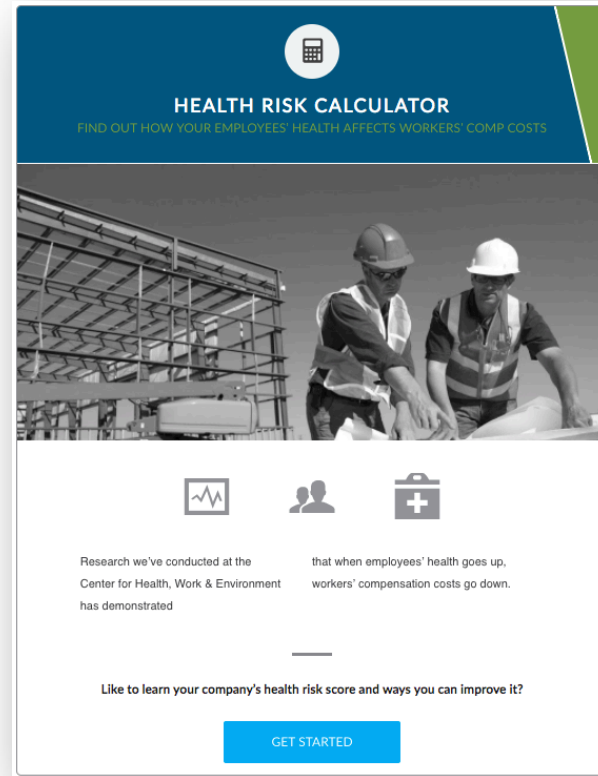


Health risk and workers' compensation calculator: An online resource for businesses

Natalie Schwatka, PhD



Overview

- Background
- Development
- Final product
- Evaluation

Partners

CHWE:

- Lili Tenney
- Miranda Dally
- Lee Newman
- David Weitzenkamp

Human Design


Pinnacol Assurance (funder):

- Jim McMillen
- Karen Curran

Segue consulting


- Claire v.S. Brockbanks




Welcome page



HEALTH RISK CALCULATOR

FIND OUT HOW YOUR EMPLOYEES' HEALTH AFFECTS WORKERS' COMP COSTS






Research we've conducted at the Center for Health, Work & Environment has demonstrated

that when employees' health goes up, workers' compensation costs go down.

Like to learn your company's health risk score and ways you can improve it?



GET STARTED

Step 1

HEALTH RISK CALCULATOR

EXPECTED WORKERS' COMPENSATION CLAIMS & COSTS BY NEXT YEAR
ALL VALUES PER 100 EMPLOYEES

<input type="text"/>	INDUSTRY AVERAGE: 0 CLAIMS	\$0 TOTAL SPEND
<input type="text"/>	ADJUSTED: 0 CLAIMS	\$0 TOTAL SPEND

1 INDUSTRY AVERAGE

CALCULATE AN INDUSTRY AVERAGE FOR WORKERS' COMPENSATION CLAIMS

Workers' compensation claim risk can vary based on the industry you're in and the number of people you employ.

What industry is your business in?

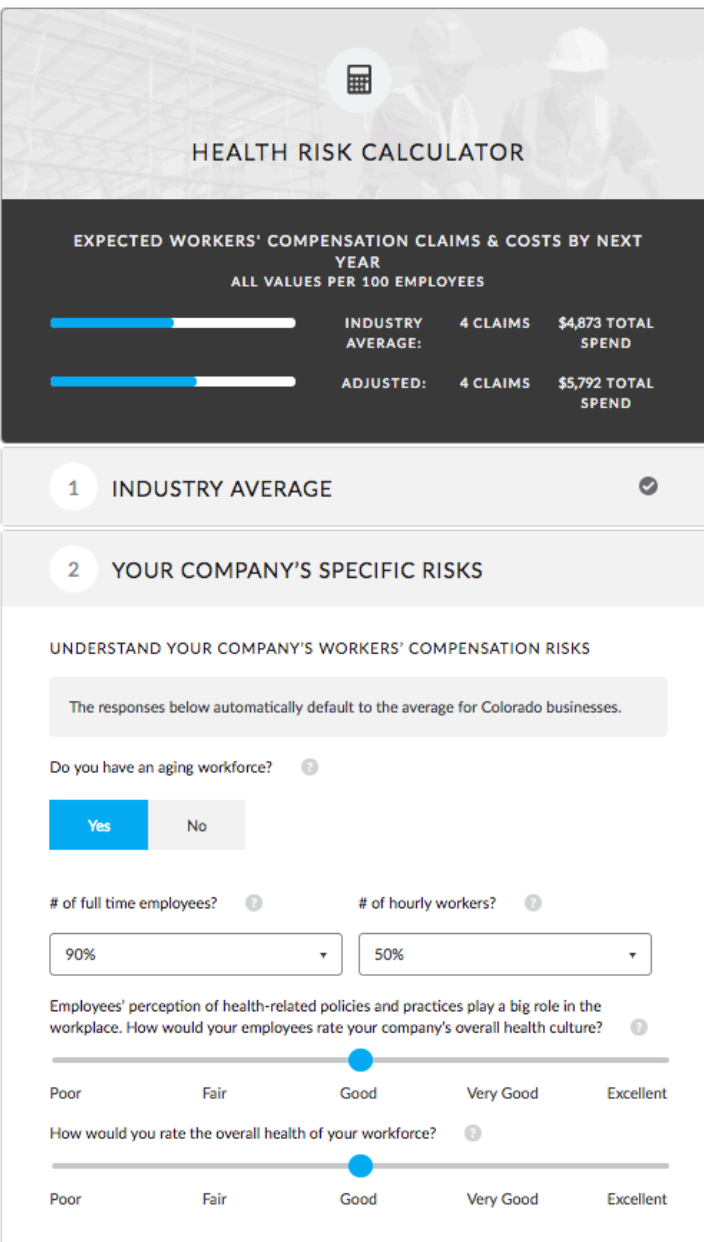
Select an industry

On average, how many people does your company employ on an annual basis? (include part-time and seasonal employees)

BACK **NEXT**

Step 2

ucdenver.edu/chwe/calculator



HEALTH RISK CALCULATOR

EXPECTED WORKERS' COMPENSATION CLAIMS & COSTS BY NEXT YEAR
ALL VALUES PER 100 EMPLOYEES

Category	Claims	Total Spend
INDUSTRY AVERAGE:	4 CLAIMS	\$4,873 TOTAL SPEND
ADJUSTED:	4 CLAIMS	\$5,792 TOTAL SPEND

1 INDUSTRY AVERAGE ✓

2 YOUR COMPANY'S SPECIFIC RISKS

UNDERSTAND YOUR COMPANY'S WORKERS' COMPENSATION RISKS

The responses below automatically default to the average for Colorado businesses.

Do you have an aging workforce? ⓘ

☒ Yes ☐ No

of full time employees? ⓘ

of hourly workers? ⓘ

Employees' perception of health-related policies and practices play a big role in the workplace. How would your employees rate your company's overall health culture? ⓘ

Poor Fair Good Very Good Excellent

How would you rate the overall health of your workforce? ⓘ

Poor Fair Good Very Good Excellent

Step 2 – continued

DID YOU KNOW THAT CERTAIN HEALTH RISKS COULD IMPACT WORKERS' COMPENSATION COSTS?

To understand how improving each health risk factor affects your business, simply move the slider above the questions and watch it adjust in real time. The higher the percentage, the more that risk will affect your workers' compensation costs.

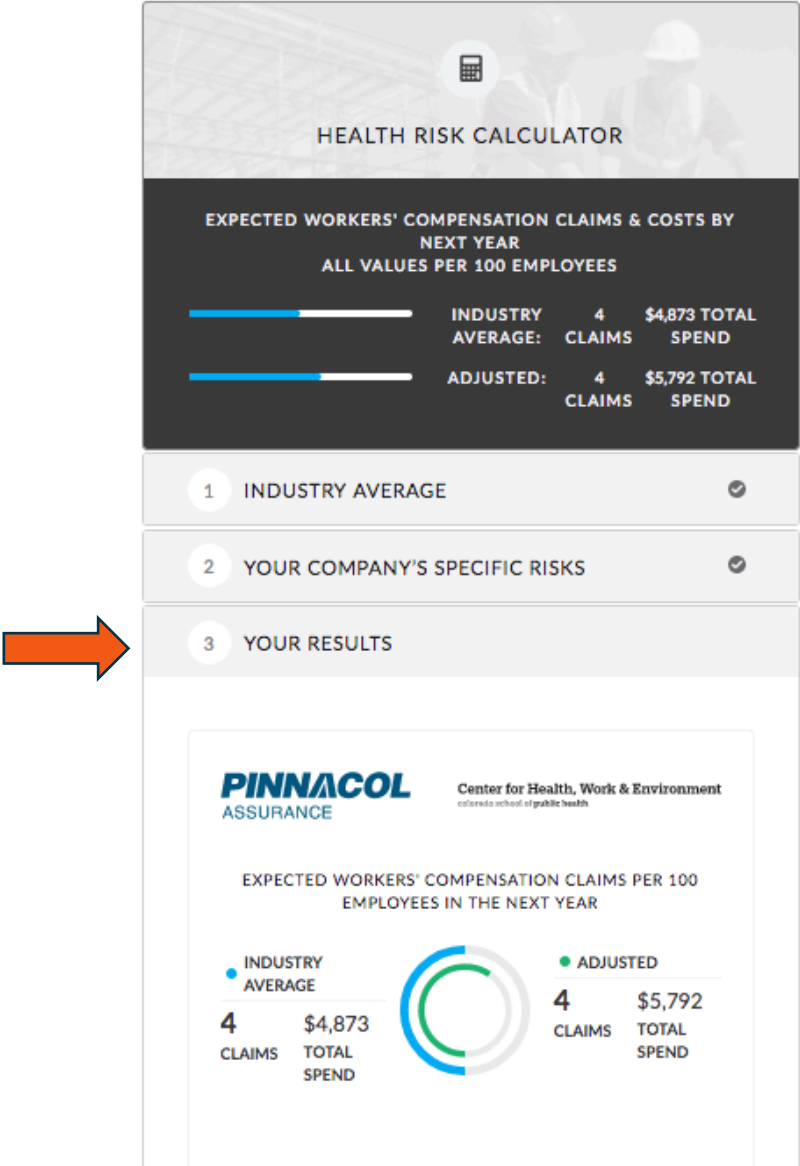


STRESS AT WORK	31%	i
POOR SLEEP	45%	i
ABNORMAL BMI	59%	i
TOBACCO USE	13%	i
HIGH CHOLESTEROL	16%	i
DEPRESSION	21%	i
MIGRAINES	25%	i
HEART DISEASE	1%	i
ARTHRITIS	15%	i
DIABETES	4%	i

BACK

NEXT

Step 3





PINNACOL
ASSURANCE

Center for Health, Work & Environment
colorado school of public health

EXPECTED WORKERS' COMPENSATION CLAIMS PER 100
EMPLOYEES IN THE NEXT YEAR



SO HOW DID YOUR COMPANY DO?

As you can see, small changes really do add up. Are you ready to commit to doing more? Let us help.


Here are three quick ways you can get started.


- 1. Share these results within your company – management, safety, human resources, employees and more – using the print or share functions below.
- 2. [Sign up](#) for the Small + Safe + Well (SSWell) study.
- 3. [Join](#) the Health Links Healthy Business Network.



Join the Small + Safe + Well Study

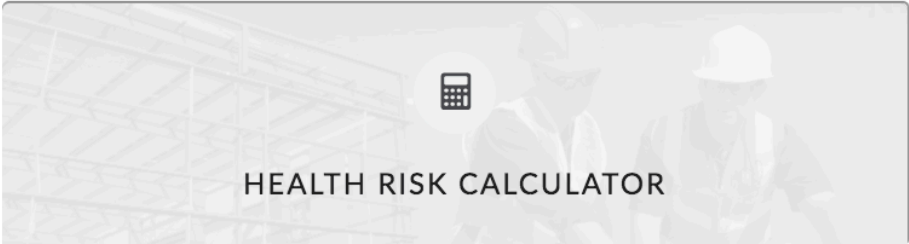
Get feedback, receive training, and advance science.

 [SSWELL STUDY](#)

[RESET CALCULATOR](#) [ACCESS RESOURCES](#) 

[BACK](#)

This tool was developed by researchers at the Center for Health, Work & Environment at the Colorado School of Public Health in collaboration with Pinnacol Assurance.



THANK YOU FOR PARTICIPATING



HEALTH AND SAFETY
TRAININGS

The Center for Health, Work & Environment offers in-person trainings and online courses to teach professionals, in a wide range of industries, the skills they need to build healthy, safe workplaces.

GET GOING



HEALTH LINKS ASSESSMENT
AND ADVISING

Join the Health Links Healthy Business Network to assess health and safety in your organization, receive advising, connect with like-minded organizations and to local resources, and become a Certified Healthy Business.

GET GOING

RESOURCES

[Resource Center](#)

[Events](#)

[Continuing Education](#)

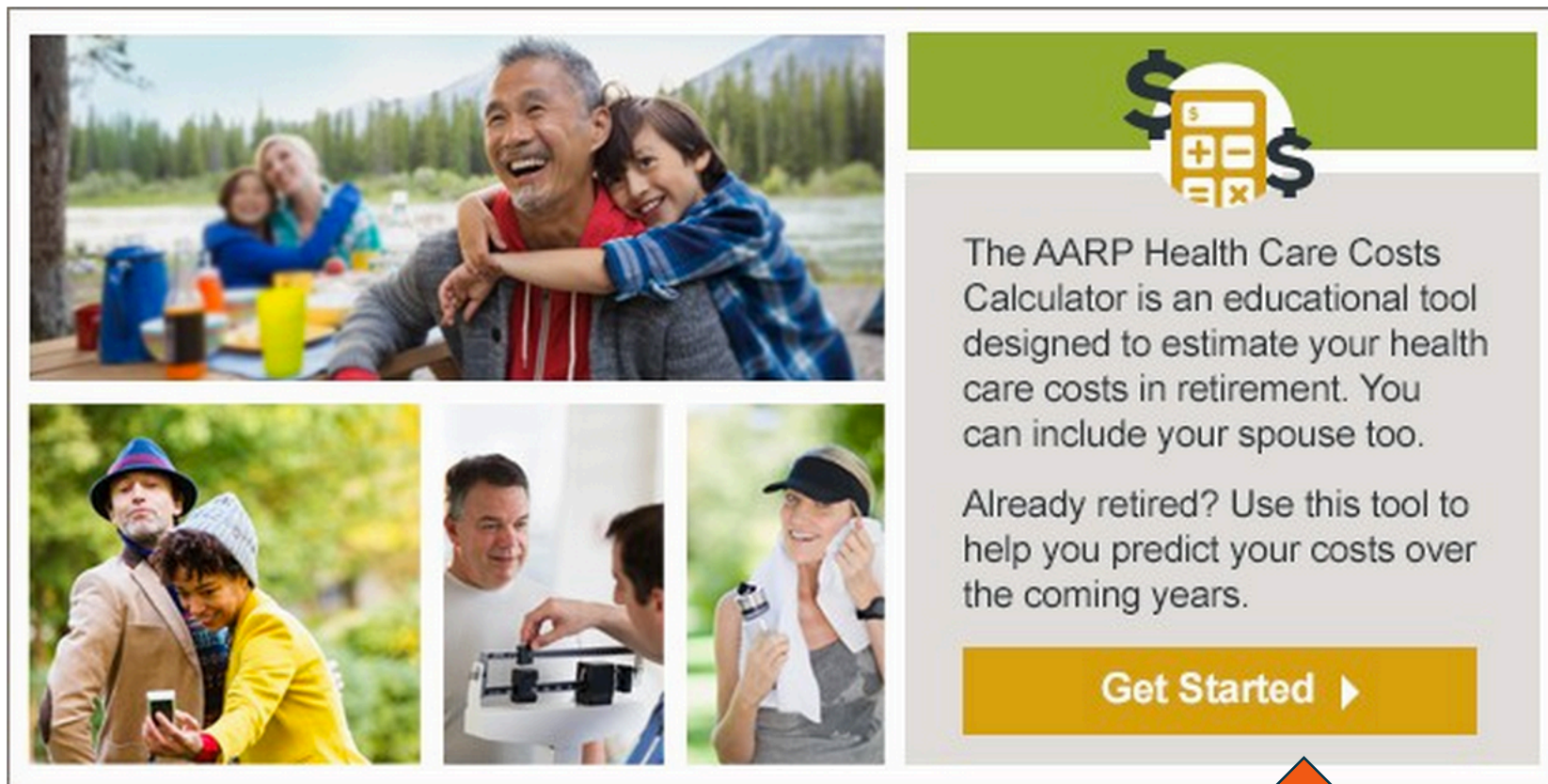
[Graduate Training](#)

Background

- Empirical research to understand health*workers' compensation
- Recognized a need to translate and disseminate empirical findings into practice
- Online, interactive calculators are popular, educational tools



Example #1 – page 1



The advertisement features a large photo of a family (father, mother, and two children) smiling outdoors at a picnic table. Below this are three smaller photos: a man and woman looking at a smartphone, a man using a scale, and a woman talking on a phone. To the right, a green header contains a calculator icon with dollar signs. The main text describes the calculator as an educational tool for estimating retirement health care costs. A yellow 'Get Started' button with a right-pointing arrow is at the bottom right.



The AARP Health Care Costs Calculator is an educational tool designed to estimate your health care costs in retirement. You can include your spouse too.

Already retired? Use this tool to help you predict your costs over the coming years.

Get Started ▶

Call to action



Example #1 – page 2

Four Easy Steps



Things to Know Before You Start

- AARP does not save any information you put into the tool.
- Experiment with adding different health conditions (such as those in your family history) to see if they increase or decrease your costs.
- Click on the suggested actions you can take that may help lower your costs — you'll see your estimate change based on what you select.
- Take advantage of resources at the end that can help you begin to tackle you long-term health and savings goals.

Demographics



Let's Get Started

Gender

Female

Male

Age

55

Already Retired?

Yes

No

☐ Check here to include a spouse/partner in the cost estimate

Call to action



Get Started ►

Example #1 – page 3

Demographics



Real time results



Your Information

Health Conditions

Personalized Estimate

Take Action

Gender

Age
55

Height:

5

ft

5

in

Weight:

160

lbs

Smoker:

Yes

No

Primary state of residence during retirement:

Colorado

What age do you plan to retire?

65

What age do you expect to live to?

84

Update My Costs

Total Health Care Costs:
\$ 175,068

Covered by Medicare:
\$ 108,892

Your Estimated Shortage:
\$ 66,176

Estimated Annual Health Care Costs During Retirement

Age	Total Estimated Annual Costs (Dollars)	Covered by Medicare (Dollars)	Estimated Shortage (Dollars)
66	~6,000	~3,000	~3,000
70	~7,500	~3,200	~4,300
75	~9,500	~3,800	~5,700
80	~12,000	~4,500	~7,500
84	~15,000	~5,200	~9,800

Previous: Welcome

Next: Health Conditions

Example #1 – page 4

Health conditions



Real time results



Your Information

Health Conditions

Personalized Estimate

Take Action

Gender
Age
55

Select Conditions to Include in Your Estimate:

-Type in your health condition-

- Click to view entire list

Conditions selected:

REMOVE

Diabetes

Mild
Moderate
Severe

High Blood Pressure (Hypertension)

Update My Costs

Total Health Care Costs:
\$ 247,248

Covered by Medicare:
\$ 163,026

Your Estimated Shortage:
\$ 84,222


Estimated Annual Health Care Costs During Retirement


Age	Total Cost (\$)	Covered by Medicare (\$)	Estimated Shortage (\$)
66	~8,500	~3,500	~5,000
70	~10,500	~4,000	~6,500
75	~13,000	~4,500	~8,500
80	~17,000	~5,500	~11,500
84	~21,000	~6,500	~14,500


Previous: Your Information


Next: Evaluate My Options


Example #1 – Final page


Your Information


Health Conditions



Personalized Estimate


Take Action

Gender 

Age 55


Resources



Now that you've seen the impact some health and lifestyle changes can make on your wallet, explore resources below that can help you form a plan, or simply provide more information.

I want more information on...

<input type="checkbox"/> Financial Planning & Saving	<input checked="" type="checkbox"/> Quit Smoking
<input type="checkbox"/> Exercise and Fitness	<input type="checkbox"/> Manage Your Diabetes
<input checked="" type="checkbox"/> Nutrition and Healthy Eating	<input type="checkbox"/> Lower Your Blood Pressure
<input type="checkbox"/> Prevention and Screenings	<input type="checkbox"/> Manage Your Weight

 **Get More Info**

Nutrition and Healthy Eating

[Good Nutrition Overview](#)
[The New American Diet](#)
[7 Day Plan for Healthy Eating](#)
[So you think you know how to diet quiz](#)

Quit Smoking

[Tips to Quit Smoking](#)
[Nicotine Withdrawl](#)
[Building A Support System](#)
[It's Never too Late to Quit Smoking](#)

Example #2 – page 1



Connect with a Safety Consultant!
Call us at 1-866-569-7805

Email us

Better Business Starts with Safety Safety Starts at BWC

How safe is your industry? Compare the numbers - Get solutions
Pick your industry and the number of employees in your business to learn more.

Pick your industry

Agriculture & Natural Resources

Manufacturing

Transportation & Warehousing

Construction

Public Employers

Utilities

Healthcare & Social Assistance

Services

Wholesale & Retail Trades

Select total number of employees

1-9

10-49

50-249

250+

SUBMIT

Industry

Business size

Example #2 – page 2

How do you compare to these average rates?

Construction

10-49

The following are average costs per claim for your industry

Average cost per claim
\$9,287.57

Average cost for a
medical only claim
\$1,069.03

Average cost for a lost
time claim
\$40,667.49

These average rates are estimated per 100 employees

Rate of claims
3.99

Rate of medical
only claims
3.17

Rate of lost time claims
.83

Leading cause of injury in the workplace

1. Slips, trips and falls
2. Overexertions

More than 40% of all claims and more than 60% of lost time claims are caused by slips, trips and falls and overexertions.

Results

Center for Health, Work & Environment
colorado school of public health

Whether you are higher, lower or average, we can help you improve on safety. **See how, click below!**

1. **One on one consultation** - Our consultants can help you improve safety. Select from industrial hygienists, ergonomists and safety consultants.
2. **Training and education** - We offer more than 80 online and inclass courses delivered in 11 locations across the state.
3. **BWC safety libraries** - We offer safety training videos and research assistance.
4. **Safety grants** - Eligible recipients may receive money for one of three things; equipment to reduce injuries, starting a wellness program or creating a drug-free program in the workplace.

Connect with a Safety Consultant now! Call us at 1-866-569-7805

Email us

Resources

colorado school of
public health

UNIVERSITY OF COLORADO
COLORADO STATE UNIVERSITY
UNIVERSITY OF NORTHERN COLORADO

Health Risk Calculator

Purpose:

To educate businesses about the relationship between employee health and workers' compensation claims, and provide them resources to take action.

Target users

Health and safety community:

- Wellness services
- Safety and Health Consultants
- Health Links Advisors

Businesses:

- Owners
- Health + Safety Managers
- Risk Managers



Algorithm Development

- Use data from the Pinnacol Assurance Health Risk Management Study
- Logistic and generalized linear models, controlling for demographics using SAS
- Translate into an excel calculator
 - Step 1 – Business information
 - Step 2 – Health information

Step 1: Business Information

	A	B	C	D
1	What industry does your business operate in?		Agriculture	
2				
3	On average, what is the number of people employed by your business?		499	
4				
5		Probability of a claim		
6		0.08		
7				
8		Industry Average Expected Claims per 100 Employees		
9		8		
10				
11		Average cost of a claim		
12		1141		
13				
14		Industry Average Total Cost of Claims per 100 Employees		
15		9128		
16				
17				
18				

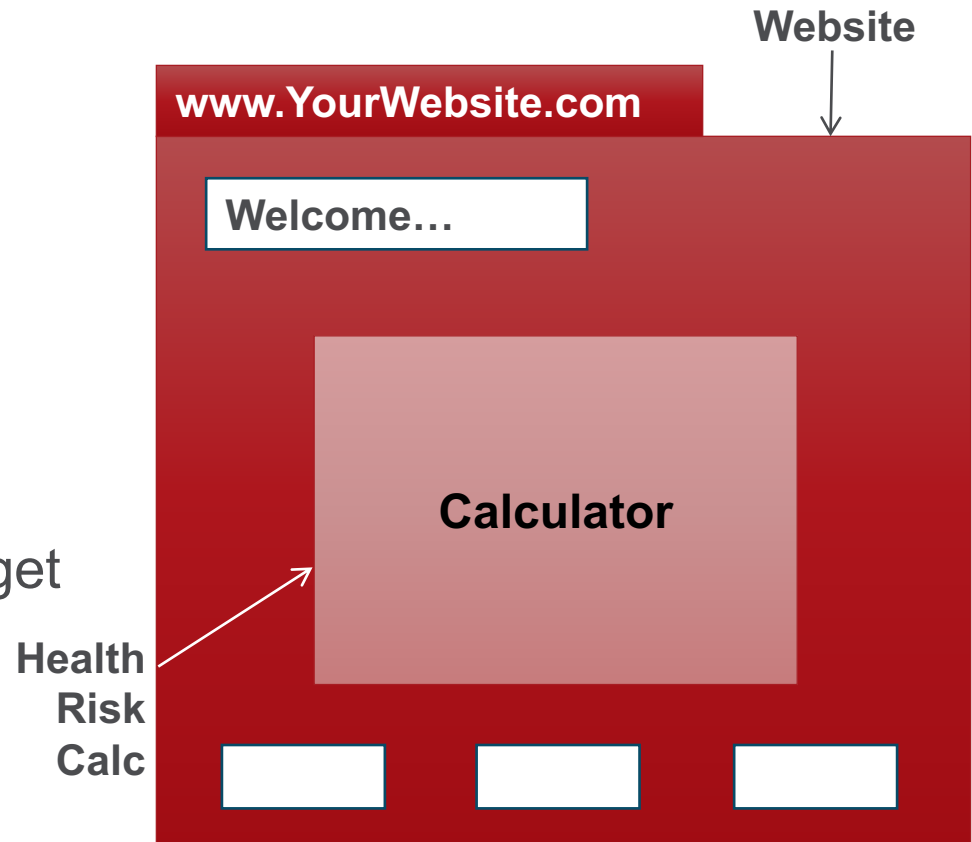
Step 2: Health Information

	A	B	C
1	Do you have an aging work force?		1
2			
3	How many of your employees are full time?		0.9
4			
5	How many of your employees are hourly workers?		0.5
6			
7	How would your employees rate the overall culture of health at your business?		Good
8			
9			
10	How would you rate the overall health of your workforce?		Good
11			
12			
13	What percentage of your employees have the following conditions?		
14	Diabetes		4
15	Arthritis		15
16	Migraines		25
17	Heart disease		1
18	Depression		21
19	Stress at work		31
20	Poor Sleep		45
21	BMI		59
22	High Cholesterol		16
23	Smoking		13
24			
25		Probability of a claim	
26		0.098382169	
27			
28		Adjusted Expected Claims per 100 Employees	
29		9.838216876	
30			
31			
32			
33		Adjusted Total Spend per 100 Employees	
34		11225.40546	
35			
36			
37		Percent Change from Industry Average	
38		23%	
39			
40			

Web application development

Main concept

- Partnership with Human Design, a local creative agency with expertise in healthcare web design
- Design a white-label application to act as a widget to be inserted into many webpages



Web application development

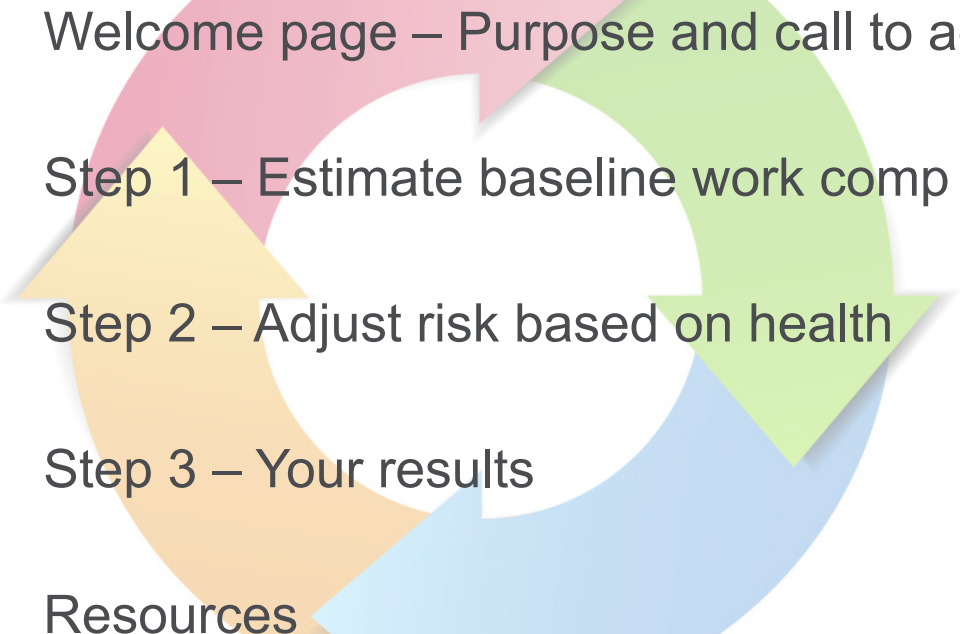
User experience features

- Interactive
- Customizable
- Step-based process
- Educational
- Visual
- Results + Resources to take action
- Sharing features



Structure / User experience

Awareness, Learning, Action

- 
1. Welcome page – Purpose and call to action
 2. Step 1 – Estimate baseline work comp risk
 3. Step 2 – Adjust risk based on health
 4. Step 3 – Your results
 5. Resources

Beta testing via focus groups

Key findings

- Engaging design and good marketing tool
- Unsure of how to answer health risk questions
- Unsure of how to interpret
- Functionality issues
- Reaction to use different between OHS community and businesses



Online user survey (n=34)

Access on own and provide reaction

- Most common planned activity post-use
 - Explore services
 - Share results
 - Evaluate health and safety program
 - Needs assessment



Website analytics (direct access)

4-months post-official launch

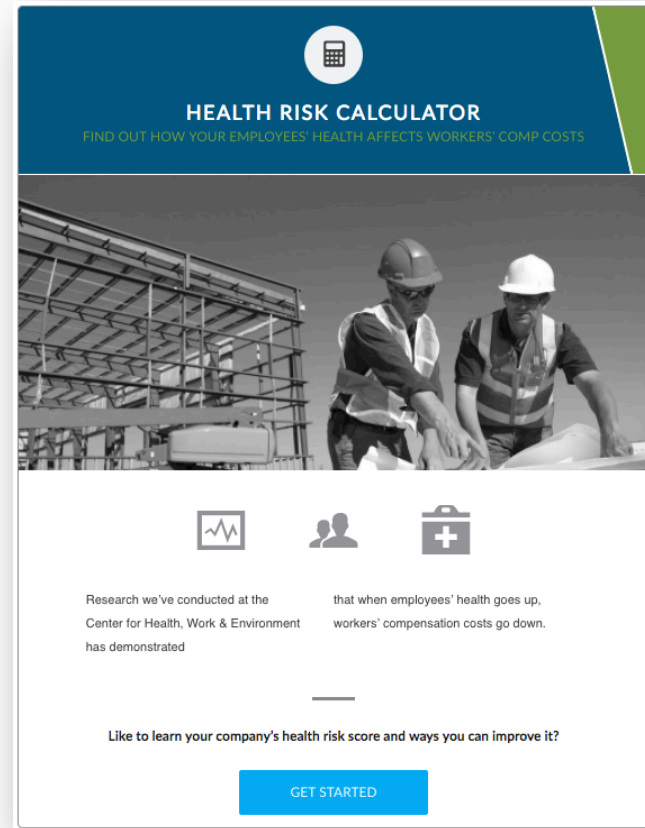
Overall number of users	313
New sessions	224 (72%)
Returning sessions	89 (28%)
Length of time spent using	1:12 minutes
Age of users	33% 25-34 27% 35-44 27% 45-54 13% 55-64
Gender of users	54% Female 46% Male
Devise used	Desktop: 298 (95%) Mobile/tablet: 15 (5%)
Visits to the FAQ page	24 (8%)
Location of users	<div><div>Colorado springs</div><div>Aurora</div><div>Denver</div><div><div></div><div></div><div></div></div><div><div>0</div><div>50</div><div>100</div><div>150</div><div>200</div></div><div><div>Direct</div><div>Referral</div></div></div>

Benefits of using the calculator

- Offers a free way to estimate workers' compensation costs based on significant employee health risk factors
- Provides a “business case” for employer safety, health and wellness programs
- Offers insight into where businesses should focus their efforts for employee safety, health and wellness
- Promotes value for business to enroll in other services

Summary

- Ground in sound research and analytics practices
- Partner with design experts
- Design adjustability into your platform
- Integrate with Google analytics for evaluation
- Market to users



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