

# Gauging Progress toward a Healthier IU: Focus on IU Southeast

A Comparison of the IU Workplace Health and Wellness Survey Results from 2013 and 2015

## 1 INTRODUCTION

---

In 2013, Indiana University implemented the first university-wide survey of employee health and wellness. In support of building a culture of health and wellness across all campus locations, the aims of the IU Workplace Health & Wellness Survey were to:

- 1) establish baseline measures of workplace health to gauge the impact of the Healthy IU initiative over time;
- 2) understand how well IU workplaces are supporting the health of employees;
- 3) identify health advantages and challenges of this university community;
- 4) identify opportunities for change that are actionable from an organizational standpoint.

In 2015, the survey was repeated. This report focuses on the first aim, as we systematically compare 2013 survey results for IU Southeast with 2015 results to assess our progress toward a healthier IU.

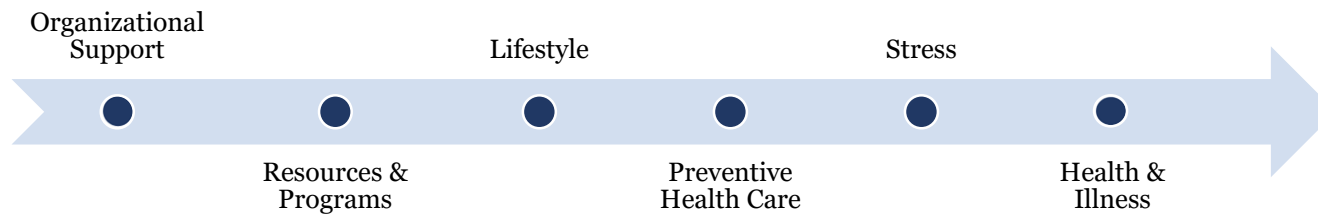
## 2 METHODS

---

### 2.1 SURVEY CONTENT

The wording of most questions in the 2015 survey remained consistent with 2013 wording, enabling valid year-to-year comparisons. Some questions were modified, deleted, or added to improve the value of information for organizational planning. Please note in the tables that follow, “NA” identifies questions that were Not Asked or Not Asked in a comparable way in both years.

The survey’s main content areas are shown on the diagram below along a continuum of change. Moving from left to right along the continuum, the difficulty and time required for change increases. Areas further to the left represent the greatest potential for rapid change when organizational interventions are implemented; right-most areas are anticipated to take far longer to reflect change. We will consider the changes observed at IU Southeast between 2013 and 2015 in the context of this continuum.





## 2.2 COMPARATIVE ANALYSIS & INTERPRETATION

A total of 146 IUSE employees responded to our survey, yielding a 32.7% response rate. Quantitative data were analyzed using IBM SPSS Statistics 23.0 (IBM Corp., 2015). For valid comparison, survey data for both survey years (2013 and 2015) were weighted to the 2013 employee population using two weighting variables: sex (female or male) and job type (faculty or staff). Respondent demographics compared to the employee population overall are shown in the table below. There is consistency in the demographic characteristics of respondents in 2015 compared to 2013. In both years, there were proportionally more females than males. The weighting process compensates for such differences.

Demographics	2013		2015	
	Respondents	Full-Time Employees*	Respondents	Full-Time Employees
<b>Sex</b>				
Female	67%	56%	66%	55%
Male	33%	44%	34%	45%
<b>Job Type</b>				
Staff	61%	69%	68%	69%
Faculty	39%	31%	32%	31%

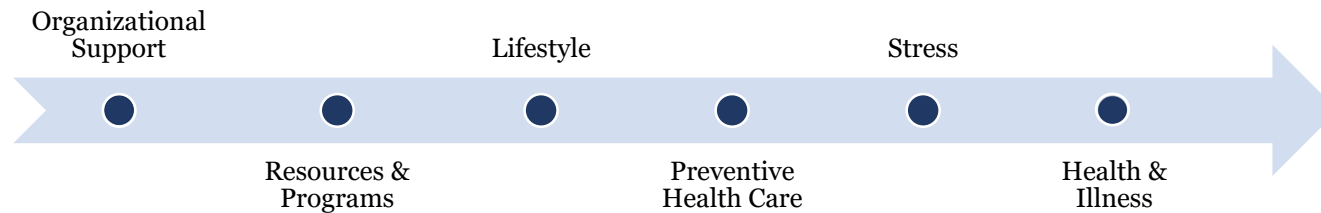
*\*2013 Full-Time Employee proportions have been corrected since originally reported*

For each question being compared, we calculated and considered two measures of change, described and explained in the table below: 1) absolute change, and 2) relative change. Further, we considered both the statistical and practical significance of these changes in the rates. Chi-square testing was conducted to assess whether the absolute difference in rates was *statistically significant*. However, given the large number of respondents to our survey (4,314), differences may be statistically significant though not practically meaningful, so criteria were set for both statistical and practical significance. The benchmark set for practical significance was  $\geq 10\%$  relative change, either better or worse.

	Absolute Change	Relative Change
<b>Meaning</b>	The simple difference between the two rates being compared	Expresses the change <i>relative</i> to the starting point; <b>allows us to compare the degree of change across factors that vary widely in prevalence</b>
<b>Calculation</b>	= 2015 Rate - 2013 Rate	= $\frac{(2015 \text{ Rate} - 2013 \text{ Rate})}{2013 \text{ Rate}}$
<b>Example 1:</b> Employees told they have pre-diabetes or borderline diabetes	= 7.5% - 5.6% = 1.9% A small absolute change but... 	= $\frac{(7.5\% - 5.6\%)}{5.6\%} = \frac{1.9\%}{5.6\%}$ = 33.9% A large relative change
<b>Example 2:</b> Employees who participated in some physical activities or exercises...in the past month	= 87.9% - 83.9% = 4.1% A larger absolute change than in example 1 but... 	= $\frac{(87.9\% - 83.9\%)}{83.9\%} = \frac{4.1\%}{83.9\%}$ = 4.9% A much smaller relative change
<b>Significance of Differences</b>	Statistical significance evaluated at $\alpha=0.05$ using Chi-square testing	Practical significance if $\geq \pm 10\%$ relative change

### 3 COMPARATIVE RESULTS

The IUSE comparisons between 2015 and 2013 IU Workplace Health & Wellness Survey results are presented in this section, primarily in the form of tables. Each section focuses on a content area, proceeding from left to right along the continuum of change.



In comparing the survey measures comprehensively, we color-coded our interpretations based on the combination of statistical and practical significance. The color-coding is intended to provide a quick visual impression of the strength and degree of change observed in each content area.

	Improvement is statistically and practically significant
	Worsening is statistically and practically significant
	Change lacks statistical and/or practical significance

Also, the tables reflect whether or not there were interventions being implemented at IUSE that focused on that aspect of workplace health in the two-year period. Such interventions were provided by a variety of groups, and information regarding these interventions was provided to the survey team by Healthy IU. Emblems distinguish between two levels of intervention:

 Face-to-face intervention provided

 Communication only provided

### 3.1 ORGANIZATIONAL SUPPORT

TABLE 1. ORGANIZATIONAL SUPPORT	COMPARISON						
	2013	2015	Absolute Change	Relative Change	p-value	Change Code	Intervention Provided
Q10. Overall, how <b>supportive</b> is IU of your personal health? (Percent rating 7-10 on scale of 1-10)	62.5%	80.8%	18.3%	29.3%	<0.001*		▲
Q9. Overall, how <b>safe do you think</b> your workplace is? (Percent rating 7-10 on scale of 1-10)	79.6%	90.7%	11.1%	13.9%	<0.001*		
Q20. All in all, how <b>satisfied</b> would you say you are with your job? (Percent satisfied/very satisfied)	85.0%	88.6%	3.6%	4.2%	0.074		
<b>Q11. Employees who Agree or Strongly Agree...</b>							
The people you work with take a <b>personal interest</b> in you.	NA	78.5%					
In your workplace, your <b>co-workers</b> support your efforts to be healthy.	64.1%	71.3%	7.2%	11.2%	0.011*		▲
Your <b>supervisor</b> is concerned about the welfare of those under him or her.	NA	70.9%					
In your workplace, <b>management</b> considers workplace health and safety to be important.	54.0%	65.1%	11.1%	20.6%	<0.001*		
IU has provided you with the opportunity to <b>be physically active</b> .	33.9%	67.9%	34.0%	100.3%	<0.001*		▲
IU has provided you with the opportunity to <b>eat a healthy diet</b> .	38.2%	53.0%	14.8%	38.7%	<0.001*		
IU has provided you with the opportunity to <b>live tobacco free</b> .	89.3%	91.3%	2.0%	2.2%	0.278		▲
IU has provided you with the opportunity to <b>manage your stress</b> .	26.7%	46.6%	19.9%	74.5%	<0.001*		Ψ
IU has provided you with the opportunity to <b>work safely</b> .	63.1%	80.2%	17.1%	27.1%	<0.001*		

\*Statistically significant; NA = not asked/not comparably asked in given year

The content area of Organizational Support showed statistically and practically significant improvements in eight measures (green). The greatest relative improvement (100.3% increase over 2013) was in the percentage of employees who say that IU has provided them with the opportunity to be physically active. Another large improvement (relative change of 74.5%) was observed in the proportion of employees reporting having the opportunity to manage their stress. Levels of stress reported by employees in the initial 2013 survey were a top concern, and subsequent efforts were focused on improving this area of wellness. No measures exhibited a significant worsening. Two remained stable over the time period: job satisfaction and the opportunity to live tobacco free.

### 3.2 RESOURCES & PROGRAMS

TABLE 2. Q12: Are the following PROGRAMS OR RESOURCES currently available at your workplace? (Percent who said yes)	COMPARISON						
	2013	2015	Absolute Change	Relative Change	p-value	Change Code	Intervention Provided
Access to clean drinkable water	NA	89.8%					
Opportunities to buy fresh fruits and vegetables	56.7%	63.7%	7.0%	12.3%	0.019*		
Healthy food options in vending machines	20.6%	39.4%	18.8%	91.3%	<0.001*		
Healthy food options to purchase in the cafeteria or other food service	75.5%	80.4%	4.9%	6.5%	0.054		
1-on-1 nutritional counseling	NA	47.9%					Ψ
Stress management or stress reduction classes/programs	16.8%	53.6%	36.8%	219.0%	<0.001*		
A convenient place to work out or exercise (2015) - A place to work out or exercise such as an onsite exercise room (2013) †	63.1%	48.0%	-15.1%	-23.9%	<0.001*		Ψ
A place to bike or walk	75.4%	88.5%	13.1%	17.4%	<0.001*		Ψ
A walking program	1.9%	67.8%	65.9%	3468.4%	<0.001*		Ψ
Ergonomics (work station or computer setup, proper lifting, etc.)	30.2%	29.3%	-0.9%	-3.0%	0.771		
Flu shots at work	94.4%	88.0%	-6.4%	-6.8%	<0.001*		▲
Employee Assistance Program (access to professional counseling)	74.8%	79.3%	4.5%	6.0%	0.090		Ψ
Programs to help people stop smoking (of current smokers)	/	/					▲
Healthy weight/weight loss programs	27.9%	52.2%	24.3%	87.1%	<0.001*		
Blood pressure monitoring device available for self assessment	4.1%	79.0%	74.9%	1826.8%	<0.001*		Ψ
A true smoke-free workplace	86.9%	77.0%	-9.9%	-11.4%	<0.001*		▲
A private area/lactation room for moms who are breast-feeding (of women aged 18-44)	8.8%	42.1%	33.3%	378.4%	<0.001*		▲
Signs that encourage stair use	10.6%	17.9%	7.3%	68.9%	0.001*		▲
Markers that identify walking trails	NA	22.5%					
Easy to access maps of walking trails	NA	42.2%					Ψ
A designated person who communicates health and wellness information to your work group	NA	35.7%					▲

\*Statistically significant; NA = not asked/not comparably asked in given year; / = insufficient sample size for analysis

Improving employee awareness and access to health-supporting Resources & Programs at their IU workplace was identified in 2013 as an opportunity for rapid change and organizational action. The numerous intervention emblems shown in the final column of this table reflect the broad action taken in this

area. Healthy change is clearly evidenced in the broad improvements seen in 9 of the measures – improvements that are both statistically and practically significant. In fact, relative increases of over 1000% were measured for walking programs (relative change of 3468.4%) and blood pressure self-monitoring devices (relative change of 1826.8%). Increases over 100% were reported for private lactation areas (378.4%) and stress management programs (219.0%). Two measures did exhibit a worsening over the time period. A smaller proportion of employees reported having a convenient place to exercise (relative change of -23.9%). Additionally, the percentage of employees with access to “a true smoke-free workplace” significantly worsened (by 11.4% relative to 2013). The remaining 4 measures were stable over the 2-year period.

### 3.3 LIFESTYLE

TABLE 3. LIFESTYLE INFLUENCES ON HEALTH	COMPARISON						
	2013	2015	Absolute Change	Relative Change	p-value	Change Code	Intervention Provided
Q22. Employees getting enough restful <b>sleep</b> to function well in job and personal life - always/most of the time	61.4%	61.0%	-0.4%	-0.7%	0.908		Ψ
Q64 & Q65. Employees whose <b>BMI falls within normal range</b> (18.5-24.9)	37.0%	28.8%	-8.2%	-22.2%	0.006*		Ψ
Q23. Employees who do <b>not smoke</b> cigarettes	96.8%	98.0%	1.2%	1.2%	0.216		▲
Q24. Current smokers who stopped smoking for one day or longer because they were <b>trying to quit</b>	/	/					
Q25. Employees who participated in <b>some physical activities</b> or exercises...during the past month	88.4%	95.6%	7.2%	8.1%	<0.001*		Ψ
Q26 and 27. Employees meeting the <b>aerobic</b> physical activity guidelines	60.0%	70.1%	10.1%	16.8%	0.001*		
Q28. Employees meeting the <b>strength-training</b> guidelines	52.0%	55.2%	3.2%	6.2%	0.247		
Q26-28. Employees meeting both aerobic and strength-training guidelines	43.0%	47.6%	4.6%	10.7%	0.124		
Q33. (Of those who mostly sit on the job) Employees who are able to <b>get up and move</b> around 8 or more times during a usual 8 hour work day	50.4%	46.2%	-4.2%	-8.3%	0.337		Ψ
Q18. Employees who Always/Usually get the social and emotional support they need	65.6%	61.0%	-4.6%	-7.0%	0.420		Ψ

\*Statistically significant; NA = not asked/not comparably asked in given year; / = insufficient sample size for analysis

The content area of Lifestyle Influences on Health moves us toward the middle of the continuum of change. One of the changes in lifestyle measures—employees meeting aerobic physical activity guidelines—met our criteria for being both statistically and practically significant for improvement.

Another—proportion of employees reporting a BMI within the normal range—met our criteria for significant worsening. The remaining measures were stable and did not exhibit either statistical or practical significance in their changes.

### 3.4 PREVENTIVE HEALTH CARE

TABLE 4. PREVENTIVE HEALTH CARE	COMPARISON						
	2013	2015	Absolute Change	Relative Change	<i>p-value</i>	Change Code	Intervention Provided
Q34. Employees who visited a doctor for a routine checkup within the past 2 years	91.5%	87.6%	-3.9%	-4.3%	0.039*		
Q35. Employees who had blood pressure checked by a health professional within the past year	97.8%	95.0%	-2.8%	-2.9%	0.018*		Ψ
Q36. Employees who last had a cholesterol test less than 5 years ago	98.1%	94.9%	-3.2%	-3.3%	0.006*		Ψ
Q37. Employees who had a lab test for high blood sugar or diabetes within the past 3 years	88.1%	75.0%	-13.1%	-14.9%	<0.001*		Ψ
Q38. Employees who had a seasonal flu vaccine during the past 12 months	56.2%	52.8%	-3.4%	-6.0%	0.272		▲

\*Statistically significant; NA = not asked/not comparably asked in given year

Most 2015 Preventive Health Care survey measures were overall stable and consistent with 2013 measures. Given the excellent baseline rates reported by IUSE employees for routine checkups, blood pressure checks, and cholesterol testing, there is little room for improvement in this area. However, significant worsening did occur with the proportion of employees having their blood sugar tested in the past 3 years. Additionally, consistent with 2013, there remains room for improvement in the percentage of employees who receive a seasonal flu vaccine.



### 3.5 STRESS

TABLE 5. IMPACT OF STRESS	COMPARISON						
	2013	2015	Absolute Change	Relative Change	<i>p-value</i>	Change Code	Intervention Provided
Q21. Employees who said <b>stress</b> (from all sources at work or at home) had <i>a lot</i> or <i>some</i> impact on their health in the past year	73.5%	70.5%	-3.0%	-4.1%	0.288		Ψ
<b>Q19. Employees who responded Always/Often</b>							
How often do you find your work stressful?	48.6%	44.7%	-3.9%	-8.0%	0.225		Ψ
How often do things going on at <u>work</u> make you tense or irritable at home?	NA	67.6%					
How often do things going on at <u>home</u> make you tense or irritable at work?	NA	9.2%					
How often in past month have you felt used up at the end of the day?	50.2%	50.2%	0.0%	0.0%	0.997		Ψ

\*Statistically significant; NA = not asked/not comparably asked in given year

Measures of the impact of stress persisted from 2013 to 2015 with little change overall. In 2015, we added two new measures to help us better understand the interplay of stress between home and work. Based on these results, work stress affects employees at home more often than home stress affects employees at work. Despite greater reported access to opportunities to manage stress (as reported in Table 3.1), we do not yet see a reduction in the impact of that stress on employees' health.

### 3.6 HEALTH & ILLNESS

TABLE 6. HEALTH & ILLNESS	COMPARISON						
	2013	2015	Absolute Change	Relative Change	p-value	Change Code	Intervention Provided
Q14. Employees rating their health as fair or poor	9.8%	10.7%	0.9%	9.2%	0.638		
Q15. Employees with one or more days of poor physical health in past 30	38.7%	32.7%	-6.0%	-15.5%	0.043*		
Q16. Employees with one or more days of poor mental health in past 30	42.4%	35.0%	-7.4%	-17.5%	0.020*		
Q17. Employees with one or more days in past 30 when poor physical/mental health interfered with usual activities	32.8%	27.6%	-5.2%	-15.9%	0.068		
<i>[Employees responding yes - Have you EVER been told by a doctor, nurse, or other health professional that you have...]</i>							
Q39. High blood pressure	22.3%	19.7%	-2.6%	-11.7%	0.288		Ψ
Q39. Borderline high or pre-hypertensive	16.4%	23.8%	7.4%	45.1%	0.004*		Ψ
Q42. High blood cholesterol	40.0%	41.9%	1.9%	4.7%	0.555		Ψ
Q45. Diabetes	5.1%	4.5%	-0.6%	-11.8%	0.638		
Q45. Pre-diabetes or borderline diabetes	5.7%	10.5%	4.8%	84.2%	0.007*		Ψ
Q48. Asthma - ever	11.5%	16.0%	4.5%	39.1%	0.041*		
Q49. Asthma - among those ever diagnosed, those who <i>currently</i> have asthma	NA	67.0%					
Q51. Arthritis	24.7%	32.4%	7.7%	31.2%	0.006*		
Q53. Arthritis-related activity limitations	17.4%	36.7%	19.3%	110.9%	0.001*		
Q57. Depressive disorder	26.1%	24.9%	-1.2%	-4.6%	0.624		▲
Q60. Heart disease	1.8%	1.3%	-0.5%	-27.8%	0.552		▲
Q61. Carpal tunnel syndrome	13.5%	10.5%	-3.0%	-22.2%	0.136		
<i>[Employees who self-identified having ...]</i>							
Q54. Chronic or recurrent low back pain	30.6%	39.4%	8.8%	28.8%	0.003*		
Q64 and Q65. Obesity (calculated BMI ≥30.0)	29.0%	30.8%	1.8%	6.2%	0.554		Ψ
Q64 and Q65. Overweight (calculated BMI 25.0-29.9)	33.0%	40.3%	7.3%	22.1%	0.019*		
Q62. Health problems they think may be due to physical surroundings at workplace	NA	19.2%					

\*Statistically significant; NA = not asked/not comparably asked in given year

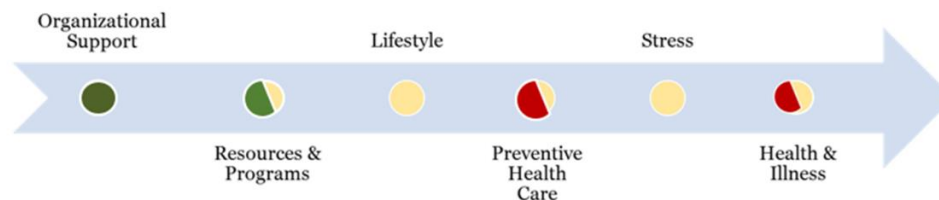
The final content area, to the far right of the continuum of change, describes the Health & Illness measures of IUSE employees. Significant improvements were observed in the proportion of employees reporting poor physical or mental health over the past month. Several areas showed a worsening of conditions. However, in this content area, the color-coded changes cannot be interpreted in the same straightforward manner as in previous sections. Some of the measures coded red (for significant increases) may, in fact, be positive and health-promoting. For example, an increase in those diagnosed with borderline high or pre-hypertension as well as pre-diabetes or borderline diabetes may mean that employees are being screened and made aware of their risk at an earlier point where prevention of full disease is possible. Significant increases in the proportion of employees ever diagnosed with asthma, arthritis, arthritis-related activity limitations, and chronic back pain were reported. An increase in the percentage of employees considered to be overweight was also observed, and weight management remains a priority area for future improvement. Of note, most of these conditions develop over a period of years. A leveling-off of disease rates is considered success through fewer new diagnoses among employees, as it is essentially impossible for employees who have once been diagnosed with a condition to be “un-diagnosed.” Stabilization of these rates is a long-term aim.

## 4 CONCLUSIONS

---

What does this comparison of the 2013 and 2015 survey results tell us?

- Statistical and practical significance, as well as consistency between 2013 and 2015, give us confidence that observed changes (for better or worse) are **real changes** in the IUSE community.
- **Clear improvements** are seen particularly – and as anticipated – in those content areas to the left of the continuum of change.
- We **held our ground** in some longer-term outcomes, but **worsened in others** during the 2-year period. The most challenging outcomes, especially disease rates, take longer to show improvement, as chronic diseases typically develop over a period of years, and once an employee is diagnosed, they cannot revert back to the undiagnosed group. Holding ground in long-term outcomes such as disease rates is, therefore, success.
- We still have work to do, but we are moving in the right direction.





**RICHARD M. FAIRBANKS  
SCHOOL OF PUBLIC HEALTH**

INDIANA UNIVERSITY  
Indianapolis

A team within the **IU Richard M. Fairbanks School of Public Health at IUPUI** designs, conducts, and analyzes the IU Workplace Health & Wellness Survey on behalf of the multi-campus IU community. We are a team committed to employee confidentiality and quality data that drive healthy change. Any questions? Contact us at [bhealthy@iu.edu](mailto:bhealthy@iu.edu)

**Co-Principal Investigators:** Gregory K. Steele, DrPH, MPH  
Lisa K. Staten, Ph.D

**Project Manager:** Tess D. Weathers, MPH

**Data Analyst:** Jennifer Alyea, MPH and Doctoral Student

**Suggested Citation:**

IU Fairbanks School of Public Health Survey Team. (2016). *Gauging Progress toward a Healthier IU: A Comparison of the IU Workplace Health and Wellness Survey Results from 2013 and 2015*. (Series of 8 reports focusing on each IU campus location.) Available at: <https://pbhealth.iupui.edu/index.php/research/bhealthy/2015-results/>