



Health & Wellness

THE CHANGING MINDSET OF MODERN LIFE INSURERS



Dear Readers,

We partnered with the Coverager team to help compile this report motivated by our strong commitment and desire to help the industry identify health and wellness solutions for clients and in turn help consumers live healthier and longer lives.

This report will provide you with a window view of how many companies featured in this publication are navigating our current environment. The integration of innovation and technology is driving dynamic developments in disease diagnosis and treatment. Although in the early stages, Electronic Health Records are being used as a new digital data source for risk assessment and potentially individual health assessments down the road. Wearables and engagement applications are allowing consumers to know "realtime" where they stand in their health journey.

When we began work on this publication in late 2019, we were excited to collaborate with many of the respected companies featured here that have made significant investments in the health and wellness arena. At SCOR, our work with partners like Garmin, Human API, Verisk, Sentio, BioSerenity, FOXO Bioscience and in particular ReMark (a SCOR wholly owned insurtech solutions provider) highlights our shared purpose and supports our goal of helping policyholders to live healthier and better lives.

As Coverager continued their work on this report during the early months of 2020, the world was changing drastically. The COVID-19 pandemic massively disrupted our sense of security and normality. And, as our anxiety rose with each passing day, we realized more than ever how important and fragile our health and wellbeing can be.

This report gives a broad overview of various health and wellness solutions in the market and a few deep dives with select companies who are aiming to broaden the life insurance ecosystem to enhance products and improve customer engagement, experience and mortality. This report also chronicles the evolution of many health awareness campaigns launched by insurance companies over time to help improve our health, change behavior and positively impact mortality.



At SCOR, we are seeking to increase public awareness by learning even more about the determinants of health, behavior change, chronic disease and the opportunities that exist for improvements in these areas. We are applying research, developing advanced algorithms and leveraging technology to help the industry innovate. But behind these innovations are a basic need for better insurance products and closer ties to policyholders to help promote disease detection, prevention and management – along with healthier lifestyles.

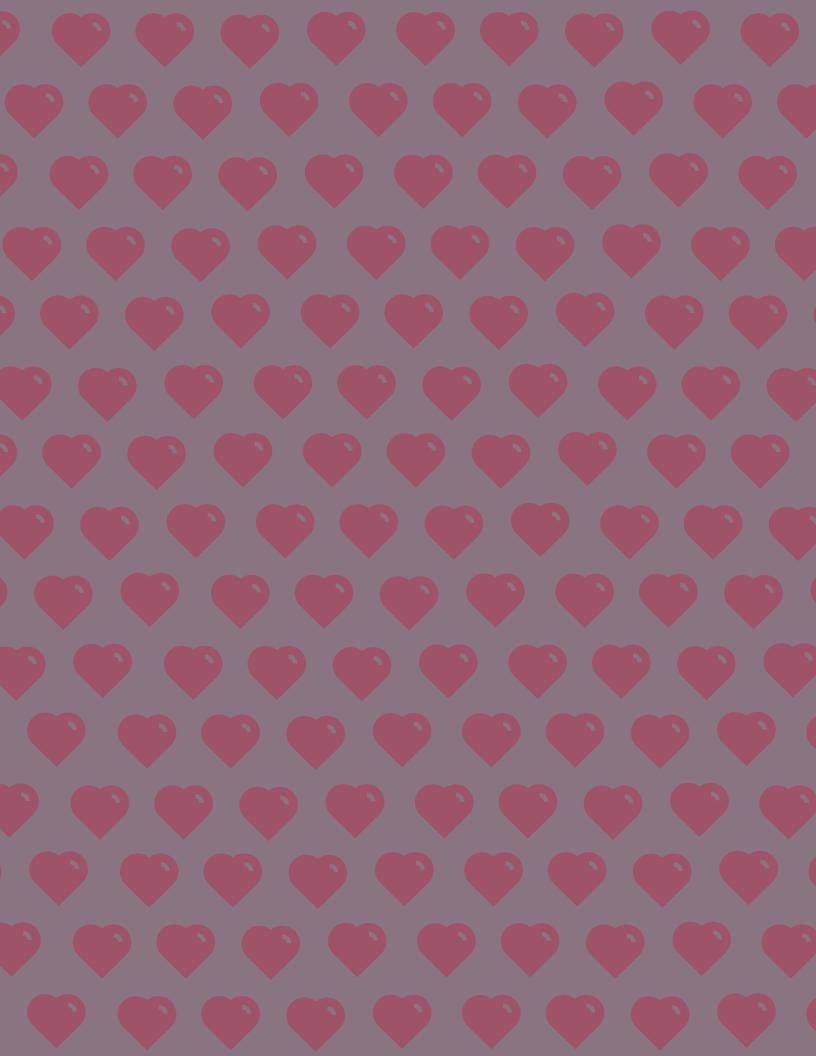
As the world's fourth largest reinsurance group established more than 50 years ago, we realize we are in a unique position to positively influence consumers' opinions and the way they think about life insurance. To this end, we are collaborating with our partners in the health and wellness space to align with the needs of our clients and their customers.

On Page 37, you will learn more about SCOR's partnership with key players in wearable technology and our development of the Biological Age Model (BAM). ReMark developed the Good Life Inspire application (app) to collect data via a wearable or cell phone and use that data to calculate a person's biological age. Based on more than 20 years of clinical data, BAM sets itself apart in being an evidence-based model for both mortality and critical illness risks.

In addition to the team at Coverager, there are so many people to thank for contributing to this state of the industry edition. At SCOR, we are proud of our affiliation not only with the journalists of this publication but the many disruptors who continue to support the life insurance industry and graciously contributed meaningful and quality content to this report.

Brona Magee, Deputy CEO SCOR Global Life





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Executive Summary

Motivated by the desire to shift the narrative from death to life, more and more life insurers move beyond protection to prevention by creating tailor-made products and services to allow clients to proactively manage their health.

Over two decades ago, Discovery, the South African-based insurer, introduced Vitality, a behavioral wellness solution to help policyholders improve their health, and enhance and protect their lives. This is done by providing them with the necessary tools, knowledge, access and incentives. The program has since expanded internationally to reach more than 16 million people with exclusive partners such as AIA, Generali, John Hancock, Manulife, Ping An, and Sumitomo Life. But for many insurers, a program like Vitality is outside their scope. Luckily for these insurers, wellness is an all-inclusive, borderless industry that allows insurers – irrespective of size – to offer quasi upgrades and perks to introduce wellness programs best suited to their policyholders.

This report explores the growing focus by insurers on wellness and wellbeing initiatives as they look to respond to the changing consumer needs of (mainly) millennials and seniors.

wellness [wel-nis]

noun

- **01.** the quality or state of being healthy in body and mind, especially as the result of deliberate effort.
- **02.** an approach to healthcare that emphasizes preventing illness and prolonging life, as opposed to emphasizing treating diseases.

Then & Now

Metropolitan Life Cautions Those 25 and Over to Keep Slim and Live Longer

THE NEW YORK TIMES, TUESDAY, FEBRUARY 2, 1960

he Metropolitan Life Insurance Company urged the public yesterday to watch its waistline in the interest of longer life and better health. It directed its advice especially to men in their twenties and thirties.

The company issued a "Table of Desirable Weights" for men and for women 25 years old and over. The range of desirable weight, it was explained, is about twenty pounds below the table of average weights for Americans issued last October after a four-year study by the Society of Actuaries.

Using that study, the life insurance company said about half of the men in their thirties were at least 10 percent above the desirable weight and about one-fourth were at least 20 percent above it. The proportion of young women exceeding the desirable weight was less. The company uses the term "desirable" for the weights associated with the longest life expectancy.

Cecil j. North, president of the company, opened a press conference on the subject by saying that this information was of vital importance "to get to the general public."

Longer Life is Aim

Dr. William P. Shepard, the concren's chief medical director, said the company was issuing the advice to encourage people "to live longer and avoid unnecessary illness."

Edward A. Lew, the company's actuary and

statistician who headed the committee that issued the Society of Actuaries study, said excess mortality for overweight had changed little in the last seventy-five years. He said the actuaries study showed that underweight had become less of a danger since the reduction of tuberculosis and pneumonia as causes of death. The new "desirable" tables are therefore about five pounds less for men and six to eight for women, he said.

The categories of "small frame," "medium frame" and "large frame" in the table of desirable weights refer to width of chest and hips. For example, Mr. Lew suggested that Fred Astaire has a small frame and that the line-backers of the New York Giants have large frames. In Opera circles, he said, Lily Pons has a small frame and most Wagnerian sopranos have large frames.

Dr. George M. Wheatley, who heads the company's health and welfare division, said there was need for a more active effort in this area. "We are eating too much for our own good," he said, deploring the combined effect of "more and richer food, more cars, more work-savers." He urged shifting the campaign against obesity from persons over 50 with a health problem to healthy persons in their twenties and thirties who are putting on weight. He appealed to the "young wife who takes pride in fattening up her young husband."

The company is issuing a free pamphlet, "How to Control Your Weight," including the new table, as well as a billfold-size folder, "Hidden Calories," which warns of additions to the diet.

Insurance Cut Rates for the Non-Smokers

MURRAY SCHUMACH, THE NEW YORK TIMES, SUNDAY, SEPTEMBER 3, 1967

Should non-smokers pay less for their life insurance than smokers? A few insurance companies apparently think so. The State Mutual Life Assurance Company of Worcester, Mass., for one, gives a flat 3 percent rate reduction to anyone who hasn't smoked a cigarette within a year of the date the policy is issued.

The cut-rate premium for the non-smoker hasn't quite become a trend yet, but there are indications that one might be under way because among the companies that favor the non-smoker is one of the giants of the industry, Metropolitan Life.

Metropolitan Life charges more if a policyholder with a lung or cardiovascular ailment smokes than if he doesn't. Another company, Phoenix Mutual of Hartford, gives non-smokers a break if they are not excessively overweight.

What is unusual about State Mutual, however, is that it has put its policy on the market without benefit of actuarial tables. "For all we know," says Sherman Ludden, director of public development for the company, "actuarial tables may eventually show us to be wrong. It may be that when people stop smoking they eat so much they do themselves more harm than good. It may take maybe 15 years to work out actuarial tables on smoking."

Rather than wait for the statisticians to compile years of mortality figures, the company decided that the glum reports by the Surgeon General's office, the United States Public Health Service, the American Cancer Society, the American Heart Association and thousands of medical studies, strongly suggested that cigarette smoking contributed substantially to lung cancer, emphysema, cardiovascular diseases and, in general shortened life. (Cigar and pipe smokers are within State Mutual's definition of non-smoker, since they rarely inhale). State Mutual's agents report that the new policy has a special psychological appeal that one of them summarized as follows: "When a man or woman has finally cut out smoking, he or she believes it only right to be rewarded for this accomplishment. In a way these people are pinning medals on themselves. And they deserve it."

How does State Mutual know the policy-buyer is telling the truth about his smoking habits? Or that he will remain a cigarette abstainer? New York Life, for instance, says that one reason it has not entered the field is that it is so "impractical" to determine the truth of the policyholder's smoking habits.

But State Mutual is convinced that the percentage of those who get the non-smoking benefit under false pretenses is so small that it won't matter. And there is one fact that seems to support its faith in the honor system. Government reports say that about a third of those between the ages of 18 and 65 in the United States are non-smokers. Policies being sold by State Mutual follow a similar ratio. "If we were running 75 percent non-smokers," says an official, "we'd know something was wrong."

And recently the company has noticed a new development. Some customers are using the policy as an incentive to stay off cigarettes. They have been off smoking for perhaps a few months, but buy the non-smoking policy with the proviso that they remain off for the full year to take advantage of the 3 percent saving.

"The evidence so far," says Mr. Ludden, "is that our hunch was right on the non-smoking policies. Why wait for actuarial tables?"

Science Fiction Comes to Life

Every now and then you're going to see science fiction films and shows that predict the future.



Martin Cooper, whose team at Motorola built the first cell phone, cited Captain Kirk's communicator on Star Trek as an inspiration. In 1984, The Terminator featured military drones which made headlines recently with the assassination of Iranian commander Qasem Soleimani. Another Schwarzenegger movie, Total Recall, gave us self-driving cars in 1990. And '2001: A Space Odyssey', the 1968 film directed by Stanley Kubrick, featured tablet computers, space tourism, and video calling.

In the 1982 TV series Knight Rider, self-made billionaire Wilton Knight rescues police Detective Lieutenant Michael Arthur long after a near fatal shot to the face, giving him a new identity and a new name: Michael Knight. Played by David Hasselhoff, Michael Knight becomes the lead field agent in the Knight Foundation's public justice organization, part of which includes the development of KITT (Knight Industries Two Thousand), a heavily modified, technologically advanced Pontiac Firebird Trans Am with numerous features and controlled by a computer with artificial intelligence. One of the features is the ability to communicate with KITT using a smartwatch. KITT is in constant contact with Michael via a two-way communication wristwatch which has a micro camera and scanner that allows KITT to gather information. In several episodes, when Michael is at last out of breath and out of moves, he relies on his watch to summon KITT and save the day.

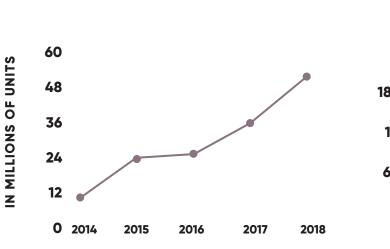
The Apple Watch

Seinfeld got off to a bad start as did the Apple Watch.

The Apple Watch was released on April 24, 2015. It was the first entirely new product that Apple had released in five years and the first launched under CEO Tim Cook. But the widely-anticipated smartwatch wasn't as successful as other Apple products. A year after the launch, it was estimated that around 5 million devices were sold while just in the last quarter of 2015, Apple sold close to 75 million iPhones. But just as Seinfeld got off to a bad start, the Apple Watch is picking up steam as does the entire smartwatch category.

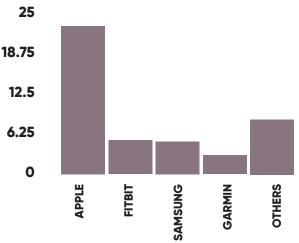
"I believe, if you zoom out into the future, and you look back, and you ask the question, 'What was Apple's greatest contribution to mankind?' It will be about health."

Tim Cook, 2019



Smartwatches Surge

Global Smartwatches Shipments



Apple Watch Saves Palm Beach County Man's Life

ABC NEWS, DECEMBER 5, 2019

Roy Robinson, 74, of Lake Worth, credits an Apple Watch with saving his life. Robinson was visiting his family in Baltimore when he said he started feeling fatigued. "So I rested and didn't think anything of it, and later that afternoon, the watch started beeping probably about once an hour, saying, 'You're in A-fib,' and I had no idea what A-fib was." He showed up at the hospital to later be admitted.

Apple Watch Calls 911 as Middletown Man Falls Down Cliff

NEWS 12, OCTOBER 21, 2019

ames Prudenciano, 28, and his date, Paige Paruso, were hiking in Hartshorne Woods Park last week when they got lost in the woods. They fell over some thorns onto a steep cliff. Once it began to get dark, they decided they were going to slide down the cliff hoping they would land on solid ground. They then realized there was nothing below them but rocks along the Navesink River. Paruso fell into the river and wasn't seriously injured, but Prudenciano landed on a rock, suffering three fractures in his back. "I was screaming that I'm going to die because I really felt I was going to die," he said in an interview with News 12. "There was no way out of this for me. I literally said my last goodbyes." At that point, Prudenciano's Apple Watch automatically dialed 911.

Man Credits Apple Watch Feature for Helping Save His Father

CBS NEWS, SEPTEMBER 23, 2019

acebook: Last Sunday while trying to meet up with my dad for some mountain biking in Riverside State Park (MTB in RSP), I get a text from dad's Apple Watch letting me know it "detected a Hard Fall" with a map to his location. It was not far from our meeting spot. We drove straight there—but he was gone when we arrived. I get another update from the watch saying his location has changed with a map location of SHMC. Dad flipped his bike at the bottom of Doomsday, hit his head and was knocked out until sometime during the ambulance ride. The watch had called 911 with his location and EMS had him scooped up and to the hospital in under a 1/2 hr. The fire dept. took his bike back to the station. My brother was already driving by the hospital when the second update came in and was able to be with him right away. Dad is doing great, clear X-Rays and CT scan, but a little sore for sure! IF YOU OWN AN APPLE WATCH, set up your HARD FALL detection-it's not just for when you fall off a roof or a ladder. Had he fallen somewhere on the High Drive trails or another remote area, the location would have clued EMS in on where to find him. Amazing technology and so glad he had it!

2019

Google Health

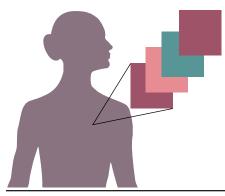
Alphabet, the parent company of Google, is another company which takes seriously the health and wellbeing sectors.

Dr. David Feinberg, who leads Google Health, has spent his entire career caring for people's health and wellbeing, and in 2019, after years in the healthcare system, he joined Google Health, which brings together groups from across Google and Alphabet that are using AI, product expertise and hardware to take on different healthcare challenges.

"I believe Google is already a health company. It's been in the company's DNA from the start."

David Feinberg, Head of Google Health, 2019





Google Health recently announced the results of a study, which suggests that AI could be more effective in spotting breast cancer than human oncologists. The findings indicate that Google's AI model spotted breast cancer in de-identified screening mammograms with greater accuracy, with fewer false positives and false negatives than experts. Google's AI subsidiary DeepMind collaborated with Cancer Research UK Imperial Centre, Northwestern University and Royal Surrey County Hospital to train and deploy the AI model, which scanned data from more than 76,000 women in the UK and more than 15,000 women in the US. The AI model was also able to more effectively screen for breast cancer using less information than human doctors, relying solely on X-ray images, while doctors had access to patient histories and prior mammograms.

Google Food Program

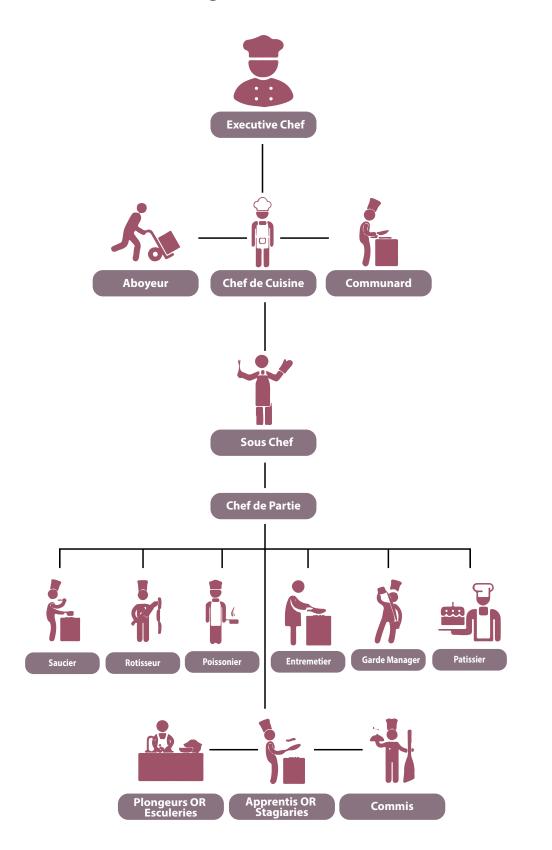
Michiel Bakker, Google's director of global workplace programs, has been responsible for Google's Food Program since 2012, one of the company's most famous employee perks. Bakker works on developing new insights and evidence in how food experiences can enable individuals and teams to be at their best.

"We need to get people to eat better long term. How can we invest in developing delicious, nutritionally dense and healthy food menus that are just as attractive as burgers and fries? Food has an impact on wellbeing, productivity, and we need to equip people with skills and passion to make good food choices at home as well."

Michiel Bakker, Google's director of global workplace programs

If you've ever wondered why healthy foods such as vegetables have historically suffered from a bad reputation, perhaps we can gain some insights from the kitchen brigade system developed by Georges-Auguste Escoffier. In the 19th century, following a French army career, chef Georges-Auguste Escoffier created the brigade system which was based on military hierarchies with the goal of establishing clear lines of responsibility and achieving maximum efficiency. He organized the kitchen into a strict hierarchy of authority, responsibility, and function. At the top is the chef de cuisine, or executive chef, followed by the sous chef and various chefs de partie, each in charge of one specific part of the plate - grilled meats, fish, sauces, fried foods, roasts, and so on. Among the lowest ranks in this brigade system was the legumier, the vegetable chef. At the time this made sense as meat was expensive, and so only the most skilled chefs were allowed to prepare it. But depriving vegetables from the level of prestige and skill meat enjoys, may have contributed to a reality where only 9.3 percent of adults are eating enough vegetables daily.

La Brigade de Cuisine





Over the past few years, Google embarked on a mission to get their employees to make better choices when it comes to food, and one of their tactics is bringing vegetables to the front of the line, literally.

At Google cafés in the New York offices, vegetables always come first on the buffet line according to a story published on OneZero by food journalist Jane Black. But Google didn't stop there.



The food plates are eight to 10 inches wide versus the standard 12 inches, which limits serving sizes. So, by the time employees get to the meat or the desserts, there's not much space left on the plate.



The company went ahead and reduced the sizes of unhealthy foods. For example, a burrito at the Google café weighed in at about 10 ounces, which is significantly lower than the average Chipotle burrito.



The company also tackled the dangers coffee breaks present. It takes around 40 seconds for the machine in the Google kitchen to brew coffee. These 40 seconds gave employees time to reach for cookies and snacks that were just 6.5 feet away. So, Google placed the snack table 17 feet away while bringing the fresh fruit bowl right next to the coffee machine. This tactic reduced the likelihood of snacking by as much as 23 percent for men and 17 percent for women.

Overall, Google's efforts have led to positive results. In the kitchens of their New York offices, which feed more than 10,000 people daily, the company serves 2,300 breakfast salads every day, up from zero two years ago. Seafood consumption jumped 85 percent between 2017 and 2018, from 13 to 24 pounds per person. Soda consumption has remained flat at an average of 20 cans per person per year. And water consumption has jumped sharply.

	At Google's Nev	v York Office	
SEAFOOD CONSUMPTION JUMPED 85%	WATER CONSUMPTION JUMPED	SODA CONSUMPTION REMAINED FLAT	2,300 BREAKFAST SALADS SERVED A DAY

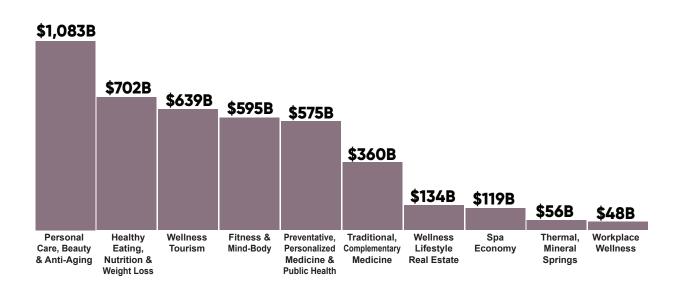
The State of the Industry

Quantifying Wellness

Wellness is a landscape with a multitude of companies that offer everything from (1) small, (2) bold to (3) disruptive innovation.



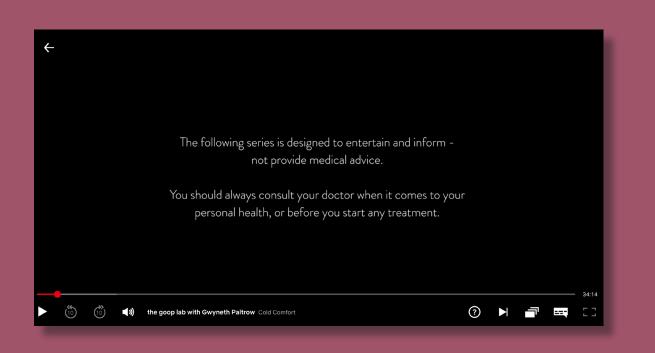
According to The Global Wellness Institute, the global wellness economy was a \$4.5 trillion market in 2018 with its top three sectors being personal care and beauty, food and nutrition, and wellness tourism:



Wellness Boulevard

Celebrities such as Leonardo Di Caprio, Gwyneth Paltrow and Jessica Alba are investing in, or launching wellness brands. Some brands are simply here to encourage healthy living; not to provide medical advice.

Leonardo Di Caprio and Ashton Kutcher invested in mattress-tech startup Casper, Serena Williams invested in Little Spoon which brings fresh organic baby food to one's doorstep, and Jennifer Lopez invested in Sarva, a wellness ecosystem with yoga at its core. In fact, there's a long list of celebs-backed wellness brands and it includes brand names such as WelleCo, a provider of premium plant-based nutritional supplements, by Elle MacPherson, Honest Beauty, a makeup company by Jessica Alba, and Goop, the wellness brand by Gwyneth Paltrow. Goop, which started as a newsletter by the name of "The Goop Lab" in 2008, has since developed into a \$250 million company complete with a website, a podcast, a magazine, books, stores, and its own Netflix series of the same name. The series is designed to entertain and inform.



Wellness: 100

Mapping 100 wellness brands uncovers a range of categories including obvious ones such as activity wearables and fitness apps and less intuitive ones such as meal kits, supplements and beauty care.

CATEGORY	#	BRAND	FOUNDED	GEO	FUNDING (\$,M)	ABOUT
	1	Apple Watch	2014	California		Fitness tracking and health-oriented capabilities
	2	Athos	2012	California	50.7	Smart performance system to deliver muscle activity insights
ACTIVITY WEARABLES	3	Fitbit	2007	California	66	Wearable sensors that track a person's daily activities
	4	Garmin	1989	Kansas		Range of wearables for sports and fitness
	5	Hidrate	2014	Minnesota	4.8	Smart water bottle that tracks users' hydration
	6	Whoop	2011	Massachusetts	104.8	Fitness tracker to improve performance
	7	Allerguard	2016	Israel	2.2	Food allergy detection
ALLERGY FRIENDLY	8	Before Brand	2015	California	48.1	System to introduce potentially allergenic food in a child's diet
ANTI-AGING	9	SIWA Therapeutics	2006	Illinois	1.6	Biological therapies for slowing or reversing the aging process
	10	Zero	2016	New York	4	Fasting tracker
	11	23andMe	2006	California	786.1	Personal genomics and biotechnology company
	12	EverlyWell	2015	Texas	50	At-home collection and digital results
AT-HOME TEST KITS	13	Viome	2016	Washington	45.5	Gut microbiome test
	14	UDoTest	2017	Massachusetts	N/A	A risk identification and disease prevention solution using at home disease screening
	15	Greatist	2011	New York	8	Health media company
BLOGS	16	SparkPeople	2001	Ohio		Health, fitness, and food content
	17	Well-NYT	~2016	New York		Wellness content
	18	GoGenics	2019	Colorado	3.1	CBD products and wellness brands
	19	Kikoko	2015	California	8	Cannabis botanical wellness company for women
CANNABIS	20	Recess	2017	New York		Products and experiences to help people feel balanced and inspired
	21	Sagely Naturals	2015	California		Products that are made with organic and non-GMO hemp
	22	tökr	2016	California	1	Cannabis delivery and CBD marketplace
01120110	23	Livongo	2008	California	235	Platform for detection of diabetes
CHRONIC CARE	24	Vida Health	2014	California	78	Platform to treat multiple chronic health
	25	Yes Health	2014	California	6	Diabetes prevention program

CATEGORY	#	BRAND	FOUNDED	GEO	FUNDING (\$,M)	ABOUT
	26	Goop	2008	California	75	Digital content and commerce
E-COMMERCE	27	The Honest Co.	2011	California	503	Eco-friendly products for babies and homes
	28	Bloomlife	2014	California	14.4	Wearables with data analytics to improve birth outcomes
	29	Elvie	2013	London	53.8	Smarter technology for women
FEMTECH	30	Lilia	2019	California	2.2	Home fertility startup that serves as a egg securing concierge
	31	Super Izzy Al	2016	Germany	0.2	Chatbot that offers health advice for women
	32	Willow	2014	California	62.5	Platform for products that help improve the lives of women
	33	PayActiv	2011	California	33.7	Financial wellness platform for employees
FINANCIAL WELLNESS	34	Even.com	2014	California	52	Service that allows users to get paid on demand
WELLNEOU	35	LearnLux	2015	Massachusetts	2	Financial wellness company for people to navigate financial decisions
GROOMING &	36	Hims	2017	California	197	Wellness brand for men
MAKEUP	37	Médène		Europe		Customized essential oil blends
	38	Aaptiv	2015	New York	52.1	Audio fitness
	39	ClassPass	2013	New York	549	Membership program for fitness classes
	40	Every Mother	2013	New York	1.5	On-demand workouts for women
	41	Gympass	2012	Brazil	300	Fitness discovery platform
0)/// 0	42	Mirror	2016	New York	74.8	Connected fitness system that streams live and on-demand classes
GYM & WORKOUT PROGRAMS	43	Orangetheory Fitness	2002	North Carolina	199.4	Chain of fitness clubs
	44	Peloton	2012	New York	994.7	Interactive fitness platform with >1.4m members
	45	Strava	2009	California	41.9	App for cyclists & runners to record activities and compete with others
	46	Tempo	2015	California	18.8	Home fitness platform
	47	Zwift	2014	California	164.5	Interactive fitness entertainment platform
	48	Blue Apron	2012	New York	199.4	Ingredient-and-recipe meal kit
	49	Daily Harvest	2015	New York	43	Ready-to-blend smoothies, soups, oats and more
MEAL KITS	50	Freshly	2012	New York	107	Ready-made meals delivered to customers
	51	Green Chef	2014	Colorado	15.5	Organic meal kits
	52	Hello Fresh	2011	Germany	367.5	Company that sends weekly pre- portioned ingredients to users
	53	Kaigo	2014	New York	4	Dietitian-designed meals
	54	Groove Health	2016	Illinois	1.6	Medication management
MEDICATION	55	Hero	2012	New York	12	Medication management
ADHERENCE	56	Line Health	2014	Massachusetts	1.2	Medication management
	57	Wellth	2014	California	17.6	Medication management

CATEGORY	#	BRAND	FOUNDED	GEO	FUNDING (\$,M)	ABOUT
	58	Calm	2012	California	143	App to help meditate and relax
	59	Desk Yogi	2015	California	1	Online wellness solution designed for busy work life
	60	Feel	2015	California	6.3	Monitoring and interventions for individuals that suffer from anxiety
	61	Happify	2012	New York	25.5	Solutions for better emotional health
MEDITATION & ANTI-ANXIETY	62	Headspace	2010	California	168.2	Guided meditation sessions and mindfulness training
	63	Joyable	2014	California	10.1	Solution for overcoming social anxiety
	64	WeDo	2015	California	1.2	Mobile wellness coach
	65	Woebot	2017	California	8	Chatbot tohelp people monitor mood and learn about themselves
	66	Youper	2016	California	3.5	Al Emotional Health Assistant to help people monitor mental health
	67	8Greens	2015	New York	10	Effervescent tablet made from 8 real greens
	68	Care/of	2016	New York	82.9	Personalized vitamin pack
NUTRITIONAL SUPPLEMENTS	69	Hydrant	2017	New York	7.4	A mix of electrolytes, minerals, and vitamins
	70	Persona	2017	Washington	4.5	Personalized nutrition program
	71	Ritual	2016	Los Angeles	40.5	Multivitamins for women
	72	Wellory	2019	New York	1.1	Personalized nutrition
PET WELLNESS	73	The Farmer's Dog	2014	New York	49.1	Fresh, preservative-free dog food
REMOTE MONITORING	74	Chronolife	2015	France		Sensors to capture physiological parameters
	75	Eight Sleep	2014	New York	70.1	Sleep fitness company
	76	Moona	2016	France	0.9	Sleep device that actively improves sleep through temperature
SLEEP WELLNESS	77	Oura	2013	California	49.5	A wellness ring and app designed for user's sleep improvement
	78	Remrise	2018	California	8.2	Personalizes plant-powered sleep formulas
	79	SNOOZ	2015	Nevada	2.6	White noise products to improve the way people sleep
	80	HearMe	2018	New Jersey	100	Anonymously connect with an empathetic HearMe Listener
000141	81	HelloRelish	2018	New York	7.2	App that delivers personalized plan to rebuild relationships
SOCIAL WELLNESS	82	Рара	2016	Florida	13.2	Platform that connects college students to senior citizens
	83	TalkLife	2012	London	2.2	P2P support network for mental health
	84	Wisdo	2015	Israel	11	App to connect with people and share advice

CATEGORY	#	BRAND	FOUNDED	GEO	FUNDING (\$,M)	ABOUT
	85	Priv	2013	California	32.9	On-demand beauty and spa services
SPA AND	86	Soothe	2013	California	78.3	Access to massage therapists
RELAXATION	87	Zenoti	2010	Washington	91	Cloud-based software solution for the spa, salon, and med spa industries
	88	Monument	2019	New York	7.5	Online treatment for those looking to change their relationship with alcohol
SUBSTANCE	89	Path	2019	California	5.4	Addiction (SUD) treatment solution for employers and organizations.
MANAGEMENT	90	Quit Genius	2017	California	13.6	Digital therapeutics for multiple addictions
	91	Tempest	2014	New York	10.4	Formerly Hip Sobriety, building the next generation of recovery care
	92	BetterHelp	2013	California		Counseling platform
THERAPY MARKETPLACE	93	SonderMind	2014	Colorado	32.9	Connecting people with a licensed therapist for video telehealth
	94	Talkspace	2012	New York	106.7	Network of licensed therapists
	95	FatSecret	2007	Australia		Food and exercise tracker
	96	FitGenie	2015	Georgia		Healthy meal delivery and integrated food tracking
WEIGHT	97	Lose It!	2008	Massachusetts	5.5	Calorie counting app
MANAGEMENT	98	MyFitnessPal	2005	Maryland	18	App to track, learn, communicate and improve one's health and wellness
	99	Noom	2008	New York	114.7	Coaching combating chronic and pre- chronic conditions
	100	Retrofit	2011	Illinois	15.7	Weight management program

To summarize, there at least 24 wellness categories; albeit not all are relevant to insurers:

- 1. Activity Wearables
- 2. Allergy-Friendly
- 3. Anti-Aging
- 4. At-Home Test Kits
- 5. Blogs

→

- 6. Cannabis
- 7. Chronic Care
- 8. E-commerce

- 9. FemTech
- 10. Financial Wellness
- 11. Grooming & Makeup
- 12. Gym & Workout Programs
- 13. Meal Kits
- 14. Medication Adherence
- 15. Meditation & Anti-Anxiety
 - 16. Nutritional Supplements
- 17. Pet Wellness
- 18. Remote Monitoring
- 19. Sleep Wellness
- 20. Social Wellness
- 21. Spa & Relaxation
- 22. Substance Management
- 23. Therapy Marketplace
- 24. Weight Management

Notes:

- These are overlapping categories as it is hard to draw the line between fitness and weight loss or mindfulness and mental health etc.
- Corporate Wellness is another category however it is mostly a combination of the categories mentioned above
- Not all categories are equally relevant to insurers; the following pages will discuss wellness in the context of insurance

The Proactive Insurer

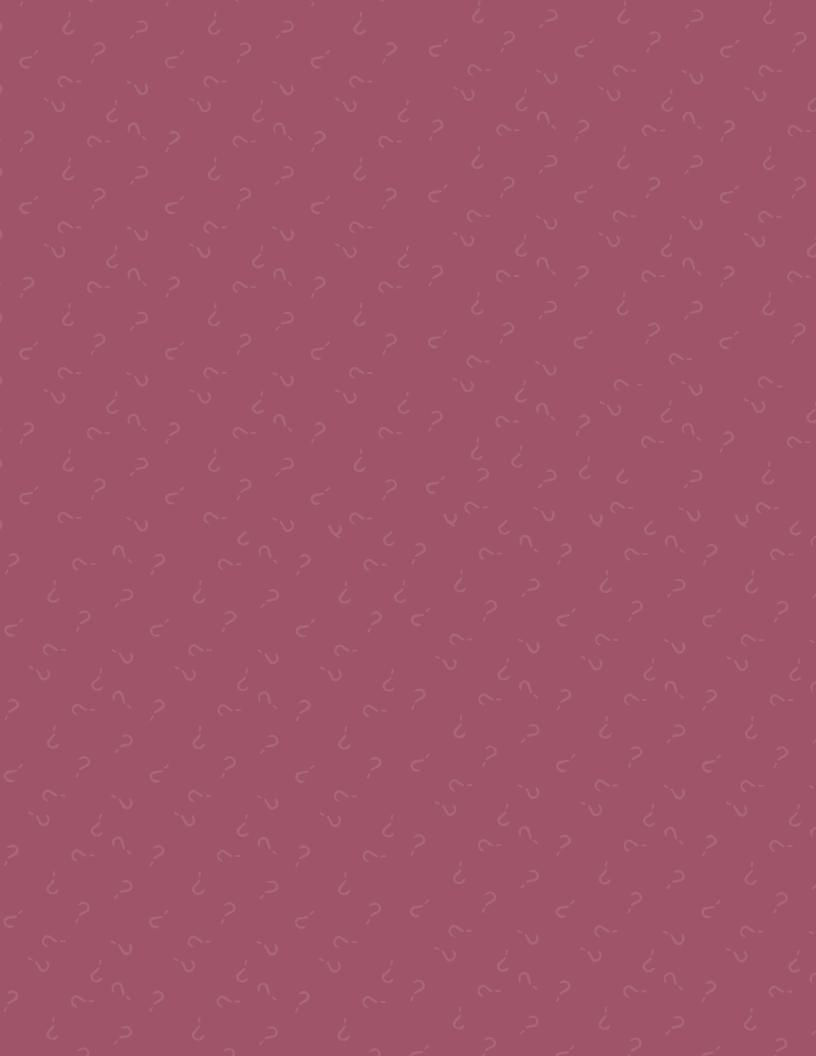
Health and life insurers have mostly showed interest in (1) Healthy Eating, Nutrition and Weight Loss, (2) Fitness and Mind-Body, (3) Preventative and Personalized Medicine and Public Health, and (4) Workplace Wellness.

INSURER	INITIATIVE	TAGS
Aetna	Certain Medicare Advantage members who live in Florida and have one or more chronic conditions will be eligible to receive assistance from Papa (grandkids on-demand service) (2019)	Social Wellness, Seniors
Aetna International	Access to text-based support from Wysa to manage stress, anxiety and sleep (2020)	Mental health, Sleep Wellness
AIA	Vitality partner (2014)	Holistic Wellness
AOK Northeast	Offered clients €50 towards fitness bracelets and smart watches with health apps (2015)	Activity Wearables, Gym & Workout Programs
Aon	Its Well One app offers employees digital coaching and the ability to connect virtually with colleagues to share progress (2019)	Corporate Wellness
Aviva	Offers "Wellbeing" app to large corporate customers at no extra cost to help employees track and improve their overall health and wellbeing (2017)	Corporate Wellness
ΑΧΑ	Partnered with global fitness aggregator ClassPass to provide wellness solutions that promote both physical and mental wellbeing to its customers (2020)	Gym & Workout Programs
АХА	Launched WayGuard that transmits a user's geographic location to a coordination center in the case of an emergency (2016)	Holistic Wellness
AXA Partners China	Partnered with Ping An and HiNounou, a connected healthcare and intelligent data company on a mission to empower seniors to live longer (2018)	Remote Monitoring, Seniors
Cigna	Partnered with Talkspace to widen its virtual care services (2020)	Mental Health, Therapy Marketplace
Cigna TTK Health Insurance	Launched a pay-as-you-workout insurance concept that offers policyholders premium discounts if they workout (2016)	Activity Wearables, Holistic Wellness
CNA Financial	Partnered with Groove Health to provide long-term care policyholders a digital medication adherence platform (2019)	Medication Adherence
Discovery	Launched an initiative to give clients Apple Watches for free so long as they maintain weekly fitness goals for 24-months (2015)	Activity Wearables, Holistic Wellness
Gen Re	Looking to help insurance companies take advantage of Monsenso's mHealth solution, which can assist in the prevention, early intervention and treatment of mental illness (2017)	B2B

INSURER	INITIATIVE	TAGS
Gen Re	Partner of TrackActive that provides a clinical software to help health professionals design and deliver musculoskeletal rehabilitation programs (2017)	B2B
Generali	Showed interest in developing smart eyeglasses that can monitor a driver's behavior to assess level of fatigue (2017)	B2B
Generali	Vitality partner (2014)	Holistic Wellness
Generali Employee Benefits	Launched CIAO, a mobile health app to help clients promote healthy behaviors within their organizations (2018)	Corporate Wellness
Generali Greece	Generali policyholders receive information and tips to maintain a healthier lifestyle (2018)	Holistic Wellness
Great Eastern	Partnered with Samsung to develop various initiatives in the areas of health, wellness, home and IoT (2018)	Holistic Wellness
Great-West Life	Launched Best Doctors Mental Health Navigator services (2019)	Mental Health, Sleep Wellness
Haven Life	Policyholders can access Aaptiv and Timeshifter as part of Haven Life Plus, a rider to the Haven Term policy that offers benefits beyond coverage (2019)	Gym & Workout Programs, Sleep Wellness
HDFC ERGO	Launched my:health, an app that allows individuals to manage their health and wellbeing (2018)	Holistic Wellness
Humana	Humana members will have the potential to access Fitbit health coaching or wellness solutions (2018)	Corporate Wellness
iA Financial Group	Launched Well-Balanced group insurance health and wellness offer, designed to help organizations manage health-related issues (2018)	Corporate Wellness
Income	Its Orange Health program encourages users to take charge of their health and earn rewards (2018)	Holistic Wellness
Irish Life	Launched a digital health engagement app MyLife (2019)	Holistic Wellness
John Hancock	Launched its HealthyFood program to reward customers for healthy eating by giving discounts or cash back on foods designated as 'healthy' (2016)	Weight Management
John Hancock	Vitality partner (2015)	Holistic Wellness
John Hancock	Offered policyholders the opportunity to earn a new Apple Watch Series 2 for \$25 by being more active (2016)	Activity Wearables, Gym & Workout Programs
John Hancock	John Hancock Aspire offers customers living with diabetes life insurance paired with a technology-enabled program that provides coaching, clinical support, education, and rewards to help manage and improve their health (2019)	Chronic Care
John Hancock	Expanded its behavioral and wellness-linked life insurance to include HealthyMind and customers also receive a free twelve-month subscription to Headspace (2018)	Mental Health, Sleep Wellness
Lincoln Financial	Launched Lincoln WellnessPATH, a financial wellness tool that helps plan sponsors improve employee financial wellness (2018)	Financial Wellness
Manulife	Vitality partner (2016)	Holistic Wellness
MetLife	Launched PlanSmart Financial Wellness to give employees the tools, guidance and support they need to improve their financial wellbeing (2018)	Financial Wellness
MetLife Japan	Partnered with DeNA to focus on corporate wellness with an emphasis on gamification and peer influence (2019)	Corporate Wellness
MLC	Launched Australia's first smartwatch technology program in the life insurance market (2015)	Activity Wearables

INSURER	INITIATIVE	TAGS
Munich Re	Looked to figure out how to use new data from smartphones and wearable devices to provide a risk score (2016)	B2B, Activity Wearables
Munich Re	Introduced Wellgage, a connected health and wellness platform (2017)	Activity Wearables
Mutual of Omaha	Offers Mutually Well, a healthy lifestyle program for Medicare Supplement customers (2019)	Holistic Wellness, Seniors
PartnerRe	Launched a pilot to gather health and wellness data to provide clients worldwide with actionable insights (2019)	B2B
Principal Financial Group	Launched My Principal Lifestyle app that rewards customers for healthy activities (2018)	Holistic Wellness
Prudential	Launched Pulse, a health management mobile application that provides AI-powered self-help tools and real-time information (2019)	Holistic Wellness
Prudential Seguros	Vitality partner (2019)	Holistic Wellness
RBC Insurance	Its digital wellness program allows users to identify health risks, get recommendations, track progress, measure impact and earn rewards (2018)	Holistic Wellness
SCOR	SCOR is an investor in Human API that gives consumers a way to share access to their electronic health records (2019)	B2B
SCOR	Partnered with Garmin Health to enhance its Biological Age Model initiative by analyzing health metrics generated by Garmin wearables (2019)	B2B, Activity Wearables
SCOR	SCOR Global Life invested in BioSerenity that aims to optimize the patient pathways in several chronic diseases (2019)	Chronic Care
SCOR	Partnered with Human Longevity - its key output is a health plan that can prevent, reduce or postpone the onset of certain conditions (2018)	Chronic Care
SCOR	SCOR invested in remote patient monitoring platform 100Plus (2018)	Remote Monitoring, Seniors
State Farm	Working on an Alexa Skill to improve senior care (2020)	Social Wellness, Seniors
Sumitomo Life	Vitality partner (2016)	Holistic Wellness
Sun Life Malaysia	Offers a wellness reward program called SunActiv that offers rewards for active users (2018)	Holistic Wellness
SWISS RE	Partnered with Wellthy Therapeutics to develop better insurance offerings for folks with Type 2 Diabetes in India (2017)	Chronic Care
Transamerica	Launched a Wealth + Health - focused on helping customers improve their overall wellbeing (2018)	Financial Wellness, Holistic Wellness
UnitedHealthcare	Launched an employer-sponsored wearable device walking program called UnitedHealthcare Motion (2017)	Corporate Wellness
Vitality	Vitality members will have access to Shapa's health management solution that includes a smart scale (2018)	Weight Management
Zurich	Launched LiveWell that's designed to empower and reward life insurance customers who take steps to improve and maintain their physical and mental wellness (2019)	Holistic Wellness

Questions & Answers



Scope & Methodology

During April and May 2020, we conducted a survey in which we asked the Coverager community several questions in regards to their health, usage of wearables, and willingness to share wearables data with their insurers.

THE RESPONDERS:	
AVERAGE AGE: 41	♀♂ 67.2% MALE / 32.8% FEMALE
86.6% WORK IN INSURANCE	2 77.3% ARE FROM THE US

The Two Main Questions:

- **01.** Would they value health and wellness advice from their life insurance company?
- **02.** Do they (or could they) view their life insurance company as a partner in improving their health?



62%

would value health and wellness advice from their life insurance company

view their life insurance companies as partners for improving their health

selected email as preferred communication channel for wellness advice



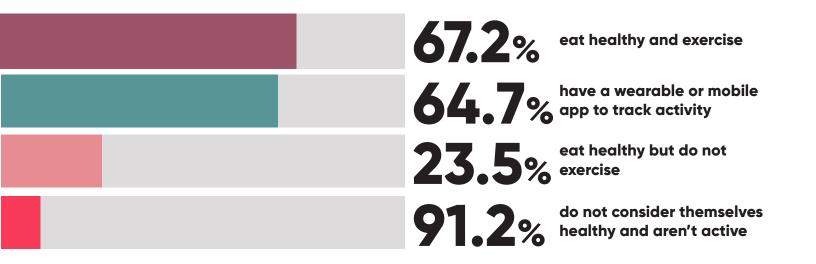
"Yes - they are incentivized to keep me alive!"

A surveyor

"No, I'd rather ask my physician or my gym instructor for advice."

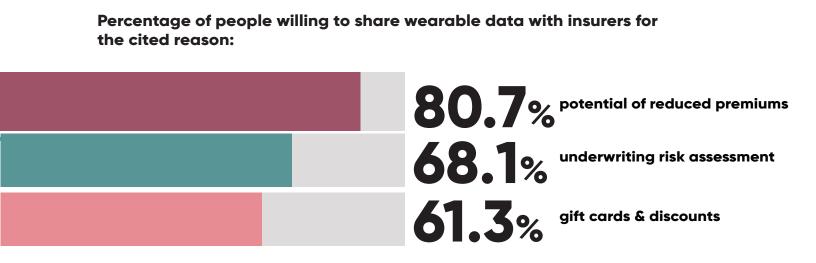
A surveyor

We also asked individuals if they consider themselves healthy and active, whether they have a wearable or mobile app to track activity, and how often they track and monitor their activity.

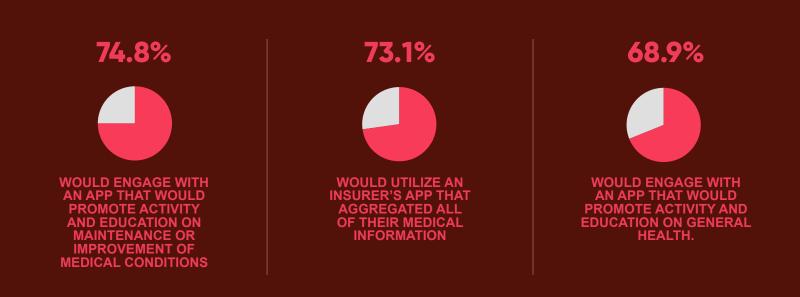


Out of those who have a wearable or an app to track activity, 41.5 percent monitor their activity daily, 37.6 percent do so multiple times a day, and 14.2 percent monitor weekly.

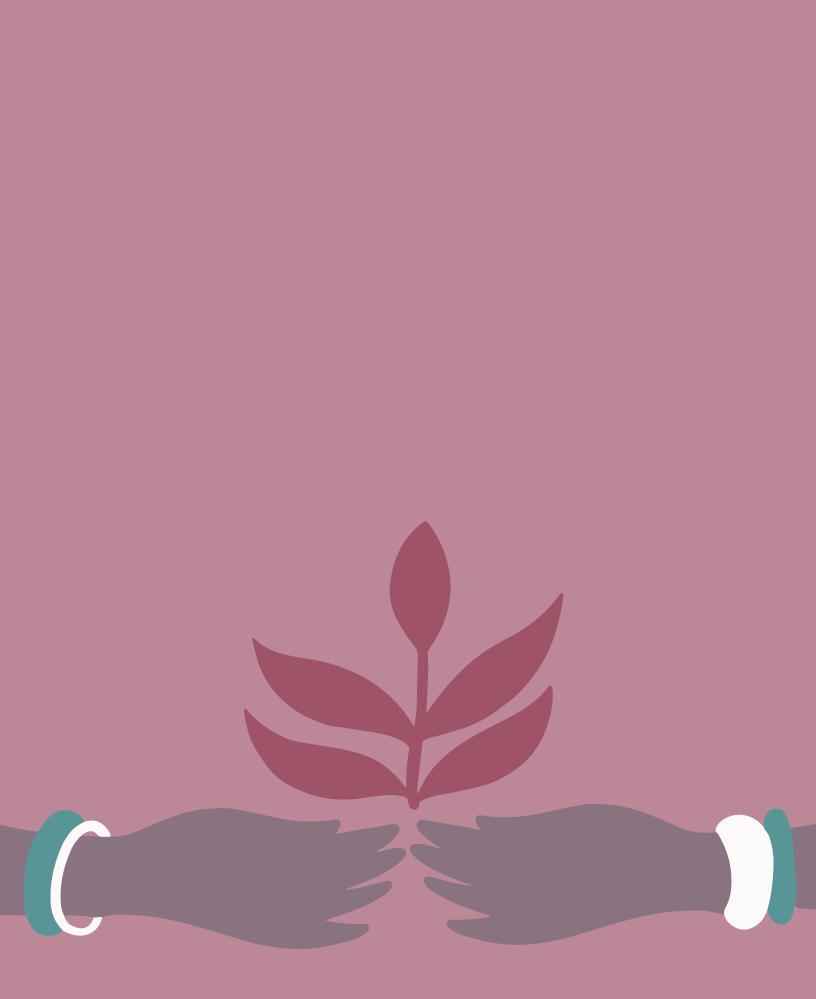
We then asked individuals if they'd be willing to share wearables data with insurers for different reasons. For those unwilling to share wearable data, privacy was the top reason with 59 percent, followed by other concerns around how the data will be used and the impact it will have on the insurance rate.



Individuals were also asked if they would be willing to engage with an insurer's app for different benefits.



Data & Intuition



Apple Life

There's no arguing that companies with the greatest incentive to save lives are life insurers, yet others beat them to the punch.

In a futuristic world life insurance companies would alert us before experiencing a heart attack. They would intervene and take control of our cars if they detected that we are intoxicated or distracted. And they would protect us from intruders trying to break into our homes.

Bill Gates famously said that we always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten.

In less than ten years, companies such as Apple, Volvo, and Ring have developed such capabilities, bringing us into the future.

There's no arguing that companies with the greatest incentive to save lives are life insurers, yet others beat them to the punch. And this fact alone should be the life insurance industry's aha moment, because industry lines are getting blurred and competition is no longer just internal.

If Apple decided to partner with an insurer to offer life insurance, just like it did with Goldman Sachs around credit cards, there's no doubt that Apple Life (assuming that would be the name) will become the fastest-growing insurance company in history. The amount and variety of user data Apple has including location, habits, financials and health gives them leverage not just amongst insurers, but also among consumers who will understand the logic and benefits of buying life insurance from Apple.

Disrupt or Disappear

The last part of Bill Gates' famous quote is "don't let yourself be lulled into inaction." In the past few years, life insurers have been presented with a range of options, yet the one option most chose was inaction. When you've built a successful company, it's very convenient and tempting to stick to the playbook that made the company successful in the first place. But success isn't guaranteed.

And if you ask Mandy Luo, Chief Actuary and Head of Data Science at ReMark, SCOR's insurtech company dedicated to reshaping the way insurance is developed, distributed and perceived, it's a disrupt or disappear kind of moment.

For years life insurers have been in the business of underwriting risk. This time, however, they face a different kind of risk – the risk of their own failure due to a changing and demanding market and consumer landscape. Years and years of inactivity made life insurers slow (legacy systems), and focusing on just one muscle (insurance) made them weak everywhere else. So, if there was a policy that offers protection against business failure, most life insurers would be considered high-risk.

According to SCOR, a tier-1 global life and P&C reinsurer, the reinsurance industry is all about combining technical expertise and experience with the developments of science. But despite the many tools the industry uses to conduct activities such as models, databases, pricing and reserving tools, there's also a need for personal judgment, human expertise, convictions, and even feelings to correctly underwrite.

"All of my best decisions in business and in life have been made with heart, intuition, guts... not analysis. If you can make a decision with analysis, you should do so. But it turns out in life that your most important decisions are always made with instinct and intuition, taste, heart."

Jeff Bezos

For the past few years, SCOR has been following the data and its intuition to offer life insurers the tools and confidence to promise customers more than a promise to pay out. The reinsurer is looking to reposition insurers as health and wellbeing experts dedicated to their customers' long-term health and happiness, and one noteworthy initiative is BAM (Biological Age Model), a solution developed in partnership with key players in the wearable technology industry, which leverages wearable data to compute a person's biological age. The essence of BAM is, regular physical activities contribute to reduced risk and prolonged life expectancy. This makes someone "younger" than his or her physical age, creating engagement incentives with tangible rewards.

Stepping Beyond

With the number of connected wearable devices worldwide expected to grow to over 1.1 billion in 2022, SCOR is betting on data for better underwriting and better relationships with consumers. In a comprehensive study, SCOR's findings demonstrated that the number of steps per day has a strong mortality predictive power and is relevant for risk selection. The findings also suggest that wearable data is able to complement disclosures, health exams and fluids used during traditional underwriting, while enabling insurers to continuously update their risk assessment. In other words, wearable data, if used properly, offers insurers several attractive benefits including continuous underwriting to minimize risk, ability to offer competitive pricing, and speeding up the purchase cycle.

But SCOR didn't stop there. It developed a methodology to correlate the critical illness relative risk per condition to the relative mortality and morbidity risk, and it partnered with Garmin, one of the leading wearable manufacturers in the world, to enhance the Biological Age Model even more. The partnership allows SCOR and its partners to access data beyond steps including rest, heart rate, sleep, and calorie burn, ultimately delivering more underwriting insights.

"Combining the health data from Garmin wearables with the analytical capabilities of BAM creates a powerful solution for both insurance companies and their customers," said Joern Watzke, Director of Global Business Development at Garmin Health. But perhaps the biggest commitment by SCOR is the fact that they are standing behind their product. "SCOR is willing to adjust its reinsurance rates based on the activity level," says Luo, while highlighting that partners also enjoy greater access to data and insights. "We've made it clear that the consumer insights are jointly shared with the carrier."

In a joint study by LIMRA and EY exploring the needs and attitudes of financial professionals, an obvious yet worthy observation was made around the difference between a transactional and relationship approach when it comes to products and services. The study found that advisors operating in insurance-oriented models rely more on client quantity, deriving less income per client than advisors operating in more investment-oriented models. And if carriers are able to offer a broader range of products and support, advisors can deepen relationships with their clients, ultimately allowing for cross-selling opportunities and future solutions to fit clients' changing needs. Clearly, breaking beyond the traditional transactional relationship life insurers have with policyholders will be beneficial, and the BAM initiative, coupled with ReMark's consumer-facing Good Life app, gives insurers the opportunity to develop a more meaningful relationship around a topic many care about – living longer and healthier.

"If people feel like they are connected with their insurance company which is helping them keep healthy, it's just going to be a win for everybody," says Allison Broglie, ReMark's Head of North America, while emphasizing the ultimate goal. "If our health isn't ultimately getting better, I think we're losing part of what we're trying to gain here."

Sometimes the path to innovation isn't smooth, especially if you're unfamiliar with the road ahead. "This is not known territory for insurers," Broglie states in regards to why life insurers haven't embraced innovation more openly. "Traditionally, life insurance has been about selling the policy, maybe following up to cross sell or upsell, and then you kind of wait. This is a whole different model that we are trying to do." And when you introduce a different model you lack the experience data. "There is no known data in the past 20 years that's telling an actuary comfortably 'hey we have seen the experience and you can price based on the data,' Luo highlights. "It's a million-dollar question whether long-term wearable impact to portfolio health is going to be 5 percent claim point or 10 percent. But we are willing to test and learn because it is the simply right thing to do.

The other challenge with innovation is that sometimes we focus too much on innovation itself. We talk about algorithms, technologies, and research and design, while forgetting that behind every necessary innovation lies a basic need. In 1889, André and Édouard Michelin founded a tire company that is now the second largest tire manufacturer in the world. They were true innovators; they invented the first automobile tire, the first tire able to handle speeds above 100km per hour, and the first removable rim. But these innovations weren't enough to drive success since not many owned cars in France at the time. So, instead of just focusing on their innovative products, they decided that a simple ratings guide (known today as the Michelin Guide) for hotels and restaurants would compel the limited number of drivers to use up their tires by driving to these locations, which will eventually cause them to buy more tires.

SCOR, which also has French roots, is applying research, developing algorithms, and leveraging technology to help the industry innovate. But behind these innovations lies a basic need for a better insurance product and helping people lead healthier lives.

Biological Age Model (BAM) Using Wearable Data to Empower Healthier Lives

Health is the new wealth

Customers today are more digitally-enabled, more health conscious and more demanding of customized products and services that offer greater freedom and flexibility. The insurance industry however often fails to keep pace, and consumers can face multiple pain points in their insurance journey:

- Despite the global trend towards health, consumers are rarely incentivized to improve their lifestyle and they are provided only limited advice on how to do so.
- Devices that are already a part of our day to day lives (such as wearables) are underutilized and not achieving their full potential to engage.
- Single point underwriting pays little attention to consumers' lifestyle and wellbeing after the underwriting is complete.
- Underwriting processes can be tedious and overwhelming, giving little consideration to the customer experience.

A wellness solution backed by science and technology

In partnership with key players in the wearable technology industry, we developed the Biological Age Model (BAM). BAM leverages wearable data to compute a person's Biological Age. Based on over 20 years of clinical data, BAM sets itself apart in being an evidence-based model for both mortality and critical illness risks.

At SCOR, we are passionate about finding solutions that empower consumers to live healthier lives. With the growing adoption of wearable devices and technology, SCOR and Vivametrica uncovered the ability to use real-time data to underwrite and to empower consumers to make informed lifestyle choices.







Millennials that are members of a wellness programme²

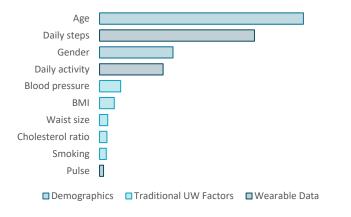
42%

Gen Xers that are part of a wellness programme²



Number of wearable devices globally by 2021³

Wearable data appears to be a stronger indicator of mortality than traditional underwriting factors



¹Euromonitor International – 2018 Megatrend Analysis: Putting the Consumer at the Heart of Business ²ReMark's 2019 Global Consumer Survey in Growth Markets

³Cisco estimates that by 2021 there will be 929 million wearable devices globally, growing nearly threefold from 325 million in 2016 at a CAGR of 23%.





In this joint comprehensive study, our findings demonstrated that the number of steps per day has a strong mortality predictive power and is relevant for risk selection. The number of steps per day also appears to be a stronger indicator than traditional underwriting factors—standalone and combined.

The study suggests that wearable data is able to complement disclosures, health exams and fluids used during traditional underwriting, while enabling insurers to continuously update their risk assessment. This could ultimately lead to insurers replacing current health exams and fluids by leveraging steps and other physical activity measures, shared by wearable devices.

Not only are these findings applicable to mortality, but SCOR has developed a methodology to correlate the critical illness relative risk per condition to the relative mortality risk.

Targeted approach to helping consumers live healthier lives

In the age of the digital and health conscious consumer, solutions need to engage consumers in the way in which they live their lives. BAM combines science with technology to address key challenges in making insurance relevant to today's consumer:

Dynamic, real-time, technology enabled

The traditional one-size-fits-all pricing approach assumes all insureds within a group will live their lives in the same fashion a far cry from the truth. BAM offers a continuous risk assessment and thereby enables dynamic underwriting. Continuous underwriting also minimizes risk, facilitates competitive pricing, speeds up the purchase cycle and improves the bottom line for insurers.

Moving beyond protection to motivating and rewarding healthier lives

For decades, interactions between insurers and insureds have mostly been transactional and not engaging. BAM's wellness program creates the opportunity for insurers to continuously engage, but also motivates consumers to live healthier lives.

Supporting consumers with health intelligence

From explaining how the simplest form of exercise (i.e. steps) can have a strong impact on mortality risk to real-time coaching on diet, exercise, sleep and stress management based on data provided by wearables.

BAM presents a new way of thinking about how we underwrite risks and how we partner with consumers to motivate healthy living. Not only is the model backed up by the art and science of risk, but it is a powerful enabler to empower consumers to make informed lifestyle choices.

Frequency 0-5K 5K-7K 7K-9K 9K+

The number of steps per day has strong predictive power

for mortality and critical illness









For additional information about BAM, please reach out to your market's SCOR representative.



On the Corner of Happy and Healthy

Adrian Gore, founder and CEO of Discovery via Mckinsey

hen I started out as a young actuary in a life-insurance company, South Africa was moving from an apartheid state to a proper democracy and facing some serious challenges, particularly in healthcare. There was an undersupply of doctors, an unusual combination of disease burdens, and a new regulatory environment that had zero tolerance for the discrimination of the past, and rightly so. This meant you couldn't rate customers on preexisting conditions. Finally, unlike most countries, where a national system partially covers risk, there was no unified public healthinsurance system at that time. When you put those four things together, sustainably financing healthcare becomes a very complex undertaking. When we formed Discovery, we asked the question, "How do you innovate and build a health-insurance system that can work in this kind of environment?" Our gut instinct was that if you can make people healthier, you can offer more sustainable insurance. It turns out that three lifestyle choices (smoking, poor nutrition, and poor physical activity) contribute to four conditions (diabetes, cancer, heart disease, and lung disease) that drive over 50 percent of mortality every year. So lifestyle choices are fundamental to any social-insurance system. The behavioral science tells us that people need incentives to make a change. But that wasn't universally known at the time; we were just a start-up acting on a hunch. When we were starting out, a massive gym chain approached us with the idea to sell our health insurance to their membership base-a classic cross-sales strategy. Our breakthrough came when we flipped this idea around: What if you can use the gyms when you get your insurance from us? But we couldn't figure out how to afford it. Then we thought, "Well, what if you earn points by doing healthy things? Then those points give you access to cool rewards and a discount on your premium?" That idea was the catalyst for everything, which I think is true of innovation. It's a moment in time. It's not always a revelation in a laboratory. In my experience, it's right there in front of you. Once you get it, you run with it.

hat initial idea was the genesis of our Vitality program, which has evolved into a complete wellness system that tracks everything from physical activity to nutrition over the course of a person's life. For instance, customers earn points by logging their workouts with fitness devices from Nike+, Fitbit, and others. These sync up with Vitality directly, through a computer, or with mobile apps on smartphones. When you go to our partner grocery stores, the healthy food is clearly demarcated on the shelf, and you get a 25 percent discount at the register when you swipe your Vitality card. When we first launched the program, we were criticized for wasting healthcare dollars on incentives, but customers went berserk for it. Today, Vitality is the foundation of our business model, driving every one of our offerings. Take life insurance. It seemed to us that the system was broken. What happens when you fill out an application? They basically cut you in half for a detailed health analysis - blood tests, medicals. From that, they derive a very sophisticated rating that often comes with a rate guaranteed for life. But how does it make any sense to set a rate at a certain point in time, when a change in your behavior could shift the underlying risk throughout your life? So we decided to offer a new, competitive model. The beauty of it is the shared value it creates for our customers, our company, and society. Our customers are given an incentive to become healthier, lowering their premiums. And we are able to operate with better actuarial dynamics and profitability. In 2001, we rolled out Discovery Life on this basis, and soon became the numberone provider of life insurance in South Africa. Our competitors have been around for more than a hundred years, but they don't have Vitality. If you understand the scale of the program, you can see it's not a capability that could easily be copied. We log 70,000 gym visits per day; people have bought a hundred million dollars' worth of healthy food in the last few years through our structure. Vitality has provided a competitive advantage that has served us well both inside our home country and beyond it. The flexibility of Vitality's structure allows us to enter markets where we could never become the main insurer; the barriers to entry are just too high. We can instead partner with established insurers in those markets by scaling our Vitality model as needed. In the United Kingdom, we worked with Prudential initially but recently acquired full ownership of our health- and life-insurance businesses there. In the Asia-Pacific region, we are now rolling out our model across some of AIA's markets. We also have an equity stake in Ping An Health, working with one of China's largest insurers, Ping An. Just this year, we've established a new partnership with John Hancock Life Insurance in the United States, and we're developing one with Generali in Europe, as well.

2015

Love it!	

1v ado Mrscashmnty33

I have been using this app for about two months now along with my Apple Watch it has been a great incentive to start moving! It usually takes about a day for my points to update accurately from my watch. It is filled with lots of great health information for me to read and get points. I love that! Just the other day I was able to watch a webinar about the dietary guidelines for 50 pts. It was very informative. It also contains meal planning ideas, you can set goals for yourself as well as earn points for your doctor visits. It's a very put together app and I love the fact that not only am I getting reasonable life insurance for my family I'm also taking steps to improve my health as well. Thank you for developing this app and keep up the great work!

Life changing! ****

1y ago Majorptn

Never thought a life insurance company would help me live better and longer! I have used this app over 17 months, received numerous gift cards and an Apple Watch for my efforts! I now walk over 15k steps a day, exercise 30 minutes plus a day and have fun tracking it. New awards keep coming like Amazon Prime for a year. I plan on platinum for life! Can't say enough great things about Vitality!!!! Awesome and thank you John Hancock!!!!

Love it! ****

1y ago Angela E.

I use this app to track all my workouts, I enjoy their articles on fitness and recipes and great health information. So far I've had it for 5 months and am getting a free Apple Watch. Highly recommend. 💗

Very motivational ****

Mar 3 Ebrown57

Keeps me focused on activities and caloric burn. Lost 5 lbs in first two weeks using the Apple Watch!

Much recommended	

Jun 21 n2ricis

It helps staying active and keeps me working out all the time. I have a free apple watch that they pay for and I am always updated on healthy trends, foods exercises.

Vitality app	

1

Jul 3 Jc2012us

My wife and I just signed up for John Hancock vitality program. We absolutely love it. What a great way to cater life insurances to the younger crowd while motivating them to work out!!

Thanks y'all.

A Different Take

The health and wellness category requires a significant time investment.

In recent years, health and wellness startups have been launching their own products and partnering with insurers to help policyholders lead a healthy lifestyle. And while some companies pledge instant interaction with the company and the insurer, it takes years to show the importance and realize the gains of making people lead healthy lifestyles. Aside from the time investment, the financial investment required to offer these health and wellness initiatives isn't small - a Vitality member can earn around \$200 a year in rewards. Of course, the ultimate promise for life insurers is to get policyholders to live longer, which in turn will reduce claims cost, but for some insurers, paying now for future benefits is too futuristic and that's why it's important to think outside the box.

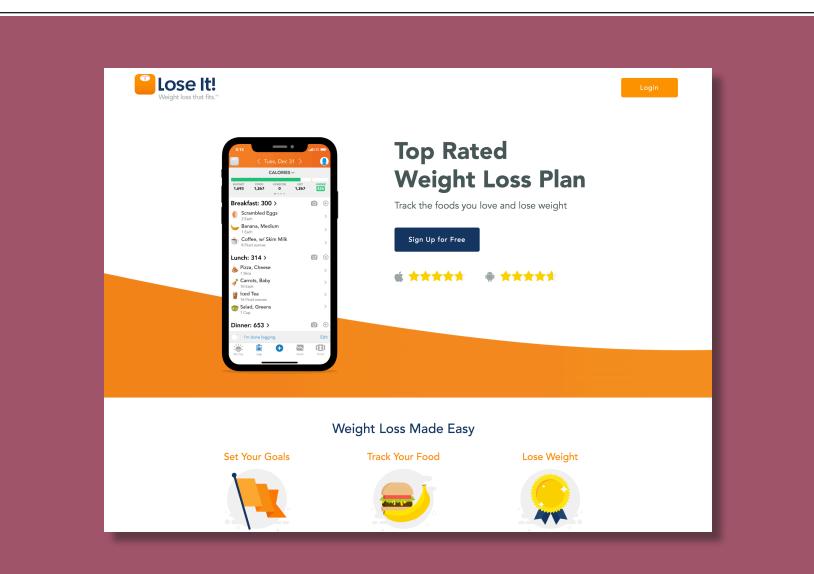
Lose it!

There are over 16 million Vitality members in 22 markets. On the other hand, Lose It!, the free calorie counting app which is featured on Apple Health, has over 35 million users worldwide. The company was founded in 2008, has only raised \$5.5 million, employs just 50 people, and is profitable thanks to 500,000 members paying ~\$40 a year for premium features. The app builds a personalized weight loss plan and daily calorie budget based on a user's personal information and health goals. It features calorie and exercising tracking, meal planning, integration with wearables, motivational challenges, and the ability to get genetic insights to make the weight loss journey more personal by allowing users to upload their DNA files from companies such as AncestryDNA and 23andMe.



In a 2016 study with the National Institute of Health, 72.7 percent of users who actively used Lose It! achieved clinically significant weight loss. In January 2020, Lose It! surpassed its goal of losing 1.5 million pounds, and so far, Lose It! users lost 92,558,209 pounds.

Lose It! is proof that some people do not require cash rewards, and others are even willing to pay for the tools that will help them achieve their health goals.



In addition, a wide variety of health and wellness firms will offer life insurers different solutions for risk reduction and distribution. Two use cases here:

🔲 nanit	P PELOTON
FOUNDED	
2015	2012
HEADQUARTERS	
New York	New York
FUNDING	
\$ 28.6M	\$ 994.7M

Video capabilities aside, Nanit's baby monitor also tracks the baby's breathing and sleeping and provides parents with helpful tips to improve their baby's (and their own) sleep. a life insurer can partner with Nanit to access their growing user base of young parents. but there's also benefit around risk prevention. the life insurance company can create a prevention program in collaboration with other insurers to keep users safe. for example, if a baby wakes up his parents 3x at night, Nanit will send the parent an app notification with an uber credit to encourage the parent to leave the car at home and not risk driving while tired. A new LIMRA study found that 1 in 4 adult Americans cannot name a single company that sells life insurance and a majority (56 percent) are unable to name 3 life insurance companies. one significant reason for this reality is the fact that life insurers were never big on advertising. with 1.4 million users who work out while staring at a 22-inch touchscreen, Peloton can provide life insurers with a platform to reach healthconscious individuals. while the company doesn't seem to be working with advertisers just yet, there's little doubt they won't go down this path. ultimately, peloton could be a great alternative for traditional, expensive tv ads.

The Insiders' View

Wellbeing: The Foundation of Future Business Success by Avibra

It is true that money can neither buy happiness nor can it improve individual overall wellbeing. Yet still, most services and business models are centered around on how to save or make more money. With so much technological innovation happening, what is bound to emerge is a new form of connected services that blends three pillars – WFI (Wellbeing, Finance, Insurance) – while putting wellbeing front and center. Behind that value proposition follows all the financial services, but with the elements of personal finance and insurance taking the back seat. It could very well come in the form of a synthetic financial instrument that is layered on top of existing financial instruments and insurance products. It will demand that most of the existing businesses recalibrate their current products, services and distribution.

To find a good example of a strong connected business model, consider the fact that 60 percent of Americans don't have \$1,000 in cash to cover an emergency. There are a multitude of services that offer to teach them how to cut corners to save that \$1,000 or offer them extra cash with a low interest rate (getting them further into debt). Imagine if a person's wellbeing becomes the primary value proposition. If that's the case, companies would need to understand why the customers are not able to save \$1,000 and how can they significantly improve their career prospects. In turn, the customers earn more money and no longer need to cut corners and pull out loans at a lower interest rate. This will not only create stronger trust and brand loyalty toward that company, but also fundamentally shift the value proposition of a business into an obligation to improve their customers' overall wellbeing before offering any kind of products.

The 4 pillars of wellbeing are financial, physical, career and, of course, community. In the future, any business that can touch upon any one of the pillars and impact their customers in that way will own the customer LTV (lifetime value). A good example of a connected service in the life insurance industry can take several forms, from a simple approach to a more holistic and integrated model where death protection is not the core part of the value proposition. It also strongly depends on some of the advancements in the healthcare space. Imagine if life insurance was about living a good life and not about death protection. The better you live, the more valuable you become to those around you. Should we fail to help you with your wellbeing efforts, we would pay your family a lump sum to continue their same wellbeing journey. It's a virtuous cycle in many ways. The same approach could be flipped for other insurance products where the customer's journey starts out focused on wellbeing first, and solving the complicated problems of living a life second.

> <u>WEBSITE</u> avibra.com

<u>FOUNDED</u> 2018

HEADQUARTERS

Iselin, New Jersey

<u>FUNDING</u> Undisclosed

OVERVIEW

Avibra is a unique platform that provides holistic wellbeing benefits to improve individual overall wellbeing, it uses data science and machine learning to track and reward individual good habits with life insurance coverage which grows on weekly basis - but never decreases for less ideal ones.

Why a Digital Health Platform Strategy is Essential for Life & Health Insurers by dacadoo

There's no denying that "digital health" is all the rage today. With 100's of digital health companies and over 300K health apps available in the app stores, it would be hard to imagine you haven't already had some experience with digital health, whether it's with your wearable device, access to your online medical record, a telemedicine call, etc. But what exactly does "digital health" mean and how should life and health insurers deploy digital health strategies to transform their businesses?

First let's define digital health: Digital health is the convergence of digital technologies with health, healthcare, living, and society to enhance the efficiency of healthcare delivery and make medicine more personalized and precise (Wikipedia). Most definitions break digital health into 5 main categories: wearables/devices, mobile health (mHealth) & remote monitoring, telehealth, health analytics, and electronic health record (EHR) systems.

Next, let's recognize that the drivers for a digital health strategy for life vs. health insurers are somewhat different:

Life insurance carriers have traditionally had little to no relationship with their policyholders, as their products are sold through a distribution network of brokers and agents, with the only engagement being perhaps an annual premium invoice and the ultimate transaction to settle a claim. In addition, the underwriting process to accept an applicant has typically involved the applicant providing biometric information ("fluids" in life insurance parlance), with underwriting decisions typically taking 4 - 8 weeks. All this is now being turned on its head by a new generation of consumers, born with smart phones in their hands and raised to expect instant gratification, transparency and deep online relationships with service providers. As a result, most life insurers are now working diligently to solve both the client engagement and the accelerated underwriting puzzles. They are looking for ways to take advantage of the petabytes of digital health data being created as a way to innovate their traditional underwriting processes. The good

news is that life insurers have lots of underwriting experts on hand to work through this part of the problem. Directly engaging with their consumers, however, is a bit trickier. While most have decided that this ongoing relationship will be based on health, and that some form of digital health tools will be needed, most do not yet have staff on hand that have created and run programs like this before.

By the very nature of health insurance, members and insurers do interact on a much more regular basis, but that interaction normally happens only when the member is sick, requires treatment, and they need the insurer to pay a medical bill (claim). After all, there is a reason that the industry generally refers to health insurers as the "payers" - that has always been their role in the healthcare process. Over the last 10 years health insurers have made large investments in digital health as a means to control medical spend – i.e. reduce expenses/ payments for healthcare. Their investment in digital health has primarily focused on ways to treat patients more efficiently and cost-effectively. For example, if they can get patients to have a telemedicine call instead of a live doctor visit, that is less expensive; if they can use some digital tools to more quickly and more accurately diagnose patients, that is more efficient, etc. These are all great uses of digital health technology, and the ROI is very easy to calculate based on the savings. Nonetheless, health insurers did not begin this journey with an overall digital health strategy and architecture in mind, so many now find themselves with a collection of unrelated digital health tools - provided by an array of point solution vendors - that aren't integrated. In summary, they're now hard at work trying to figure out what their comprehensive digital health technology strategy should look like for the future.

The Digital Health Platform Strategy

With all of the digital health solutions and resulting health data available today, why haven't more life and health insurers been able crack the code yet on solving these issues? One major barrier is that the devices, apps, care management programs, electronic medical records, etc. operate in silos, as point solutions and independent programs – each generating disparate data. In many cases the insurers are offering digital health solutions to their member populations but have no way to track if it's working or even know who's using it, because they are all disconnected from each other. Complicating things further, strong consumer preference for digital tracking devices exists, so insurers need to be able to accommodate incoming data from a plethora of technologies.

It's entirely unrealistic to think everyone would use the same device, and the beauty and promise of digital health lies in the rapid innovation originating from the health tech industry to differentiate, expand and improve the medical community's ability to identify, analyze, prevent, treat and even cure specific conditions.

And we should encourage and support these efforts. So how can insurers embrace these promising technologies and deliver the most benefit for themselves and the members they serve? The answer is in designing and developing a platform built with a set of standards that enables integration of all of this digital health data, and, equally important, which also makes it actionable. Such a platform would need to comprise the following core functionality:

- An open API providing the ability to collect data from all digital health sources, including wearables, apps, electronic medical records, etc.
- Artificial intelligence to interpret the massive amounts of data across lifestyle, body and mind aspects of health and rapidly triage individuals needing assistance.
- An integration layer to connect individuals needing assistance with condition-specific content and programs, as well as human coaches, clinicians and caregivers.
- Triggers that automatically send alerts to care coordinators/clinicians when someone could benefit from a live call, telemedicine visit or physical appointment.
- A Health Score that measures holistic health in real-time based on all the integrated data inputs. This will inform individuals of how their own behaviors affect their health, as well as inform healthcare organizations about their population's health and how it is evolving over time.
- Risk Scores to provide underwriters with instant health risk probability data for use in accelerated underwriting as which will also enable the creation of new ways of underwriting and more personalized insurance products.
- Analytics to quickly determine what is working/not working with respect to health outcomes and end-user engagement.
- Holistic health and wellness content that is meaningful and targeted for all levels of health: healthy, low risk, rising risk and high risk.
- Engagement apps that get individuals more engaged in maintaining a healthy lifestyle through personalized programs that are simple and fun, with the option for rewards.

While the drivers for digital health platforms are different for life and health insurers, the benefits are very similar. It enables insurers to create an ongoing personal relationship with their members that is far more meaningful than collecting premiums and paying claims, while at the same time having a positive impact on the health of their populations. Insurers will realize enormous benefits from having a healthier book of business - not just financial benefits, but happier customers too!

<u>WEBSITE</u>	FOUNDED
dacadoo.com	2010

HEADQUARTERS

Zurich

FUNDING \$71.1M

OVERVIEW

dacadoo is a global technology company that develops and operates a mobile-first digital health engagement platform that helps people live healthier, more active lives through a combination of motivational techniques from behavioral science, online gaming and social networks, as well as artificial intelligence and automated coaching.

Transforming the Longevity Industry Using the Science of Epigenetics by FOXO BioScience

Since the 1700s⁽¹⁾, underwriters have been predicting human lifespan to manage longevity risk. The last major change in medical underwriting protocols for life insurance applicants was the introduction of blood collection to screen for HIV in the 1980s. Since then, medical underwriting has changed little despite new accelerated underwriting protocols. Enter the era of molecular biology and FOXO BioScience. Firmly positioned at the intersection of science and bioinformatics, FOXO is commercializing groundbreaking epigenetic biomarkers to address the challenges of accurately assessing health and wellness from self-reported questionnaires and invasive paramedical specimen collections.

What started as a keen insight that "epigenetic clocks" or molecular biological aging measures developed by Dr. Steve Horvath⁽²⁾ were highly predictive of mortality, has rapidly evolved into a next generation underwriting approach to traditional mortality underwriting for the life insurance industry.

Unlike genetics, which are fixed at birth and reflect the DNA inherited from one's parents, epigenetics is based on individual choices and changes based on lifestyle and environmental factors. Depending on individual habits, such as tobacco and alcohol use, diet and exercise, stress level and sleep, our genes express differently. Changes in gene expression can ultimately be tuned to biological aging. Thus, the science of epigenetics can act as a powerful tool for underwriters seeking to assess health and wellness and predict individual human lifespan.

Since meeting with Dr. Horvath, FOXO founder and CEO Jon Sabes has been assembled a highly-skilled team of biological and machine learning data scientists, life insurance underwriting experts, and entrepreneurs to develop epigenetic technology and testing services to identify and quantify specific biomarkers of disease and aging, including tobacco, alcohol, drugs of abuse, biological age, risk classifications, as well as other clinical blood chemistries. In pioneering a precise new medical protocol, FOXO is set to

(2) Gibbs, W. Wayt Biomarkers and ageing: The clock-watcher. Nature.com https://www.nature.com/news/biomarkers-and-ageing-the-clock-watcher-1.15014

⁽¹⁾ Insurance Handbook. Insurance Information Institute https://www.iii.org/publications/insurance-handbook/brief-history

disrupt the global life insurance industry with a next-generation underwriting tool that is more accurate, consistent, and cost-effective than the traditional methods currently being used.

At the same time, FOXO is also supporting groundbreaking scientific discoveries by collaborating with scientists to develop much-needed tools and services to advance the science of epigenetics. FOXO played a pivotal role in the commercialization of the upcoming Infinium Mouse Methylation Array and will be the first company to give researchers access to DNA methylation array technology that supports diagnostic screening and therapeutic medicine in model organisms like mice.

In addition, FOXO is facilitating significant scientific breakthroughs worldwide with open source bioinformatic software that simplifies and automates preprocessing, quality control, and analysis of complex DNA methylation data being used by researchers to advance their understanding of the science of epigenetics. To learn how FOXO's epigenetic technology can help move your research or business forward, visit foxobioscience.com.

<u>WEBSITE</u>	<u>FOUNDED</u>
foxobioscience.com	2016
<u>HEADQUARTERS</u>	<u>funding</u>
Minneapolis, Minnesota	N/A

OVERVIEW

FOXO BioScience (formerly Yousurance and Life Epigenetics) is a leader in epigenetic technology that supports groundbreaking scientific research and disruptive next-generation business initiatives. FOXO offers leading supervised machine learning and artificial intelligence technologies to identify epigenetic signatures related to biomarkers of human health and aging.

Wellness Use Cases by Optimity

Optimity was established in 2014, and its headquarters are in Toronto and San Francisco (additional offices in Boston, Ottawa and Tokyo). Working with 11 major life and health insurance carriers, Optimity offers integrated, mobile-first wellness solutions that enable a digital, consistent connection to millions of consumers.

Their programs offer a honeypot strategy for lead pre-qualification, near-real-time data insights for continuous, simplified and automated underwriting, and high-frequency customer engagement. The company is the provider of SaaS health rewards platforms (Optimity Wellness and Carrot Rewards) to over 100 clients in Canada, US and Japan.

User Insights

- 1.4 Million members
- Demographics data
- 2.2 Trillion data points (800 data points per user per year)
- Behavioral and psychographic insights on users that match health-conscious and
- achievement-oriented personalities
- Interpersonal interactivity insights between users as they build their "circles" of their
- micro-community within the platform

Optimity's thesis is to create the world's largest network of health-conscious consumers: using wellness to pave the way for a future where consumers are rewarded for an active lifestyle. Their data is continuously connected, verified and used to best service these customers' needs for a lifetime. By establishing an authentic connection with the end customers, they enable the insurance carriers to become a lifestyle experience that is personalized to the customers' needs.

They protect the carriers' pool of policyholders with continuous risk mitigation via evidence-based proactive health recommendations and needs assessments. Working with reinsurers, data partners and in-house researchers, Optimity is creating dynamic health scores that will serve as FICO scores for health.

Steps & Beyond

- Behavior science loops power engagement & health outcomes. Optimity's engagement strategy is built on the Transtheoretical Model of Behaviour Change, which influences tailored interventions to specific stages of readiness and supports techniques to promote self-efficacy. Use of prompts and motivation strategies are key interventions outlined by the Theory of Planned Behaviour. Various elements of Social Cognitive Theory and the Health Belief Model inform specific strategies Optimity uses in the design of its programming. The goal is to identify the unique needs of users based on a set of trigger data, intervene through the form of recommendations (content, resources, etc), and provide feedback loops to let users know how they are doing, give them some insight into their lives, and recommend next steps. As a result of this fully-formed feedback loop, users remain engaged in the program and come back for new insights regularly.
- Social connectedness: Step together programs has proven to drive more impact of mHealth app intervention.
- Motivation Why are members interested in getting healthy and how this is linked to life events? Optimity provides a carrier-specific program through the Optimity member app (Apple or Android) or access to online access. Features include:
 - Microlearning (nudges) via micro-activities & mini-courses
 - Dynamic Health Risk Assessment individual risk profile
 - Wealth Assessment investment profile and insurance gaps
 - 400+ Wearable & IoT health device uploads and connectivity
 - Gamified quests, targets, challenges and educational content
 - Rewards earn points and redeem for rewards
 - Social connection with friends and affinity members
 - Viral lead gen and social connectedness and how this impacts conversion, revenue, engagement and ultimately health outcomes
 - Life events data linked to advisor appointments

What will 2030 look like for wellness?

Optimity believes that by concentrating on holistic (not just steps) multi-dimensional healthy living, incentive-based mobile apps can influence millions of consumers to

be measurably healthier. Data about sleep and heart will become well-analyzed and linked to mortality tables as a predictor. Mental health will be a hot topic. Novel studies about social connectedness and the disappearance of multi-generational homes will surface.

<u>WEBSITE</u>
myoptimity.com

HEADQUARTERS

FOUNDED 2014

FUNDING \$2.8M

OVERVIEW

Optimity offers integrated, mobile-first wellness solutions that enable a digital, consistent connection to millions of consumers.

Getting to the Heart of the Matter in Addressing the World Health Crisis by PAI Health

The world is facing a health crisis, and insurers are facing an unprecedented rise in associated claims. Recent pandemics such as COVID-19 are reframing global conversations around health and wellness and generating new awareness of health risks associated with underlying conditions. This has generated new appreciation for preventive health as well as new recognition of lifestyle risk factors like inactivity. Physical inactivity is one of the leading health risk factors, however in spite of common knowledge that people should maintain an active lifestyle, approximately 77 percent of Americans are not meeting the recommended guidelines of aerobic and muscle-strengthening activity. According to the World Health Organization, 71 percent of global deaths are caused by lifestyle disease and 5.3M deaths per year are caused by physical inactivity.

It Starts with the Heart

According to a report from the Global Wellness Institute, Americans spent \$264.6 billion on physical activity in 2018, far more than any other nation, including fitness classes, sports and recreation, equipment and supplies, and related technology. Even with all this spending, the U.S. ranks 143rd globally for actual participation in physical activity. Additionally, the U.S. is the top spender worldwide on healthcare per person, but consistently ranks near the bottom on measures of actual health such as life expectancy, chronic disease, and lifestyle diseases like cardiovascular disease.

It's also never been easier to track physical activity, with wearable technology adoption continuing to grow. It is projected that 109.2 million smartwatches will be shipped worldwide in 2023, up from 69.3 million units in 2019.

So, why are we not seeing a meaningful health impact on people's lives?

While we know behavior change is hard, why is tackling the challenge of increasing physical activity so difficult, even when individuals are motivated to change?

The problem is current exercise guidelines fail to guide people to better health. Recommendations such as 10,000 steps and weekly activity guidelines are vague, not personalized, and difficult to adhere to. In addition, it turns out that there is less value to these metrics than people originally thought - what really matters is the body's response to exercise, which is best measured through heart rate.

Personal Activity Intelligence (PAI) is a new health standard for physical activity that solves this problem. PAI is a heart rate-based score and personalized prescription for exercise scientifically proven to maximize protection from lifestyle disease. Studies proved that those who maintained 100 PAI or more had on average a 25 percent lower risk of cardiovascular disease (CVD) mortality and lived on average 5 years longer. This impact is intensified for high-risk cohorts, including those with hypertension and type 2 diabetes lowering their risk of CVD mortality by 31.5 percent and 54 percent respectively.

A Simple Number With a Lot of Science

An individual's PAI Score is calculated through a mobile app that takes personal profile and heart rate data from a wearable device, and it translates it into a 7-day activity score. The ideal universal goal is to maintain 100 PAI or more for the maximum health protection, but since it's personalized, what each person needs to do to achieve 100 PAI is unique to them. The PAI algorithm was developed by Professor Ulrik Wisloff from the Norwegian University of Science and Technology. It is based on the science of cardiorespiratory fitness, which has been recognized by the American Heart Association as a leading predictor of health and longevity and recommended as a clinical vital sign. The PAI metric has been validated by one of the world's largest health studies that followed more than 45,000 people over 25 years with over 1 million person years of data. Several studies have been published on the efficacy of the PAI metric to predict mortality in respected journals including The American Journal of Medicine and Mayo Clinic Proceedings.

"The most relevant index for measuring if you are physically active enough is PAI, from a health perspective that's all that really matters. Managing your PAI Score helps you reduce your risk of lifestyle related diseases. Simply, it helps you live longer."

Ulrik Wisloff, Professor of Exercise Physiology at NTNU and Inventor of PAI

Catering to the Inactive Population

The genesis of PAI was driven by a desire to help inactive people become more active. Professor Ulrik Wisloff wanted to develop a solution that would make it easy for anyone to know if they were doing enough, giving credit to a broad range of activities beyond traditional exercise. PAI recognizes any activity that gets the body moving and the heart pumping, and it's personalized to an individual's fitness level, meeting people where they are at and adapting as they progress.

When starting their journey, less active people will find that they can earn PAI doing everyday activities, and they can see what earns them the most heart health benefits so they can adapt their lifestyle over time. Essentially, PAI measures what matters so people can focus on the one number that counts.

Benefiting Insurers with a Win-Win Solution

The PAI Score is inclusive which is important to insurers, as it works for individuals across all fitness levels and caters to the large inactive population. PAI awards fair credit for all activities, regardless of steps, allowing people to do what they love. PAI also enables insurers to create individualized experiences for customers and explore wellness-centered value propositions that appeal to new generations of consumers.

Insurers can introduce members to the PAI Health app, or they can choose to integrate PAI into their app if they have one. PAI Health offers an API-first design allowing for integration flexibility and to support for a variety of use cases across insurer workflows. PAI offers insurers game-changing risk assessment tools that transform customer acquisition and traditional underwriting. Through customer segmentation and predictive analytics, PAI enables highly personalized engagement and innovative value propositions that appeal to new generations of consumers. PAI interprets personal profile and heart rate data to produce reports and actionable insights that can reduce mortality and morbidity and transform traditional models of underwriting and pricing.

Insurers can leverage PAI's data insights to enable dynamic risk monitoring, reduce costs, and increase engagement while improving members' health. "We provide anonymized, yet structured data sets that are backed by science, making population health management more accessible to insurers and employers. Ultimately, we enable more data-driven insights to tailor products and personalize solutions." - Sally Powell, General Manager, PAI Health.

"There's a big opportunity for insurers to change their relationships with customers to be less transactional and instead be more engaging and personable with digital solutions like PAI. Not only will this improve their policyholders' health, but it will also attract and retain new business."

Sally Powell, General Manager, PAI Health

<u>WEBSITE</u>	
PAlhealth con	

HEADQUARTERS

Vancouver, BC

FOUNDED

1999

FUNDING \$9M

OVERVIEW

PAI (Personal Activity Intelligence) is a personalized weekly activity program that shows each end user exactly how much exercise their body needs to live a longer, healthier life.

How Future Forward Insurance Companies are Tackling Variable Rate Life Policies by PHR Plus

Consumers expect personalized digital experiences and the demand for these offerings isn't slowing down. Amazon, ride sharing platforms, social media feeds, and even auto insurance companies have offerings that adapt to the preferences of the consumer. But where is life insurance in this journey of on-demand digital products?

The truth is, that most life insurance companies are very far behind. It's common knowledge in the industry that policyholders lack loyalty to their life insurance carrier, policy renewal rates are low, and most individual consumers don't have multiple policies with the same carrier. Variable rate or "pay as you live" life insurance products show promise to remedy to these problems. Electronic medical records and digital health apps are a part of the solution, but the key to ignite this change is a robust customer-centric platform to enable the overall experience with the policyholder.

"Health has become the contemporary asset worth protecting. To generate sustainable growth, (life) insurers must prioritize health – and look beyond the niche of the 'healthy wealthy'..."

Let's look at how Perry the Policyholder interacts with his Future Forward Insurance Carrier. We'll see how this improved experience has the potential to create health gains for Perry and significant returns for the carrier. Perry is a 46 year old dentist that has a wife, two kids, he has elevated blood pressure, and like many of us he's 30 pounds overweight.

Perry made a promise with himself to take control of his health. He never misses his annual checkup with his doctor, he's taking his blood pressure medication daily, running with his dog every morning, and hitting the gym when he gets the opportunity. Perry's Future Forward Insurance Carrier knows that these behaviors have the propensity to improve mortality; so they enable, incentivize, and reward it. After Perry went through initial underwriting, (which was 4 days instead of 40) they gave Perry access to a personal health platform that allows him to connect and share his data in a HIPAA compliant way and on his terms. He has his medical records, pharmacy records his Fitbit, and his blood pressure data synching in on-demand in one digital location.

Perry's enjoying that the platform prompts him with engaging curated health content from experts in the industry, and he's spoon fed healthy recipes that he makes with his wife. Perry is routinely on top of the leaderboard of the steps challenges and he loves the gift cards he can use on health gear. Best yet, every year with a couple clicks of a mouse, Perry goes through streamlined underwriting and he gets a 20% insurance discount for his healthy habits! Perry is as proud as a peacock and he tells all of his people that he got his life insurance from Future Forward Insurance Carrier. In fact, he receives a \$500 cash voucher every time one of his people use the personal promo code he provides to sign up. And Perry feels like he's prepared for whatever his future holds. The platform enabled accelerated underwriting and now, he got a great rate on an annuity and an individual disability insurance policy.

When you contrast this to Cory's experience with Complacent Insurance Co, there's no comparison. Complacent Insurance Co had a life insurance underwriting experience that took 40 days, his only interaction with Complacent Insurance Co is when he pays his bill, and he wouldn't even think about taking out another policy with them, let alone refer them to the crew he cares about!

PHR Plus has the Tools to Make it Happen

PHR Plus offers a comprehensive tool for customer engagement and health data aggregation and in partnership with SCOR we have many options to fit carrier's needs.

Are you ready to be a Future Forward Insurance Carrier?

Platform to Enable

Ongoing Policyholder HIPAA Consent

• Consumers are prompted to update their HIPAA consent as-needed

Ongoing Access to Health Data

- Aggregation from electronic medical records
- Aggregation from home health and fitness devices

Ongoing Underwriting

- A.I. risk stratification
- Automated underwriting

Platform to Engage

Policyholder Health Activation

- Single source for personal health record to share as needed with family members and providers
- Steps and activity challenges
- Prizes, rewards, and gamification
- Personalized health content from expert sources
- Condition specific video engagement
- Tailored healthy recipes
 Proactive health messages and nudges

Testimonials from Actual Users

"Great initiative to get people moving and the added incentive made it even more worthwhile."

"Do the offer again – truly Gold Classl"

"Thank you!"

"I am loving the challenge, it genuinely does inspire me to make an extra bit of effort on the days I am nearly there and would have otherwise let myself off the hook."

"Good to see you're looking after my health. This works both ways.. I'm less likely to die, and you keep the premiums. You should keep the program going indefinitely, (but just don't increase premiums!!)"

WEBSITE www.phrplus.com FOUNDED 2015

HEADQUARTERS

Phoenix, Arizona

<u>FUNDING</u> N/A

OVERVIEW

curaNEXUS is the company that created PHR Plus. PHR Plus is the mint.com for your health information. PHR Plus makes it easy to access your health information from hospital systems, labs, and home health devices in one HIPAA compliant system, share this with medical personnel and keep on you at all times.

One Test to Rule Them All by PNOĒ

In recent years the insurtech industry has seen countless initiatives by startups and large organizations aiming to improve accuracy in risk prediction by using data. The health and life insurance sectors have tried to follow this trend with little to no success however. The reason is simple: data sources collected on a mass population basis are unable to reliably predict or early detect the conditions accounting for the highest number of deaths and majority of healthcare expenses. Conditions of interest are the usual culprits and include metabolic, cardiovascular and pulmonary diseases.

The COVID19 coronavirus pandemic is certainly an extremely rare incident that couldn't have been predicted by actuarial models and will most likely prove to be orders of magnitude less lethal compared to other conditions or infectious diseases. However, due to the complications it causes in the case of an underlying chronic disease (e.g. cardiovascular, pulmonary or metabolic disorder), it revealed the ghastly reality that health officials across the globe have been warning us about for decades now. Most chronic disease cases that are likely to kill you and constitute the vast majority of healthcare expenses remain largely undiagnosed. As a result, thousands of individuals who were seemingly healthy developed severe complications, when infected by the virus, many of which resulted in near death experiences or even fatalities.

The numbers have been known for years now: ~50 percent of heart attacks are silent until a major cardiac event occurs whereas 60-70 percent of COPD cases remain undiagnosed until they evolve into severe respiratory disorder. Despite advancements in wearable technology, data processing algorithms and routine biometrics screening, biomarkers collected on an individual level still only include heart rate, steps, blood pressure, blood glucose, BMI and cholesterol. Unfortunately, it has been proven that these biomarkers cannot reliably detect or predict a heart attack, the onset of COPD or diabetes in its early stage.

The question that arises: Is there a screening process that can reliably detect and/or predict the onset of these diseases at a cost effective and non-invasive way?

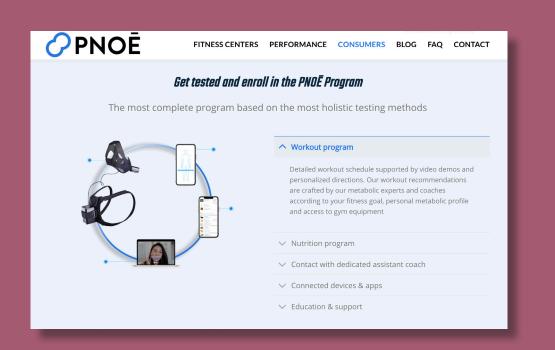
Look no further than cardio-metabolic testing, a method that has been around for more than 100 years and is widely considered the most insightful but underutilized health assessment. Its stats and features are more than startling:

- It is the only assessment capable of accurately assessing VO2peak, the most powerful predictor or all-cause mortality and morbidity. Several decades long longitudinal studies have shown that VO2peak results to an Net Reclassification Index of ~30 percent, meaning that the independent introduction of VO2peak in an actuarial model using traditional biometrics (e.g. BMI, cholesterol blood pressure), leads to a reduction of false positives and false negative cases by ~30 percent. Such is the power of VO2peak in predicting mortality and morbidity that is widely accepted as the most reliable indicator of overall health and in 2016 the American Heart Association openly stated that ideally each person should undergo cardio-metabolic testing regularly.
- It is the only assessment that can easily and non-invasively detect ischemic heart disease (a blockage in your heart), the condition that accounts for ~85 percent of cardiovascular disease cases with a ~90 percent sensitivity and specificity, comparable only to nuclear stress testing, an extremely invasive and costly radioactive test. Typical ECG stress testing has a specificity and sensitivity of ~50 percent making it almost useless for first line screening of cardiovascular disease as indicated by several high profile medical institutions. The absence of an accurate, non-invasive and cost effective first line screening tool has led to excessive utilization of methods such as nuclear imaging leading to enormous healthcare costs and even cancer cases.
- It is the only assessment known to medicine that can screen your metabolic, cardiovascular and pulmonary systems individually but also how they work in unison.
- The gold standard in distinguishing between pulmonary and cardiovascular disease in cases of individuals experiencing shortness of breath and angina, one of the most frequent symptoms in primary care which very often stems from an underlying heart of lungs condition.
- It is the only assessment known to medicine that is able to detect reduction in metabolic rate due to adaptive thermogenesis, the state at which the human body reduces caloric expenditure due to dieting or other hormonal changes and is now considered the most important physiological factor behind inability to lose weight or keep weight off.

All it takes is a 10 minute exercise test on a treadmill or stationary bicycle while wearing a face mask that analyzes your breath. But why would such an insightful assessment, non-invasive and relatively simple assessment be so underutilized with only a handful of people being aware of its value and even fewer having done it?

The answer lies in a combination of factors:

- Expensive devices that require special training to operate and usually involve cumbersome and time consuming processes.
- Inability by most practitioners and health practitioners to analyze the data collected and translate them into a diagnosis, nutrition or workout plan.
- Widespread misconception that a cardio-metabolic test needs to be a maximal excursion assessment that only generates VO2max as an output and is therefore useful only to athletes.
- Low reimbursement for cardio-metabolic testing (~\$250/test) relative to other diagnostic methods such as nuclear stress testing (~\$2-5k/test) is leading US care providers to choose the latter as more profitable and financially sustainable in a system driven largely by fee for service rather than fee for value. On the contrary, the value based model of European health systems directly incentivized to use the most effective and cost efficient method has been much more conducive to cardio-metabolic testing the usage of which has flourished in several sectors from pre-operative assessment to routine cardiovascular screening.



In its effort to overcome these problems and realize the enormous potential that cardiometabolic analysis holds, PNOE created the world's first cardio-metabolic analyzer for the mass market. An affordable, portable, easy to use but still clinically accurate device coupled with a fully automated data interpretation software, PNOE constitutes the first solution able to make clinical grade cardio-metabolic testing a routine screening process for everyone. PNOE is already being used by hundreds of health and wellness centers and will soon be available for domestic usage. Through its network of testing sites and soon to launch domestic testing service, PNOE aims to realize its mission of democratizing the most insightful health assessment there is allowing carriers and care providers to diagnose and predict chronic disease in the most cost effective and accurate way.

> WEBSITE mypnoe.com

HEADQUARTERS Palo Alto, California <u>FOUNDED</u> 2016

<u>FUNDING</u> Undisclosed

OVERVIEW

PNOE is the world's first breath analysis device that makes the most vital health screening as easy as a 10-minute workout. In a few minutes, PNOE will detect conditions that account for more than 40% of US health spending. PNOE will quantify with the medical gold standard method the impact of your nutrition and workout on your overall health.

What the Industry Forgot about Wellness Engagement by Sureify

Wellness engagement presents an alluring promise to life insurance carriers. Business opportunities seem to lurk between the related ideas of wellness — a state of physical, mental, and social wellbeing - and life insurance, a product connoting health, security, and family. Meanwhile, the fitness industry continues to grow each year, alongside a burgeoning mental wellness industry. A general consensus is forming amongst life insurers that wellness engagement is a silver bullet for customer engagement. Industry leaders are diving into data tracking, rewards programs, and behavior change technology - all enticements for an industry that's trailing behind consumer and technological shifts.

Insurers are prudent to develop wellness engagement strategies given these market shifts. At Sureify, we've had much success enabling wellness strategies for our carriers via our Lifetime platform. However, many have forgotten the full definition of wellness. The hype is all about the health component to the neglect of comprehensive wellness. This is costing carriers the attention of a huge population of policyholders who aren't interested or who get their health fix elsewhere. We challenge life insurers to capitalize on all aspects of wellness. So, let's look at wellness engagement, its efficacy, the limitations of health-focused wellness, and how to engage customers with all aspects of wellness.

What is Wellness?

The World Health Organization defines wellness as "...a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity." This is the view that Sureify takes, including the subcategories of spirituality, cognition, finance, and environment. However, insurers seem fixated on the health component, and we challenge them to share our comprehensive view of wellness, which reaches a bigger audience.

Why Are Life Insurers Investing in Wellness Engagement?

1. The promise of driving customer engagement. Wellness programs can drive greater policyholder engagement, leading to greater persistency and lifetime value.

- 2. Rebrand the industry. Many carriers think of wellness as an opportunity to reinvent their public images. With wellness engagement, carriers can move away from connotations of risk to become all about living a healthy lifestyle.
- **3.** Mortality. There is a hope that wellness engagement can improve actuarial predictions and reduce mortality.

Health-focused Wellness Engagement Outcomes

In partnership with our carriers, we've seen health-focused wellness engagement resonate with select demographics in the U.S. Let's break it down by looking at a use case from a top five U.S. life carrier, which we will call Carrier A.

Carrier A Use Case Overview

In March 2018, Carrier A released a mobile app, powered by Sureify's Lifetime platform, to a block of their policyholders. We've chosen to focus on this carrier because they configured the application in the most health-centric fashion amongst all our carriers. The app included 18 wearable and app integrations (including Apple Health, Fitbit, and Garmin Connect), rotating activity challenges, activity tracking (calories, BMI, weight, steps, cycling, floors/elevation), activity goal-setting, wellness content (articles, polls, videos, quizzes), and a reward system whereby users redeem points (earned through activity) for gift cards to major retailers.

Adoption

Sex and age were the most significant predictors of adoption for Carrier A. The application was uniformly offered in an email campaign to demographics of males, females, and the following age groups: new adults, young adults, active adults, preretirement, and retirement.

There were different points of marketing outreach over the course of two years, each outreach targeting new policyholder sets. Females were the most likely to adopt the application with 71 percent of females targeted adopting the app, in comparison to 42 percent of males. The new and young adults were also high adopters compared to active adults, preretirement, and retirement aged policyholders whose adoption hovered around 35 percent across multiple outreaches.

Other Key Findings

Does health-focused wellness engagement increase the lifetime value of policyholders? This is perhaps the most central question about wellness engagement. After all, wellness strategies are an investment and many carriers are wondering what, if any, returns can be expected. Our clients are yielding affirmative (qualitative and quantitative) results. Carrier A, for example, recently surveyed its policyholder adopters regarding upselling propensity, as a preliminary step to connecting a purchasing path to the wellness engagement experience. On a 10-point scale, 71 percent responded seven or higher when asked how likely they would be to purchase a financial product related to the program. Another 47 percent responded with a 10 when asked how likely they would be to recommend Carrier A to friends, family, or colleagues. These are significant signs that lifetime value can be improved amongst a wellness engaged policyholder base, even if the wellness content emphasizes health alone. However, it raises the question: who else could be engaged if the full spectrum of wellness was employed?

Limitations of Health-focused Wellness

It's important to acknowledge the limitations of health-centered wellness and take advantage of wellness' other aspects. Our data show that a large percentage of preretirement/retirement age policyholders are not receptive to wellness engagement. Adoption rates for these demographics have hovered around 35 percent. This is perhaps not unsurprising, given that the wellness strategies employed often included wearable tech integrations - innovations younger generations have adopted more so than their parents and grandparents. Whatever the reason, there is an apparent need for engagement content relevant to the interests and realities of life's later stages.

Actuarial

Wellness engagement vis-a-vis actuarial insights is at an exploratory stage. As far as we know, actuarial tables are not being rewritten on the basis of Apple Watch data. There are a number of challenges to work through in this area. There is the initial selection bias (wellness programs tend to attract already health-conscious individuals), data quality issues, and the need for long-term cohort studies. In spite of these roadblocks, we think wellness programs can lay the groundwork for future actuarial analysis.

Comprehensive Wellness Engagement

Comprehensive wellness engagement means incorporating more than health into an engagement strategy. Other areas might include community, cognition, environment, and finances. Insurers are well-positioned to advocate for social and financial flourishing, given the societal role insurance has played as a financial and risk-sharing tool for communities. Our carrier clients have expanded their reach by promoting engagement strategies around both these concepts. For these carriers, high-quality financial education content is reshaping the way their policyholders interact with them. Life insurance shifts from being a passive product, whose value is only proven with a claim, into an interactive experience that assists policyholders on their financial journeys. In some ways, financial education is nothing new for the life insurance business. The best advisors and agents have always played that function. The difference now is the need for self-guided, digital financial advisory.

Digital platforms allow carriers to harness the power of gamification techniques and virality. A feature in our platform, Lifetime, for example, prompts users to tackle a checklist of financial to-do's and share their success stories with other members. We've happily seen participants share personal testimonials (along with selfies) to the app dashboard to inspire other members. Facebook, Instagram, and LinkedIn sharing add an extra layer of virality to such features, allowing our clients to turn their policyholders into brand ambassadors.

Increasing Lifetime Value

By widening the scope of wellness engagement, carriers can seriously increase the lifetime value of their customers. We are finding that many policyholders are receptive to social initiatives that encourage them to include their friends and family members. Such carrier sponsored social initiatives are planting the seed for future policyholders who are positively exposed to their brands. Similarly, self-guided educational content is empowering policyholders to master their own finances and also serves as a lead generation tool for new product sales.

Final Thoughts

Wellness engagement is how Sureify got its start. We saw an industry in dire need of engaging its customers, and we built LifetimeEngage, a platform that supports all facets of wellness engagement. The full potential of wellness is yet to be realized, but there is a danger of over-calibrating the health component. One can tell a very compelling story about activity challenges, wearable integrations, and tangible health outcomes. We can attest to this story, but we've also seen how this slanted form of engagement excludes a significant portion of policyholders. Our clients are going beyond health and discovering how finance, lifestyle, community, and more can touch their policyholders' lives. And don't forget that for some policyholders, the right level of engagement turns out to be a premium notice delivered through a push notification or other baseline self-service features (which is why we built LifetimeService to support complete self-servicing). Remember, wellness encompasses a lot more than health and so should your engagement strategy.

WEBSITE	<u>FOUNDED</u>
sureify.com	2012
HEADQUARTERS	FUNDING
San Jose, California	\$11.8M

OVERVIEW

Sureify is a SaaS platform for life and annuity companies around the globe. Sureify's sales, customer self-service engagement solution, and their up-sell cross-sell solutions enable life insurers to connect, service, and sell to their new and existing customers using the most life insurance focused platform in the market today.

Wellness: Takeaways

Conclusion

At large, pure wellness initiatives - those focused on prevention and wellbeing - are embarked upon by insurers looking to engage with their customers. After all - insurance, as a product is a rarely differentiated product sold to a generally indifferent consumer. In most cases, engagement boils down to encouragement in the form of incentives.

When Vitality was still known as PruHealth in the UK, its advertising campaign centered on the slogan 'why pay for the gym?' And till this day www.whypayforthegym. com redirects to https://www.vitality.co.uk/campaigns/gym. You can say, that not much has changed, albeit free gym memberships are now packaged in terms & conditions to make the benefit a bit harder to achieve.

Generally speaking, 'Wellness is an old initiative that has graduated from a trend to a way of life. The common association of women on a diet eating a salad contributed in part by slogans such as "Eat Beef-The West Wasn't Won on Salad" and famous TV characters such as Al Bundy have now been replaced with hip D2C brands that are cool as a cucumber.

"A lot of people, when they talk about eating healthy, get pigeonholed into a granola, hippy demographic. We want to make healthy eating cooler than it is perceived to be."

Nathaniel Ru, co-founder of Sweetgreen, 2010

Also, getting people to lead healthier lives isn't a new concept. As seen earlier, in the 60s, MetLife urged shifting the campaign against obesity from older folks with a health problem to young, healthy people that are carrying some extra weight. And having a reward element wasn't invented with the rise of insurtechs; life insurers offered non-smokers lower rates in an era where men were judged by their cigarettes.



What has changed considerably is the number of adjacent sectors aspiring to be known as a wellness brand that would benefit from partnering with insurers. After all, insurance, if you think about it, is a wellness product at its core as it emphasizes prevention (of financial hardship) for a policyholder or his loved ones. What also has changed is the amount of data available to insurers to engage, and encourage policyholders as they [insurers] evolve from being passive to proactive; possibly indicating the greatest change of all - insurers looking out for their future.

About



SCOR, one of the world's largest reinsurers, provides its clients with a diversified and innovative range of solutions to control and manage risk. Using its experience and expertise, "The Art & Science of Risk", SCOR provides cuttingedge financial solutions, analytics tools and services in all areas related to risk – in Life & Health as well as in P&C.

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