

UPDATE ON AU HEALTH AND WELLNESS INITIATIVES

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AUBURN UNIVERSITY

HARRISON SCHOOL OF PHARMACY



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HUMAN RESOURCES

AU HEALTH INSURANCE PLAN MEDICAL DIAGNOSES

CARDIOVASCULAR DISEASE:



Heart Attack



Stroke



High Blood Pressure with Complications



Essential Hypertension (High Blood Pressure)



Chest Pain (Angina)



Coronary Heart Disease / Atherosclerosis



Disorders of Lipid Metabolism

DIABETES:



Diabetes without Complications



Diabetes with Complications



Renal Dialysis



AU HEALTH INSURANCE PLAN MEDICAL DIAGNOSES

Healthy Tigers Rationale:

80% or more of medical and pharmacy expenditures are spent on less than 20% of the insured population.

HT goal = early identification and treatment.

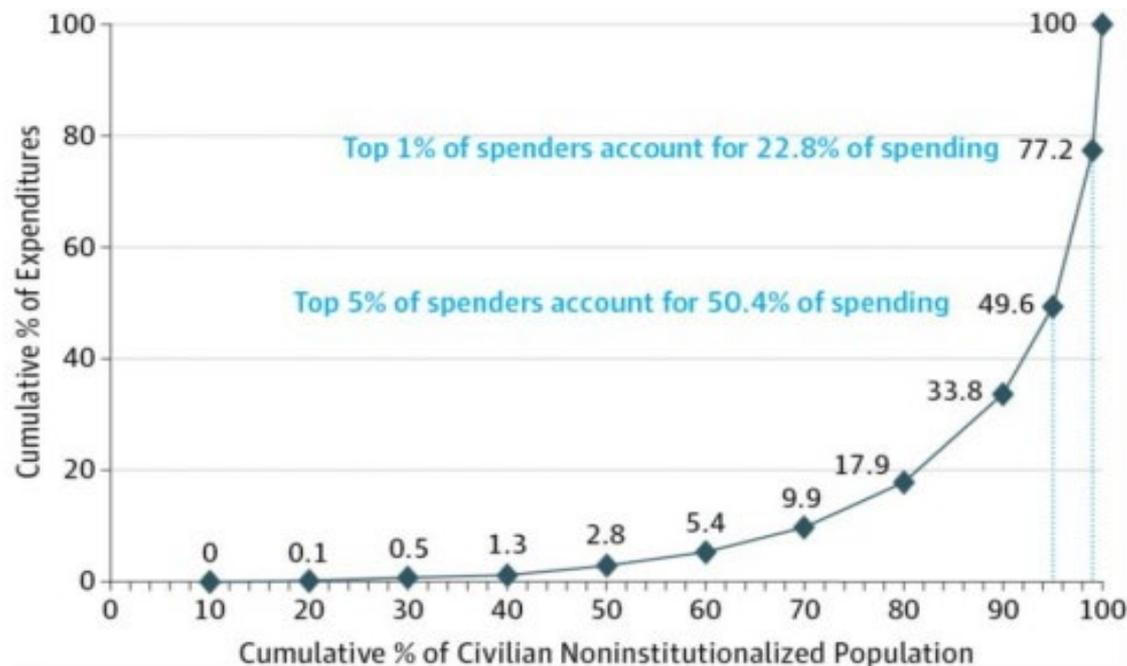


FIGURE S-1 Distribution of Personal Health Care Spending in the US Civilian Noninstitutionalized Population, 2014.

SOURCE: Dzau et al., 2017.

AU HEALTHY TIGERS TIMELINE

2010 - 2019

ADULT DEPENDENTS ADDED:

- AU Employees and Spouses / ASD
- Blood Pressure, Glucose, Cholesterol
- BMI Added, But Optional

ADULT DEPENDENTS SEPARATE INCENTIVE:

- AU Employees and Spouses / ASD Receive Separate Incentive from Employee

2011

2018

2010

2012

“HEALTHY TIGERS” INTRODUCED

- Introduced March 2010
- AU Employees Only
- Blood Pressure, Glucose, Cholesterol

BMI ALARM VALUE IMPLEMENTED:

- BMI Added as a Red Zone
- BMI of 35.0 or Greater
- No Medical Referral Required



TIGERMEDS



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BIOMETRIC SCREENINGS



WELLNESS RECOGNITION EVENTS



LUNCH AND LEARNS

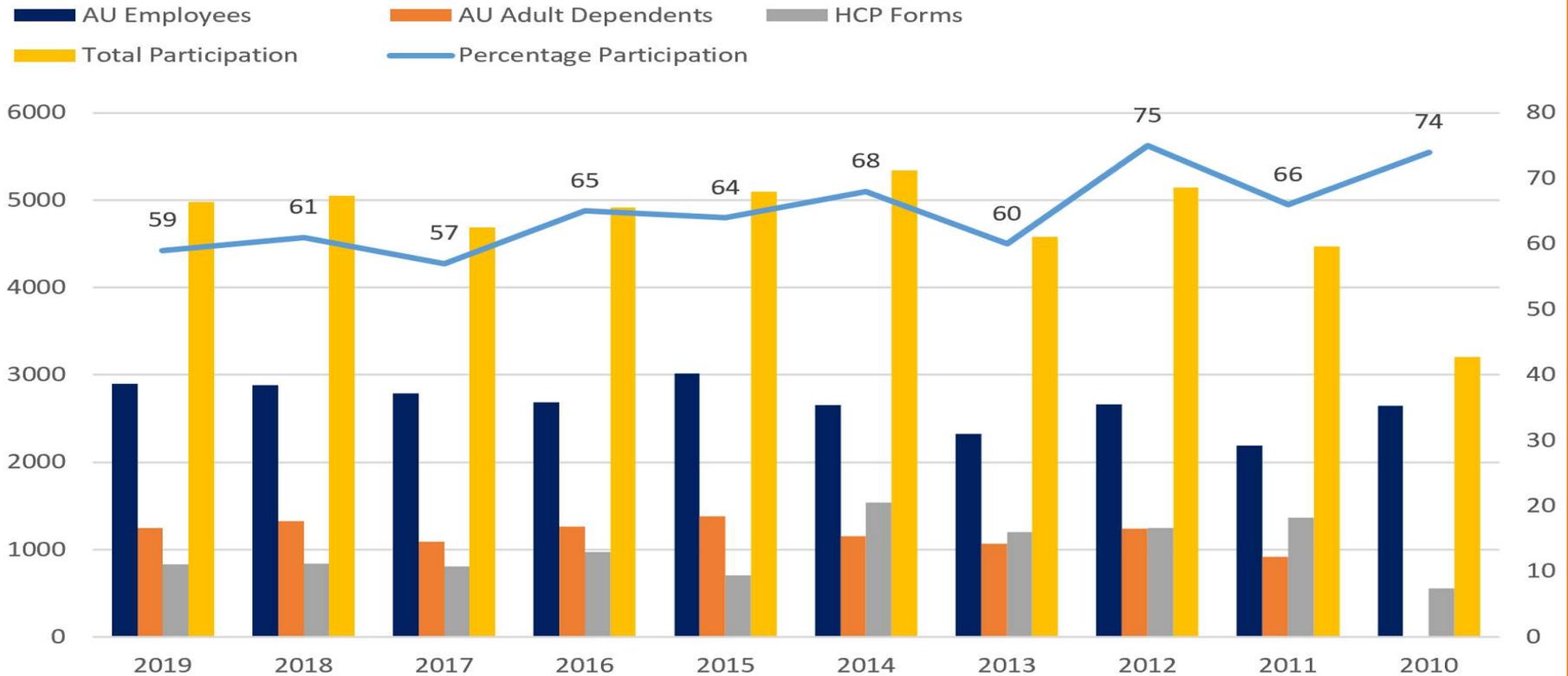


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NEWSLETTERS, RESOURCES, CLASSES



HEALTHY TIGERS PARTICIPATION DATA



HEALTHY TIGERS PARTICIPANT DEMOGRAPHICS

TOTAL NUMBER OF UNIQUE
HT PARTICIPANTS

(ALL YEARS): **8,808**

- 53.5% Female
- 45.5% Male

AVERAGE NUMBER
OF HT PARTICIPANTS
PER YEAR

(2014-2018): **4,716**

AVERAGES ACROSS ALL YEARS



HEALTHY TIGERS BLOOD PRESSURE 5-YEAR DATA

HEALTHY TIGERS BLOOD PRESSURE RESULTS (mmHg)



ZONE DEFINITIONS:

BP Green Zone=

- SBP 139 mmHg or Lower
- DBP 89 mmHg or Lower

BP Yellow Zone=

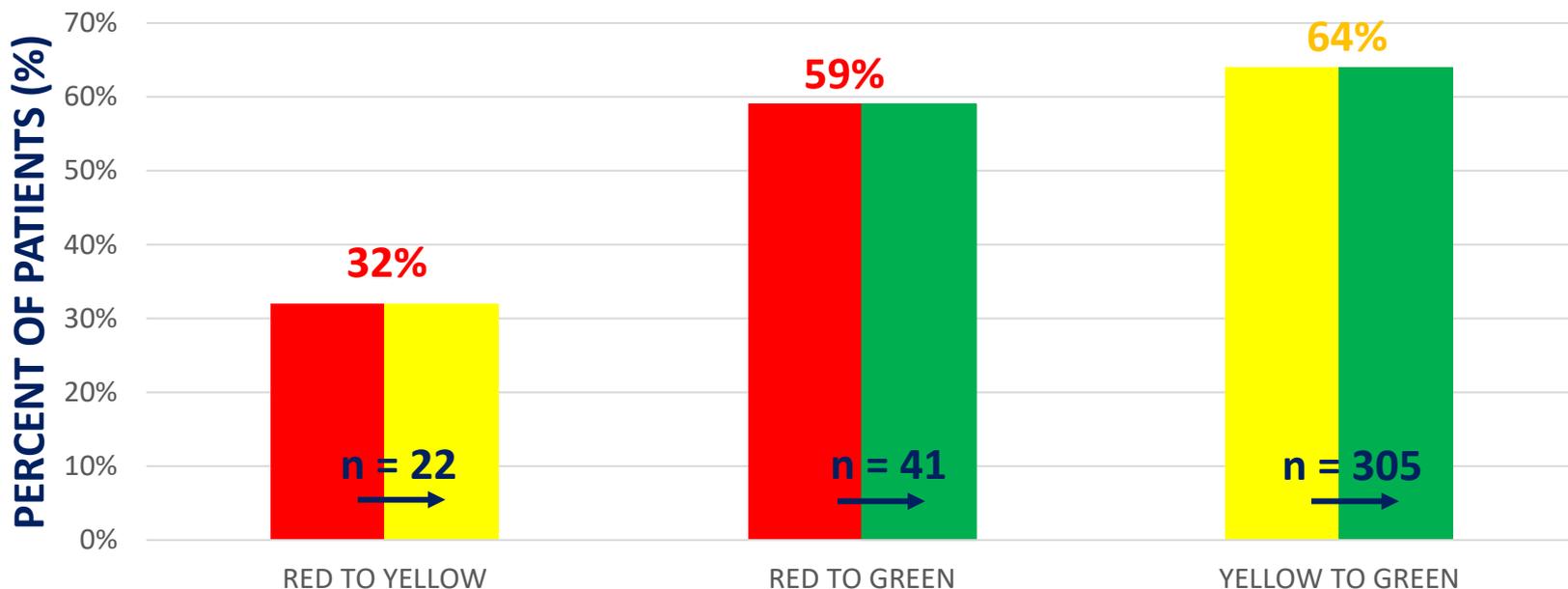
- SBP 140-159 mmHg
- DBP 90-99 mmHg
- One or Both

BP Red Zone=

- SBP 160 mmHg or Higher
- DBP 100 mmHg or Higher
- One or Both

HEALTHY TIGERS BLOOD PRESSURE 5-YEAR DATA (CONTINUED)

**PATIENTS WHO WERE SCREENED IN BOTH 2014 AND 2018
WHO WERE IN **YELLOW** OR **RED ZONES** FOR BLOOD PRESSURE IN 2014
(n=545)**

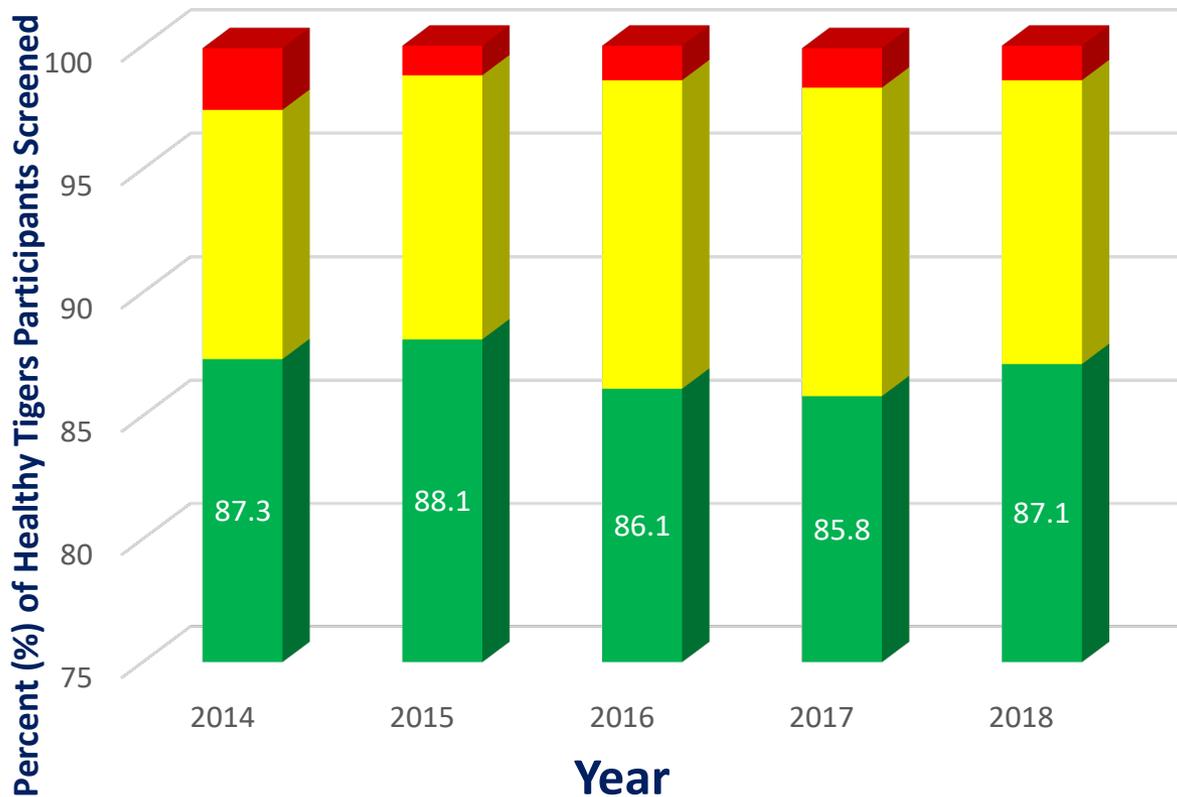


368 (68%) Patients Improved at Least One Zone

HEALTHY TIGERS BLOOD GLUCOSE 5-YEAR DATA

HEALTHY TIGERS BLOOD GLUCOSE RESULTS

(mg/dL)



ZONE DEFINITIONS:

Glucose Green Zone=

- Random Glucose 119mg/dL or lower

Glucose Yellow Zone=

- Random Glucose 120 to 199 mg/dL

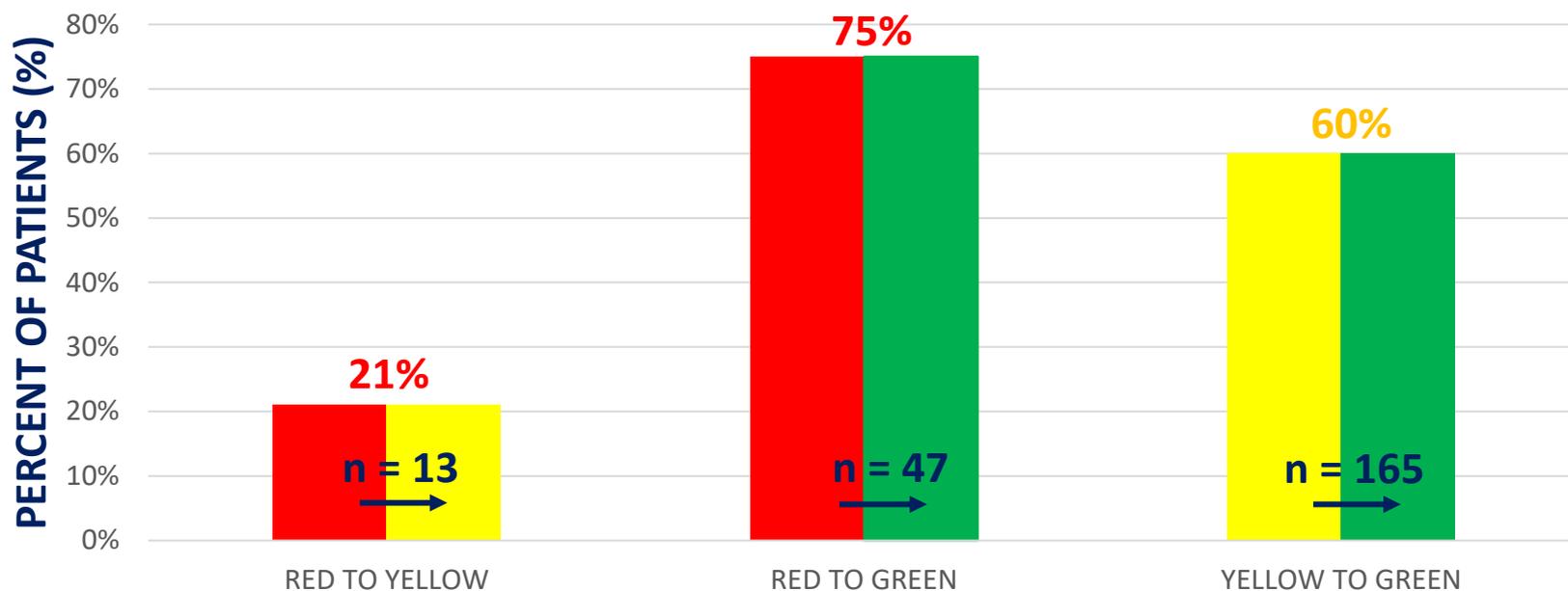
Glucose Red Zone=

- Random Glucose 200 mg/dL or higher

■ GLUCOSE GREEN ZONE ■ GLUCOSE YELLOW ZONE ■ GLUCOSE RED ZONE

HEALTHY TIGERS BLOOD GLUCOSE 5-YEAR DATA (CONTINUED)

PATIENTS WHO WERE SCREENED IN BOTH 2014 AND 2018
WHO WERE IN **YELLOW** OR **RED ZONES** FOR BLOOD GLUCOSE IN 2014
(n=338)



225 (67%) Patients Improved at Least One Zone

PRE-DIABETES AND DIABETES DETECTION (2017/ 2018)

In addition to random blood glucose levels, we administered a validated instrument that is used to predict a patient's risk of having pre-diabetes

- Centers for Disease Control (CDC) instrument
- American Diabetes Association (ADA) instrument
- American Diabetes Association guidelines
- Then a Hgb A1C was offered for further evaluation

740 Healthy Tigers patients requested and received Hgb A1C

- 69 patients (9.3%) Hgb A1C was within pre-diabetes range
- 7 patients (1.0%) Hgb A1C was within the diabetes range (undiagnosed diabetes)

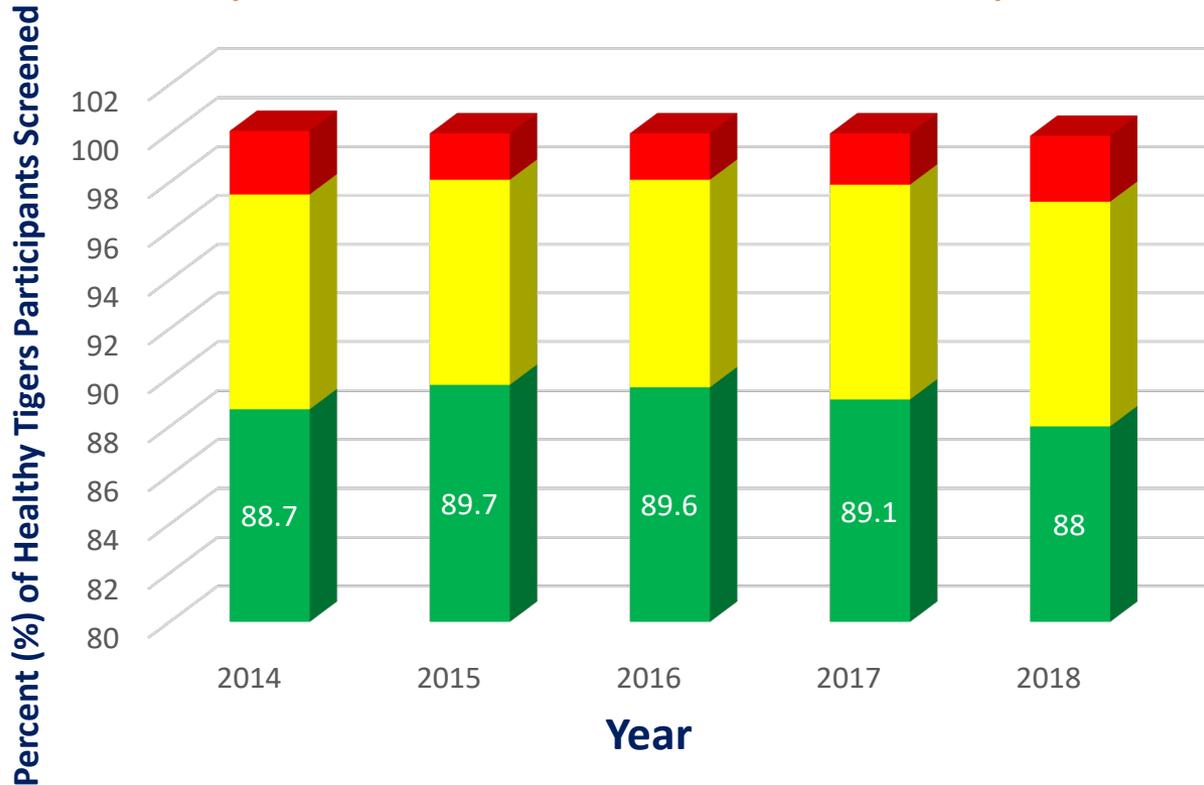
Compared with those with a normal A1C (< 5.7%), participants with an elevated A1C were more likely to be:

- | | |
|------------------------------|---|
| • Older | • Have a sibling with diabetes |
| • Non-white | • Higher random blood sugar (RBS) value(s) |
| • Obese | • Lower high density lipoprotein (HDL-C) value |
| • Physically Inactive | • More likely to have high blood pressure |

HEALTHY TIGERS CHOLESTEROL 5-YEAR DATA

HEALTHY TIGERS CHOLESTEROL RESULTS

(Total Cholesterol : HDL- Cholesterol Ratio)



■ CHOLESTEROL RATIO GREEN ZONE ■ CHOLESTEROL RATIO YELLOW ZONE
■ CHOLESTEROL RATIO RED ZONE

ZONE DEFINITIONS:

Cholesterol Ratio Green Zone=

- TC/HDL 4.9 or less
- Total Cholesterol 200mg/dL or less

Cholesterol Ratio Yellow Zone=

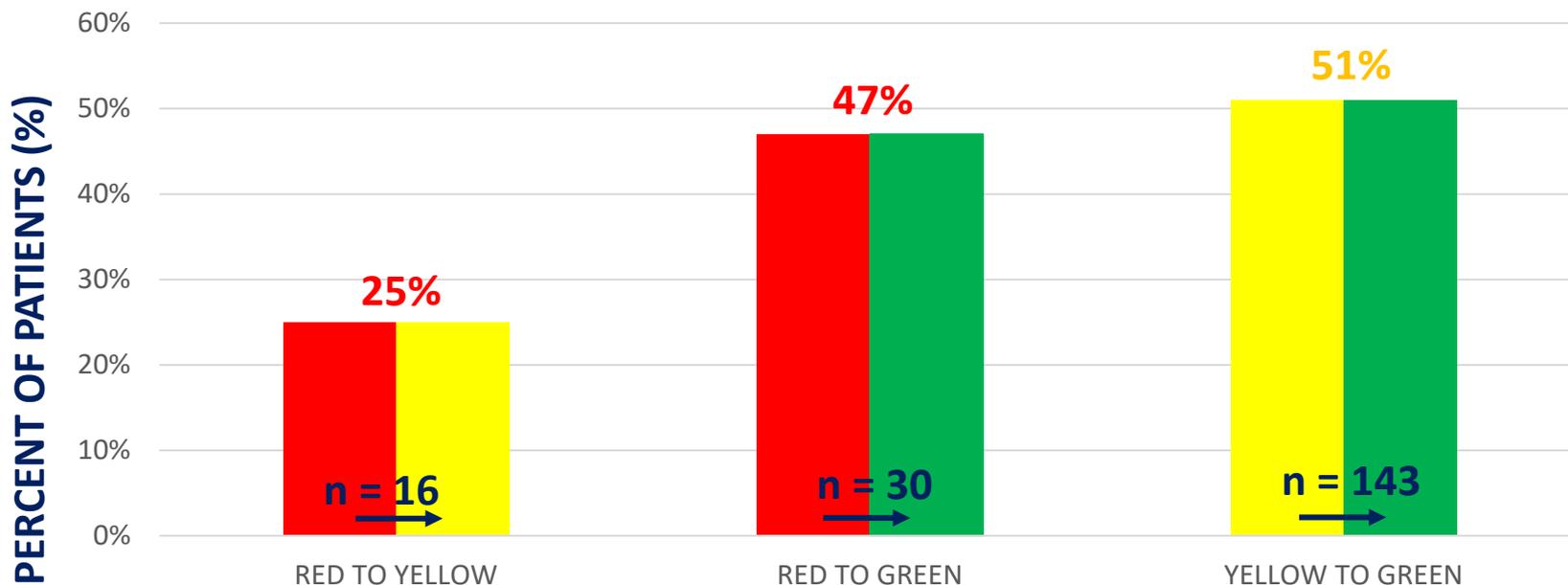
- TC/HDL 5.0 to 8.32
- Total Cholesterol 200 – 250mg/dL

Cholesterol Ratio Red Zone=

- TC/HDL 8.33 or greater
- Total Cholesterol 250 mg/dL or greater

HEALTHY TIGERS CHOLESTEROL 5-YEAR DATA (CONTINUED)

PATIENTS WHO WERE SCREENED IN BOTH 2014 AND 2018
WHO WERE IN **YELLOW** OR **RED ZONES** FOR CHOLESTEROL IN 2014
(n=342)

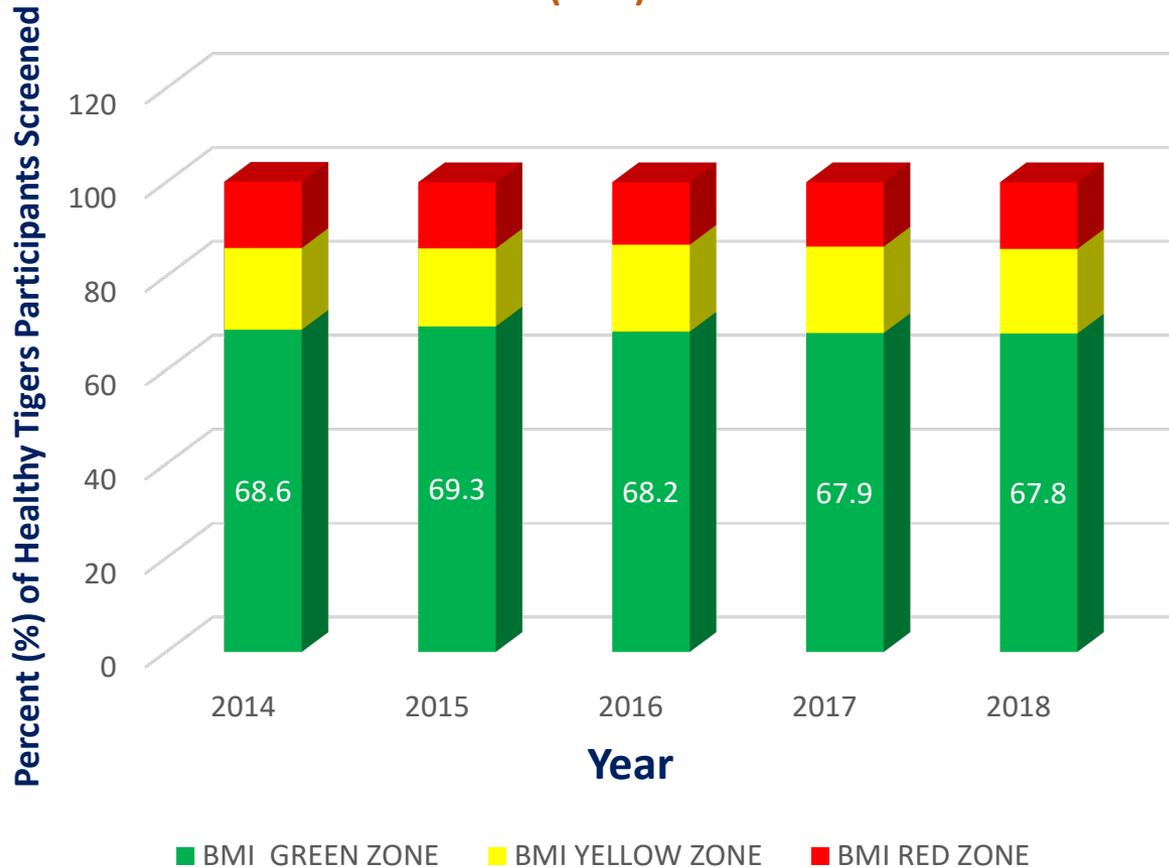


189 (56%) Patients Improved at Least One Zone

HEALTHY TIGERS BMI 5-YEAR DATA

HEALTHY TIGERS BMI RESULTS

(BMI)



ZONE DEFINITIONS:

BMI Green Zone=

- BMI 29.9 or less

BMI Yellow Zone=

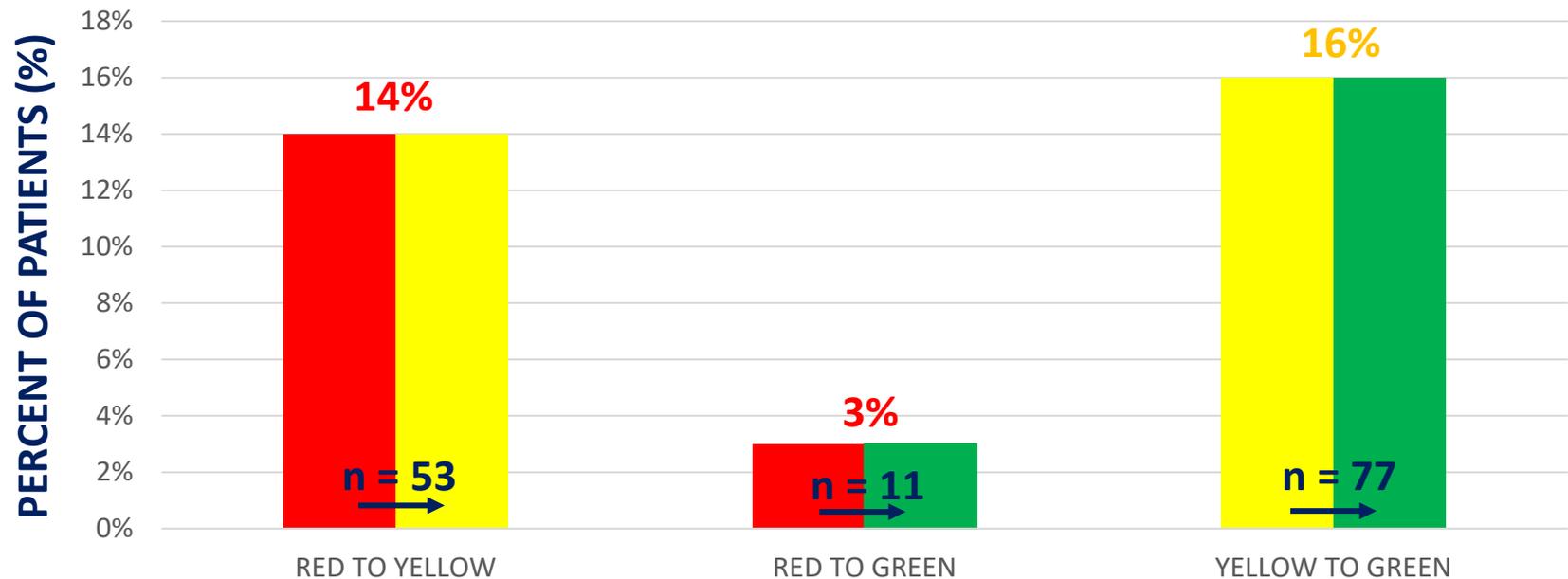
- BMI 30.0 to 34.9

BMI Red Zone=

- BMI 35.0 or greater

HEALTHY TIGERS BLOOD BMI 5-YEAR DATA (CONTINUED)

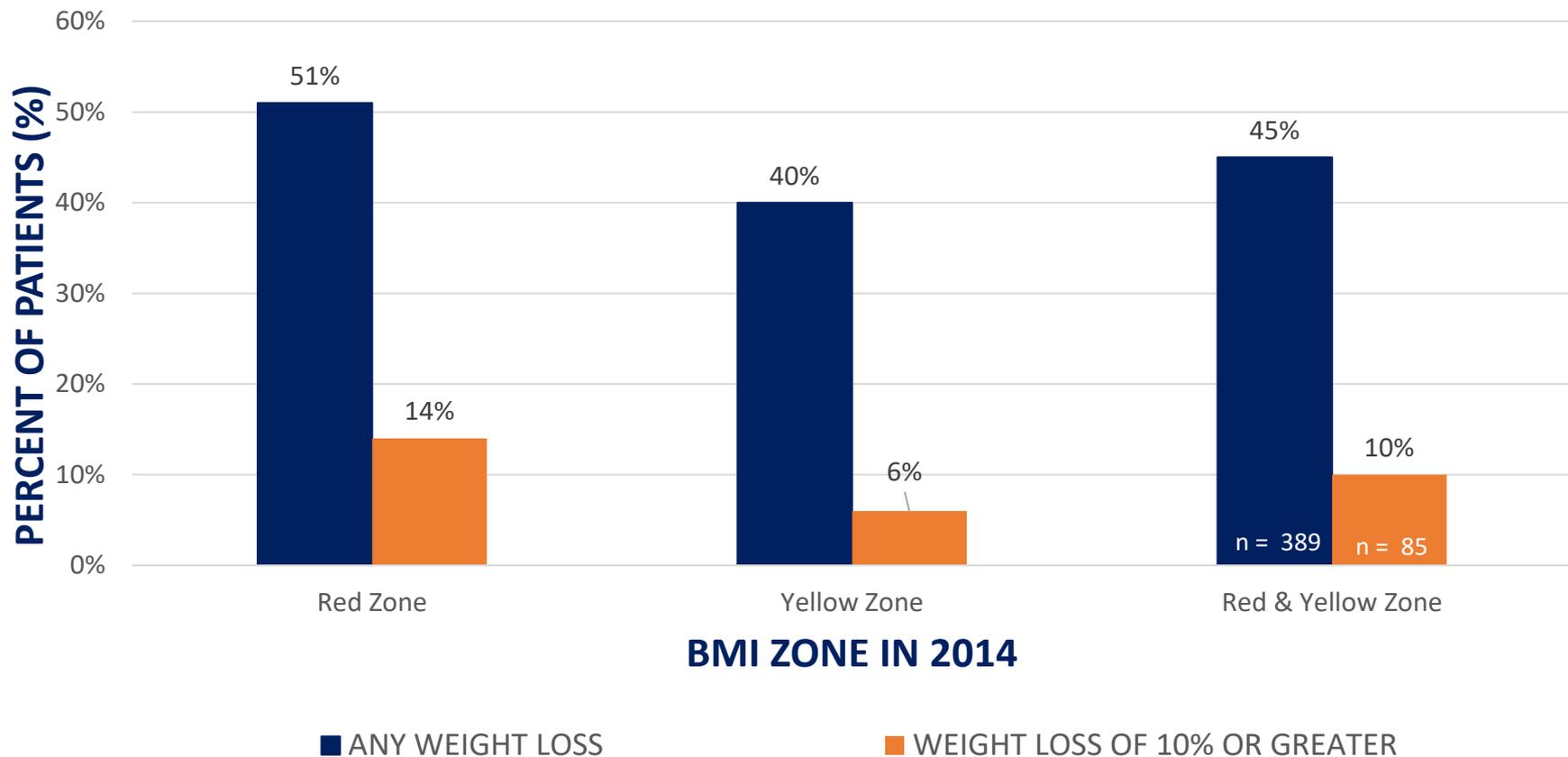
PATIENTS WHO WERE SCREENED IN BOTH 2014 AND 2018
WHO WERE IN **YELLOW** OR **RED ZONES** FOR BMI IN 2014
n = 869 (32%)



141 (16%) Patients Improved at Least One Zone

HEALTHY TIGERS BMI 5-YEAR DATA (CONTINUED)

DATA FOR BMI PATIENTS WHO WERE SCREENED IN BOTH 2014 AND 2018 % OF BASELINE WEIGHT LOSS



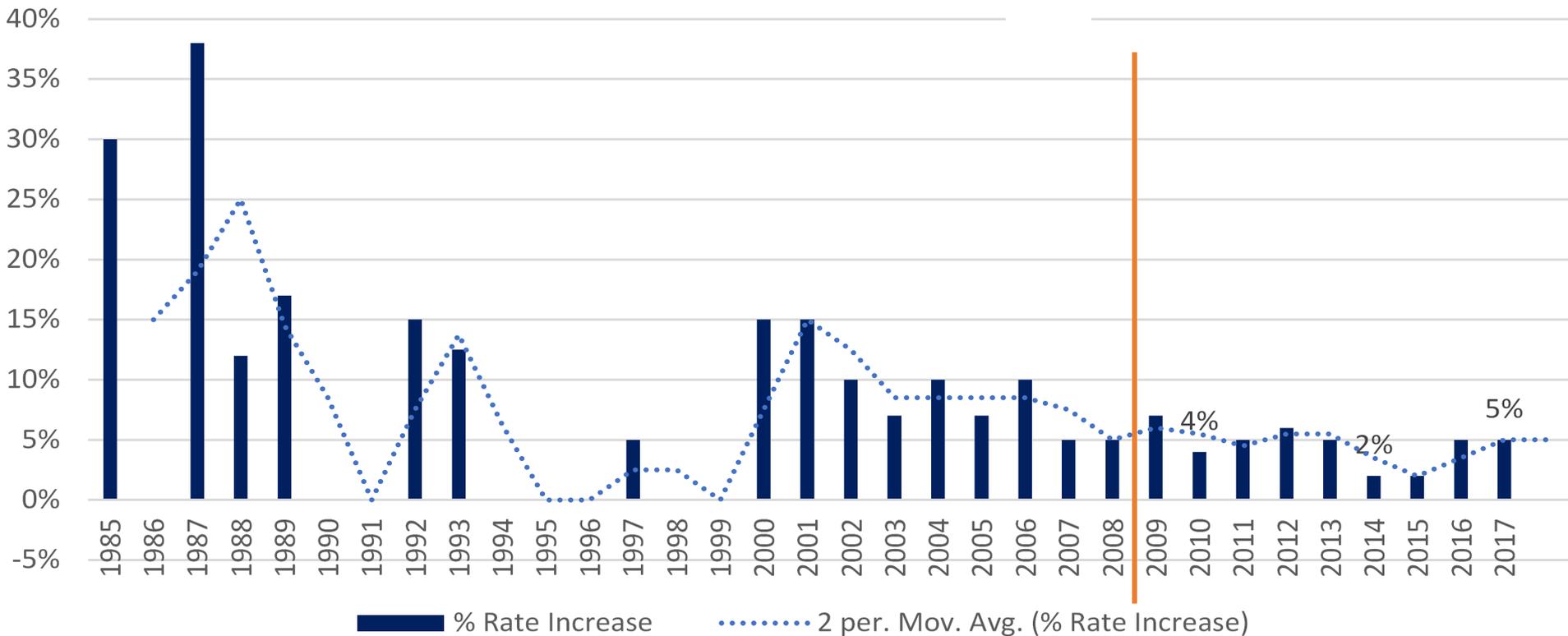
MEDICAL EXPENDITURES

MEDICAL EXPENDITURE BASED ON TOP 100 DIAGNOSES RELATED TO HEALTHY TIGERS SCREENINGS

	2014	2018	SAVINGS (INCREASE)
CHOLESTEROL	\$192,419	\$80,096	\$112,323
BLOOD PRESSURE	\$272,961	\$194,943	\$78,018
HEART DISEASE	\$1,219,628	\$350,279	\$869,349
DIABETES	\$282,414	\$376,206	(\$93,792)
TOTAL	\$2,061,214	\$907,732	\$965,898

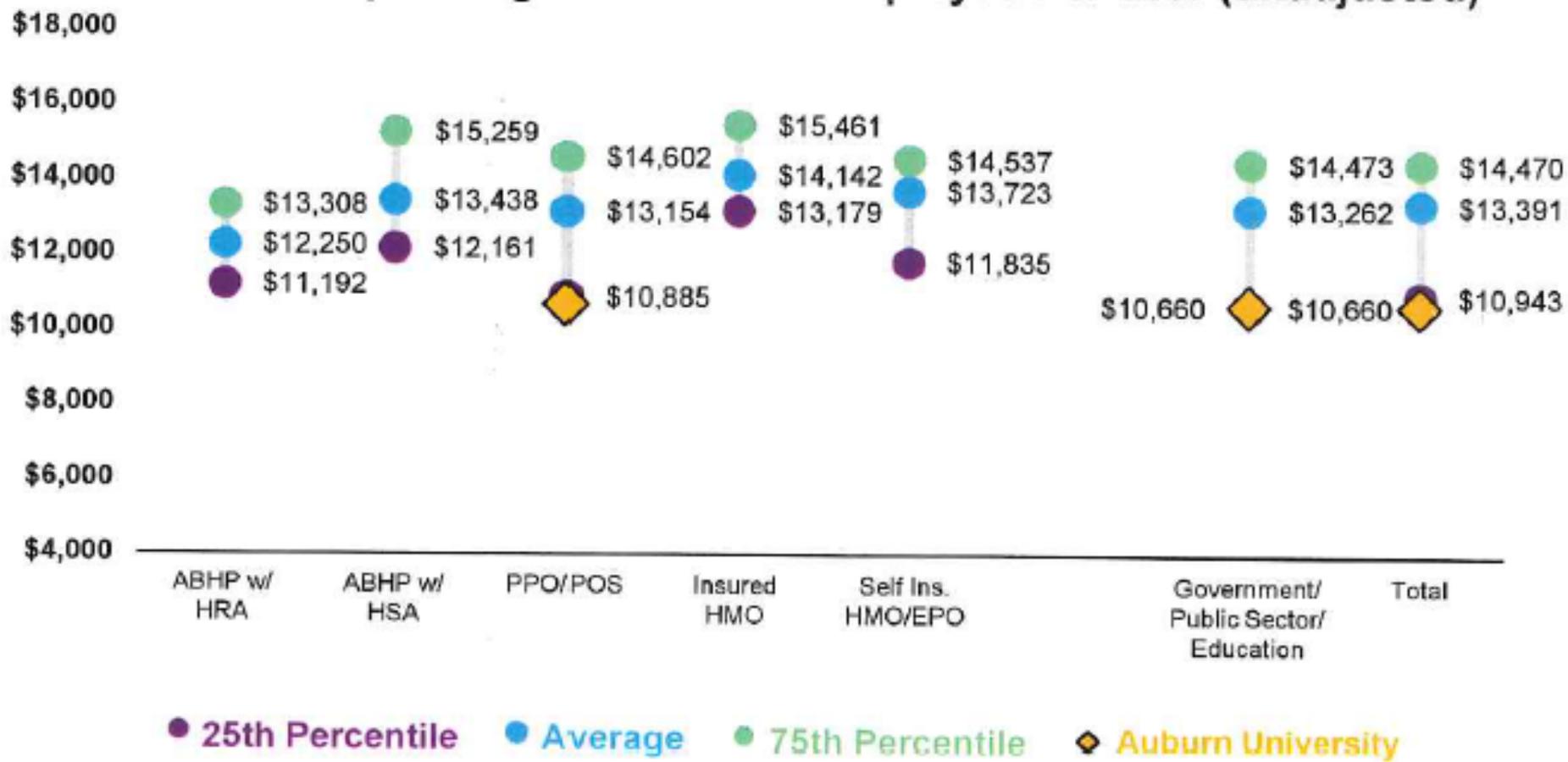
AU HEALTH INSURANCE PREMIUMS- TREND

AU HEALTH AND PHARMACY INSURANCE ANNUAL % RATE INCREASE (%)

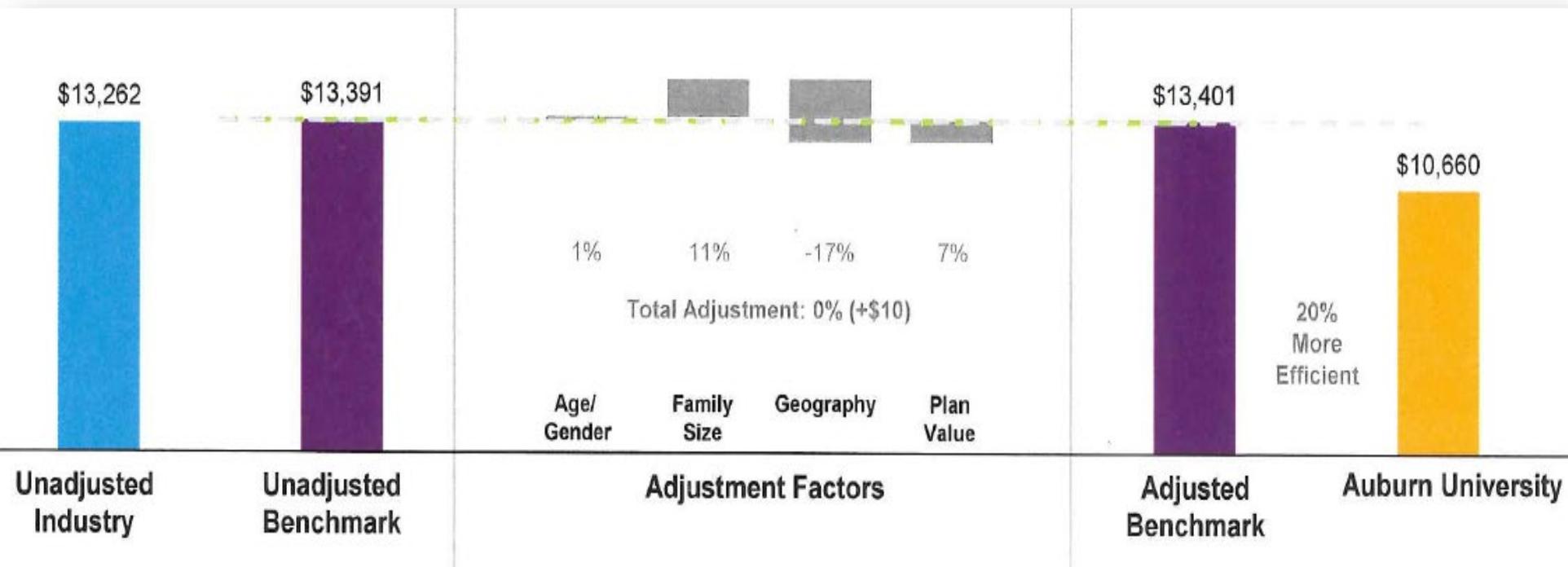


AU HEALTH INSURANCE MEDICAL EXPENDITURES (PEPY) 2018

Total Spending Per Covered Employee Per Year (unadjusted)



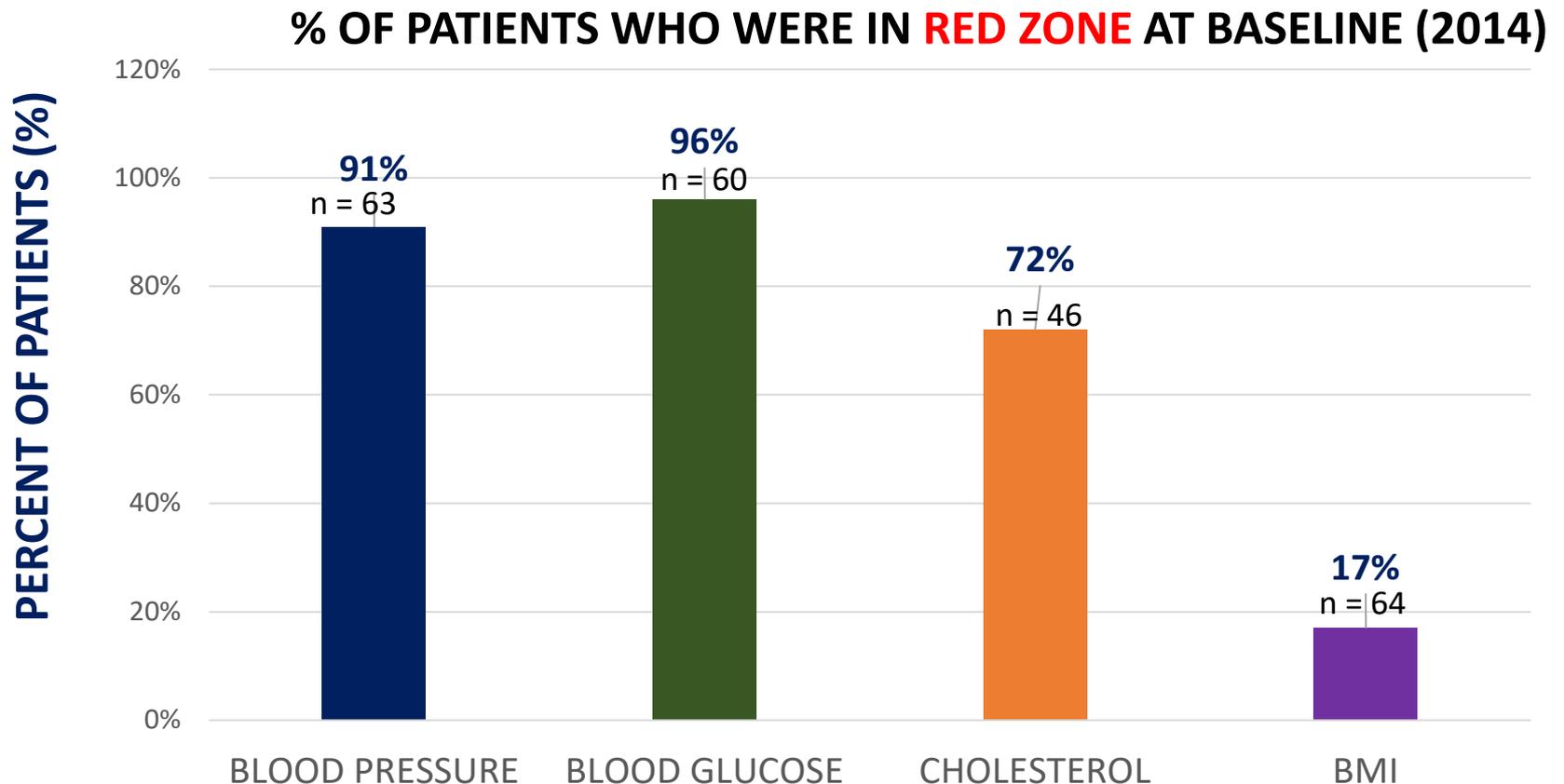
AU HEALTH INSURANCE MEDICAL EXPENDITURES (PEPY) 2018



Analysis Conducted by Willis Towers Watson

AU HEALTH AND WELLNESS SUMMARY

PATIENTS WHO WERE SCREENED IN BOTH 2014 AND 2018 WHO IMPROVED BY AT LEAST ONE ZONE



AU HEALTH & WELLNESS SUMMARY (CONTINUED)

MULTIFACETED
HEALTH AND
WELLNESS
INITIATIVES

REDUCTION IN
RELATED MEDICAL
EXPENDITURES

MORE EFFICIENT
THAN ADJUSTED
INDUSTRY
BENCHMARKS

HIGH PARTICIPATION
RATE IN HEALTHY
TIGERS

STEADY AND
SLOWED PERCENT
INCREASE IN HEALTH
CARE INSURANCE
PREMIUMS

NEAR 25TH
PERCENTILE OF
SPENDING PER
COVERED EMPLOYEE
PER YEAR WHEN
COMPARED TO
BENCHMARKS

QUESTIONS

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