

# The Top Ways HR & Benefits Leaders Can Impact Health Care Costs



**lark**

**Chronic diseases are ubiquitous, with 2 out of 3 Americans managing at least one chronic condition, and 2 out of 5 managing at least two.<sup>1</sup> Consequences include burdensome treatments, serious complications, and a lower quality of life.**

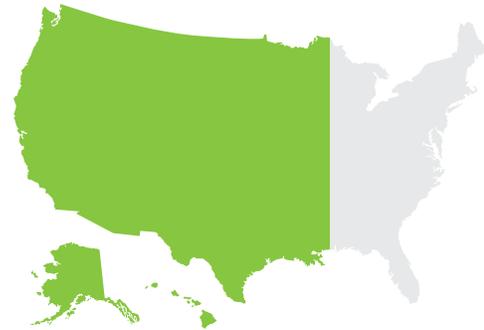
Chronic diseases are also devastating on an economic level. The National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) at the Centers for Disease Control and Prevention (CDC) report that chronic and mental health conditions cost the nation \$2.3 trillion annually, including 86% of dollars spent on healthcare.<sup>2</sup> There is also the cost of reduced productivity from absenteeism and presenteeism.

Paying for chronic diseases can hurt your bottom line as a healthcare provider or employer, but you can have some control over employees' health and associated costs. These are some top ways that HR can impact chronic disease prevention and costs.

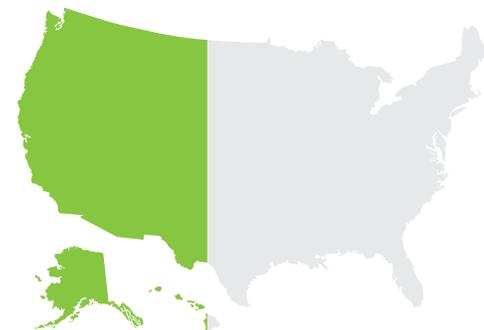
Lifestyle factors are the most common cause for many of the most common chronic conditions, including hypertension, prediabetes and diabetes, cardiovascular diseases, stroke, and obesity, which itself is a cause of these and other chronic conditions.

Health behaviors to lower the risk and/or cost of these and other chronic conditions include:

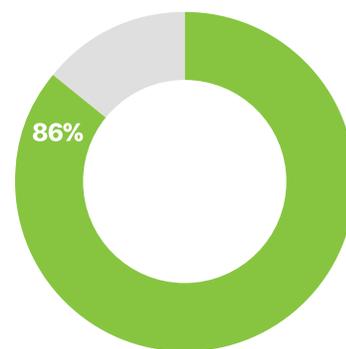
- Losing extra weight or preventing weight gain.
- Eating a diet high in vegetables, whole grains, seafood, and healthy fats, and low in added sugars, fried foods, and processed and fatty red meats.
- Being physically active.
- Avoiding tobacco and excess alcohol consumption.



**2 OUT OF 3 AMERICANS MANAGE AT LEAST ONE CHRONIC CONDITION**



**2 OUT OF 5 AMERICANS MANAGE AT LEAST TWO CHRONIC CONDITIONS**



**86% OF U.S. HEALTHCARE COSTS IS SPENT ON CHRONIC AND MENTAL HEALTH CONDITIONS (\$2.3 TRILLION ANNUALLY)**

## Recognize primary, secondary, and tertiary prevention

Failing to include primary and secondary preventive measures in your health and wellness offerings, in addition to tertiary, can be an expensive mistake.

**Primary prevention** includes modifying health behaviors before someone gets sick. Wellness programs often come to mind, with behaviors such as weight loss, smoking cessation, and group fitness.

**Secondary prevention** involves detecting a disease in its early state so it can be treated before it becomes serious. This can include health fairs with blood pressure measurements to screen for high blood pressure, or on-site screening for diabetes health risks, such as prediabetes or obesity.

Primary and secondary prevention are often overlooked in our society because their effects are less visible and quantifiable than tertiary prevention, but they can have noticeable impacts on your costs and productivity in a short period of time. Consider what might happen if you enroll an employee with prediabetes into a CDC-recognized Diabetes Prevention Program (DPP), which often costs around \$500. The program may lower diabetes risk by over 50%, and each prediabetic patient who does not get diabetes costs an average of \$7,900 less than if they did.<sup>3</sup> Similarly, improving treatment in hypertension can lead to savings of about \$100 per person per year.<sup>4</sup>

POTENTIAL DECREASE IN  
DIABETES RISK WITH A DIABETES  
PREVENTION PROGRAM

50%↓

COST SAVINGS PER PREDIABETIC  
PATIENT THAT DOES NOT  
DEVELOP DIABETES

\$7,900↓

COST SAVINGS PER  
PERSON WITH IMPROVED  
HYPERTENSION TREATMENT

\$100↓

The Partnership for Prevention points out that our current healthcare system emphasizes tertiary prevention, and your healthcare plan likely does, too.<sup>5</sup> Tertiary prevention aims to reduce consequences after a disease develops. It could involve chemotherapy for cancer or dialysis for chronic kidney disease.

**Tertiary prevention** can also include less involved, but still-effective, approaches, such as managing blood glucose (diabetes) or blood pressure (hypertension) to prevent or delay complications such as diabetic neuropathy, blindness, kidney disease, stroke, and cardiovascular events. This type of prevention relies largely on daily choices, such as taking medications and eating right. While these choices are less costly than dialysis and chemotherapy, patients may be unlikely to get the help they need with such in-the-moment decisions due to healthcare shortages. An always-accessible digital nurse can provide effective support that leads to good choices more consistently.

Level of Prevention	Examples of How a Digital Nurse Can Help
Primary	<ul style="list-style-type: none"> <li>• Educate on the importance of weight loss or maintenance, healthy eating, physical activity, adequate sleep, and stress management.</li> <li>• Assist users on achieving healthy lifestyle behaviors.</li> </ul>
Secondary	<ul style="list-style-type: none"> <li>• Inform users if their weight and height are indicative of overweight or obesity.</li> <li>• Encourage regular blood sugar, blood pressure, and cholesterol measurements to screen for prediabetes, diabetes, hypertension, and cardiovascular disease.</li> </ul>
Tertiary	<ul style="list-style-type: none"> <li>• Increase medication adherence via reminders and tracking.</li> <li>• Encourage blood glucose or blood pressure monitoring.</li> <li>• Set weight loss goals and track progress.</li> </ul>

A customized program can help with primary, secondary, and tertiary prevention by assisting covered employees in daily health behaviors. Offering live nurses to be available 24/7 to all patients is unrealistic due to factors such as cost and lack of personalization, but a digital nurse, available via smartphone app and powered by artificial intelligence (AI), is feasible.

### Increase cost-effectiveness and recognize value.

The dollars and cents need to make sense for HR to make the case that it is impacting chronic disease costs. The cost-effectiveness (CE), or cost-utility ratio, helps evaluate the worthiness of a program by weighing the cost of the program against a benefit such as reduced long-term healthcare costs or increased quality of life quantified by some standard measure such as quality-adjusted life years (QALY).<sup>6</sup>

The current and long-standing acceptable threshold considered worthwhile is \$50,000 per QALY gained.<sup>7</sup> Many chronic disease prevention and management programs are well below this value, including:

- Hypertension screening and treatment.<sup>8</sup>
- Cholesterol screening and treatment.<sup>9</sup>
- Hypertension management,<sup>10</sup> including among diabetic patients<sup>11</sup> and using lifestyle interventions.<sup>12</sup>
- Diabetes management through strategies such as screenings, lifestyle interventions, and medication adherence.<sup>13,14</sup>
- Diabetes prevention among individuals with prediabetes in a DPP.<sup>15</sup>

The numbers may vary, but the message remains the same: better prevention and care are worthwhile.

## Make healthcare accessible to all.

Only a small handful of the sickest patients are responsible for the most frequent and costly treatments. This makes no sense from a human or economic perspective, but the Association of American Medical Colleges (AAMC) reports that healthcare providers are in short supply, with 100,000 more physicians being needed to meet needs.<sup>16</sup> This number does not include other healthcare providers, such as nurses and nutritionists, that could help patients with daily choices such as eating well and taking medications as prescribed.

Live providers are indisputably in short supply, but the game is not over if you think outside of the box. Digital AI nurses can fill the gap.

- They are available 24/7 to every single patient on demand.
- They are suitable for primary, secondary, and tertiary prevention, including for diabetes and hypertension management.
- They can increasingly adjust their coaching to the individual the more the individual uses the service.

They are infinitely scalable, as no additional live personnel are required as your covered population grows.

## Leverage pre-existing programs.

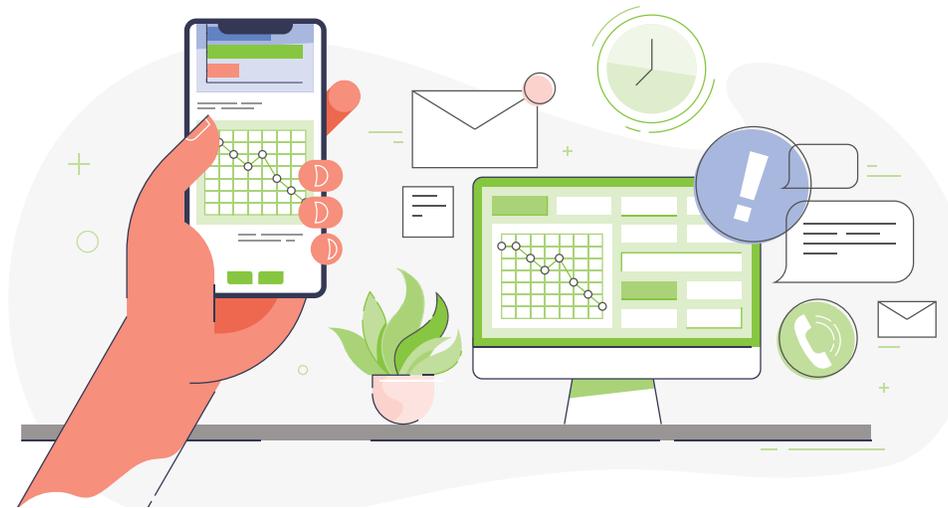
It probably makes little sense from a financial, efficacy, or time perspective to start your own wellness and chronic disease management programs. Instead, you may be better off offering your beneficiaries pre-existing programs with the following benefits.

- Another company already invested the time, money, and thought into creating a program that works.
- You can simply sign up for the program and let another company handle enrollment, eligibility verification, and administrative logistics.
- The other company can provide you with costs and health outcomes data so you need not dedicate your own resources.
- Performance-based billing lets you pay for results rather than paying up front for something that may not work.
- An established program may already have a system for shipping devices such as scales, blood pressure monitors, and blood glucose monitors that work with the smartphone app.

## Reduce costs, increase effectiveness.

You can increase cost-effectiveness by lowering costs and increasing effectiveness. As you search for a program, you might consider a digital one with artificial intelligence (AI).

These are some ways a digital AI health nurse from an established company can lower costs and increase effectiveness.



Lower Costs	Increase Effectiveness
<p>Avoid start-up costs that you would pay if you were designing a program from scratch and had to research it, test and modify it, and find personnel to run it.</p>	<p>Increase participation by allowing for unlimited anytime interaction with the health coach, no appointment or payment necessary, and avoiding inconvenience and feelings of shame or judgment from in-person interactions.</p>
<p>Takes charge of patient recruitment and enrollment so you can save time instead of verifying eligibility, and includes initial services such as shipping scales or blood glucose or pressure monitors.</p>	<p>Customize each user's experience with a coach that grows with the user through AI. Live nurses may not have the chance to develop personalized programs and long-term relationships with each patient</p>
<p>Prevents the need to pay for administrative costs and for overhead such as renting venues/facilities for in-person appointments or meetings.</p>	<p>Provide a multi-faceted approach to chronic disease prevention and management, including medication adherence, weight management, monitoring of values such as blood glucose and blood pressure, and diet and physical activity logging and tracking.</p>
<p>Allows for infinite scalability without the need to change the program or hire more live nurses as your program grows.</p>	<p>Uses evidence-supported behavior change techniques to help patients form healthy habits in their daily lives.</p>
<p>Uses performance-based billing so that you pay when the results are shown and only for the patients who use the program.</p>	<p>Increase accessibility by being available all the time to everyone who is eligible, unlike live healthcare professionals who are in short supply and may not be available nights and weekends without appointments.</p>

Be sure to read between the lines as you choose an online or digital AI nurse. Some programs claim to be virtual but include a live component. This hybrid model can lead to reduced accessibility to patients, and increased costs to you.

## Increase participation.

Too many programs show a misleading lack of positive results due to low participation. Regular participation for a substantial period is often necessary to achieve results. For example, the DPP is designed with the goal of having participants attend sessions for at least a year and a minimum of 22 sessions, including 16 lessons in the first 6 months of the program.

Attending in-person meetings for a year or more can be more than your employees or participants may be willing to do, especially if they are not already committed to preventing or managing chronic conditions. Digital programs can increase enrollment and participation because they eliminate:

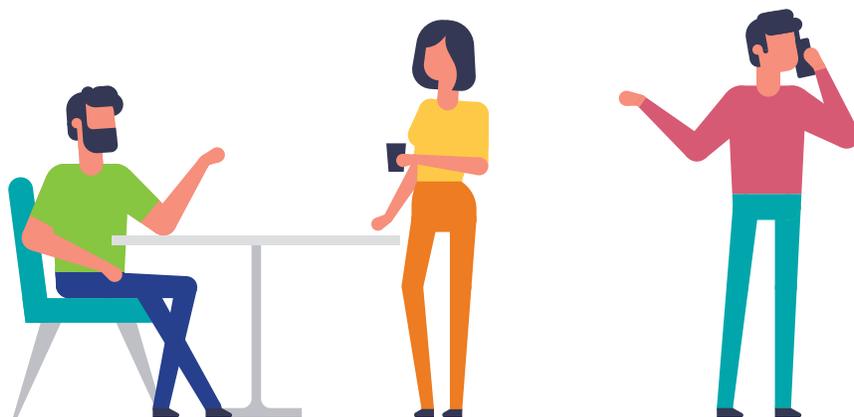
- The time, cost, and energy associated with traveling to group sessions.
- Inconvenience of attending meeting at specific times.
- Negative feelings such as shyness or judgment from the group leader or other participants.

## Build a healthy culture, consistently.

Do you offer health and wellness programs to your employees and educate them on the benefits of eating well and exercising? Does your company serve doughnuts at meetings, encourage employees to eat lunch while at their computers, and shame employees who leave the office at 4:30 p.m. because they are tired or want to spend time with their families?

If you answered, "Yes" to both sets of questions, HR can improve the company's wellness culture to make it more consistent. Provide opportunities in the office to maintain that healthy lifestyle that will ultimately lower healthcare costs and increase productivity. Examples include:

- Serving fruit, yogurt cups, cheese, salads, and water instead of pizza, croissants, and soft drinks at meetings.
- Encouraging employees to take phone calls on their cellphones so they can walk while talking.
- Requiring employees to leave their desks at lunchtime.



- 1 Buttorf C, Ruder T, Bauman M. Multiple Chronic Conditions in the United States. Santa Monica, CA: RAND Corporation, 2017. <https://www.rand.org/pubs/tools/TL221.html>.
- 2 Health and Economic Costs of Chronic Diseases. Centers for Disease Control and Prevention. <https://www.cdc.gov/chronicdisease/about/costs/index.htm>. Last reviewed October 23, 2018. Accessed December 5, 2018.
- 3 Diabetes and the workplace. Centers for Disease Control and Prevention. <https://www.cdc.gov/diabetes/diabetesatwork/diabetes-basics/workplace.html>. Last reviewed December 29, 2016. Accessed December 5, 2018.
- 4 Nuckols TK, Aledort JE, Adams J, et al. Cost implications of improving blood pressure management among U.S. adults. *Health Serv Res.* 2011;46(4):1124-57. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3165181/>
- 5 Woolf SH, Hustin CG, Lewin LS, Marks JS, Fielding JE, Sanchez, EJ. The Economic Argument for Disease Prevention: Distinguishing Between Value and Savings: A Prevention Policy Paper Commissioned by Partnership for Prevention. Partnership for Prevention. <http://www.prevent.org/data/files/initiatives/economicargumentfordiseaseprevention.pdf> Published February, 2009. Accessed December 4, 2018.
- 6 Woolf SH, Hustin CG, Lewin LS, Marks JS, Fielding JE, Sanchez, EJ. The Economic Argument for Disease Prevention: Distinguishing Between Value and Savings: A Prevention Policy Paper Commissioned by Partnership for Prevention. Partnership for Prevention. <http://www.prevent.org/data/files/initiatives/economicargumentfordiseaseprevention.pdf> Published February, 2009. Accessed December 4, 2018
- 7 Neuman PJ, Cohen JT, Weinstein MC. Updating Cost-Effectiveness — The Curious Resilience of the \$50,000-per-QALY Threshold. *N Engl J Med* 2014; 371:796-797. DOI: 10.1056/NEJMp1405158. <https://www.nejm.org/doi/full/10.1056/NEJMp1405158>
- 8 Dehmer SP, Maciosek MV, LaFrance AB, and Flottemesch TJ. Health Benefits and Cost-Effectiveness of Asymptomatic Screening for Hypertension and High Cholesterol and Aspirin Counseling for Primary Prevention. *Ann Fam Med.* January/February 2017 15:23-36; doi:10.1370/afm.2015. <http://www.annfammed.org/content/15/1/23.full>
- 9 Dehmer SP, Maciosek MV, LaFrance AB, and Flottemesch TJ. Health Benefits and Cost-Effectiveness of Asymptomatic Screening for Hypertension and High Cholesterol and Aspirin Counseling for Primary Prevention. *Ann Fam Med.* January/February 2017 15:23-36; doi:10.1370/afm.2015. <http://www.annfammed.org/content/15/1/23.full>
- 10 Moran AE, Odden MC, Thanataveerat A, Tzong KY, Rasmussen PW, Guzman D, Williams L, Bibbins-Domingo K, Coxson PG, Goldman L. Cost-Effectiveness of Hypertension Therapy According to 2014 Guidelines. January 29, 2015. *N Engl J Med* 2015; 372:447-455. DOI: 10.1056/NEJMsa1406751. <https://www.nejm.org/doi/full/10.1056/NEJMsa1406751>
- 11 Ly, D., Alex, F. Z. and Christopher, H. (2009), Cost Effectiveness Analysis of a Hypertension Management Program in Patients With Type 2 Diabetes. *The Journal of Clinical Hypertension*, 11: 116-124. doi:10.1111/j.1751-7176.2009.00082.x. <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1751-7176.2009.00082.x>
- 12 Richman IB, Fairley M, Jørgensen ME, Schuler A, Owens DK, Goldhaber-Fiebert JD. Cost-effectiveness of Intensive Blood Pressure Management. *JAMA Cardiol.* 2016;1(8):872-879. doi:10.1001/jamacardio.2016.3517. <https://jamanetwork.com/journals/jamacardiology/fullarticle/2551983>
- 13 Gilmer TP, Roze S, Valentine WJ, et al. Cost-effectiveness of diabetes case management for low-income populations. *Health Serv Res.* 2007;42(5):1943-59. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2254564/>
- 14 Li R, Zhang P, Barker LE, Chowdhury FM, Zhang X. Cost-effectiveness of interventions to prevent and control diabetes mellitus: a systematic review. *Diabetes Care.* 2010;33(8):1872-94. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2909081/>
- 15 Herman WH. The cost-effectiveness of diabetes prevention: results from the Diabetes Prevention Program and the Diabetes Prevention Program Outcomes Study. *Clinical Diabetes and Endocrinology*2015;1:9. <https://doi.org/10.1186/s40842-015-0009-1>. <https://clindiaabetesendo.biomedcentral.com/articles/10.1186/s40842-015-0009-1>
- 16 Dall T, West T, Chakbrati R, Reynolds R, Iacobucci W; IHS Markit Ltd. The Complexities of Physician Supply and Demand: Projections from 2016 to 2030. [https://aamc-black.global.ssl.fastly.net/production/media/filer\\_public/85/d7/85d7b689-f417-4ef0-97fb-ecc129836829/aamc\\_2018\\_workforce\\_projections\\_update\\_april\\_11\\_2018.pdf](https://aamc-black.global.ssl.fastly.net/production/media/filer_public/85/d7/85d7b689-f417-4ef0-97fb-ecc129836829/aamc_2018_workforce_projections_update_april_11_2018.pdf) Published March 2018. Accessed December 5, 2018