Rizzardi Pearson BA, MBA are economists with experience in working with the reports of a number of life care planning experts.

KP: How should "cost per year" be addressed if the life care planner is not the expert determining life expectancy?

TRI: The economist needs the annual amounts needed for various categories of life care for each year through the end of life expectancy. There is often disagreement between the parties about the life expectancy of the person needing the life care plan, so my valuations are structured so that the present value of the plan is reported as through each year up to a normal life expectancy. That is so that alternative life expectancies can be considered easily by a jury.

Strictly for purposes of being able to check my interpretations, it is sometimes helpful for a life care planning expert to report "unadjusted" total dollar figures for an assumed life expectancy. However, if the amounts per year are clearly reported, this is only for purposes of checking totals. Once an economist sets up a spreadsheet, it is very easy to "sum" amounts appearing in any column of the spreadsheet. The figures from the spreadsheet should equal the unadjusted figures provided by the life care planning expert. If the totals do not match, the economist should determine why they do not match. From that standpoint, it does not matter what life expectancy the life care planning expert has used as long as it is stated clearly in the report for the life care plan. In this context, "unadjusted" means figures in current year dollars and without any reduction to present value.

SRP: I agree with Tom Ireland that the annual amount for each category of care is essential. I also prefer to have a breakdown of how the annual cost was derived so that if life expectancy is altered I can change the annual amount and still maintain consistency with the life care planner's opinion.

KP: How should the "number of units" in a lifetime be computed? For example, if the number of units per lifetime is 10.4, should the number used be 10, 10.4, or 11?

TRI: Suppose, for example, that we are talking about specially equipped vans costing \$50,000 (in today's dollars) that must be replaced on average every seven years and that the individual's life expectancy is 25 years. A van would be needed in year 1, year 8, year 15, and year 22 of the plan. If we could assume that vans wear out exactly on schedule every seven years, it would make sense to add \$50,000 in current dollars to the spreadsheet in years 1, 8, 15, and 22. Since that is not the case, however, it might make sense to include one van at \$50,000 as an "immediate expense" and then use $\$50,000/7 = \7143 per year thereafter. Life care planning experts often report costs to the nearest penny.

avoided. No one knows what price today will be five years from now to the nearest penny.

SRP: I would simply use 10.4 units. However, depending on what it is one is projecting it may make sense to round to the nearest penny or dollar. Large ticket items over short periods of time lend themselves well to this practice. But in costing numerous lines of prescription drug items for a plaintiff with a 50-year life expectancy and lots of small ticket item needs (personal care items, etc.) rounding up a \$1.50 per item to \$2.00 could be open to a lot more scrutiny and rightly so.

KP: If a provider provides a range in costs for services or for other reasons, should a life care planning expert use the low, high, or an average value for the range?

TRI: In some circumstances, it might be useful for an economist to make one calculation using all low values and another calculation using all high values. In other circumstances, it might be useful to produce a single figure based on the average of the ranges. Whatever is done, it is important that the life care planning expert be consistent in whatever is done. Generally, it would be most useful to provide the range clearly and let the economist determine whether to use both high and low values or average values for ranges. It would almost never be the case that a life care planning expert should use all low values or all high values in calculating single reported totals.

SRP: I agree with Tom in his answer to this question in the following respects: Consistency is important both to the reader of the plan (whoever that might be) and the economist who must convert to present value the life care planner's "opinions," which are expressed in dollar terms. Once the plan leaves the life care planner an attorney may ask the economist to make any number of assumptions with respect to low end costs or high end costs. I believe the life care planner should state her or his information/research *clearly and accurately*. If there is a range in costs, the range should be included in the life care plan. Sometimes the range is so extreme averaging it or determining a midpoint gives us a meaningless result, as in the case of disputed surgical procedures that may be needed at undetermined points in the future. However, in most cases for items in standard life care plans the range is fairly small and my experience has been that many life care planners routinely use the average of the low and high ends of the range.

KP: How should a life care planner indicate to an economist that costs are to be provided through a given year or to a given year?

TRI: The key is to be very clear. If a given good or service is to be provided through 2015 or through age 17, be sure that is what life care plan report says. If a life care plan says that

a good or service should be provided from 10-13 years of age and then another amount is needed from age 13-16, an economist will not know what the correct amount was for age 13. The report should be clear about exact times when services are needed. If a report says that the service will be needed until age 13, but starting with age 13 a different amount is needed, an economist will know what the plan calls for.

SRP: Clarity is always important. A very helpful piece of advice may be to include in your plan a "key" on the front page or near the front page, along with the trial date, date of birth, life expectancy, etc. to identify starting and ending dates. For example, "0" = Starting Year; "1" = Year 1; etc. or use actual dates (starting date would be the trial date, year 1, etc. would be identified to show a pattern). I find this helps tremendously, especially when I often receive a life care plan months after its completion. Some plans can get very confusing unless they are labeled properly as to exactly when services should begin.

KP: When determining the cost of an item in a life care plan, a life care planner may receive three different quotes. How should these be reported? For example, if the quotes were \$95, \$120, and \$140, should the planner use a range of \$95-\$140, or \$120?

TRI: This should be up to the life care planner. From the standpoint of an economist, it does not matter. If a range of \$95-\$140 was reported and I were trying to produce a single projection, the figure I would use is $\$95 \text{ plus } \$140 = \$325/2 = \117.50 . If the life care planner reported \$120 as the middle quote, I would use \$120. The difference between \$117.50 and \$120 would not have a significant impact on the accuracy of the projection made by an economist. Sometimes, however, I provide one projection using the low ends of all ranges and another using the high ends of all ranges. The most important thing is that the life care planner should be consistent in whatever choice is made with respect to this question. Using a mix of approaches could make it appear that you were trying to influence the outcome in a way favorable to your employing attorney. This will not directly affect the economist who will calculate the value as you present it, but it may affect your own credibility with a jury.

SRP: I agree. Some ranges may be broader than \$95-\$140 and the middle quote may not be a figure like \$120 that happens to be only a few dollars more than the average of the upper and lower quote. It should come down to the experience and knowledge of the life care planner as to the most reasonable range, which I suspect eliminates the problem of having one very costly provider that lies outside the normal range of the other providers costs. And I also suspect this touches upon how "prevailing costs" are defined and used by each life care planner or whether the standard might be reasonable rates charged or some other standard. Typically, what I see in the life care plans I review is a range and then an average of the range.

KP: Should a life care planner "round off numbers" or report costs to the nearest penny? If so, what should be the guidelines for doing so?

TRI: No projection of present value for a number of years is going to be accurate to the penny. Therefore, I round off all figures from life care plans to the nearest whole dollar. I use standard rounding practices such that \$.50 rounds up to the nearest dollar and \$.49 rounds down to the nearest dollar. I don't have a preference with respect to whether the life care planner rounds or doesn't round figures as long as the life care planner is consistent in whatever practice is used. Rounding does not take much of an economist's time. There is a difference, however, between rounding by an economist and rounding by a life care planner. A life care planner who is reporting prices to the penny is reporting prices with as much detailed accuracy as may be available. That does not create a possible impression of "delusive exactness." For an economist to do so with a present value projection over a number of years can give the impression that the economist is trying to give the impression that the economist's calculations are more exact than they could possibly be. No good economist is going to try to pretend that his projections are accurate to penny-level accuracy. My tables are reported to the nearest dollar, but values based on my tables in my reports are sometimes reported only to the nearest one hundred thousand dollars (assuming that \$100,000 is less than two percent of the total for all years).

SRP: I think that the life care planner should simply state the costs as they are. I think it may add confusion if the life care planner takes the original quotes and rounds them up or down, then converts them to daily, monthly or annual rates and then turns the whole report over to an economist to project into present value format. For example, in some plans prescription drug costs itemized page by page, calculated by the cost per pill, number of pills needed per day, to ultimately arrive at the annual cost per each kind of pill. If these costs per pill were rounded first before being multiplied by number of times needed per day and then by month or episodes of need per year the annual costs would be significantly different.

As an illustration, let's assume that the cost of a certain prescription drug cost \$1.51 per pill and the patient requires 3 pills per day. Over the course of a year the cost would be about \$555.15. If the life care planner rounded the cost of the pill to \$2.00, over the course of a year the cost would be \$730.00 (about 31 percent higher). With respect to rounding the total costs of life care items after the calculations have been done, e.g., using \$555 instead of \$555.15 that I find perfectly acceptable. I agree wholeheartedly that the best any economist can do is provide a reasonable estimate of the present value of future life care costs based on a qualified life care plan.

KP: If the life care planner has been provided with a life expectancy of 7.5 years, should the planner use 7.0 years, 7.5 years or 8.0 years for the individual's life expectancy?

TRI: The life care plan report should say 7.5 years. It is acceptable if the costs are reported for an eighth full year as long as it is made clear that the life expectancy is 7.5 years and that the figures reported for eighth year are whole year figures. The matter of fractional years of life expectancy has never become a major issue in any of my cases. The shorter the life expectancy, the more fractional years matter. With 7.5 years, 0.5 of a year makes a difference of 6.67% in life expectancy. With an individual whose life expectancy is 31.5 years, a 0.5 year difference makes only a 1.59% difference. Note these percentages do not take into account discounting to present value, which would increase the difference between short and long life expectancies.

SRP: The life care planner should use 7.5 years. In cases with life expectancies that are short a difference of one-half year makes much more of an impact than one in which the life expectancy is long (say 50+ years). Whether we use 50.5 or 50 in that case would be of no particular concern as .5 year difference makes only a 1.0% difference. However, I choose to use the exact life expectancy.

KP: How should the issues of "possible" and "probable" expenditures be addressed in a life care plan? If a physician says that the patient may require a spinal cord stimulator, for example, should the cost be identified, omitted, or identified and included in the totals?

TRI: Most life care plans that I have seen are clear in this area. Clarity is what matters most to an economist. Normally, I do not include items that are only possibly needed, but my report mentions those items as not having been included in my projections. Normally I would treat expenditure that are probable as like other expenditures. I interpret "probable" as having a probability greater than 50 percent and "possible" as having a probability of less than 50 percent. Your question prompts consideration of a third type of uncertainty. A given expenditure may be reasonably certain to be needed, but it is unclear when it will be needed. A medical doctor might testify, for example, that a given operation will be needed sometime between the ages of 15 and 27, but be unable to say when, within that time frame, the operation will be needed. Because surgical operations have a higher than average rate of inflation, I tend to lump all expenses that are reasonably certain to be needed, but uncertain as to the age at which they will be needed into a category of one time expenditures. The first row in my tables calculating present values is labeled "Once." That is where I would list expenditures that are reasonably certain to be needed on a one time basis (or a two time basis), but the timing of those expenditures is unknown.

SRP: My approach is almost identical to Tom's in all

respects. The only thing that may differ from Tom is how one time expenditures are handled. This can vary from case to case for a number of reasons. Most typically Tom's approach is used. But another approach would be to use hypothetical dates for surgical procedures based on doctor's best estimates or the hiring attorney's input. Then I develop a separate chart specifically for the surgical care items (or whatever items are at issue) which then produces a range of present value totals for that category. The result is that one can then get a better handle on the one-time expenditures that are certain as to time. Obviously, if there is no basis for choosing hypothetical dates, it would not be in an economist's expertise does not include the capacity to determine appropriate future dates for possible or probable medical treatments, even for purposes of settlement.

KP: Economists can be a valuable resource for a life care planner. Thank you both for your input.

About the Authors

Thomas R. Ireland
Department of Economics, 408 SSB
University of Missouri at St. Louis
8001 Natural Bridge Road
St. Louis, MO 63121
Tel: 314-516-5558
Fax: 314-516-5352
Email: Ireland@umsl.edu
Web: www.umsl.edu/~ireland

Stephanie Rizzardi Pearson
Rizzardi Pearson Associates
140 South Lake Avenue, Suite 217
Pasadena, CA 91101
Tel: 626-229-0304
Fax: 626-229-0305
Email: srizzardipearson.com
Web: www.rizzardipearson.com