

Section I: Executive Summary

MHealthy supports the health and well-being of University of Michigan (U-M) faculty and staff, as well as their families, U-M patients, retirees, community members and K-12 students. We embrace the philosophy that well-being encompasses the whole person with many factors playing a role in achieving balance, purpose and vitality. We deliver effective, evidence-based health and well-being programs and services that improve people's lives and support a culture of health at the university.

Broadly, programs address the following health behavior areas: physical activity/movement, tobacco cessation, alcohol use, nutrition and weight concerns, mental and emotional well-being, and sleep (in 2020), as well as services for occupational health and ergonomics. Each of these programs is detailed in our annual report sent to a variety of stakeholders.

One of MHealthy's strengths is having access to partners from across the university, who work together to improve the health and well-being of all faculty and staff. We work closely with colleagues in areas such as the Benefits Administration Office, Safety, Disability Management, Student Life, Poverty Solutions Center, Organizational Learning, and Vending/Dining/Catering to ensure the programs and services are aligned.

The methods used to evaluate MHealthy for this application include descriptive statistics as well as bivariate tests (e.g. McNemar's) and advanced statistical modeling. These advanced statistical models include multivariate logistic regression and linear mixed-effects regression while using various methods such as propensity score matching and co-variate controls to control for confounding factors in these associations and relationships.

The results from these analyses show that:

- 1) There are percentage point decreases between 2009 and 2019 in seven of the eight health risks, and all seven associations are statistically significant.
- 2) Defining participation as participating in the wellness program all 4 years, the percent increase when comparing 2016 and 2019 medical and pharmaceutical claims costs is lower for participants than non-participants.
- 3) U-M has lower per capita claims costs for each year reported compared to the IBM Watson Health University benchmark.
- 4) The percent increase when comparing 2016 and 2019 illness-related absenteeism is lower for participants than non-participants.
- 5) Illness related absenteeism is lower for the U-M compared to the BLS benchmark.
- 6) The percent increase when comparing 2016 and 2019 turnover rates is about the same for participants and non-participants. However, participants have lower turnover rates compared to non-participants. Also, participants compared to non-participants have lower odds of subsequent turnover.
- 7) Turnover is lower for the U-M compared to the CUPA-HR benchmark.
- 8) The majority of U-M employees surveyed agree that overall, U-M has a strong and

supportive culture of health.

9) MHealthy has much higher scores on the HERO scorecard compared to HERO's national benchmark.

MHealthy has addressed some unique challenges since its inception in 2006. In the first years of the program, during an economic downturn, the program and incentive budgets were cut. We quickly prioritized initiatives and shifted necessary funds. Throughout the years, the program has also remained nimble to meet the varying needs of its population, changing leadership and priorities, and national and global climate. We have quickly and thoughtfully responded to many challenges that arose during the pandemic. The program shifted most in-person programs and services to a virtual format, including programs such as leadership trainings, Wellness Champion Retreats, and group exercise and relaxation classes. We also pivoted to telehealth visits with counselors in our tobacco cessation, alcohol management, mental and emotional health and medical ergonomics programs. In addition, new solutions to unique issues throughout the pandemic were addressed, including caregiving, sleep, social isolation/loneliness/connection, financial well-being and the importance of arts and creativity on well-being.

Section II: Narrative Description of Program

Section 2A. Describe the organization, in three to five sentences.

The University of Michigan (U-M) is a world-class institution of higher learning that includes offering undergraduate and graduate programs at campuses in Ann Arbor, Dearborn and Flint, and a health system with three hospitals and over 120 clinic locations. MHealthy provides services to U-M's more than 52,000 employees, as well as to U-M patients, community members and K-12 students, while also contributing to the U-M's mission of academic, research and patient care. The university's dedication to academic excellence for the public good is inseparable from its commitment to diversity, equity, and inclusion where we strive to ensure that each member of our community has a full opportunity to thrive. We serve our community through tailored communications and engagement strategies. The latter includes surveying faculty and staff for feedback prior to program implementation, within a culture of shared responsibility, valuing choice, and characteristics of an institution that is decentralized while still maintaining webs of connections and intentional partnerships.

Section 2B. Health Improvement Efforts and Strategy

1. What are the organization's health and well-being goals?

MHealthy supports U-M's philosophy that well-being encompasses the whole person with many factors playing a role in achieving balance, purpose and vitality at work and home. We are dedicated to delivering effective, evidence-based health and well-being programs and services that improve people's lives and foster a culture of health at the university.



MHealthy has a mission, vision, strategic goals, principles, and yearly objectives (see image below) as well as an eight-dimension model of well-being (see image). All are in place to support the priorities of the university and to ensure every person has an equal opportunity to thrive.

		mhealthy.umich.edu	
<p>OUR VISION</p> <p>MHealthy envisions a U-M community where every person has an equal opportunity to thrive in all dimensions of well-being.</p>		<p>OUR MISSION</p> <p>MHealthy serves the U-M community in leading fulfilling lives by meeting their needs through a diverse set of well-being programs and services. MHealthy fosters a sense of belonging, positive and inclusive work cultures, and healthy environments that contribute to U-M being a great public university.</p>	
<p>OUR STRATEGIC GOALS</p> <ul style="list-style-type: none"> • Advance the national conversation on workplace well-being through cutting edge research and evaluation that inform innovative programming. • Support every person we serve in all dimensions of well-being through behavior change support, education, advocacy, and connection. • Strengthen a positive and inclusive culture of well-being that helps make U-M a great place to work. • Build relationships with internal and external partners to support MHealthy's mission. 		<p>OUR PRINCIPLES</p> <ul style="list-style-type: none"> • We believe that every person we serve deserves the opportunity to engage with health and well-being in their own way and we provide a variety of accessible options to facilitate that engagement. • We value evidence based and data driven decision-making while also respecting confidentiality. • We are agile in offering innovative programming to support the well-being of every person we serve. • We are responsive to the changing needs of our customers and environment. • We are good stewards of the university's resources - financial, people, and partnerships. 	

Our priority is the well-being of our faculty and staff. To that end, we also have macro-level goals, developed in conjunction with our Chief Health Officer and key stakeholders (see Table 1 below), with results presented in our leadership dashboard, that we use to measure the success of our programming. Details regarding the dashboard and goals are published [here](#). Some of the macro-level goals are simply descriptive in nature so are not all mentioned in this application. Additionally, more complex multivariate analyses, related to the macro-level goals, are presented in this application. In order to evaluate the effectiveness of our various programs, we also assess micro-level metrics with evaluation of program-specific goals to determine impact and process metrics that includes but is not limited to customer satisfaction.

Table 1: Macro-level Goals	
Work Culture	
Goal 1:	Annually, the majority of Health Questionnaire (HQ) respondents will agree with the statement: “The person I report to is supportive of workplace health and well-being activities.” <i>Please see results in section VII.</i>
Goal 2:	Annually, the majority of HQ respondents will agree with the statement: “Overall, U-M actively supports a work culture and environment that promotes the health and well-being of its faculty and staff.” <i>Please see results in section VII.</i>
Goal 3:	Each assessed year, the majority of culture of health survey respondents will report that U-M’s health and well-being initiatives contribute to U-M being a great place to work. <i>Please see results in section VII.</i>
Goal 4:	Each assessed year, the majority of culture of health survey respondents will report that U-M’s culture of health and well-being contributes to their overall quality of life. <i>Please see results in section VII.</i>
Engagement	
Goal 5:	Since 2016, the number of unique annual participants in MHealthy will maintain or increase. <i>Please see results in Table 3.</i>
Goal 6:	Since 2016, the number of unique annual faculty participants in MHealthy will maintain or increase. <i>Please see dashboard publication for results. Publication is linked above and the citation is also found in section VII.</i>
Goal 7:	Since 2016, the number of unique annual participants in MHealthy, with chronic conditions, will maintain or increase. <i>Please see dashboard publication for results. Publication is linked above and the citation is also found in section VII.</i>
Health Risks	
Goal 8:	Since 2009, the percent of HQ respondents that are classified as high risk will remain the same or be reduced. <i>Please see Table 4 below for results.</i>
Goal 9:	Since 2009, the percent of HQ respondents that are classified as low risk will remain the same or be increased. <i>Please see dashboard publication for results. Publication is linked above and the citation is also found in section VII.</i>
Absenteeism	
Goal 10:	Since 2009, the university will maintain or improve upon the average number of days of work lost annually due to self-reported illness related absenteeism. <i>Please see dashboard publication for results. Publication is linked above and the citation is also found in section VII.</i>
Work Performance	
Goal 11:	Annually, among individuals who agreed that a concern interfered with their work performance or productivity prior to participating in an MHealthy service, the majority will agree that their work performance or productivity improved after using the service <i>Please see dashboard publication for results. Publication is linked above and the citation is also found in section VII.</i>
Program Satisfaction	
Goal 12:	Annually, MHealthy will achieve an average customer satisfaction score of at least 4 out of 5 on all programs and services. <i>Please see dashboard publication for results.</i>

	<i>Publication is linked above and the citation is also found in section VII.</i>
	Recognition and Leadership
Goal 13:	The university will receive local and national recognition for its health and well-being programs and will participate as a national leader in the area of employee health and well-being. <i>Please see dashboard publication for results. Publication is linked above and the citation is also found in section VII.</i>

Our mission and goals are communicated to U-M faculty and staff through our website, social channels, university-wide publications, in-person and virtual meetings, annual report and other communication tools.

Since our inception in 2009, we have employed a multi-faceted, data-informed strategic planning and evaluation process. Strategic decision-making is guided by a combination of health risk data, cutting edge approaches supported by current literature, the priorities of university leadership, peer benchmarking, employee surveys and the input of various committees and focus groups.

Identifying the goals to tell the story of the important work happening at U-M came fairly easily following our 5-year evaluation (presented in 2014 and 2015). Our leadership was charged by the university’s Executive Vice Presidents to develop a series of macro-level goals to track over time (see Table 1 above). In developing these goals, leadership considered 3 main guiding principles:

- 1) Focus on specific subpopulations and non-financial metrics. While maintaining a total population approach, U-M executives asked leadership to concentrate programming on those employees who are exposed to additional harm (at high risk and those with chronic conditions). They also suggested that we pay particular attention to non-financial metrics, such as culture and engagement, when developing the metrics.
- 2) Align with Dee Edington’s 5 pillars. Dr. Edington is a former, well known, faculty member from the university who is a widely respected and published scholar in the field of health and well-being. Since the act of creating the goals fell into Pillar 5, *Quality Assurance: Measuring and Communicating What Matters*, leadership focused on pillars 1-4 for the development of the macro-level goals. Those remaining 4 pillars are (1) Senior Leadership: Engaged and Committed Leadership, (2) Operations Leadership: Positive Environment, Culture and Climate, (3) Self-Leadership: Positive Individual Health and Self-Leadership, and (4) Incentives: Positive Personal Motivation.
- 3) Build upon the work completed in the initial 5-year evaluation. Leadership considered the macro-level goals prior to the 5-year evaluation and what we wanted to continue tracking or improve upon.

We continuously contribute to the literature in health and well-being. A complete list of publications can be found in Section VII of this application. We also regularly survey university peers and health systems in areas such as programs offered, incentive models,

communications and general program strategy. U-M faculty and staff are also surveyed regularly with culture, satisfaction, needs and interest surveys. MHealthy is consistently evaluating and enhancing programming to reflect the needs and interests of our population with the most current, evidence-based research available.

MHealthy also established various culture building activities, such as a premiere Wellness Champion program (participation results for the Wellness Champion program can be found in Table 3), to help foster a positive culture of health. For more details regarding the Wellness Champion Program, please see section VI. Approximately every three years, we assess the culture of health at the university. Evidenced by 2016 and 2019 culture of health survey results (Table 2 below), overall, the majority of U-M employee survey respondents agree that U-M has a strong and supportive culture of health. A detailed table of these results can be found in section VII of this application.

Table 2: Number and Average Percent of 2016 and 2019 Culture of Health Survey Respondents Who Responded Favorably in each of the Summary Categories

Category	2016 Average N	2016 Average % (n)	2019 Average N	2019 Average % (n)
Values, Policies and Practices	1,634	59% (969)	1,557	60% (932)
Contributions to the University	1,629	60% (981)	1,553	63% (981)
Environmental Support	1,633	49% (802)	1,554	52% (810)
Co-Worker Support	1,638	65% (1,062)	1,553	62% (957)
Leadership Support	1,634	58% (947)	1,550	58% (907)

Scientific Principles

MHealthy offers a wide variety of health behavior change programs and services that are organized around a socioecological approach that intervene on the individual, interpersonal, and organizational level. Many of our programs utilize motivational interviewing and the transtheoretical model framework; for example, our outpatient tobacco cessation program utilizes motivational interviewing and our inpatient tobacco cessation program utilizes the transtheoretical model. Counselors use a patient’s staging to inform their next step in intervention and how they follow up.

Leadership training courses focus around specific organizational development strategies. These include aligning organizational values to the company culture, where the company culture is our philosophy of well-being with eight dimensions of well-being. Workshops are

also designed around the human experience in that participants are highly encouraged to share their stories, successes and failures. Many of these principles are also used across strategy, programming, and communications. MHealthy has worked with many faculty across the university to develop various models and principles to guide our work.

Individual Level Efforts

Broadly, the areas of health behaviors that are addressed through our programs are listed in the chart below.

Program Name	Details	Population: Faculty (F) Staff (S) Patients (P) Community (C) Retirees (R) Students (Stu) Spouses/Other Qualified Adults (S/OQA)	Dimension of Well-Being
Physical activity programs	Free and low-cost in-person and virtual exercise and relaxation classes (including accessible options). During the pandemic, over 300 virtual classes were offered. Several on-campus building fitness centers, a fully managed fitness center on the medical campus. U-M offers additional indoor and outdoor fitness facilities. Time to Move encourages employees to incorporate movement throughout their day with reminders to move every hour, including web communications and calendar reminders. Active U and Active U Autumn are physical activity challenges that engage individuals and groups to track their physical activity with over 10,000 participants each year.	F, S, P, C, R, Stu, S/OQA	Physical
Tobacco Consultation Service	Certified Tobacco Treatment Specialists provide group and 1:1 quit tobacco care. Population-level programming for tobacco in programs such as the Great American Smokeout.	F, S, P, C, R, S/OQAs	Physical
Alcohol Management Program	Take a harm reduction vs abstinence-based approach to helping individuals reduce their alcohol use. Population-level programming through email programs and web information.	F, S, P, C, R, S/OQAs	Physical, Social
Nourish Your	Highlight and reinforce intuitive eating principles,	F,S	Physical,

Whole Self and other nutrition resources	offered in a 1:1 coaching format in a 12-week program currently via Zoom, telephone and email. Offer WW™, food labelling at point-of-sale locations, cooking classes, chef demonstrations, farmers markets, food sharing cupboards and Cooking Matters (cooking course focused on low cost recipes, to specific departments).		Social
Mental and emotional well-being	In-person/virtual counseling sessions, support groups, crisis support services (supporting grief and trauma), group interventions, emergency hardship fund support, peer support networks, educational presentations, and a workplace mental health working group. Address policy and culture issues surrounding mental and emotional health.	F, S	Mental/ Emotional, Social
Occupational Health Services	Services such as new employee health screenings, workplace injury evaluation and treatment, physical therapy, body substance reports, fitness for duty, vaccinations, respiratory fit testing, medical surveillance, Covid-19 testing/vaccination. Individuals under a doctor's care for discomfort or a disability affecting work have access to ergonomic consultations. New back pain triage program addresses acute back pain with promising results.	F, S	Physical
Online programs	Through coordination with an online vendor, offer an annual HRA, periodic biometric screenings, personal health reports with action plan, optional health coaching and online programs.	F, S	Physical, Mental/ Emotional, Social, Financial
Financial well-being	Resource Coach program described in the innovation section, low interest rate loan and budget counselling offered in conjunction with a local credit union, web resources on financial well-being, university also offers generous salary match through 403b.	F, S	Financial, Physical, Social, Mental/ Emotional, Environmental
Environmental health partnerships	Partner with Planet Blue and the Office of Campus Sustainability to assist, support and promote efforts to educate in environmental health topics.	F, S	Environmental
Spiritual health partnerships	Partner with HR and Mental/Emotional Health to support spiritual needs including reflection spaces and respecting religious observances.	F, S, P	Spiritual

Additional topic area programs	Health risk and employee interest data to explore/implement resources for emerging topics such as sleep programs, caregiving resources, loneliness/connection and social isolation, oral care and arts collaborations.	F, S	Physical, Social, Financial, Intellectual, Mental/ Emotional
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Intrinsic and Extrinsic Motivation

MHealthy addresses intrinsic motivation through its individual, interpersonal and organizational approaches, including:

- Our current vendor for online programming includes a virtual “why” wall for participants to indicate their reasons for why taking actions toward their health and well-being is important.
- Since 1996, Active U, an online physical activity tracker, includes a team component where employees can contribute to a group tracking goal.
- General communications campaigns address intrinsic motivation, including topics such as “What’s Your Why.”
- A mental and emotional health campaign called “Be Kind, Be Well” had a primary focus of belonging to a group and “being in this together.”

MHealthy also includes various forms of extrinsic motivation, including incenting specific activities with cash in the paycheck, as well as small, effective incentives like t-shirts, gift cards, lunch bags, scarfs, baseball hats and stress kits for completion of activities.

Skill Building

Our Wellness and Risk Reduction Programs mentioned in the above table address skill building in the following ways:

- The Alcohol Management Program helps employees build skills to reduce or eliminate alcohol use(ex. recipes for non-alcoholic drinks and options for Zoom parties with friends that don’t focus on alcohol).
- Tobacco Consultation Services and Nourish program professional counselors work individually with clients to strategize behavior change.
- The Active U physical activity program offers weekly tips and tricks for building a fitness routine.
- The Resource Coach works individually with employees to find resources and also build skills around financial well-being.
- Vendors for online programs offer a variety of modules for skill and habit building in a wide variety of topics such as sleep, nutrition, physical activity, back pain, stress management, financial well-being, and social well-being.

Organizational Structure

In 2009, U-M services from across the university were brought together under an integrated

organizational umbrella called “MHealthy”, which reports to the Associate Vice President for Human Resources. MHealthy represents dedicated staff members as well as partners we work with across campus.

Our work is integrated into many presidential initiatives and university-wide committees and initiatives. We support the presidential initiatives of poverty solutions, environment and sustainability initiatives, faculty public engagement and the arts initiative. As displayed earlier, the university has a unified model of well-being that was developed in partnership with our student wellness colleagues, our chief health officer and the president of the university. An MHealthy Advisory Committee also acts to advise on future programming and is made up of faculty and staff members representatives from a broad group of units.

The university continues to examine how policies and procedures can support the health and well-being of faculty and staff. Michigan Medicine has a specific remote work policy and with the shift in pandemic work, all schools, colleges and units are developing their own remote work policies. A university wide committee is currently working on a variety of policy recommendations that support faculty and staff, including access to mental and emotional health services, creating a culture that prioritizes time in the work day to promote self-care, training for supervisors to support a multi-modal workforce, and new, innovative additions to the benefits package.

MHealthy partners with units around the university, including the Poverty Solutions Center, Food Services, Food Insecurity Working Group, Schools of Social Work and Public Health, and MDining to integrate programs addressing social determinants of health for our faculty and staff. The university has policies surrounding smoke and tobacco free environments, nutrition guidelines, parental leave and services for transgender, non-binary and gender nonconforming patients. We also support our Occupational Health Services team, who staff an onsite medical clinic offering services noted in the above table. Our mental and emotional health services have two onsite counseling centers for free counselling for faculty and staff. We are also currently proposing two onsite employee resource centers with staff trained in social work or other disciplines to assist with financial and other resources to address social determinants of health. Additional efforts in this area are described in the Innovation section.

Sections III, IV and VI. Evaluation Methodology, Results and Tables

A. Participation

Table 3: Participation Cascade

2016	2017	2018	2019
Eligible Population = 43,707	Eligible Population = 44,225	Eligible Population = 46,008	Eligible Population = 48,273
Participation in the HQ = 20,243 (46%)	Participation in the HQ = 642* *HQ was not incentivized or used as a gateway for the Rewards Program this year.	Participation in the HQ = 19,478 (42%)	Participation in the HQ = 19,433 (40%)
Number of Wellness Champions = 550 Number of Wellness Champions Who Participated in at Least One Champion Retreat = 353	Number of Wellness Champions = 658 Number of Wellness Champions Who Participated in at Least One Champion Retreat = 313	Number of Wellness Champions = 691 Number of Wellness Champions Who Participated in at Least One Champion Retreat = 354	Number of Wellness Champions = 788 Number of Wellness Champions Who Participated in at Least One Champion Retreat = 376
2016 - 2019 Cohort of HQ Participants = 7,634 (17%)			
Participation in programs = 16,029 (37%)	Participation in programs = 11,177 (25%)	Participation in programs = 18,465 (40%)	Participation in programs = *15,207 (32%) *Biometric screening year
2016 - 2019 Cohort Program Participants = 4,107 (9%)			

Results: Table 3, the participation cascade table, displays the details regarding participation in MHealthy. In general, the eligible population ranges from 43,707 in 2016 to 48,273 in 2019, with small increases annually. The number of participants completing the HQ remains relatively steady across the years, excluding 2017 where the HQ was not incentivized or used as a gateway to incentivized activities. HQ completion was 20,243; 642; 19,478 and 19,433 from 2016-2019 respectively. 7,634 employees completed the HQ all three years (2017 was excluded due to the HQ not being incentivized). Many employees also participated in programs. In 2016, 16,029 employees participated in at least one program. In 2017, there were significantly more employees participating in programs compared to those who took the HQ (n=11,177). 18,465 employees participated in programs in 2018. 2019 was a biometric screening year. Participants received an incentive for completing the HQ and participating in the biometric screening. Still, the vast majority of employees who participated in the HQ also participated in programs (n=15,207). 4,107 employees participated in programs all four years (2017 included).

In 2016, benefits-eligible faculty and staff and their enrolled spouses and other qualified adults (SOQAs) were eligible to take the HQ and participate in a subset of programs.

However, they were not eligible for the main incentive (MHealthy Rewards). In 2017-2019, SOQAs were not eligible for our HQ and online programs, however, were still eligible for additional programs such as Active U, Tobacco Consultation Services and WW™.

B. Health Outcomes

- **Health Risks: Comparing 2009 and 2019 Health Risks**

Methodology: Health Risks

Outcome: The outcomes assessed are self-reported health risks (i.e. obesity, tobacco, alcohol, nutrition, back pain, physical inactivity, depression and stress).

Evaluation Design: The structure of the evaluation consisted of the analysis of pre-post measures of HQ participants. For these analyses, risks were assessed annually in 2009 and 2019. All risks are self-reported, excluding obesity, which in 2019 was measured when participants took the 2019 biometric screening. 2009, 2012, 2014 and 2019 were biometric screening years.

Population and Sample: The target population consisted of employees who participated in the 2009 and 2019 HQ with complete data on the variable of interest. The sample sizes ranged from 5,215-5,399 depending on the variable of interest.

Tools Used to Collect Data: Health risks were collected annually and based on a wellness vendor's HQ. All data were merged, de-identified and stored via our data warehouse vendor. In the data warehouse, the 5 most recent rolling years of data are available to analyze. MHealthy staff archived HQ data back to 2009 so these data were available to analyze outside of the most recent rolling 5 years stored in the data warehouse.

Statistical Analyses: The statistical package used for these analyses was SAS (Release 9.4). McNemar's tests were used to identify statistically significant bivariate associations between the 2009 and 2019 health risks. Statistical significance was defined as: * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 4 Outcomes: Health Risks

Health Questionnaire 2009 and 2019 Changes in Health Risks

Risk	Total N	2009 At Risk % (n)	2019 At Risk % (n)	Percentage Point Increase / Decrease	†Statistical Significance
Low Back Pain	5,282	46.9% (2,476)	34.4% (1,819)	-12.5%	***
Nutrition	5,324	54.9% (2,921)	44.6% (2,375)	-10.3%	***
Depression	5,215	30.0% (1,565)	24.4% (1,270)	-5.6%	***
Anxiety	5,381	65.3% (3,511)	59.7% (3,210)	-5.6%	***
Physical Inactivity	5,399	48.1% (2,598)	42.5% (2,296)	-5.6%	***
Tobacco	5,397	7.5% (404)	3.2% (174)	-4.3%	***
Alcohol	5,342	5.8% (312)	3.7% (196)	-2.1%	***
Obesity (BMI ≥ 30)	5,399	27.3% (1,476)	34.3% (1,851)	+7.0%	***

†Statistical Significance = *p<.05; **p<.01; ***p<.001

Results: Health Risks

Table 4 shows the McNemar's results between each of the 2009 and 2019 self-reported health risk areas measured from the annual HQ. Please note that the HQ questions used to create the definitions of risk did change from 2009 to 2019 for nutrition and back pain. As a result, it is likely that some of the decrease is associated with the change in questions that assess those two constructs. Table 4 is based on a cohort of HQ participants in 2009 and 2019. Results show that there were statistically significant percent decreases between 2009 and 2019 in seven of the eight health risks. Obesity shows a statistically significant increase. Research suggests that BMI increases with age up to post-retirement ages, then plateaus or decreases. Given this, and since these analyses do not control for age, this increase in risk for obesity is not surprising.

C. Organizational Outcomes

Methodology: Medical and RX Costs, Illness Related Absenteeism and Turnover for Participant and Non-participant Analyses

Outcomes: The outcomes assessed in tables 5-6 are medical and pharmaceutical claims costs (combined) and illness related absenteeism.

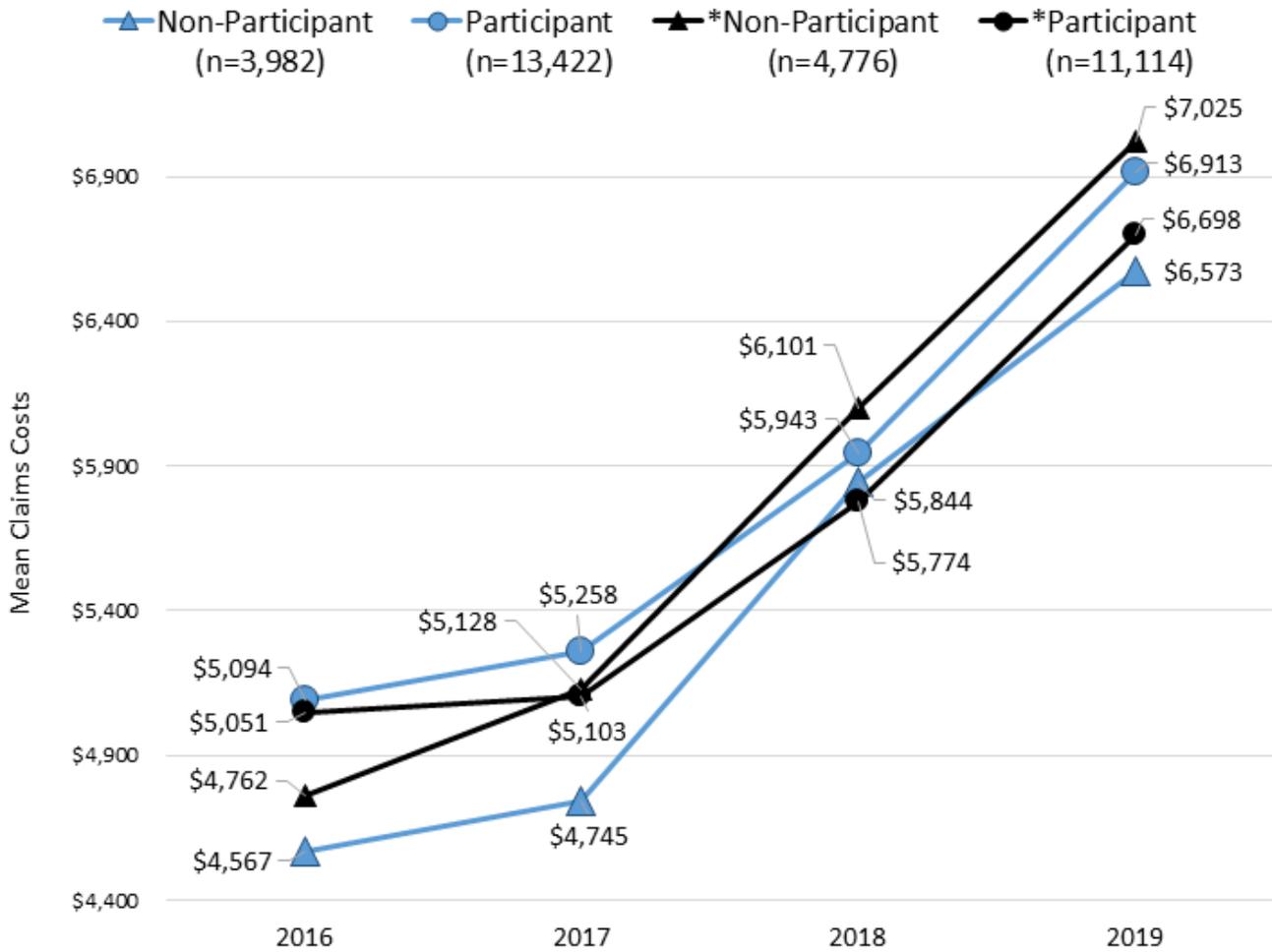
Evaluation Design: The structure of the evaluation consisted of a time-series design with a comparison group. For these analyses, four calendar years of data were used: 2016 – 2019.

Population and Sample: The target population consisted of employees who were active, full-time, non-pregnant and between ages 18 and 64 years. Employees in the sample were also continuously enrolled for 180 days or more and any gaps in enrollment could not exceed 40 days (per year). For Medical and RX costs, the analysis sample consisted of a cohort of participants (participating 3 of 4 years, n=13,422; participating all 4 years, n=11,114) and non-participants (participating 3 of 4 years, n=3,982; participating all 4 years, n=4,776). For illness related absenteeism, the analysis sample consisted of a cohort of participants (participating 3 of 4 years, n=13,420; participating all 4 years, n=11,110) and non-participants (participating 3 of 4 years, n=3,966; participating all 4 years, n=4,737).

Tools Used to Collect Data: 2016 demographic variables (gender, race/ethnicity, age, and wage) were collected via administrative records. Program participation data were collected and then transferred to IBM. In order for employees to be classified as participants, they had to participate in the HQ or an MHealthy program for at least 3 out of the 4 years. Results for participants who participated in the HQ or an MHealthy program all 4 years are also included in the tables. 2016 employee relative risk score and 2016-2019 medical and pharmaceutical claims costs were derived from health insurance claims information. Illness related absenteeism data were derived from time-keeping records then transferred to IBM Watson Health. All data were merged, de-identified and stored via our data warehouse vendor. In the data warehouse, the 5 most recent rolling years of data are available to analyze.

Statistical Analyses: The statistical package used for these analyses was SAS (Release 9.4). In order to control for differences in various factors that may contribute to differences in these various outcomes, propensity score matching was conducted. Due to a greater number of participants than non-participants, a weighted matching process was performed. Analyzing the variance ratios between the region and matched observations shows that the post-matched data are reasonably well balanced. The structure of the evaluation consisted of propensity score matching that was based on 2016 sociodemographic characteristics and relative risk score for both outcomes of interest and the 2016 outcome of interest for the specific outcome of interest (e.g., for the illness related absenteeism trend outcome, 2016 illness related absenteeism was included in the match). Outliers in claims costs were capped at \$100,000. Linear mixed-effects regression modeling (Proc mixed in SAS) was conducted and the difference in difference between 2016 and 2019 participant outcomes and 2016 and 2019 non-participant outcomes were assessed.

Table 5 Outcomes: Medical and Pharmaceutical Costs



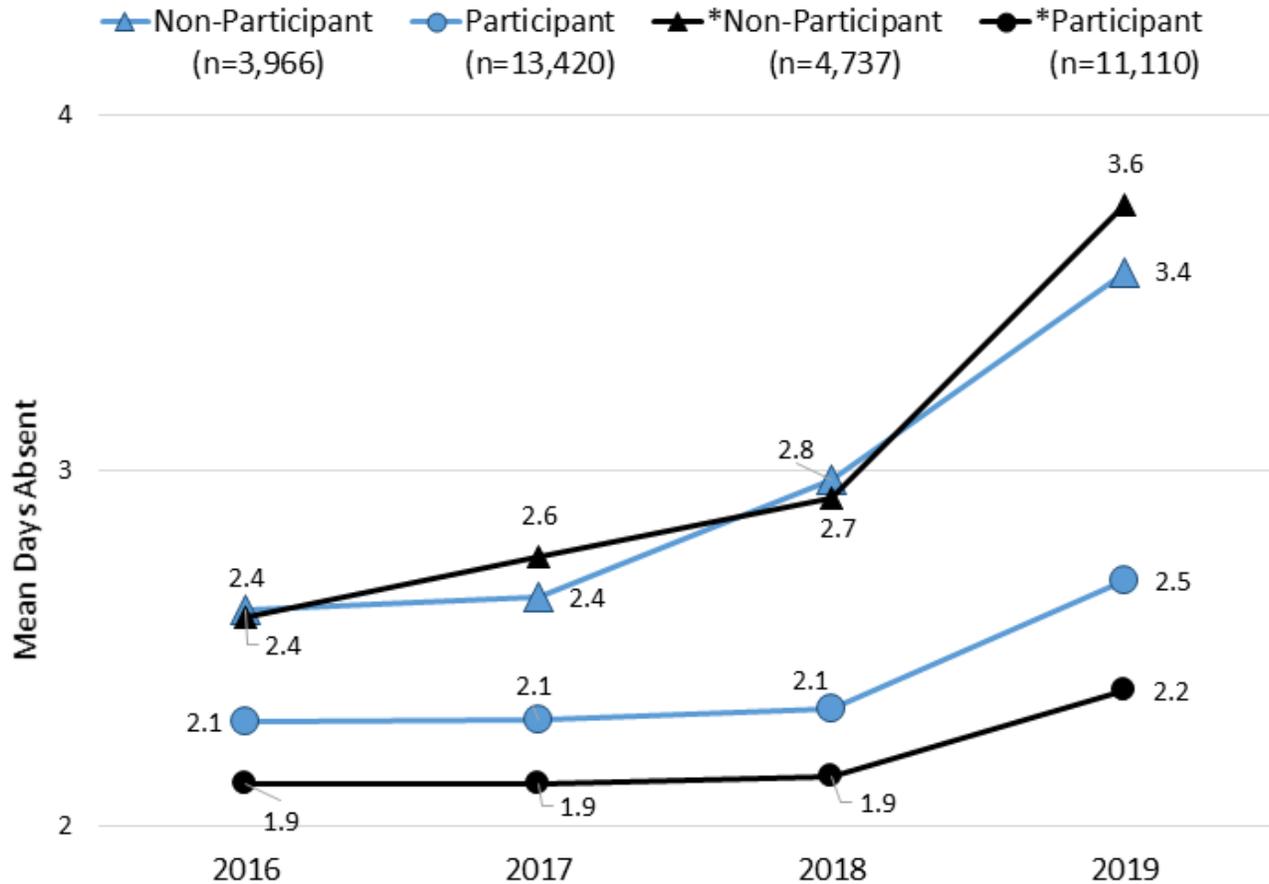
	Non-Participants	Participants	*Non-Participants	*Participants
2016	\$4,567	\$5,094	\$4,762	\$5,051
2019	\$6,573	\$6,913	\$7,025	\$6,698
2016 and 2019 Adjusted Rate of Change	+43.9%	+35.7%	+47.5%	+32.6%

*Uses a conservative definition of participation where participating equals all 4 years rather than 3 of the 4 years.

Results: Table 5 shows the results for medical and pharmaceutical claims costs (combined) for 2016- 2019. These results show that when using the definition of participating 3 of the 4 years, that the percent increase when comparing 2016 and 2019 medical and pharmaceutical claims costs is lower for participants (35.7%) than non-participants (43.9%). This difference in medical and RX costs between 2016 and 2019 for both participants and non-participants is not statistically significant. Interestingly, when using the definition of participating all four years rather than 3 of the 4 years, the percent increase when comparing 2016 and 2019 medical and pharmaceutical claims costs is still lower for participants (32.6%)

than non-participants (47.5%). However, this difference in medical and RX costs between 2016 and 2019 for both participants and non-participants is statistically significant ($p > .001$). This is after controlling for 2016 socioeconomic factors, relative risk score and medical and RX costs.

Table 6 Outcomes: Illness Related Absenteeism



	Non-Participants	Participants	*Non-Participants	*Participants
2016	2.4	2.1	2.4	1.9
2019	3.4	2.5	3.6	2.2
2016 and 2019 Adjusted Rate of Change	+41.7%	+19.0%	+50.0%	+15.8%

*Uses a conservative definition of participation where participating equals all 4 years rather than 3 of the 4 years.

Results: Reviewing Table 6, it shows that the percent increase when comparing 2016 and 2019 illness related absenteeism is lower for participants (19.0%) than non-participants (41.7%). This difference in illness related absenteeism between 2016 and 2019 for both

participants and non-participants is statistically significant ($p > .001$). Participating 4 of 4 years shows a similar pattern as 3 of 4 years, but the percent increase is even more pronounced (non-participants =50.0% and participants =15.8%). This difference in illness related absenteeism between 2016 and 2019 for both 4 of 4 year participants and non-participants is also statistically significant ($p > .001$).

Methodology: Turnover, Participant and Non-participant Analyses

Outcome: The outcome assessed is turnover from the university.

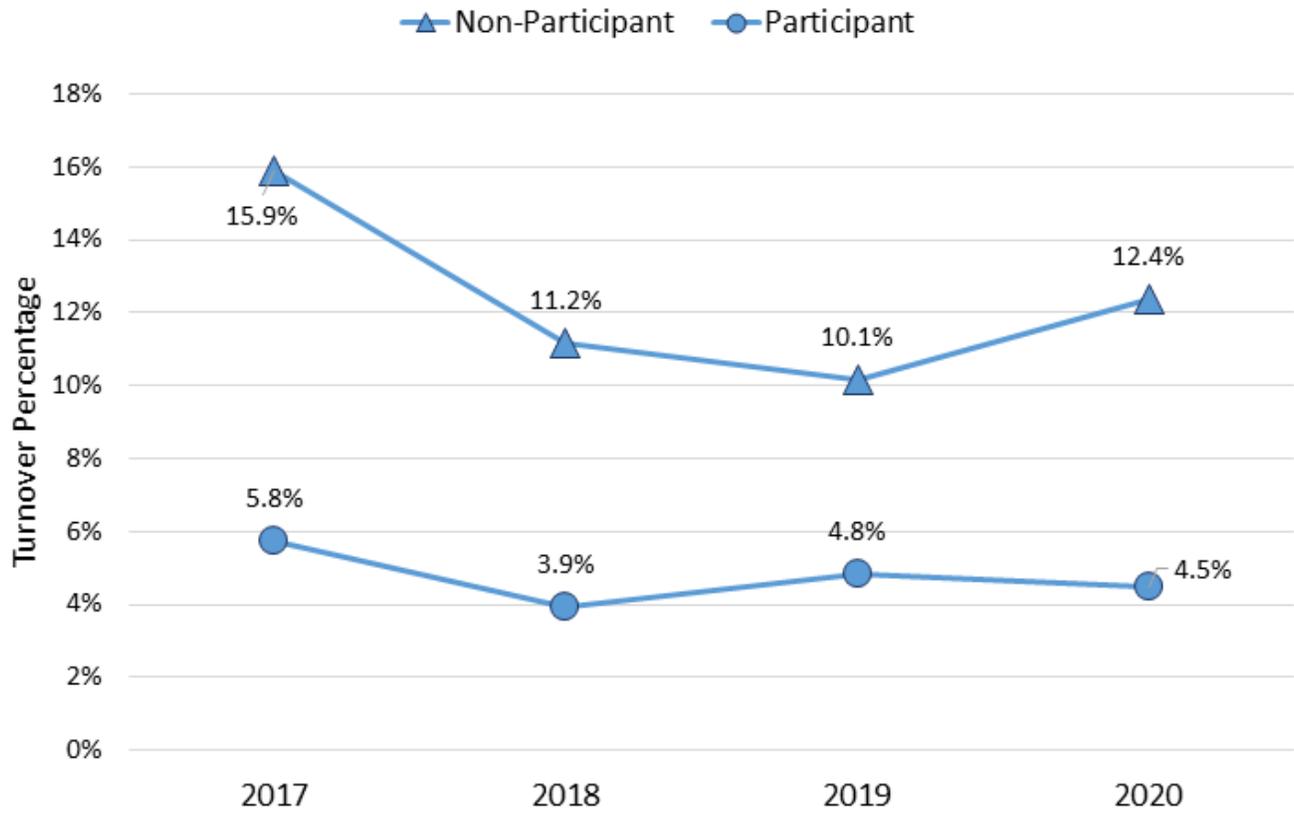
Evaluation Design: The structure of the evaluation consisted of a time-series design with a comparison group. For these analyses, five calendar years of data were used: 2016 (baseline) – 2020.

Population and Sample: The target population for U-M consisted of employees who were active, full-time, non-pregnant and between ages 18 and 64 years. Employees in the sample were also continuously enrolled for 180 days or more and any gaps in enrollment could not exceed 40 days (per year). The analysis sample consisted of participants and non-participants who met the sample selection criteria each year prior to the turnover outcome (e.g. employees who met the sample selection criteria in 2016 and participation status in 2016 with turnover assessed in 2017).

Tools Used to Collect Data: 2016 demographic variables (gender, race/ethnicity, age, and wage) and 2016-2020 turnover were collected via administrative records. Program participation data was collected at MHealthy and then transferred to IBM Watson Health. In order for an employee to be classified as a participant, they had to have taken the HQ or participated in a program each previous year turnover was assessed (e.g. participation status in 2016 and turnover status in 2017). 2016 employee relative risk score was derived from health insurance claims information. All data were merged, de-identified and stored via our data warehouse vendor. In the data warehouse, the 5 most recent rolling years of data are available to analyze.

Statistical Analyses: The statistical package used for these analyses was SAS (Release 9.4). In order to control for differences in various factors that may contribute to differences in turnover, propensity score matching was conducted. Due to a greater number of participants than non participants, a weighted matching process was performed. The structure of the evaluation consisted of propensity score matching that was based on 2016 sociodemographic characteristics and relative risk score. Due to the non-normal assumption regarding the turnover data, a different statistical procedure from the medical and RX costs and absenteeism was conducted. Proc Glimmix in SAS was used to account for the non-normal distribution. The difference in difference between 2017 and 2020 participant turnover and 2017 and 2020 non-participant turnover were also assessed.

Table 7 Outcomes: Turnover



	Non-Participants		Participants	
	n	Turnover %	n	Turnover %
2017	2,755	15.9%	17,451	5.8%
2018	4,131	11.2%	14,064	3.9%
2019	3,058	10.1%	13,920	4.8%
2020	2,236	12.4%	12,875	4.5%
2017 and 2020 Adjusted Rate of Change		-22.0%		-22.4%

Results: Table 7 shows the turnover percentages for years 2017-2020 between participants and non-participants. When comparing the percent decrease in 2017 and 2020 turnover percentages, participants and non-participants are about the same. The difference in turnover between 2017 and 2020 for both participants and non-participants is statistically significant ($p > .001$).

Methodology: Turnover, Logistic Regression Analysis Controlling for Confounders

Outcome: The outcome assessed is turnover from the university.

Evaluation Design: The structure of the evaluation consisted of a time-series design. For these analyses, five calendar years of data were used: 2016 – 2020.

Population and Sample: The target population for U-M consisted of employees who were active, full-time, non-pregnant and between ages 18 and 64 years. Employees in the sample were also continuously enrolled for 180 days or more and any gaps in enrollment could not exceed 40 days (per year). The analysis sample consisted of 24,058 participants who met the sample selection criteria and had complete data on turnover.

Tools Used to Collect Data: 2016 demographic variables (gender, race/ethnicity, age, and wage) and 2017-2020 turnover were collected via administrative records. Program participation data was collected at MHealthy and then transferred to IBM Watson Health. In order for an employee to be classified as a participant for this logistic regression analysis, they had to participate in the HQ or an MHealthy program in 2016. 2016 employee relative risk score was derived from health insurance claims information. All data were merged, de-identified and stored via our data warehouse vendor. In the data warehouse, the 5 most recent rolling years of data are available to analyze.

Statistical Analyses: The statistical package used for these analyses was SAS (Release 9.4). For the multivariable analyses, logistic regression was used to measure the relationship between 2016 participation in MHealthy on 2017-2020 turnover (experiencing turnover anytime between 2017 and 2020 versus not experiencing turnover anytime between 2017 and 2020) while controlling for 2016 gender, age, race/ethnicity, annualized wage and relative risk score. The natural log of wage and relative risk score was used to linearize the effect of the skewed distribution. Propensity score matching was not used prior to running the logistic regression model as confounders were controlled (added to the model) in these analyses.

Table 8 Outcomes: Turnover

Logistic Regression Results (Odds Ratios and 95% Confidence Intervals) of 2016 Participation on 2017-2019 Turnover

Female	0.74 (0.68-0.80)
Average Age (in years)	0.93 (0.93-0.93)
Race/Ethnicity	
White	Ref.
Asian	2.02 (1.81-2.26)
Black	1.24 (1.09-1.42)
Hispanic	1.39 (1.14-1.69)
Two or more	1.44 (1.11-1.88)
Not included	1.18 (0.91-1.52)
Logged Annualized Wage (in US dollars)	0.82 (0.76-0.89)

Non-participant	0.90 (0.81-0.99)
Logged Relative Risk Score	0.98 (0.96-1.01)

Results: Table 8 shows the results of the relationship between 2016 participation on 2017-2020 turnover. The results show that participating in MHealthy in 2016 is related to lower odds of subsequent turnover (OR=0.90). In addition, all other racial and ethnic groups of employees (excluding the category where the race/ethnicity of employees was not included) have higher odds of experiencing subsequent turnover compared to white employees. Women have lower odds (OR=0.74) of experiencing turnover compared to men. Younger and lower wage earning employees also have higher odds of experiencing turnover.

D. Comparative Health and Organization Outcomes

Methodology: Medical and RX Costs, Illness Related Absenteeism and Turnover

Outcome: The outcomes assessed are medical and pharmaceutical claims costs (combined), illness related absenteeism and turnover.

Evaluation Design: The structure of the evaluation for these analyses (Tables 9-11) consisted of a time-series design with a comparison group. Four calendar years of data were used for medical and pharmaceutical claims costs (2016-2019) and illness related absenteeism (2016-2019). Five calendar years of data were used for turnover (2016 – 2020).

Population and Sample: The target population for U-M consisted of employees who were active, full-time, non-pregnant and between ages 18 and 64 years. Employees in the sample were also continuously enrolled for 180 days or more and any gaps in enrollment could not exceed 40 days (per year). The analysis sample for medical and pharmaceutical claims cost for U-M consisted of a 2016-2019 cohort of U-M employees who met the sample selection criteria, with outliers in claims costs capped at \$100,000 (n=17,404). The analysis sample for illness related absenteeism for the U-M consisted of a 2016-2019 cohort of U-M employees who met the sample selection criteria (n=17,386). The analysis sample for turnover consisted of U-M employees who met the sample selection and propensity score matching (mentioned in the turnover participant/non-participant analyses described above) criteria (n=20,965).

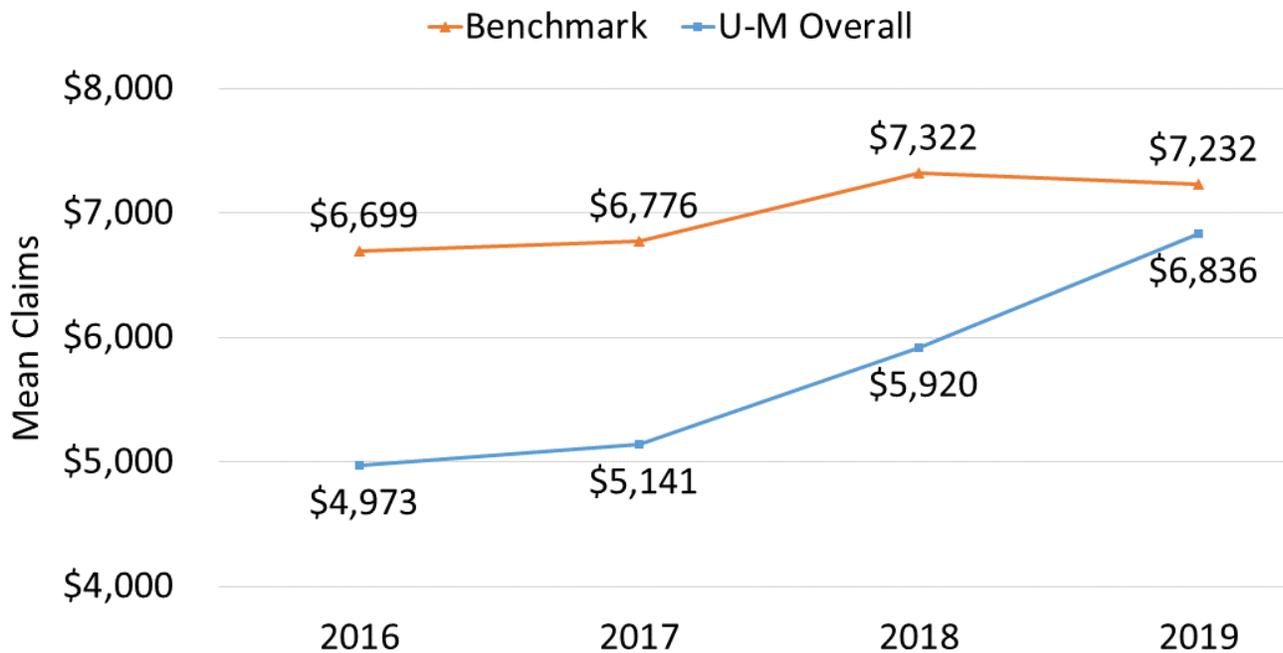
The IBM Watson Health University benchmark for the claims analysis consisted of 14, 21, 19 and 22 universities in 2016-2019 respectively and was age and gender adjusted but did not have any sample constraints or outlier capping. Only 2 years of the IBM benchmark are available in the U-M database. The additional two years reported were taken from a standard report accessed by the IBM team. The illness related absenteeism benchmark was The Bureau of Labor Statistics (BLS) benchmark and is specifically the BLS Education and Health Services sector. The education sector includes all levels of education (not just higher education). A similar sample selection criteria was not available for the BLS benchmark. In the BLS benchmark, absences are defined as instances when persons who usually work 35 or more hours per week (full time) worked less than 35 hours during the reference week for one of the following reasons: own illness, injury, or medical problems; child care problems;

other family or personal obligations; civic or military duty; and maternity or paternity leave. Excluded are situations in which work was missed due to vacation or personal days, holiday, labor dispute, and other reasons. For multiple jobholders, absence data refer only to work missed at their main jobs. The College and University Professional Association (CUPA-HR) data were used as the turnover benchmark. A similar sample selection criterion was not available for the CUPA-HR benchmark.

Tools Used to Collect Data: For the U-M sample, 2016 demographic variables (gender, race/ethnicity, age, and wage) were collected via administrative records. 2016 employee relative risk score and 2016-2019 medical and pharmaceutical claims costs were derived from health insurance claims information. All data were merged, de-identified and stored via our data warehouse vendor. In the data warehouse, the 5 most recent rolling years of U-M data are available to analyze.

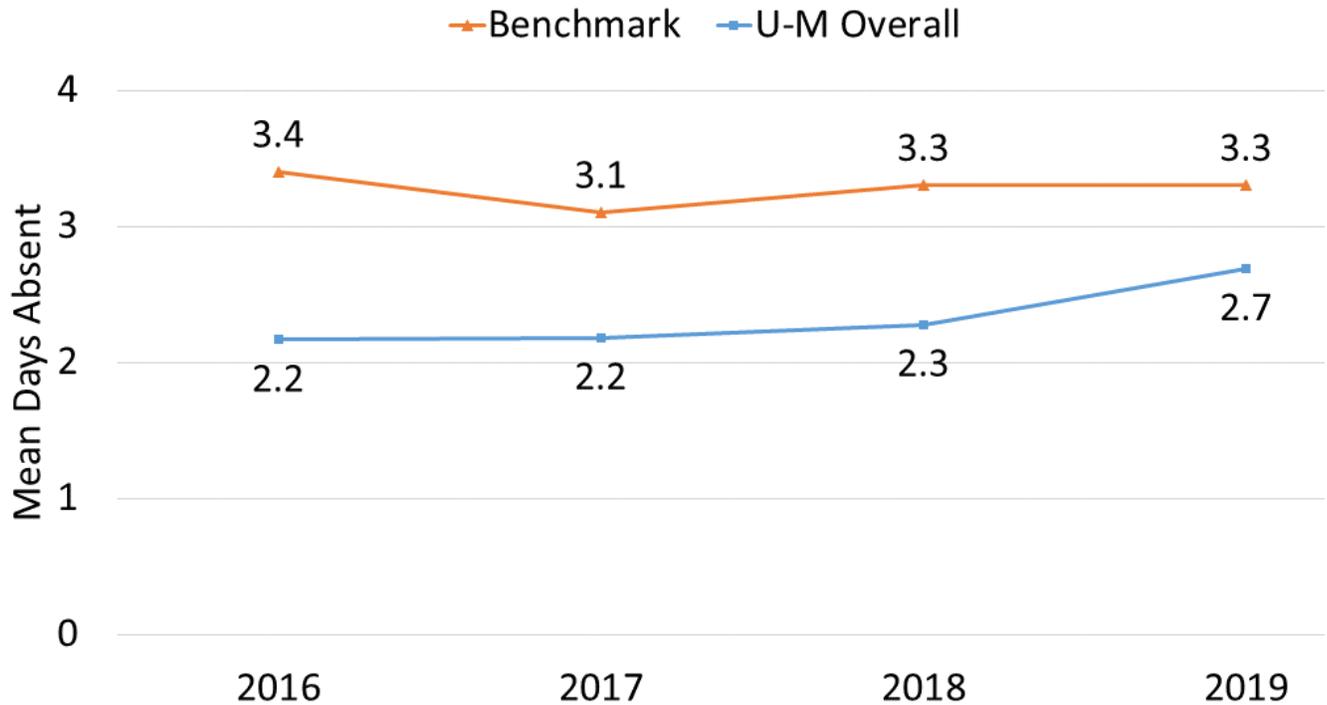
Statistical Analyses: Descriptive statistics were used here. Averages in medical and pharmaceutical claims, illness related absenteeism and turnover over the 4 or 5 time points were used for these analyses.

Table 9 Outcomes: Medical and Pharmaceutical Claims with Benchmarks



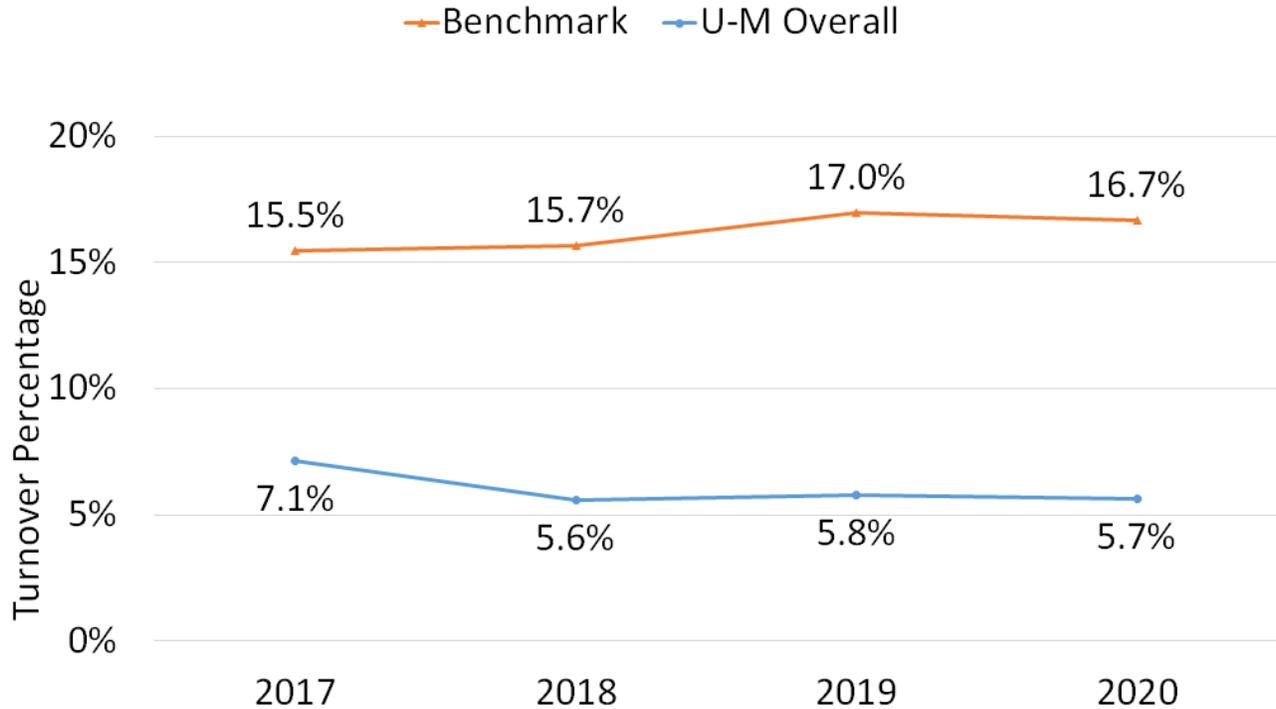
Results: Comparing U-M 2016-2019 medical and pharmaceutical claims cost trend to the IBM Watson Health university benchmark in Table 9, data shows that U-M has lower per capita claims costs for each year reported. However, the trend for U-M is higher than for benchmark universities.

Table 10 Outcomes: Absenteeism with Benchmark



Results: Table 10 shows the absenteeism results for 2016-2019 for U-M compared to the Bureau of Labor Statistics benchmark. These results show that absenteeism is lower for the U-M compared to the benchmark. Here too, the benchmark is holding steady but the U-M trend is increasing.

Table 11 Outcomes: Turnover with Benchmark



Results: Table 11 shows the results for U-M 2017-2020 turnover percentages compared to the CUPA-HR benchmark. These results show that turnover is lower for U-M compared to the benchmark. Here, the trend for U-M is decreasing vs. the benchmark which is increasing.

Table 12 Outcomes: Health Enhancement Research Organization Scorecard 2016 and 2019 Results compared to the HERO National Scorecard Averages

HERO Scorecard Results: 2016 and 2019

	2016	2019	2019 National Average
Section 1: Strategic Planning	19	18	10
Section 2: Organizational & Cultural Support	46	40	23
Section 3: Programs	36	37	21
Section 4: Program Integration	12	9	5
Section 5: Participation Strategies	41	42	22
Section 6: Measurement & Evaluation	21	21	9
Total Score	175	167	90

Note: The HERO Scorecard not administered in 2017 and 2018.

The HERO Scorecard is completed most years, by an MHealthy leadership team. Between 2016 and 2019, the leadership team completing the scorecard changed, with the retirement of our director. This change likely impacted the scoring of specific scorecard questions. As seen in the comparison to the national average, however, U-M consistently rates much higher than the national average, approximately double the benchmark score in many categories.

Section V. Innovation and other important factors

Innovation: Addressing Basic Needs, Social Determinants of Health and Disparities

We effectively partner with multiple internal units to engage employees, support their basic needs and address social determinants of health. This work goes beyond simply offering programs that are inclusive, but aims to create a true sense of belonging among our faculty and staff.

While many health and well-being programs touch on financial well-being, our Resource Coach program is an innovative program that is not found at most organizations. Employees who are having difficulty financially or with accessing services can work 1:1 with a case manager who triages them to appropriate services. This Resource Coach, trained as a social worker with a background in social services, also has access to mini-grant funds to assist with emergent needs and can assist employees in applying for funds from our Emergency Hardship Fund or assistance with a local credit union. Innovative food security efforts, including stocking food sharing cupboards in many units, cooking classes geared towards resource-limited individuals and plans to offer 1:1 meal planning/food budgeting assistance continue to address the health related social needs of our faculty and staff. We are also currently exploring employee resource centers as an option to centralize assistance, offering organizational pipeline workforce development (peer coaches, engagement with new hires, and additional supervisor training) and additional support for our lower-wage workers. We are also partnering with our benefits office to examine specific issues of healthcare access and utilization. The benefits office also has made continuous improvements in coverage for various individuals, including a significant expansion of trans-inclusive care.

U-M has a special interest in addressing diversity, equity and inclusion, as well as working to prevent and alleviate poverty as part of its Presidential Initiatives. Many of our wellness and risk reduction programs work to address health disparities, including racial disparities related to tobacco and financial well-being. For example, we are committed to raising awareness of the racial wealth gap as a health equity issue and provide information and resources on this topic on our website. In the future, we will maintain a sense of humble curiosity and eagerness to identify possible avenues for an employer to impact social needs such as housing instability and energy insecurity through well-being programs.

We are continually striving to make our programs accessible. In addition to providing programs to individuals on various work shifts, we have targeted programming and options for employees who have limited access to computers or have shift work that makes attending programming less convenient. In addition, we strive to make programming accessible in every way, using university resources and expertise in making websites and employee portals accessible, with each being reviewed by the university's Digital Information Accessibility Coordinator from the Office for Institutional Equity. We also hire individuals to provide real-time captioning for virtual and in-person events, and/or utilize sign language interpreters. Our Active U program is working in partnership with our adaptive and inclusive sports department. We partner with vendors to ensure there is diverse representation in imaging and content.

Innovation: Support and Shifting of Services During Covid

With the onset of Covid-19, MHealthy shifted many services to continue to support the health and well-being needs of employees and the community during a time when they needed it most.

- At the beginning of the pandemic, we compiled and shared resources available through the university and locally to support health and well-being through the crisis.
- We were uniquely positioned through our Resource Coach program to address the financial challenges of our employees and help them meet basic needs.
- Our Mental and Emotional Health team responded to the crisis by mobilizing a trauma-informed approach in collaboration with wellness partners and academic departments. A Stress Response Team was developed, Resilience Rounds and support groups were developed and video, telephonic and in-person counseling sessions were available.
- We also shifted most of our programming to a virtual format.
- We streamlined communications to focus on delivering the most critical information to faculty and staff, including program changes, mental and emotional health resources, and benefits and time-off updates.

Innovation: Serving a Distributed Workforce

MHealthy offers specific targeted, customized programming to support employees on various shifts and to create a culture of health in each work unit. We also serve various campuses and work locations. Areas at the university that are found to be exposed to additional harm (have high health risks) are also served through focused partnerships. Some examples of these focused partnerships include specific job families taking "mini-vacations" and addressing specific musculoskeletal needs through Core Conditioning Care and Neck and Upper Torso programs; job families on a variety of shifts receive services related to financial well-being and musculoskeletal needs; and specific programs to address departments with

employees in lower wage categories, including offering 1:1 budgeting assistance and partnerships on providing food cupboards.

Our unique triad relationship between an MHealthy Wellness Coordinator, a volunteer MHealthy Champion, and their supervisor creates a dynamic ability to impact and sustain positive cultures of health within individual, distributed work units. Wellness Coordinators are staff who work with in-unit volunteer Wellness Champions and unit supervisors to foster cultures of health within units and provide opportunities for employees to learn, engage and practice healthy behaviors. Wellness Coordinators participate in many unit weekly “Huddles” brown bag sessions, and onsite/virtual activities where they offer opportunities to move more, connect, or discuss specific health topics of interest to the unit. Champions are a network of over 500 volunteers who bring programs into their units, offering opportunities for employees to learn and engage in all dimensions of well-being while encouraging engagement in programs, organizing wellness activities and accessing wellness grants for their department. This unique relationship allows departments choice in the specific health and well-being programming their staff need and want to engage in within their units.

Serving our distributed workforce is also addressed by engaging with and supporting supervisors, an integral part of the triad model. We offer a unique training workshop, *Leaders Creating A Culture of Connection*, where leaders learn how to foster a culture of health and connection in their units and build skills, while also learning from and connecting with other leaders. We also create modules for a university-wide Foundations of Leadership program for new supervisors and managers. In addition, leadership shares messages on health and well-being and also participates on the MHealthy Advisory Committee. We can see the impact and value of this work to the university with the culture of health survey results found above.

Innovation: Planning, Implementation and Evaluation

Our unparalleled approach to consistent planning, implementation and macro and micro-level evaluation of our health and well-being efforts contribute to our positive impact on the lives of our faculty and staff. We consistently use data-informed strategic planning and evaluation for each of its individual programs and the overarching program in general. We have a dedicated research and evaluation manager and research support staff who continually evaluate program impact and assist staff in implementing research driven programs and services. Our research and evaluation manager is involved in all aspects of strategic planning. Each program is evaluated on micro-level metrics to assist in future program format and offerings. The overall impact of our programs and services are also evaluated regularly (macro evaluation). Finally, the partnerships with our evaluation team and faculty contribute to the overall literature in the field of health and well-being, with multiple yearly publications in peer reviewed journals. Please see section VII for a list of these publications. This work helps us determine the most impactful programs for its own faculty and staff but also

contributes to the knowledge in the field.

Innovation: Community Programming

MHealthy also engages in programs that assist the surrounding community. Some of our programs and services are available to community members as well (see Section II, Individual Level Efforts).

MHealthy offers a program called Project Healthy Schools (PHS). PHS is one of only a few school-based programs that have demonstrated significant and lasting improvements in health behavior and cardiovascular risk factors. Staff develop hands-on lessons and wellness activities, teaching students and staff in areas such as physical activity and nutrition with nearly 90,000 K-12 students benefiting from these lessons since its inception in 2004. The group created a website for families during the Covid-19 pandemic filled with resources on physical activity, screen time, nutrition, mindfulness and other family resources to help support families. The group also has shifted to include more social-emotional learning into their programming and is participating in a systematic review of all lessons and programming to ensure it is inclusive of all communities they serve.

Section VII. Supplemental Material

2016 and 2019 Culture of Health Survey Results, Percent that Agreed or Strongly Agreed

Category	Culture of Health Questions	2016 N=1,637 (16%)	2019 N=1,567 (16%)
Values, Policies and Practices	Overall, policies at U-M support a healthy workforce.	71%	72%
Values, Policies and Practices	Overall, U-M actively supports a work culture and environment that promotes the health and well-being of its faculty and staff.	67%	68% *80% (15,113)
Values, Policies and Practices	Faculty and staff health and well-being are important at U-M.	72%	70%
Values, Policies and Practices	Reasonable expectations regarding workload, breaks and time off work exist at U-M .	52%	52%
Values, Policies and Practices	U-M places a high priority on helping faculty and staff manage stress/burnout effectively.	35%	37%
Contributions to the University	U-M’s health and well-being initiatives contribute to U-M being a great place to work.	64%	67%

Contributions to the University	U-M's culture of health and well-being contributes to the overall quality of life for faculty and staff.	59%	62%
Contributions to the University	U-M provides health and well-being programs that address the unique needs and interests of its faculty and staff population.	58%	61%
Environmental Support	During the workday at U-M, there are opportunities to be physically active.	42%	43%
Environmental Support	U-M promotes healthy food choices at work.	47%	50%
Environmental Support	U-M's tobacco policies are well promoted.	53%	63%
Environmental Support	U-M regularly provides educational training and/or information for faculty and staff to perform their job safely (e.g., chemical safety, infection control, safe use of equipment, etc.)	63%	62%
Environmental Support	U-M's physical space allows adequate opportunities for faculty and staff to care for their health and well-being needs during the workday.	42%	43%
Co-Worker Support	The people I work with have a sense of community.	68%	64%
Co-Worker Support	The people I work with help to foster an atmosphere of trust.	62%	60%
Co-Worker Support	The people I work with are supportive of my health and well-being.	65%	61%
Leadership Support	University leaders communicate their support for employee health and well-being.	51%	52%
Leadership Support	The person I report to is supportive of workplace health and well-being activities.	65%	65% *78% (14,931)

*From the Health Questionnaire in 2019. These questions were not asked on the 2016 Health Questionnaire.

Publications that Utilize MHealthy Data Sources

- Jenkins, K.R., Stiehl, E.M., Sherman, B.W., Bales, S.L. *Supporting Employee Health at Work: How perceptions differ across wage category*. Am J Health Promot, 2021. In press.
- Jenkins, K.R., Sherman, B.W. *Wellness Program Nonparticipation and Its Association With Employee Turnover*. Am J Health Promot, 2020. **34**(5), p. 559–562.
- Jenkins, K.R. *Communicating a Wellness Program's Value: The Development of a Dashboard for a Large University With an Academic Medical Center*. Am J Health Promot, 2020. **34**(4), p. 451-455.
- Jenkins, K.R., Fakhoury, N., Richardson, C.R., Segar, M., Krupka, E., Kullgren, J. *Characterizing Employees' Preferences for Incentives for Healthy Behaviors: Examples to Improve Interest in Wellness Programs*. Health Promot Pract, 2020. **20**(6), p. 880–889.
- Beck, A.J., Hirth, R.A., Jenkins, K.R., Sleeman, K.K., Zhang, W. *Factors Associated With Participation in a University Worksite Wellness Program*. Am J Prev Med, 2016. **51**(1), p. e1–e11.
- Jenkins, K., Fakhoury, N., Marzec, M., Harlow-Rosentraub, K. *Perceptions of a Culture of Health: Implications for Communications and Programming*. Health Promot Pract, 2015. **16**(6), p. 796-804.
- Jenkins, K.R., Fakhoury, N., Matthias Gray, L., Herzog-Mourad, T., Williams, D., Winfield, R. *Lessons for Sustainability: Perceptions of a Smoke-Free Campus Initiative*. Health Behav Policy Rev, 2014. **1**(5), p. 420-431.
- Jenkins, K.R. *How Valid Are Self-Reports of Illness Related Absence: Evidence from a University Employee Health Management Program*. Popul Health Manag, 2014. **17**(4), p. 211-217.