The Costs Of Unhealthy Behaviors

Data Collection Is Only Useful If You Have Something To Compare It To...

In this interview, nationally recognized expert, **Dr. Steve Aldana,** sat down with WELCOA President, Dr. David Hunnicutt to discuss the incidence, prevalence and costs of unhealthy behaviors in the United States. What you're about to read will both alarm and encourage you.

How much does it cost if an employee is physically inactive?

Aldana: We don't have the exact cost of sedentary living by employee, but we do have some fairly good numbers in three specific areas: 1.) what physical inactivity costs society as a whole; 2.) what physical inactivity costs us in terms of healthcare; and 3.) what are the actual costs for the group—however, individual employee is not as good as the first two sources.

Basically, it's estimated that sedentary living—the fact that we're not moving around very much—costs us as a nation $150 billion. This is in 1987 dollars. That's just due to healthcare costs associated with diseases that we get from not moving around. So that takes care of the first area. When it comes to the second area, this is where the numbers get serious. In fact, 15% of all of the healthcare costs we pay in the United States is due to sedentary lifestyles. Now, if employers want to calculate what physical inactivity is costing their company, I would suggest that they take a look at their total healthcare expenditures for a year and take 15% of that. In reality, that's going to be pretty close to the actual expenditures.

Those are some pretty stark numbers. Just for background, can you share with our readers what we know about the percentage of the population that is not active, marginally active and active?

Aldana: Sure. First, it's important to understand that experts and scientists have pretty much changed the way we measure physical activity over the last few years based on the recommendations from the Surgeon General. The new recommendations include 30 minutes of moderate, intensive physical activity every day. So to answer your question, about 78-80% of the entire U.S. population does not get enough physical activity to get the benefits. Looking at it another way, there's about 20-25% that are actually moving around enough to lower their risks and to lower their prevalence of disease. The rest are not. So it's the vast majority; and it has changed a little for the better over the last few years—not very much—a couple of percentage points.

As a sidebar, has it hurt or has it helped when the physical activity recommendations changed?

Aldana: I think it's a good thing because it really lets us zero in on the metrics that we need to be measuring. The people who complain the most are mostly the researchers because their data sets now need to be updated and modified. And, as a researcher, I can tell you that's a pain. But all in all, the recommendation is a good one.

So now let's turn our attention to the costs of tobacco use. What do we know about this particular behavior?

Aldana: Smoking and tobacco use is a big, big deal in the United States. And this is true on both sides—the tobacco industry and the public health professionals. The good news is with all of the attention that tobacco use has received; it's the one behavior on which we have a lot of really good data. First, it's important to understand that approximately 23% of the population uses tobacco. If you're a female and you're 24 years of age and you're a smoker, it's going to cost $106,000 for you over your lifetime to treat the diseases that you get from tobacco use. That's everything. That's private insurance, Medicare, Medicaid; it's going to cost $106,000 to treat you. If you're a man, and you're a tobacco user at age 24 and you

use tobacco your whole life, it's going to cost $220,000. This equates to about $40 in healthcare costs for every pack of cigarettes you smoke.

So if you spent $4.25 for a pack of smokes, the real cost of that purchase is about $44.25—$40 of which will be paid for by someone else.

What are the benefits of quitting the use of tobacco? How long will it take? What kind of costs can be prevented or avoided for employees if they can quit smoking?

Aldana: The benefits are a direct reduction in disease which occurs in the human body—remember this is a direct reduction. And this reduction in disease is going to occur very quickly. This is where the largest and most tangible benefit occurs—a reduction in medical spending for adults as of result of quitting the use of tobacco. For those who continue to use the costs are staggering. First, there's the cost of lost economic output because tobacco users die premature. In fact, tobacco users die 12 to 14 years earlier than non-tobacco users. That's a huge reduction in productivity. In addition, as we've mentioned previously, tobacco users will incur significantly more medical care than non-users. Those are the big two. But let's not forget there's also the cost of things like home fires, and other insurance-related issues. All in all, the costs are enormous both in terms of the toll on health and human life, and the economic impact on the rest of society.

You mentioned that health benefits can occur relatively quickly...what else can you tell us?

Aldana: Depending on how long these people have used tobacco products, it's not uncommon that health benefits can be seen or realized in as little as three or four weeks. For example, if they're getting treatment for asthma or if they're using an inhaler to help clear them up, those things go away very, very quickly in the beginning. The big change obviously occurs a bit later. Believe it or not, blood pressures actually come back down to where they're supposed to be. That's a very good thing. One of the drawbacks to quitting is that many people gain a little bit of weight along the way. But the benefits far outweigh the consequences. With more time, medical expenditures will actually reduce.

For an employer who is hoping to manage tobacco-induced high blood pressure, do you have a good sense of when those changes will occur?

Aldana: If you're talking about acute, short-term changes, it's not uncommon to see changes in vessel by dilation within 12-24 hours after stopping tobacco use. Blood pressure can correct itself in three to six months in some cases.

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So what do we know about the cost of overweight and/or obesity?

Aldana: When it comes to calculating costs, overweight and obesity are pretty much the same thing—they're just varying degrees of the same thing. By the way, about 67% of the population is either obese or overweight, and that number has some consequences associated with it.

In a nutshell, about 12% of total healthcare costs are obesity related. So for an employer, you can pretty much take all your healthcare costs for the year, take 12% of that, and you'll be pretty close to approximating your obesity burden—the amount of cost you have that is directly due to treating obese individuals. But there's more than that, and it's really interesting.

If you take, for example, someone who's obese and someone who's not, and they both have the same health condition or the same disease, it costs $1,200 more to treat the obese person than it does the person who maintains a healthy weight—even though it may not be an obesity-related condition. This increase in treatment costs occurs because it's more difficult to treat obese patients. It's tougher to get IV lines in them; it's tougher to do surgery on them; they have more complications. As a result, it costs $1,200 more on average to treat an obese person than it does to treat a non-obese person for the same condition.

So between physical inactivity and obesity, it could cost an employer as much as 27% of their total healthcare claims?

Aldana: It's worse. The piece we're missing here is the diet piece. The diet piece plus sedentary living are both contributing to the obesity epidemic. That's when the numbers start to get really, really concerning. Indeed, when you factor this variable in, you're now looking at 35-40% of total healthcare costs. If you add in tobacco use, you're now sitting at 65-70% of total healthcare expenditures within your organization.

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Steve Aldana Speaks Out On...

The Cost of Physical Inactivity To Employers

"If employers want to calculate what physical inactivity is costing their company, I would suggest that they take a look at their total healthcare expenditures for a year and take 15% of that."

The Cost of Tobacco Using Female Employees

"If you're a female and you're 24 years of age and you're a smoker, it's going to cost $106,000 for you over your lifetime to treat the diseases that you get from tobacco use."

The Cost of Tobacco Using Male Employees

"If you're a man, and you're a tobacco user at age 24 and you use tobacco your whole life, it's going to cost $220,000."

The Benefits of Quitting Tobacco

"Depending on how long these people have used tobacco products, it's not uncommon that health benefits can be seen or realized in as little as three or four weeks."

The Cost of Healthcare For Someone Who's Obese And Someone Who's Not

"If you take, for example, someone who's obese and someone who's not, and they both have the same health condition or the same disease, it costs $1,200 more to treat the obese person than it does the person who maintains a healthy weight—even though it may not be an obesity-related condition."

The Cost of Preventable Healthcare Claims To Employers

"...when you factor in (preventable health conditions), you're now looking at 35-40% of total healthcare costs. If you add in tobacco use, you're now sitting at 65-70% of total healthcare expenditures within your organization."

The Future

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So it really makes good sense for employers to get on these issues?

Aldana: It absolutely does. If you take the top 10 causes of death in the United States, diet is directly related to the top three—heart disease, cancer and stroke—not to mention diabetes. So you've got four of the top ten killers and you have the top three, which makes up about 70% of the total deaths in the United States. If you look at it in those terms, it's pretty significant.

Since we're talking about obesity, I would be remiss if I didn't ask the question concerning the CDC's own admission that it may have dramatically over-inflated the number of deaths associated with overweight and obesity in this country. How do you reconcile that as a researcher?

Aldana: First, we all have to admit that their numbers were flawed, and that in and of itself is an issue. But, you also have to look at the overall disease burden and total morbidity associated with the condition. And you have to look at all the diseases: coronary heart disease, cancer, stroke, diabetes, hypertension, and all the others that are related to carrying excessive body weight. When you look at it in those terms, it helps to reconcile the CDC's original estimates.

We've been talking about problems and costs for most of this interview. What do we know about the efficacy of interventions like physical activity?

Aldana: A good intervention is going to get those people who are not already exercising to either start thinking about and/or participating in some form of regular physical activity. It's not going to be a huge impact because it's very difficult to make that kind of dent in this problem. But, if we can increase physical activity among the general population, I think you're going to see that a few small percentage points will make a huge difference.

Here's one way to think about it.

Let's acknowledge the fact that 78% of our employees are sedentary. What if we dropped that number down to 75%? This would represent a three percent reduction in the number of people who are physically inactive. So what would that really mean for us if we were able to make a change like that?

Well, if you look at Dee Edington's data, that's $1,500-$3,500 savings for each person that reduces one of their risk factors. So, if you have 100 employees and you get a three percent increase in physical activity, on a monetary dollar-for-dollar basis, you would see a $9,000 reduction in excessive claims for that one change alone. Obviously, those are rough estimates based on Dee Edington's work. But, let's say you could get a 20% increase in physical activity. Now the numbers start to get very compelling. But, you could expect far more from this type of change because with increased physical activity, you would start to see a reduction in musculoskeletal issues, diabetes, and blood pressure. With all of those changes would come additional savings.

Q The numbers from effective interventions are pretty compelling. But what does an effective intervention look like?

Aldana: Well there's still a lot of learning to do in this area, but we do know without hesitation, that the more intensive and more comprehensive, the better. It's like a dose response: the bigger dose you give them, the more they respond. So just a health risk appraisal will have some impact, but it will be very small. A health risk appraisal that's followed up by walking programs and competition between departments, including spouses and walking groups on their own and incenting them and giving them pedometers to help them track it, and having contests and then pulling all those together, it's going to have an even greater impact than if you just did an HRA as a stand alone. So my advice to employers is to make your interventions as intensive and comprehensive as possible.

Q Any final thoughts?

Aldana: I can tell you personally that I'm concerned about what the future holds. By 2015, we're going to be spending 20% of our GDP on healthcare. As a researcher, and as a citizen, I can tell you that is a big number. In fact, it's the biggest number the world's ever known. What we need now is boldness on the part of employers and health promotion practitioners. We really have to stop apologizing for suggesting changes in the workplace. If anything, we need to take the whole health promotion thing to the next level in organizations. The future depends on it. ★

About Steven G. Aldana, PhD

Dr. Steve Aldana is a professor of Lifestyle Medicine in the Department of Exercise Sciences at Brigham Young University in Provo, Utah, and he is an adjunct faculty member of the University of Illinois School of Medicine. He has spent his career researching and teaching about the impact of lifestyle on disease and quality of life.

He has published over 60 research articles and has written five books on the connections between healthy living and disease prevention. He is a regular consultant to Centers for Disease Control and Prevention, the National Institutes of Health, and the California Department of Health Services. In the past few years he has given over 80 invited lectures and keynote speeches around the United States. He has received numerous state, private, and federal grants to research how the adoption of healthy behaviors can prevent, arrest, and even reverse many common chronic diseases such as cardiovascular disease, diabetes, and cancer.

As one who practices what he preaches, Dr. Aldana is passionate about educating people about the tremendous impact lifestyle has on disease and is devoted to helping individuals adopt and maintain healthy lifestyles. As a nationally recognized expert on healthy living, he is a highly sought after speaker and advisor. He lives in the heart of the Rocky Mountains with his wife and children. When he is not working in his garden he can often be found playing flag football, mountain biking, or running.

We've chosen to include this interview with Dr. Steve Aldana in this issue of *Absolute Advantage* because it addresses the cost of unhealthy behaviors to the nation's employers. In the context of this issue, we believe that this information can be invaluable to practitioners as they think about their present data collection efforts.

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