

# Population Health Report

## Workers Lifestyle Group

Blacktown Workers Club  
Blacktown Workers Sports Club



### Reporting period:

12 Dec 2022 - 29 Feb 2024

# Context, Purpose & Caveats



## Context & Purpose

The SiSU Health Population Health Report is designed to provide Health Station partners with an accurate, objective and comprehensive view of the physical and mental health of their customers or patrons, including risk prevalence.

## Privacy & Trust

Privacy and user trust are essential elements of an effective population health screening program and are also central to SiSU Health's operating model and role as a first-party data controller.

The de-identified data presented in this report has been captured with the express and explicit consent of participants for every health check, and in compliance with all data and privacy laws relevant to the jurisdiction where the health check was undertaken. The report also uses data aggregation techniques to ensure that participants cannot be identified specifically or deductively.

Health Station participants retain ultimate ownership of their data and may request to have it deleted or ported as per the principles of the GDPR which SiSU Health has adopted globally.

## Caveats

SiSU Health takes all reasonable measures to ensure the accuracy of data presented in this report, however it offers no warranty in this regard.

Analyses presented in this report are generated from the de-identified data of participating customers only, and are subject to selection bias. Extrapolations and projections are only used where explicitly stated. With higher rates of participation come higher rates of accuracy.

Decisions to act, or not, on the insights and opportunities presented in this report rest with the employer organisation.

SiSU Health also uses third party data to enrich analyses such as benchmarking and productivity and reviews these third party data sources and frameworks for relevance and accuracy on an annual basis.

## Copyright

Analytical processes and techniques used in this report remain the intellectual property and copyright of SiSU Health Group.

# Executive Summary



# Health & Activity Summary

## Demographics



**2** health station location(s)

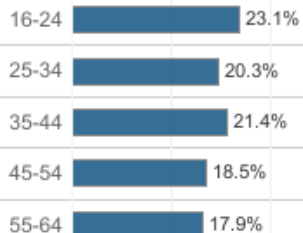
**4,928** health checks

**4,312**  
participants



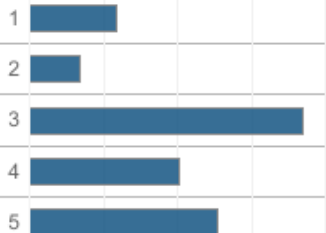
Median Age

**43**



Median Socio Economic Index (quintile)

**3**



## Health Risk Profile



**24.5%** of participants recorded high blood pressure ( $\geq 140/90$  mmHg).



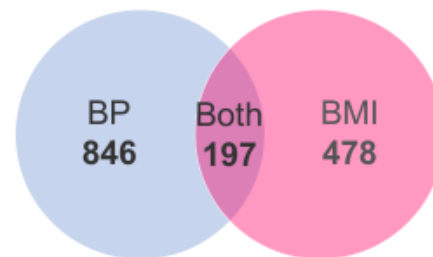
**67.3%** of participants were overweight or obese (BMI  $\geq 25$ ).



**16.3%** of participants stated that they are smokers



**1,521** health checks triggered a GP call-to-action for high BP ( $\geq 140/90$  mmHg) and/or high BMI ( $\geq 35$ ).



**2,242** participants had not received a blood pressure check in the previous 12 months.



Based on the AUSRISK Assessment

**182** (7.4%) participants are predicted to develop Type 2 Diabetes in the next 5 years.

# SiSU Health Station Activity Summary



## Total Health Checks

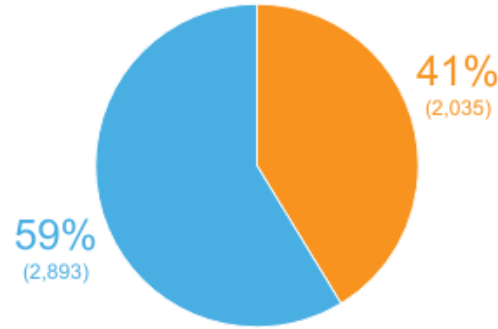
# 4,928

Health Checks by Month



Total Participants	Repeat Participants	Avg. Checks per Day
4,312	17.4%	11.1

## Health Checks by Sex



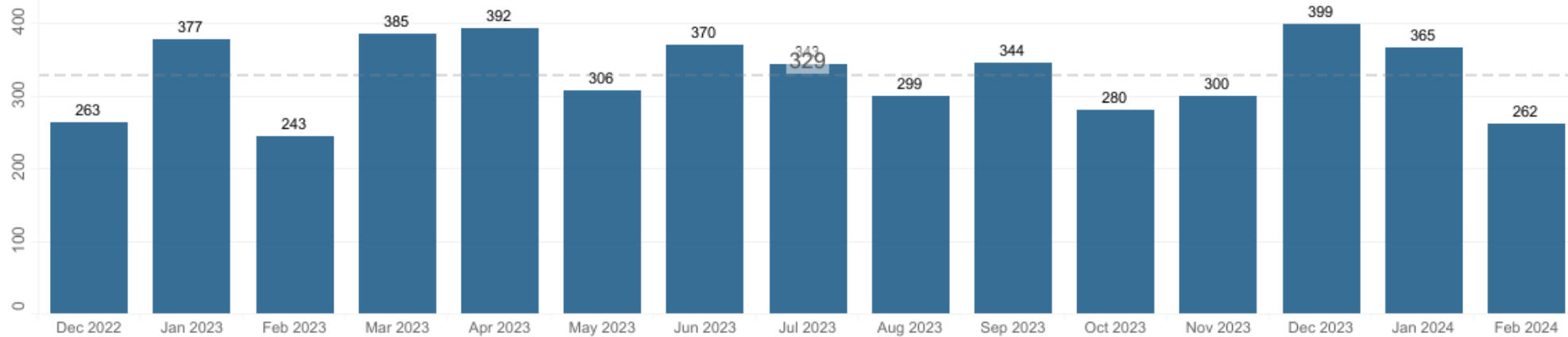
- Health Checks
- Female
- Participants
- Male

## Health Checks by Age Group & Sex

16 to 24	577	378	19.4%
25 to 34	503	329	16.9%
35 to 44	495	341	17.0%
45 to 54	471	322	16.1%
55 to 64	411	339	15.2%
65+	436	326	15.5%

## Health Checks by Month

Select Date Level: Month



# Participant Health Profile

- Blood Pressure (BP)
- Body Mass Index (BMI)
- Body Fat (BF) Percentage
- AUSDRISK (Type 2 diabetes)
- Smoking
- Perceived Stress Scale (PSS-4)



# Metrics that Matter



We focus on human health measures attributable to the greatest burden of disease risk and productivity loss

<h2>High Blood Pressure</h2> 	<h2>Obesity &amp; T2 Diabetes</h2> 	<h2>Smoking</h2> 	<h2>Perceived Stress</h2> 
<p>High blood pressure is the leading global preventable risk factor for cardiovascular disease accounting for 10.8 million deaths, or 19.2% of all deaths globally in 2019 (Murray et al., 2020).</p> <p>Measurement is key. In 2022, almost two-thirds (65.6%) of first-time SiSU Health Station users aged 35-64 (n 51,164) reported not having had their blood pressure measured in the last twelve months.</p> <p>From SiSU Health Station global data, on average 20% of health checks from participants aged 35-64 record a blood pressure above 140/90mmHg.</p>	<p>Excess weight and obesity (BMI 30+) are major contributing factors to the development of Type 2 diabetes and its complications for both sexes.</p> <p>Research by Wang, Li, Wang et al (2021) showed that compared to people with a normal BMI (18.5-25), prevalence of diabetes was 2.8 times higher amongst people with a BMI of between 30-35, and 4.6 times higher amongst people with a BMI of between 35-40.</p> <p>Additionally, obesity has also been associated with excess lost productivity in the workplace (from absenteeism and presenteeism), and that the amount of excess lost productivity increases as BMI category increases (Finkelstein et al. 2010).</p>	<p>Smoking tobacco is the world's second leading preventable disease risk factor attributable to 9.1 million deaths globally in 2019 (Murray et al., 2020).</p> <p>Tobacco use is causally linked to the burden of 41 individual diseases including 19 types of cancer and seven cardiovascular diseases (Australian Institute of Health And Welfare, 2021).</p> <p>Smoking is also a major contributor to lost productivity in workplaces with research estimating approximately 157.5 hours per smoker per annum of lost productivity; 76% of which is comprised of smoking breaks (Berman et al., 2014)</p>	<p>SiSU Health serves the Perceived Stress Scale 4 (PSS-4) on its health stations to measure perceived stress.</p> <p>Findings from research by Bui et al. (2021) suggests that there is a negative correlation between stress and workplace productivity, where higher stress scores are associated with lower productivity.</p>

Australian Institute of Health and Welfare (2021) Australian Burden of Disease Study 2018: Interactive data on risk factor burden, AIHW, Australian Government, accessed 17 August 2022.  
Berman, M., Crane, R., Seiber, E., & Munur, M. (2014). Estimating the cost of a smoking employee. *Tobacco control*, 23(5), 428-433. <https://doi.org/10.1136/tobaccocontrol-2012-050888>  
Bui, T., Zackula, R., Dugan, K., & Ablah, E. (2021). Workplace Stress and Productivity: A Cross-Sectional Study. *Kansas Journal of Medicine*, 14(1). <https://doi.org/10.17161/kjm.vol1413424>  
Finkelstein, E. A., DiBonaventura, M. d., Burgess, S. M., & Hale, B. C. (2010). The costs of obesity in the workplace. *Journal of occupational and environmental medicine*, 52(10), 971-976. <https://doi.org/10.1097/JOM.0b013e3181f274d2>  
Murray, Christopher J L et al. (2020). Global burden of 87 risk factors in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet*, 396(10258) 1223-1249.  
Wang L, Li X, Wang Z, et al. Trends in Prevalence of Diabetes and Control of Risk Factors in Diabetes Among US Adults, 1999-2018. *JAMA*. 2021;326(8):704-716. <https://doi.org/10.1001/jama.2021.9883>

# A Note on Deductive Identification Control

## Deductive Identification Control

In any aggregated reporting, there is a risk of deductive identification of individuals where demographic breakdowns of the health risks profile (whether by sex, age group, or location) comprise low numbers of participation.

To mitigate against deductive identification, and preserve participants' privacy, SiSU Health Station reports feature in-built filtering to automatically exclude breakdowns where the *n* of Health Checks is below a pre-determined minimum threshold.

The summary table to the right provides an overview of the location/sex breakdowns which are included and excluded from the health risk profile breakdowns in this report.

Current Minimum Threshold set at:

**10**  
health checks

Note: Locations where there are zero checks for either gender will be excluded from the summary table altogether

Adjust minimum threshold:  
10



Excluded from breakdown  
(n of checks below 10)



Included in breakdown  
(n of checks 10 or above)



Blood Pressure



Body Fat %



Smoking



Body Mass Index



AUSDRISK



Perceived Stress

		Blood Pressure	Body Fat %	Smoking	Body Mass Index	AUSDRISK	Perceived Stress
Female	Blacktown Workers Club	✓	✓	✓	✓	✓	✓
	Blacktown Workers Sports Club	✓	✓	✓	✓	✓	✓
Male	Blacktown Workers Club	✓	✓	✓	✓	✓	✓
	Blacktown Workers Sports Club	✓	✓	✓	✓	✓	✓



# Health Risk Categories by Sex

(based on participants' most recent health check)



**High blood pressure:** 140/90+ mm/Hg measured by SiSU Health Station

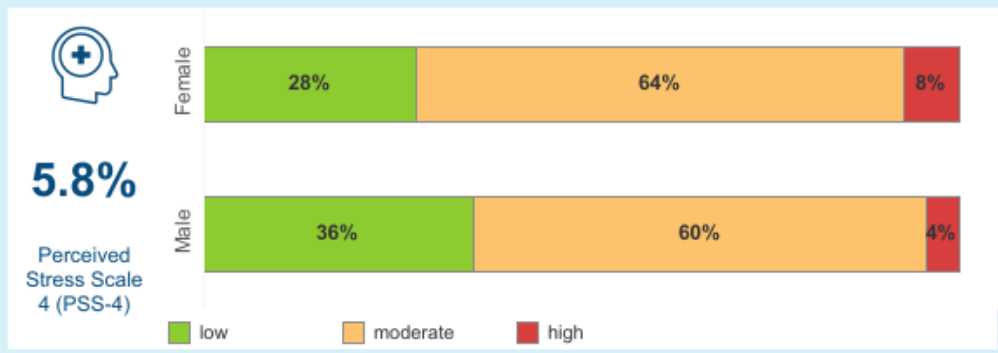
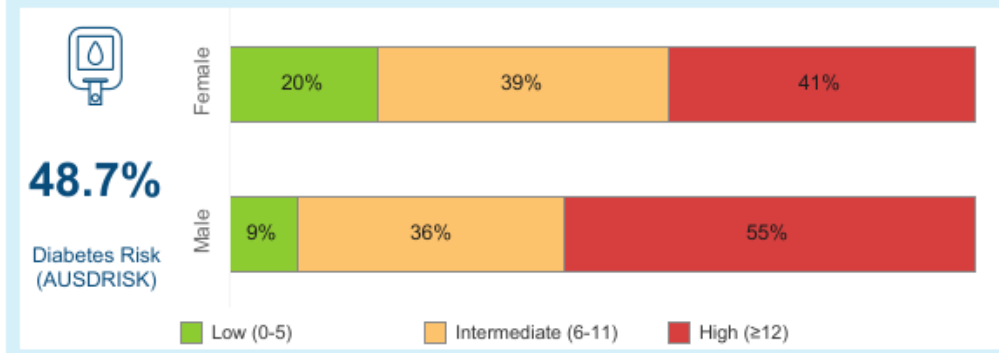
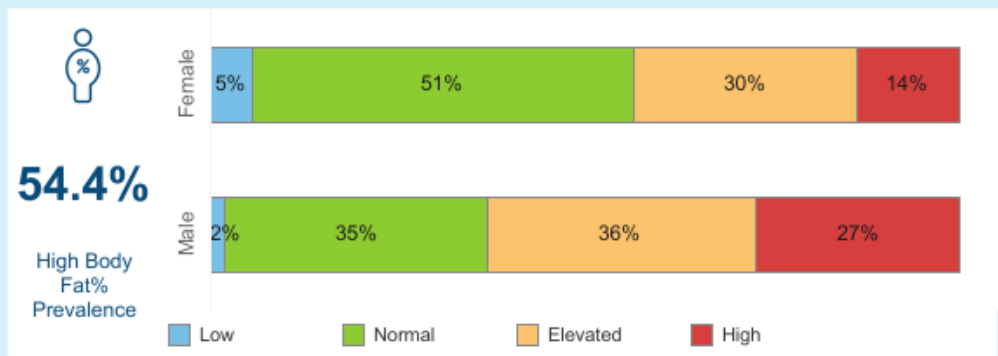
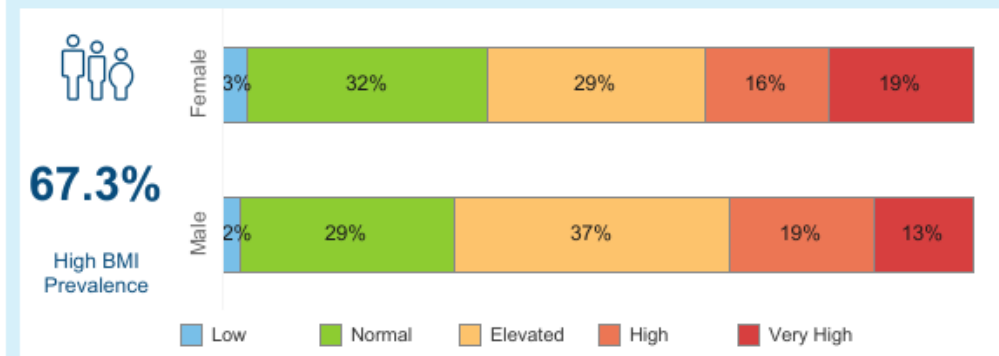
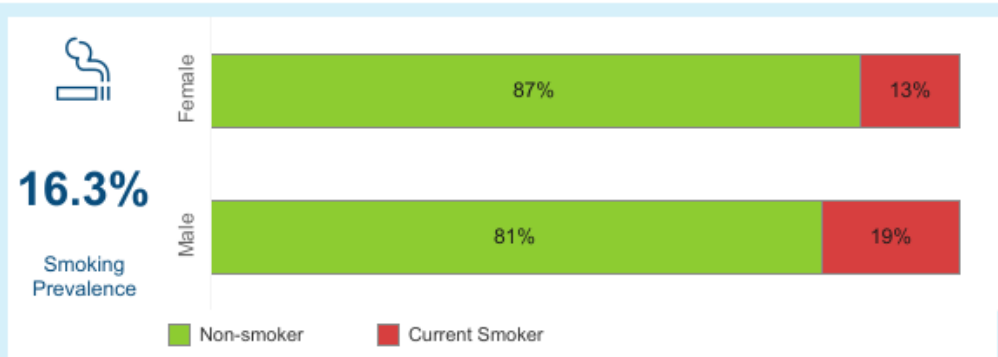
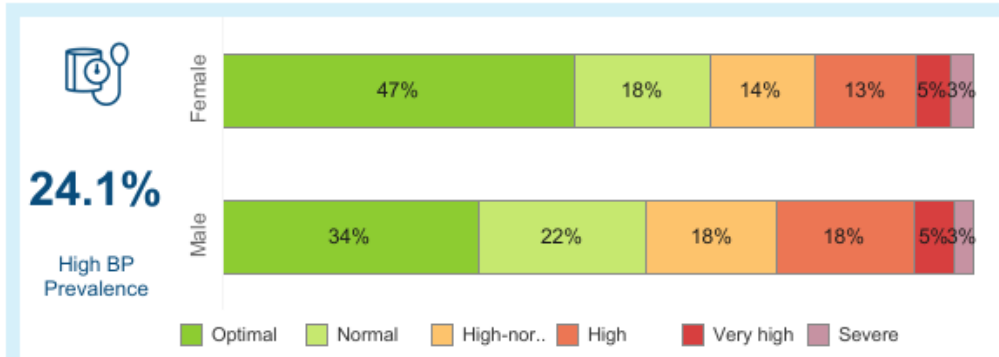
**High BMI:** 25+ calculated from SiSU Health Station measured height and weight

**High diabetes risk:** Score  $\geq 12$  points in AUSDRISK survey

**Smoking:** Self-reported current smoker

**High body fat%:** Elevated or High rating from body fat%.

**High stress:** Score  $\geq 11$  points in PSS-4 survey



# Blood Pressure Risk Ratings by Sex & Age Group

(based on participants' most recent health check)



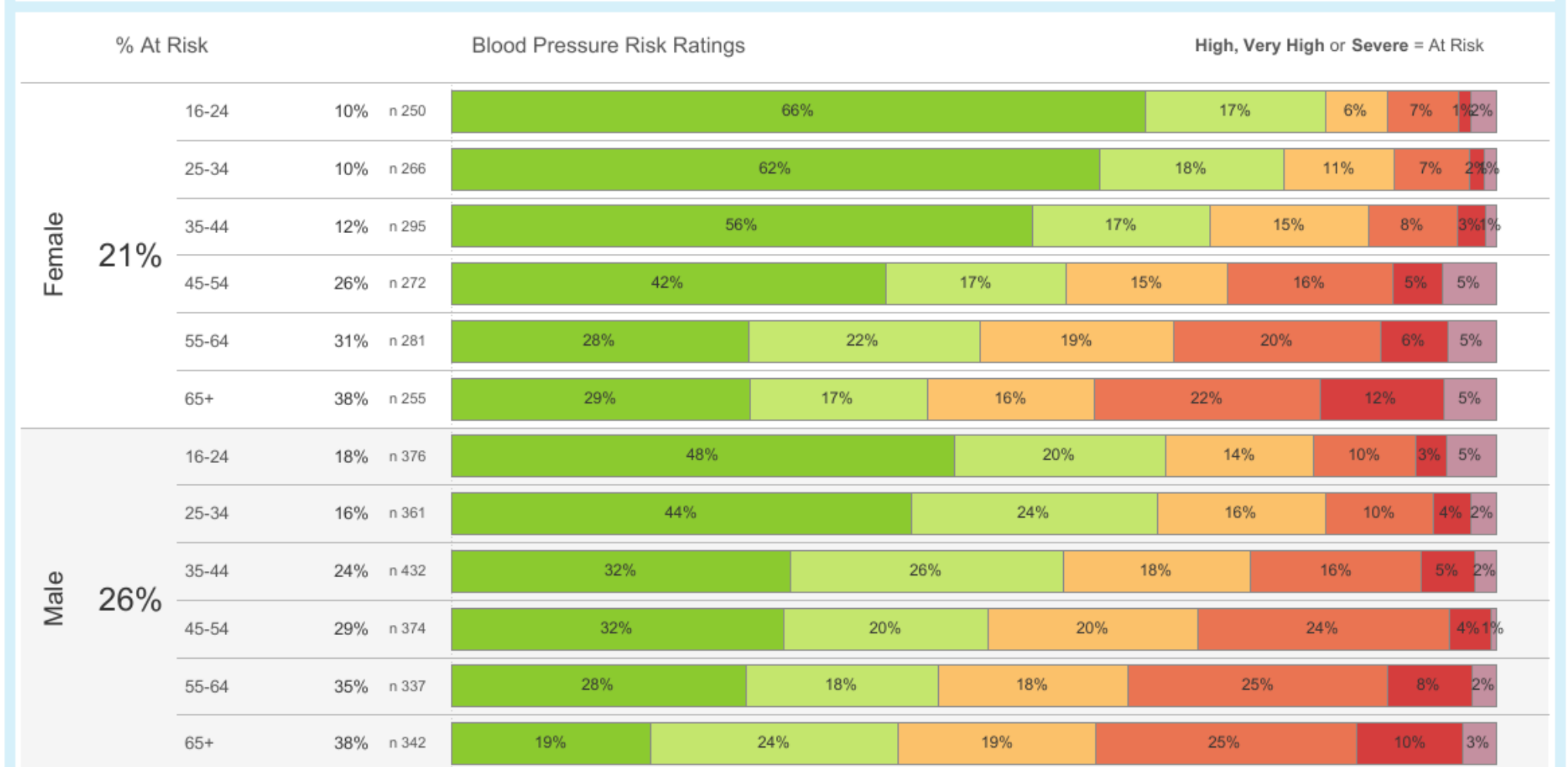
Total BP Checks  
**4,236**

Total Participants  
**3,799**

Overall BP Risk  
(140/90+ mmHg)  
**24.1%**

BP GP Calls-to-Action  
(140/90+ mmHg)  
**1,043**

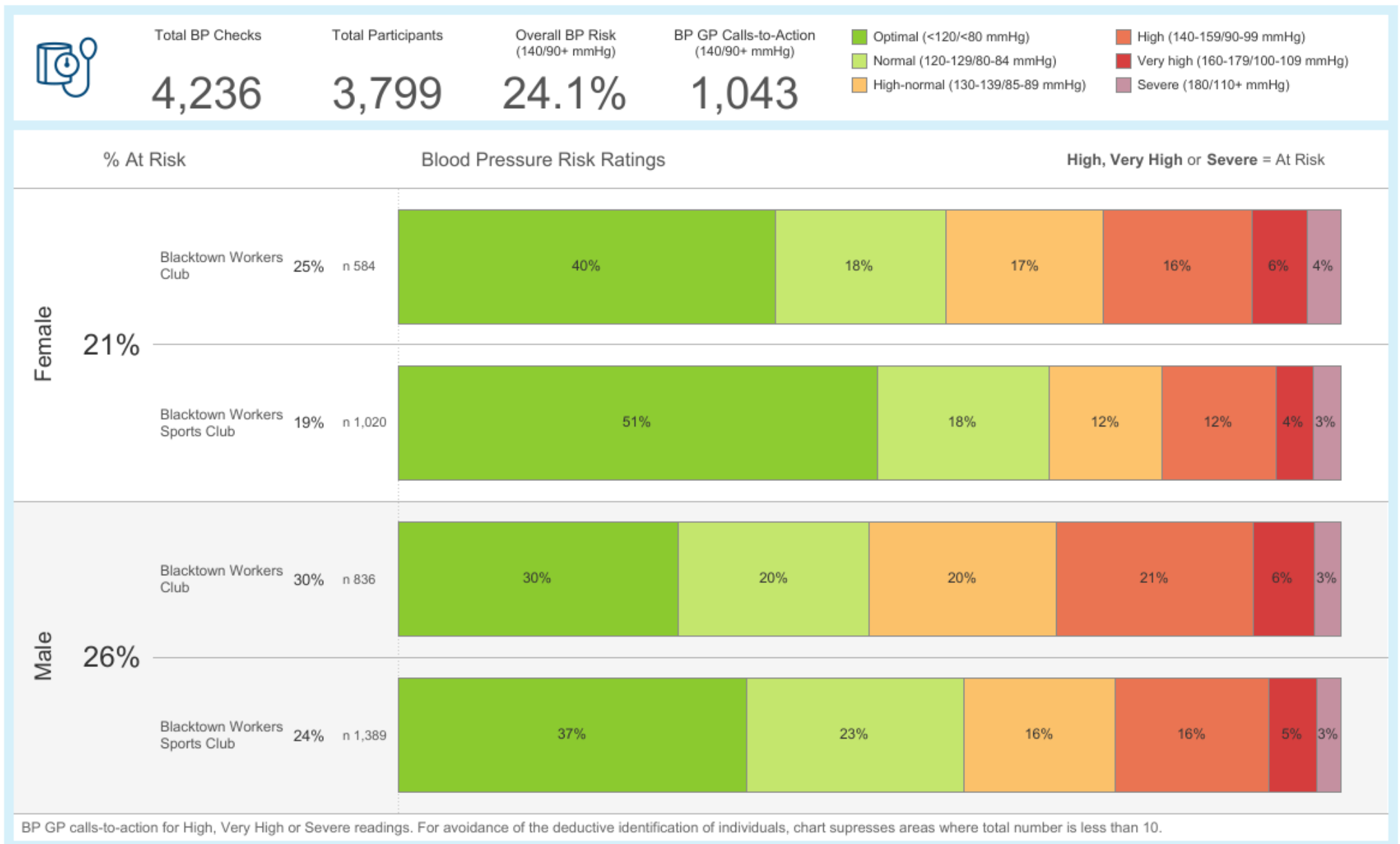
- Optimal (<120/<80 mmHg)
- Normal (120-129/80-84 mmHg)
- High-normal (130-139/85-89 mmHg)
- High (140-159/90-99 mmHg)
- Very high (160-179/100-109 mmHg)
- Severe (180/110+ mmHg)



BP GP calls-to-action for High, Very High or Severe readings. For avoidance of the deductive identification of individuals, chart suppresses areas where total number is less than 10.

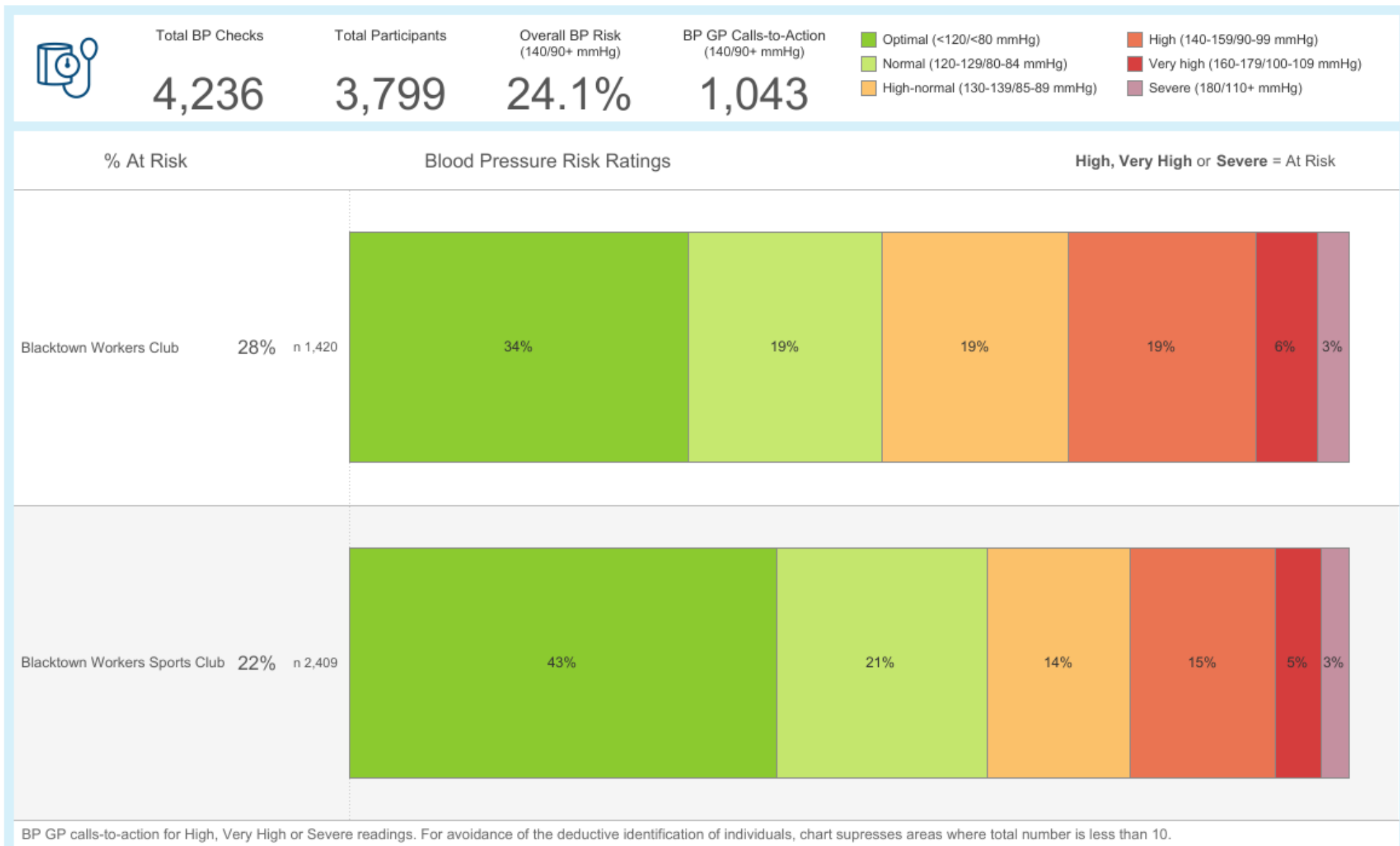
# Blood Pressure Risk Ratings by Sex & Location

(based on participants' most recent health check)



# Blood Pressure Risk Ratings by Location

(based on participants' most recent health check)



# Body Mass Index Risk (BMI) Ratings by Sex & Age Group

(based on participants' most recent health check)



Total BMI Checks

4,251

Total Participants

3,763

BMI Risk (25+)

67.3%

BMI GP Calls-to-Action (35+)

675 (15.9%)

Low (<18.5)  
Normal (18.5-25)  
Elevated (25-30)

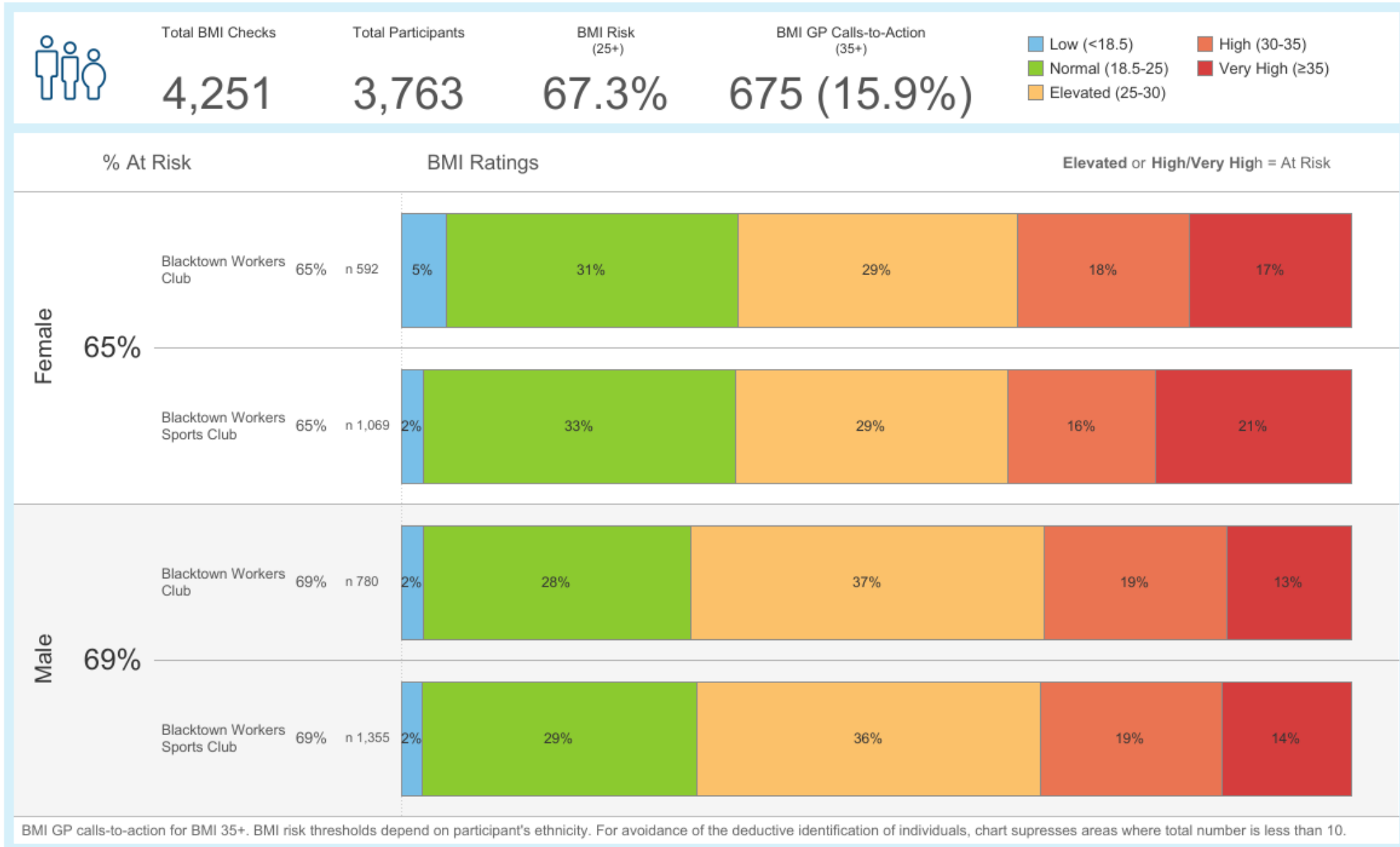
High (30-35)  
Very High (≥35)

		% At Risk	BMI Ratings					Elevated or High/Very High = At Risk	
Female	65%	16-24	55%	n 320	7%	39%	19%	13%	23%
		25-34	64%	n 275	3%	33%	25%	17%	23%
		35-44	71%	n 292	2%	27%	38%	17%	16%
		45-54	71%	n 265	0%	28%	31%	22%	18%
		55-64	66%	n 271	3%	31%	29%	17%	20%
		65+	63%	n 251	3%	33%	33%	15%	15%
Male	69%	16-24	56%	n 453	6%	39%	31%	15%	9%
		25-34	69%	n 378	3%	28%	33%	20%	16%
		35-44	74%	n 397	1%	25%	38%	21%	15%
		45-54	79%	n 343	1%	20%	40%	21%	17%
		55-64	75%	n 298	1%	24%	39%	22%	13%
		65+	66%	n 269	2%	32%	42%	14%	10%

BMI GP calls-to-action for BMI 35+. BMI risk thresholds depend on participant's ethnicity. For avoidance of the deductive identification of individuals, chart suppresses areas where total number is less than 10.

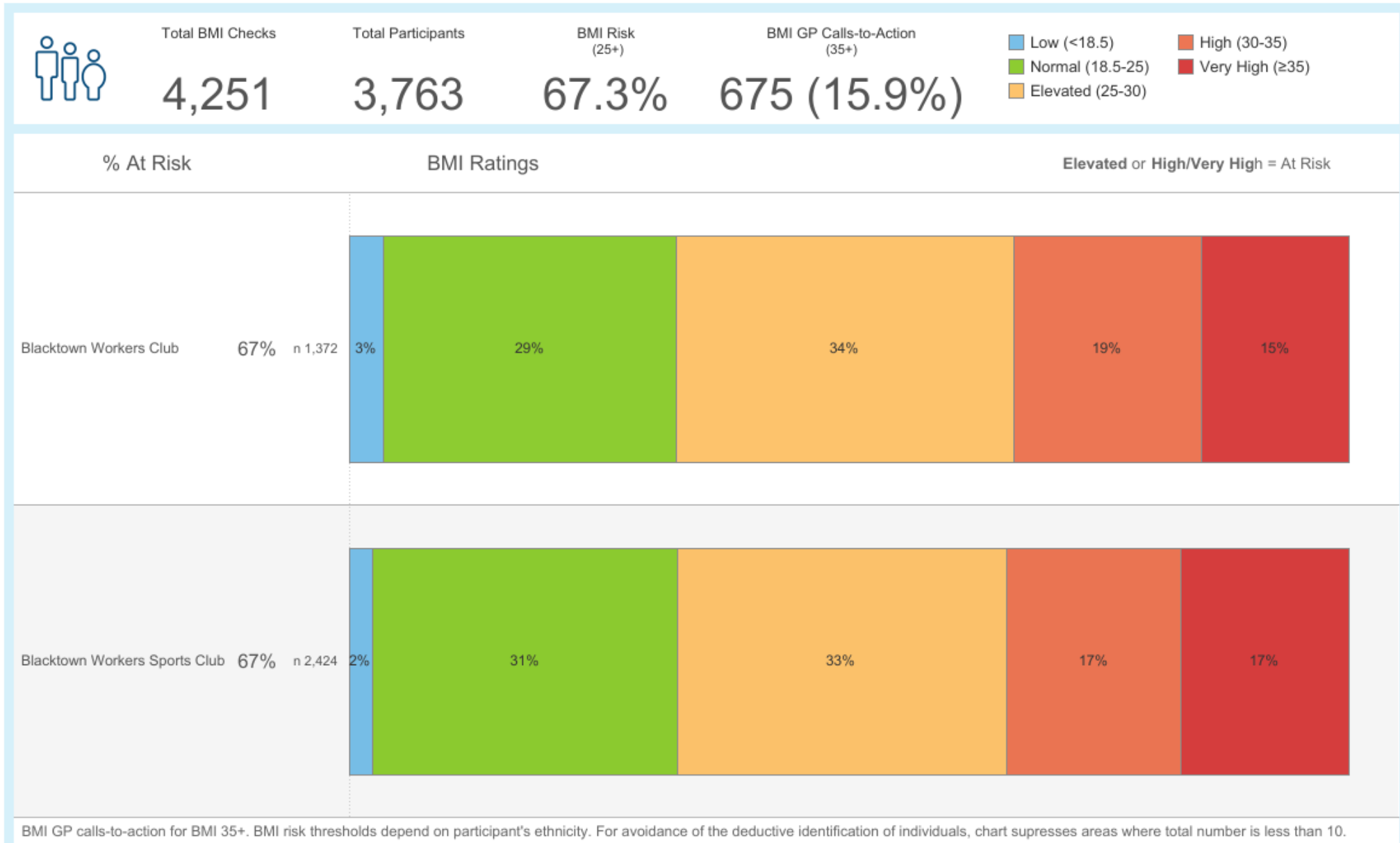
# Body Mass Index Risk (BMI) Ratings by Sex & Location

(based on participants' most recent health check)



# Body Mass Index Risk (BMI) Ratings by Location

(based on participants' most recent health check)



BMI GP calls-to-action for BMI 35+. BMI risk thresholds depend on participant's ethnicity. For avoidance of the deductive identification of individuals, chart suppresses areas where total number is less than 10.

# Body Fat Percentage Risk Ratings by Sex & Age Group

(based on participants' most recent health check)



Total Body Fat Checks

3,247

Total Participants

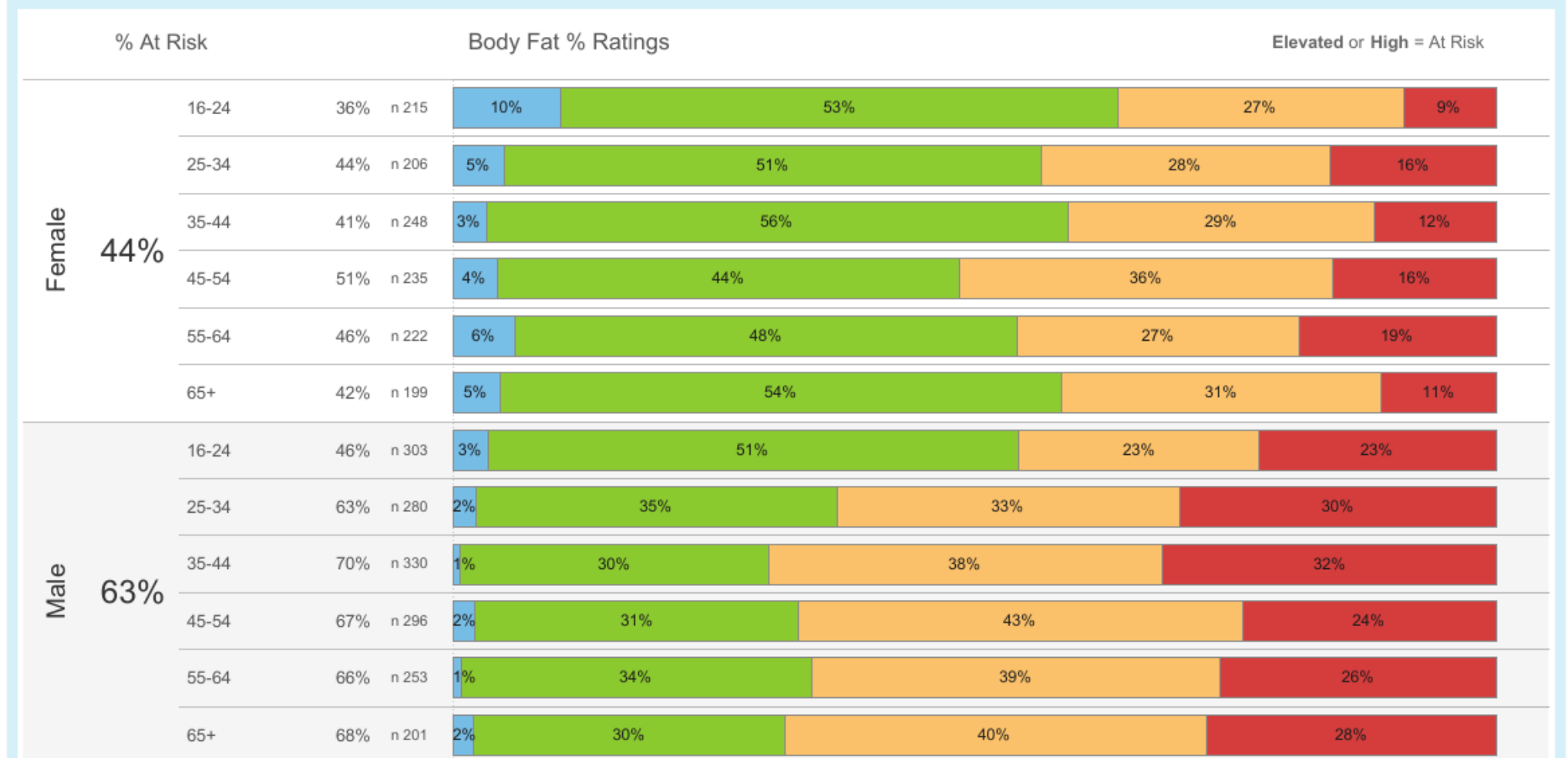
2,955

High BF % Risk

54.4%

■ Low 
 ■ Normal 
 ■ Elevated 
 ■ High

Refer to Glossary for Body Fat % Risk Range definitions.

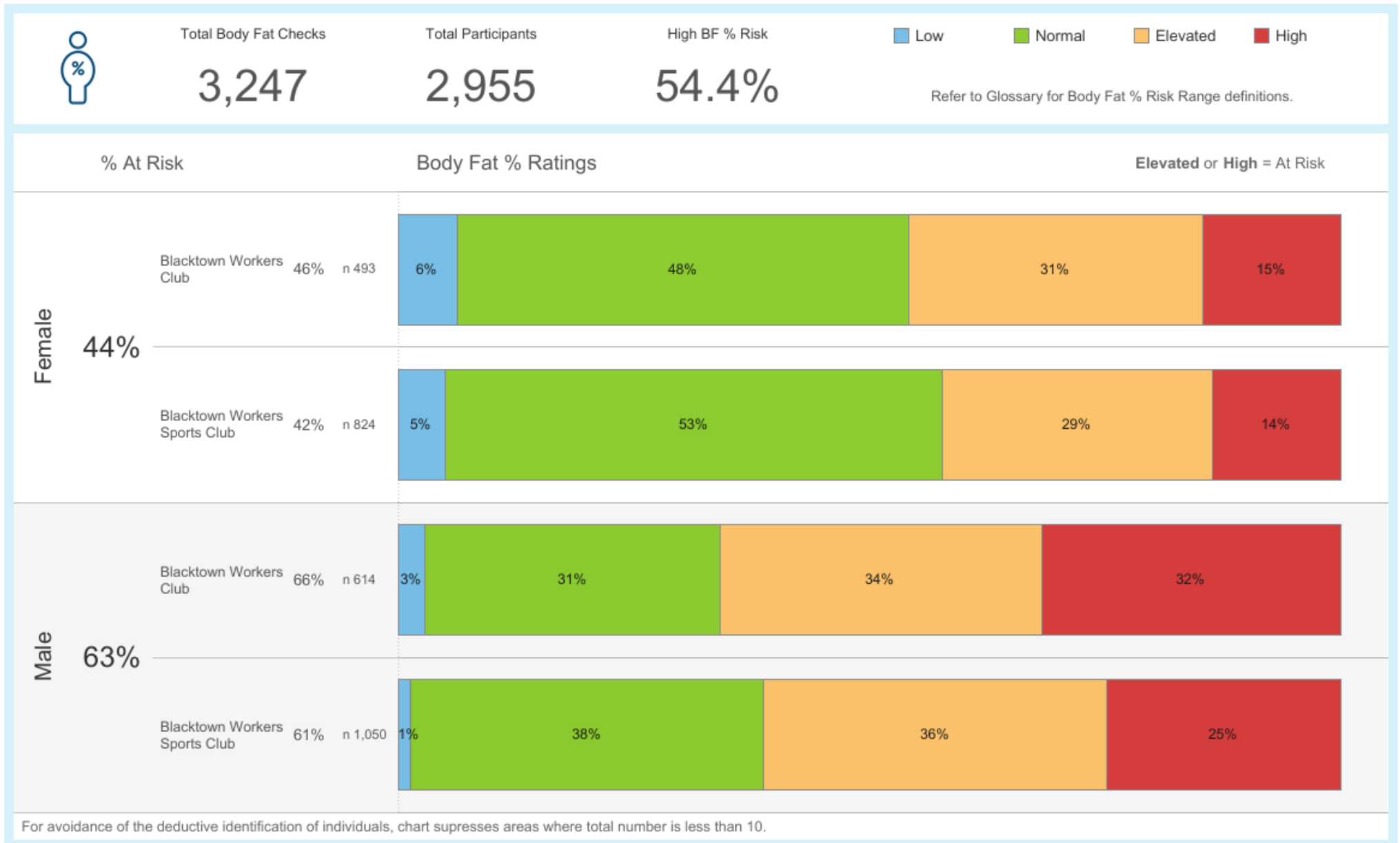


For avoidance of the deductive identification of individuals, chart suppresses areas where total number is less than 10.



# Body Fat Percentage Risk Ratings by Sex & Location

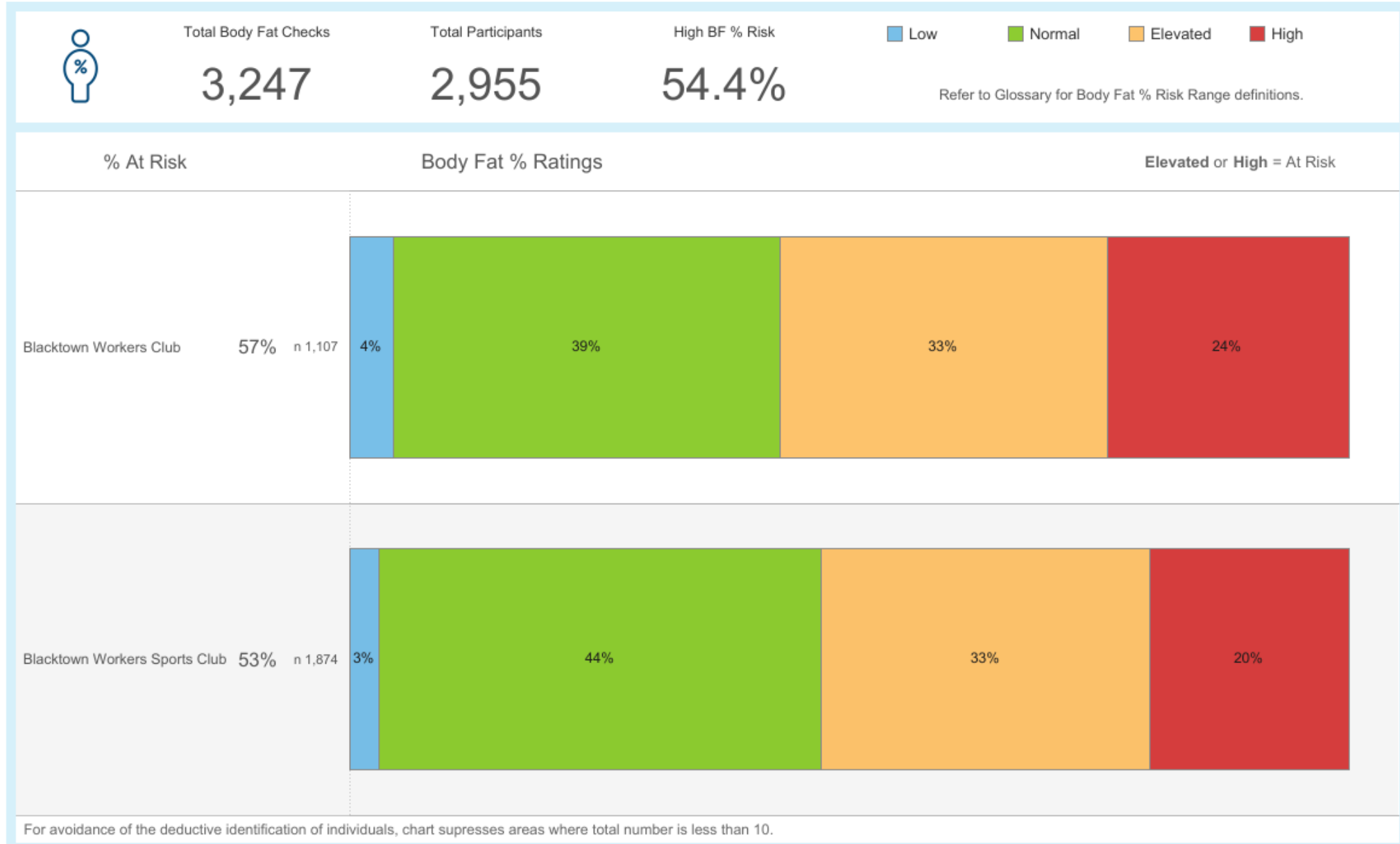
(based on participants' most recent health check)



For avoidance of the deductive identification of individuals, chart suppresses areas where total number is less than 10.

# Body Fat Percentage Risk Ratings by Location

(based on participants' most recent health check)



# Diabetes Risk (AUSDRISK) by Sex & Age Group

(based on participants' most recent health check)



Total Responses

2,637

Total Participants

2,443

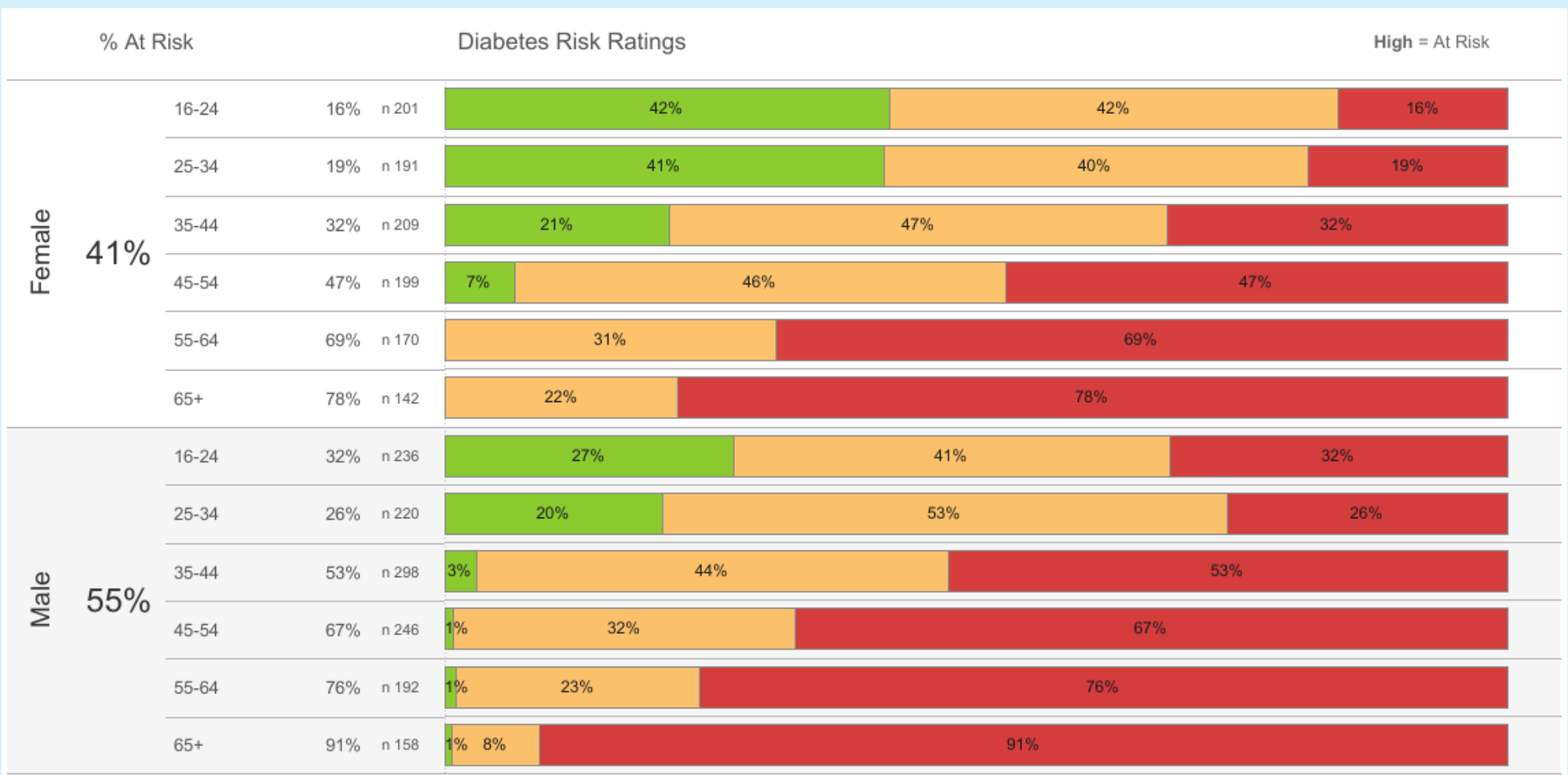
Diabetes Risk

48.7%

Low (0-5)

Intermediate (6-11)

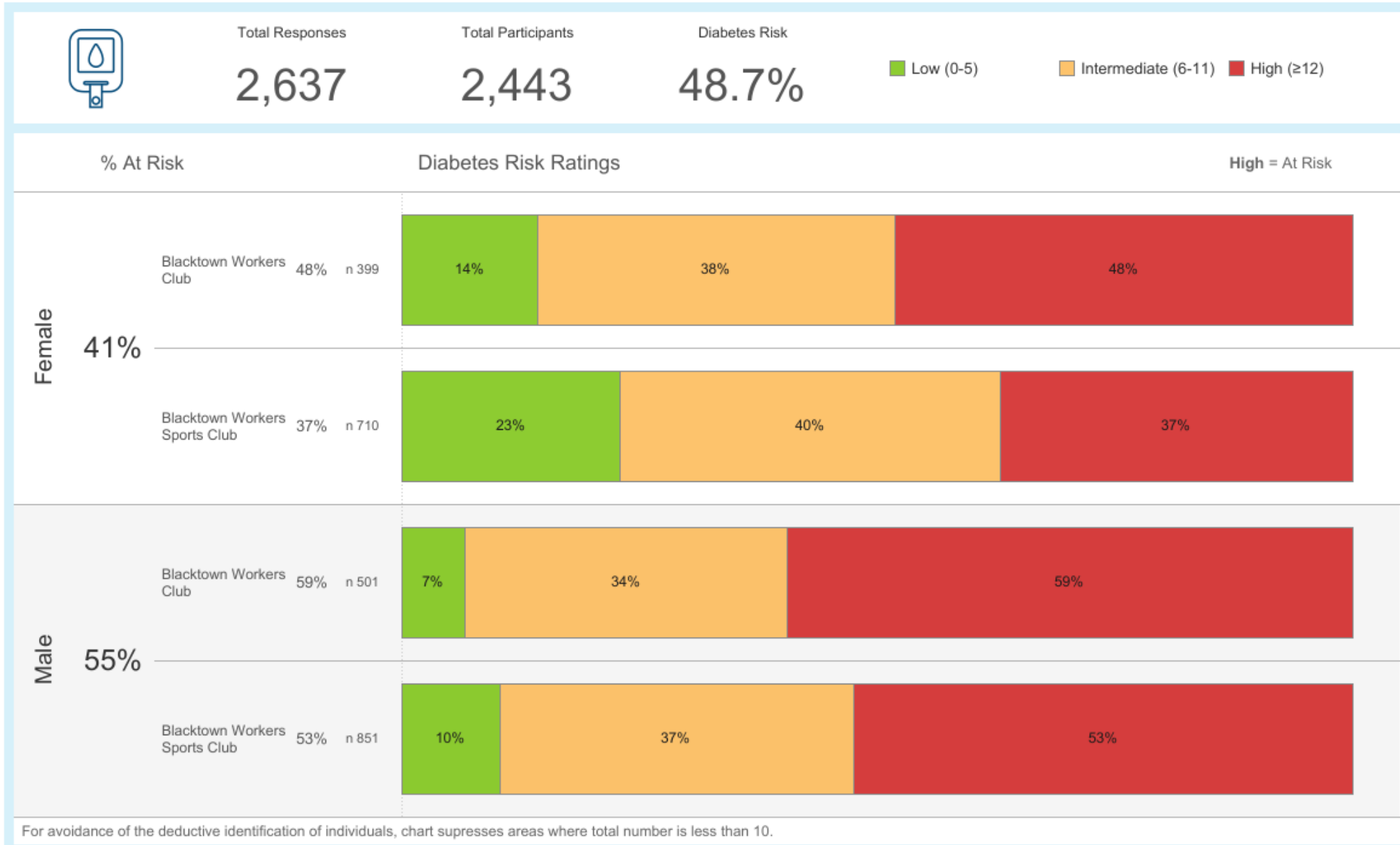
High (≥12)



For avoidance of the deductive identification of individuals, chart suppresses areas where total number is less than 10.

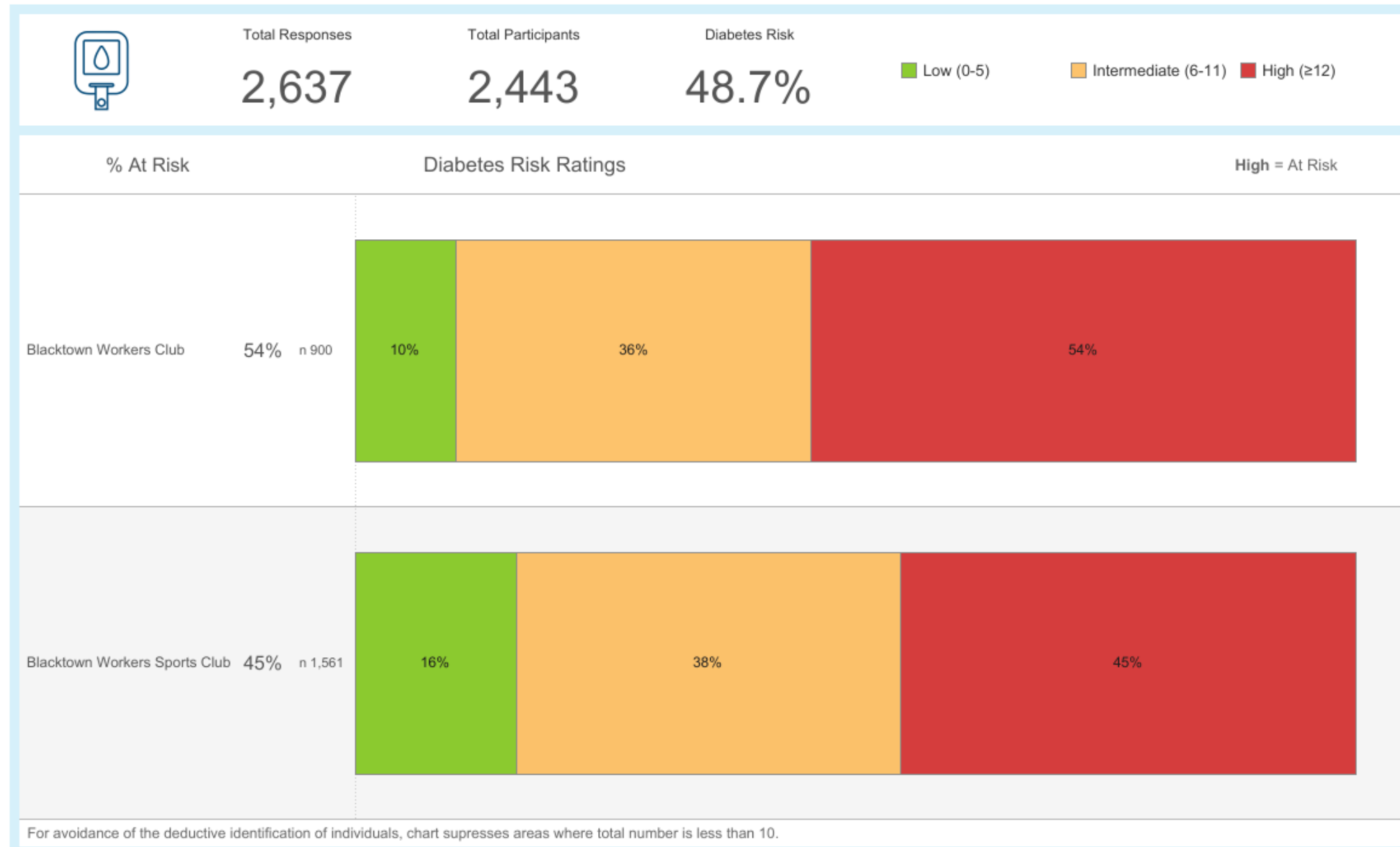
# Diabetes Risk (AUSDRISK) by Sex & Location

(based on participants' most recent health check)



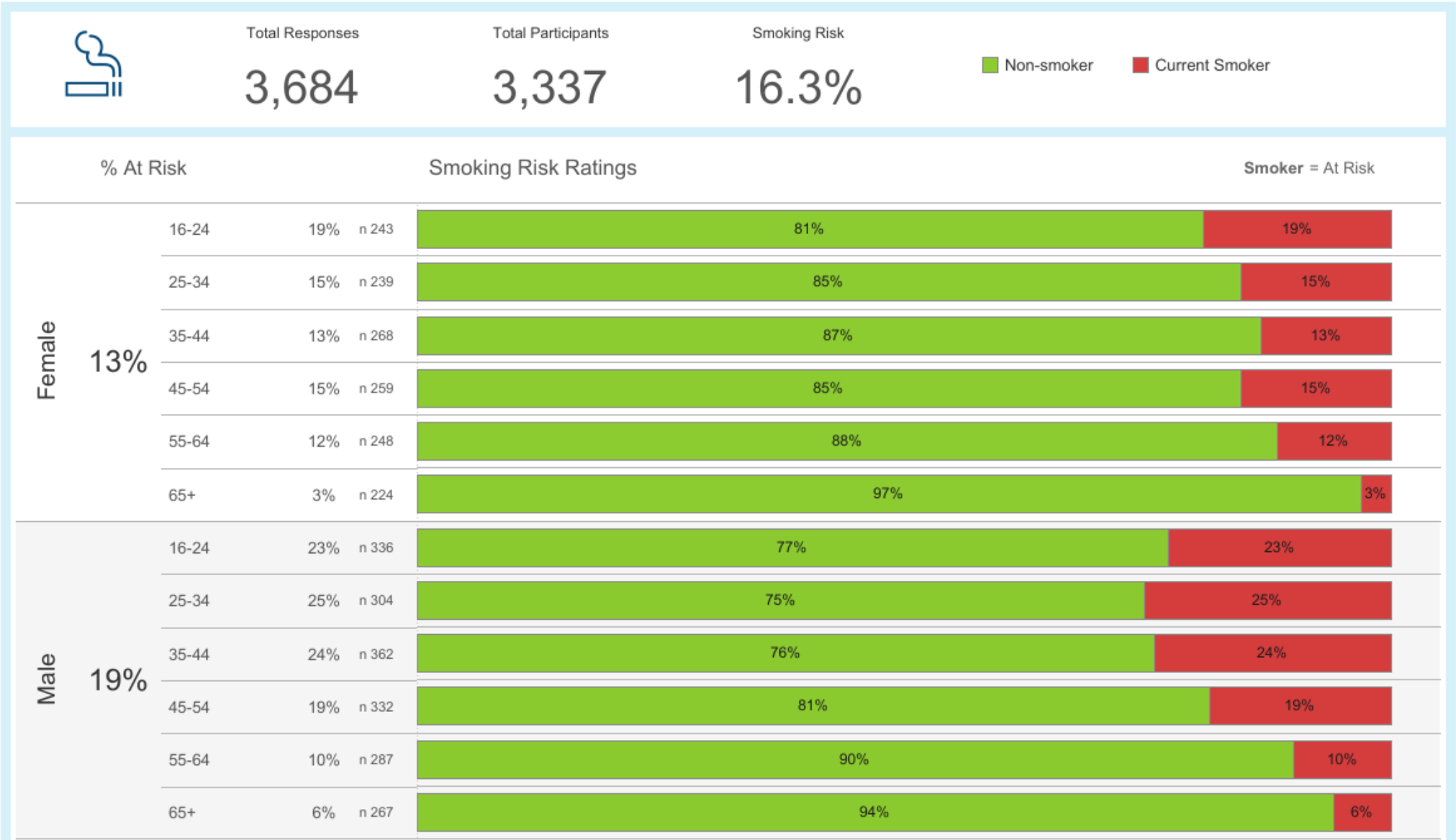
# Diabetes Risk (AUSDRISK) by Location

(based on participants' most recent health check)



# Smoking Prevalence by Sex & Age Group

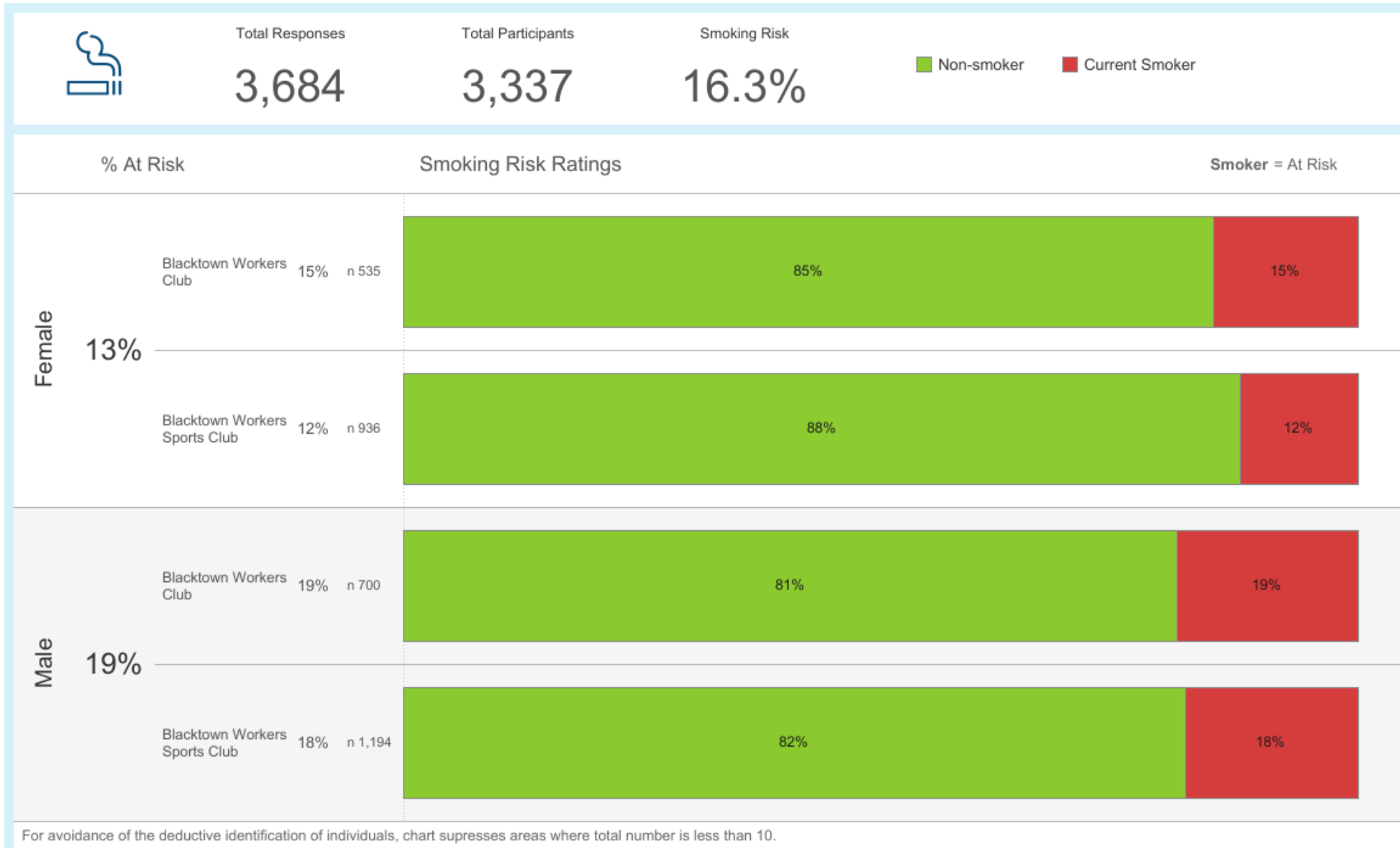
(based on the most recent health check)



For avoidance of the deductive identification of individuals, chart suppresses areas where total number is less than 10.

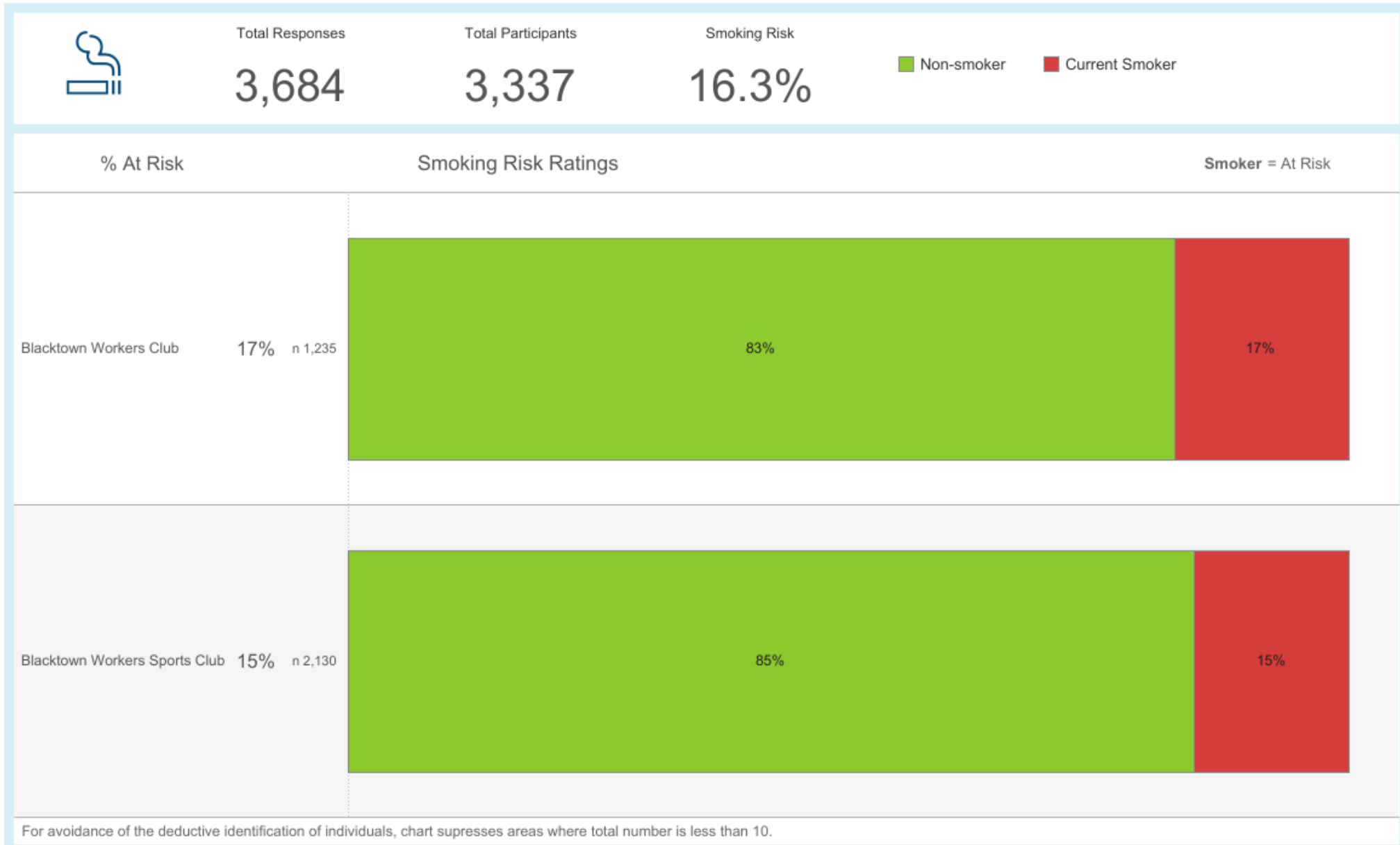
# Smoking Prevalence by Sex & Location

(based on the most recent health check)



# Smoking Prevalence by Location

(based on the most recent health check)





# Perceived Stress Scale 4 (PSS-4) by Sex & Age Group

(based on the most recent response)



Total Responses

3,034

Total Participants

2,819

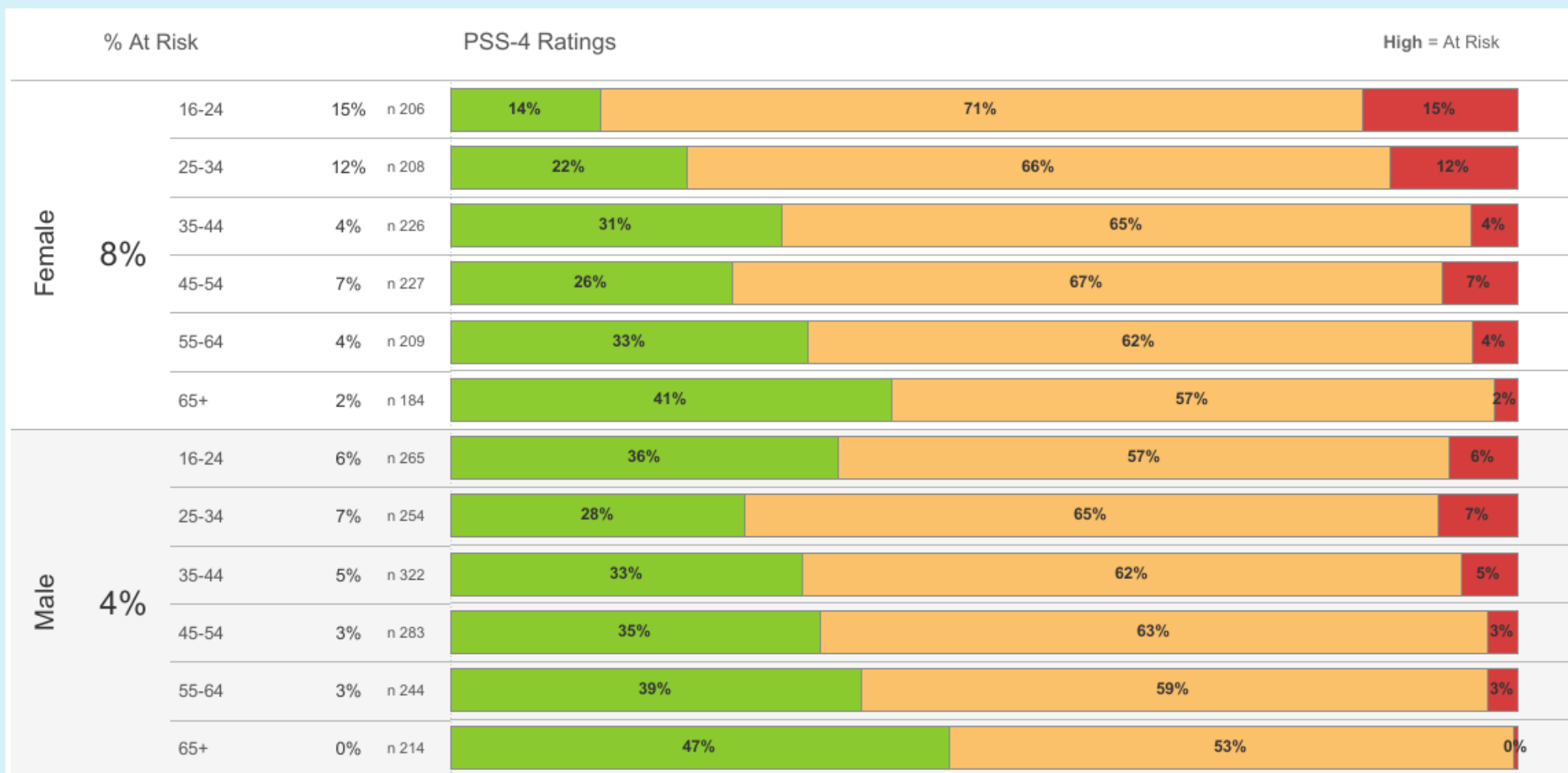
High PSS-4  
(11+ points)

5.7%

low

moderate

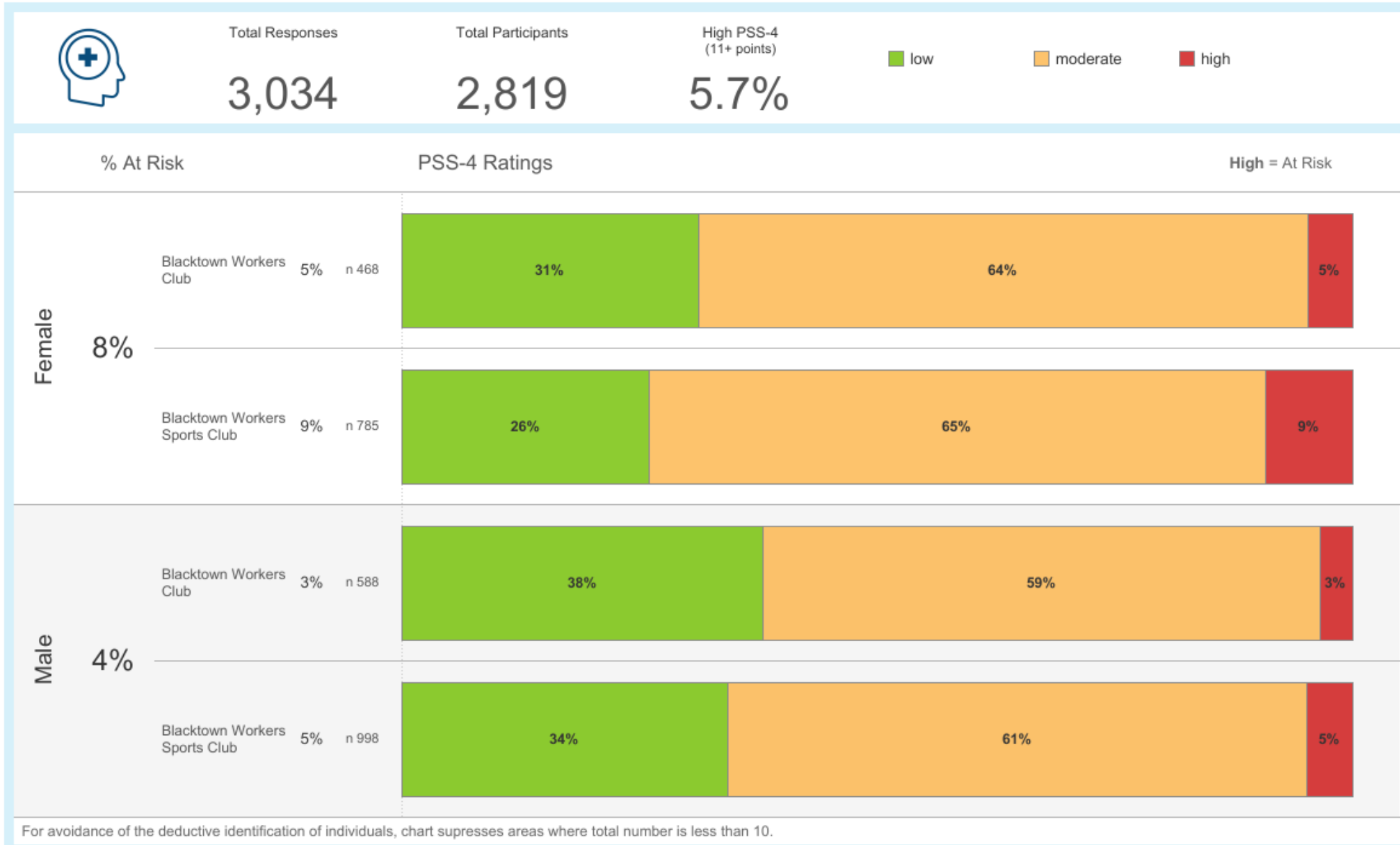
high



For avoidance of the deductive identification of individuals, chart suppresses areas where total number is less than 10.

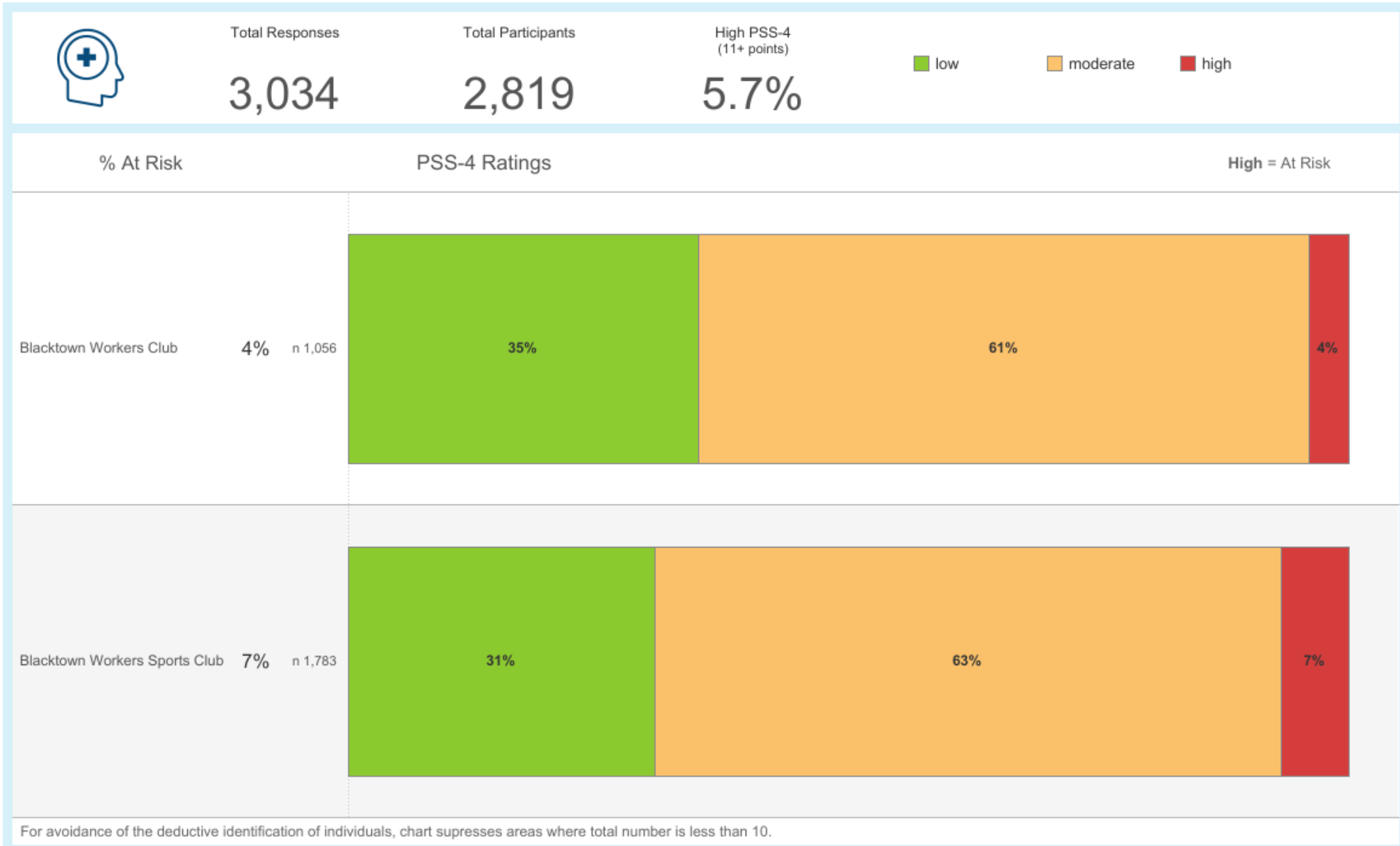
# Perceived Stress Scale 4 (PSS-4) by Sex & Location

(based on the most recent response)



# Perceived Stress Scale 4 (PSS-4) by Location

(based on the most recent response)



# SiSU Population Health Benchmarking



# SiSU Demographic Benchmarking Comparisons



**CLIENT**  
**Workers Lifestyle Group**



Total Participants  
**4,312**

Median age (yrs)  
**43**

**COUNTRY**  
**Australian Adult Population (Census 2016)**



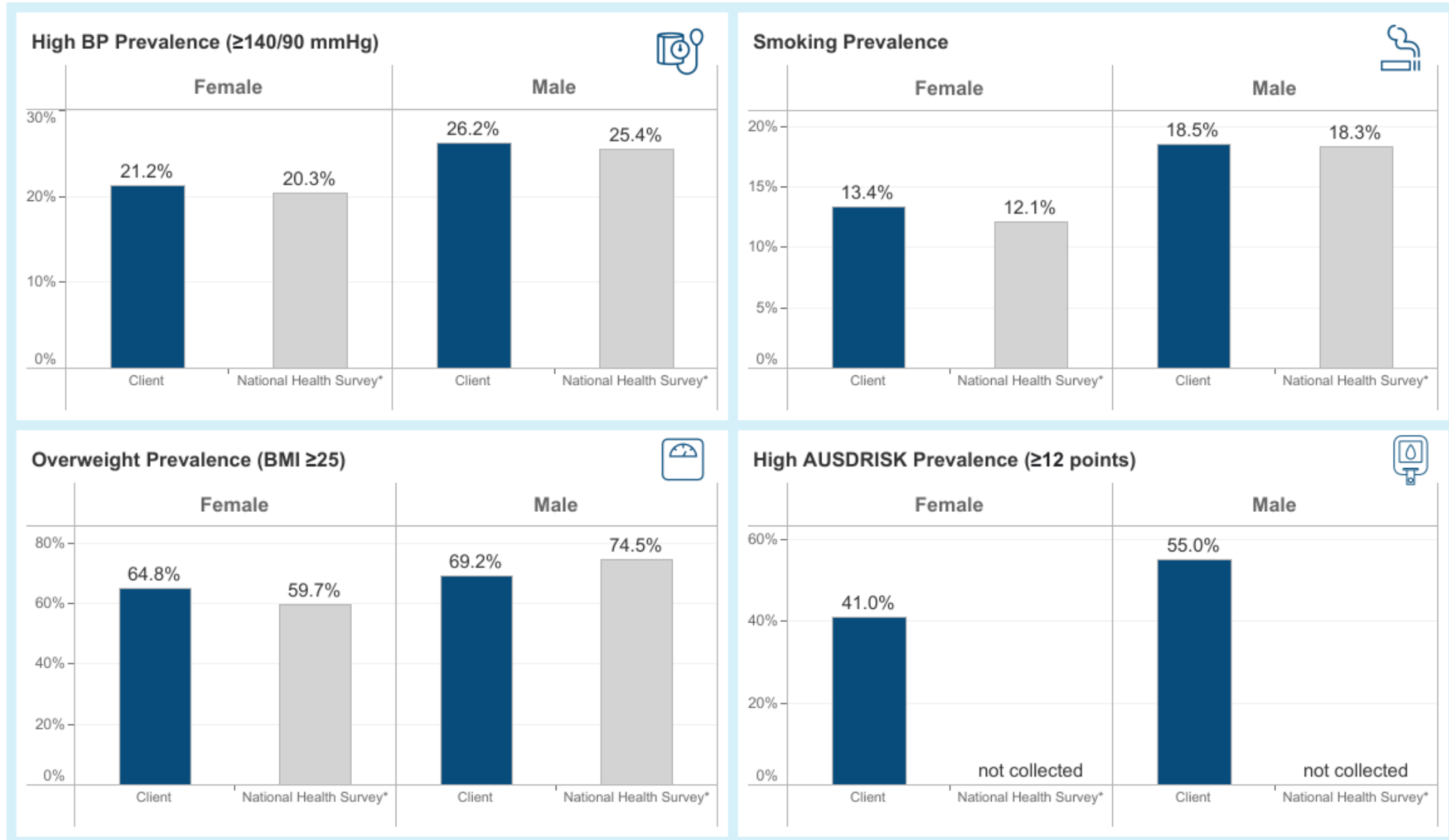
Total Adult Population  
**18,730,676**

Median Age (yrs)  
**45**

## % Participant by Sex & Age Group

	16-24		25-34		35-44		45-54		55-64	
<b>Female</b>	18.8%	15.3%	16.8%	18.4%	17.5%	16.4%	15.7%	16.2%	16.6%	14.5%
<b>Male</b>	20.1%	16.5%	17.5%	18.7%	18.6%	16.7%	15.8%	16.0%	14.2%	14.3%
	Client	Census 2016	Client	Census 2016	Client	Census 2016	Client	Census 2016	Client	Census 2016

# SiSU Health Risk Benchmark Comparisons



\* National Health Survey data are from Australian Bureau Statistics (ABS) 2017-18: <https://www.abs.gov.au/statistics/health/health-conditions-and-risks/national-health-survey-first-results/latest-release>

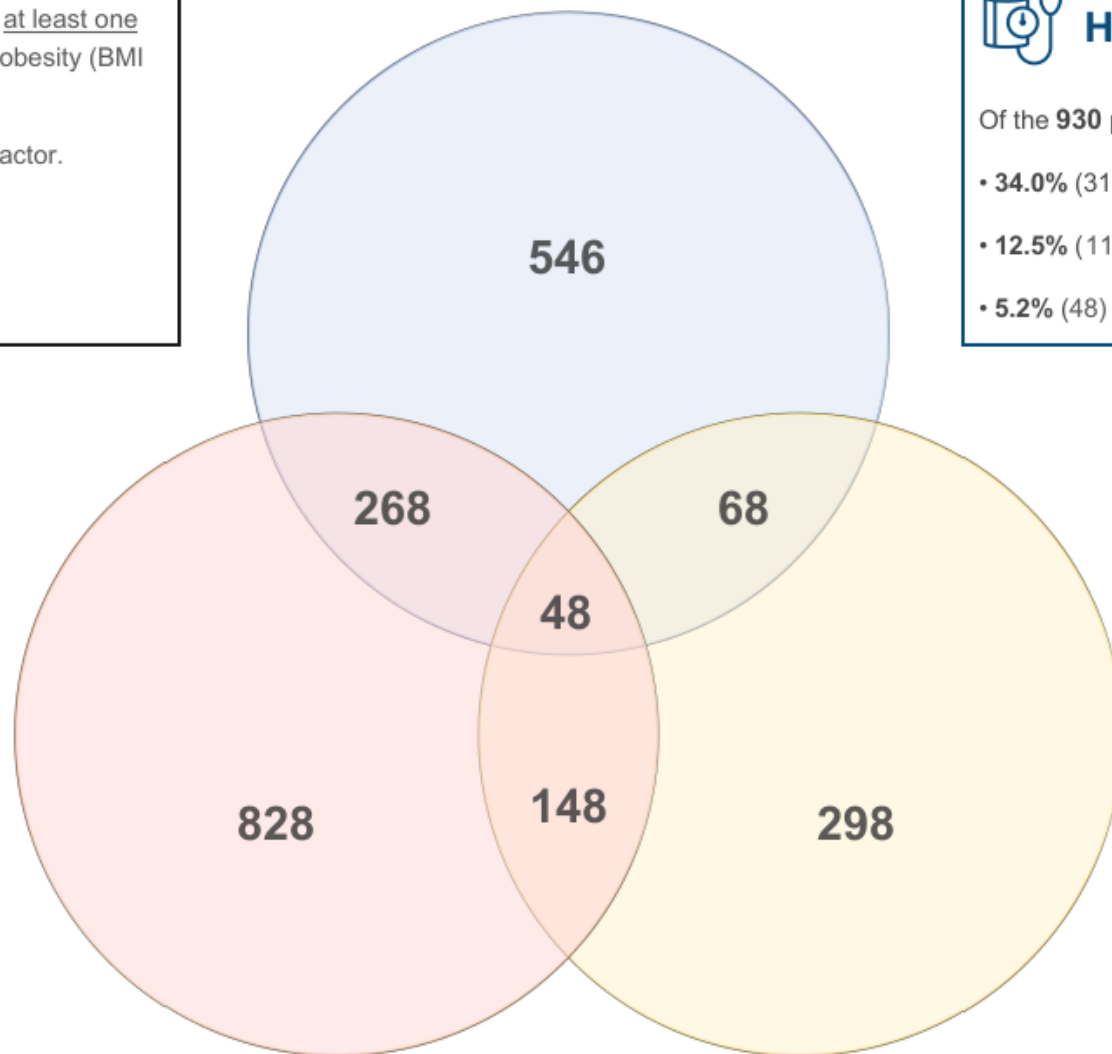
# Multiple Health Risk Co-morbidities


**2,204** participants recorded at least one risk factor of high blood pressure, obesity (BMI 30+) or smoking.

**75.9%** (1,672) had only one risk factor.

**22.0%** (484) had two risk factors.

**2.2%** (48) had three risk factors.



 **High Blood Pressure**

Of the **930** participants with high BP:

- **34.0%** (316) were also obese
- **12.5%** (116) also smoke
- **5.2%** (48) were obese and smoke

 **Obesity**  
(BMI ≥30)

Of the **1,292** obese participants:

- **24.5%** (316) also recorded high BP
- **15.2%** (196) also smoke
- **3.7%** (48) smoke AND recorded high BP

 **Smoking**

Of the **562** participants who smoke:

- **20.6%** (116) also recorded high BP
- **34.9%** (196) were also obese
- **8.5%** (48) recorded high blood pressure and were obese

# Health Outcome Analysis

Health Outcome Analysis presents a profile of the **net health risks change** in the cohort of participants who did at least 2 health checks by calculating the difference between their first and most recent measurement for each key health metric.

Health metrics currently included are:

- Blood pressure (BP) risk prevalence and rating
- Body mass index (BMI) risk prevalence and rating
- Body fat (BF) percentage risk prevalence and rating
- Smoking prevalence
- Weight change (kg)





# Health Outcome Analysis

Repeat Participant Health Change



## Health Outcome Analysis™

The **Health Outcome Analysis™** presents a profile of the **net health change** in the repeat participant cohort through comparison of their initial and most recent measurement for each key health metric.

Participants must complete at least two measurements in their SiSU Station history for each respective risk factor to be included in the analysis.

A participant needs to only complete one health check at a given store during the month to be included in the analysis for that location, as long as they had done at least two health checks in their whole SiSU Station History.

Participants with shared SiSU accounts are excluded from the analysis, and participants who have reported pregnancy in their SiSU Station history are excluded from the Body Fat, BMI and Weight Change analysis.

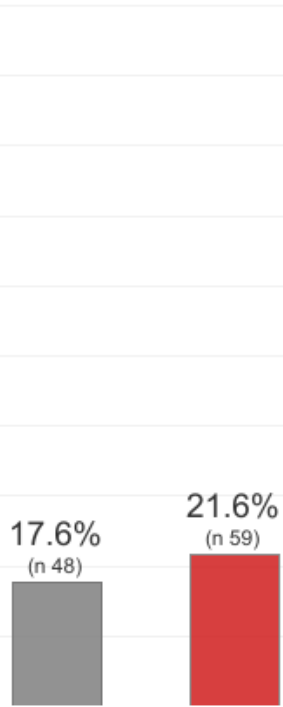


### High BP Change

▲ 22.9%

275 repeat participants

Initial High BP	Current High BP
17.6% (n 48)	21.6% (n 59)

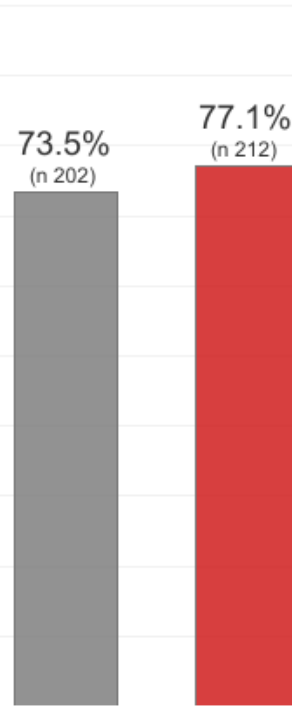


### High BMI Change

▲ 5.0%

281 repeat participants

Initial High BMI	Current High BMI
73.5% (n 202)	77.1% (n 212)

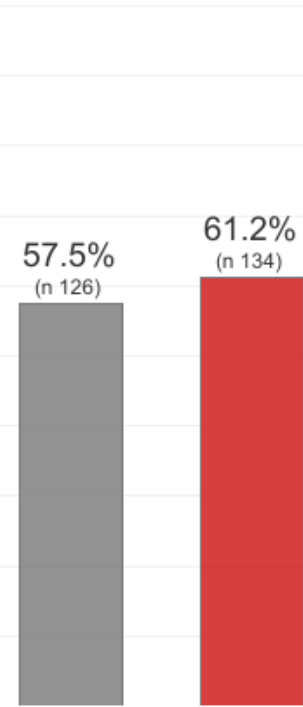


### High Body Fat Change

▲ 6.3%

227 repeat participants

Initial High BF%	Current High BF%
57.5% (n 126)	61.2% (n 134)

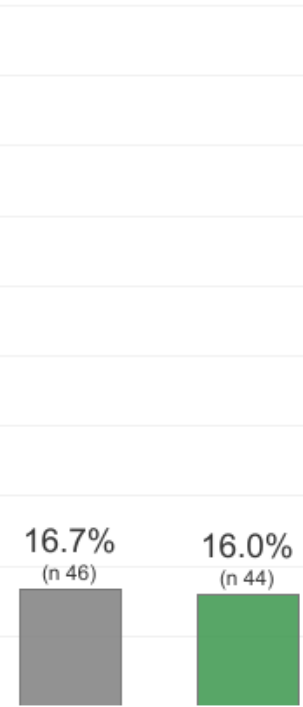


### Smoking Change

▼ 4.3%

280 repeat participants

Initial Smokers	Current Smokers
16.7% (n 46)	16.0% (n 44)



# Blood Pressure Change

Repeat BP Check Participants - Initial vs Current BP Check



**High Blood Pressure**  
(140/90+ mmHg)



Initial Check  
High BP Participants

**48**  
(17.6%)

Net Change Participants  
with High BP

**▲ 11**

Current Check  
High BP Participants

**59**  
(21.6%)

% Change High BP  
Prevalence

**▲ 22.9%**

Total Repeat Participants

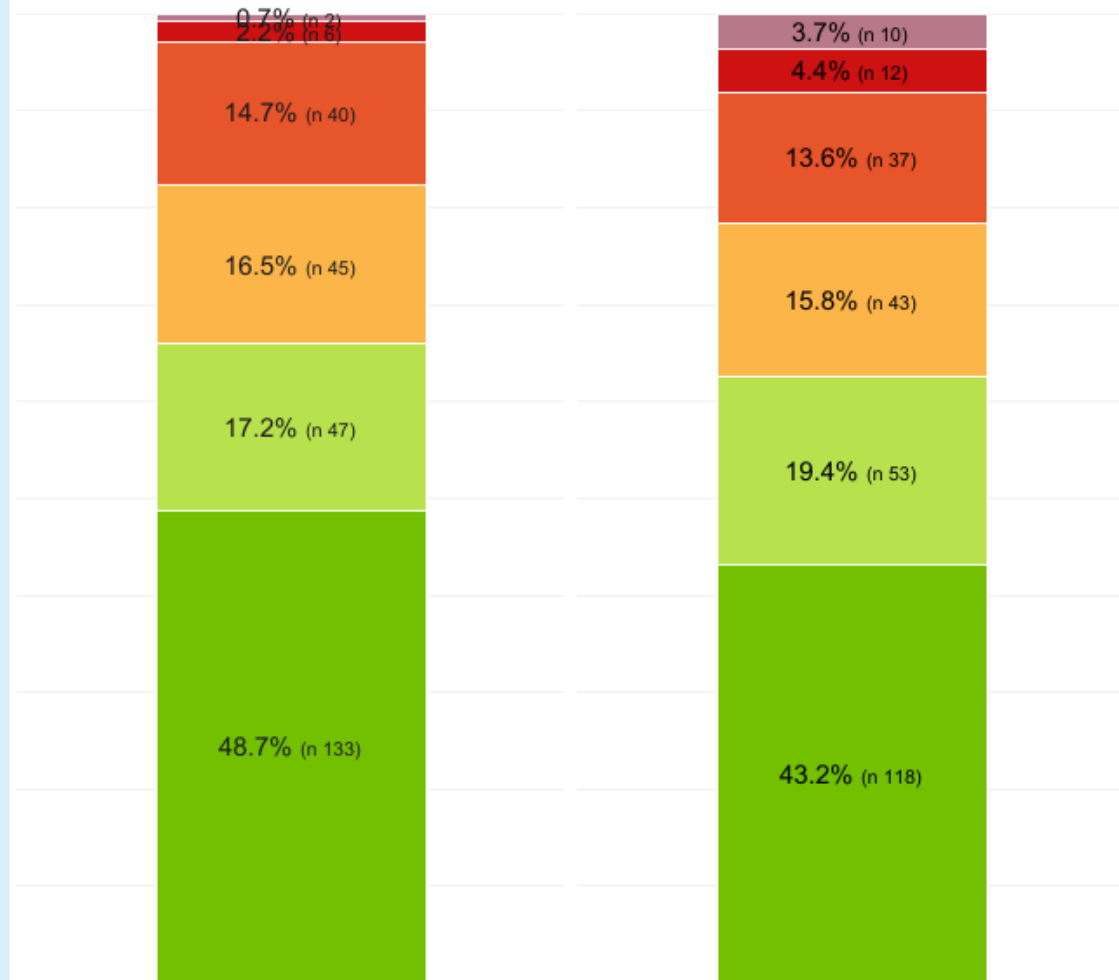
**275**

**Notes:**

An analysis of the proportion of participants in each blood pressure rating category, comparing individuals' initial and most recent blood pressure test at a SiSU Health Station. The population is limited to individuals who have completed 2+ SiSU Health Station checks (with a blood pressure result) with the same email address, and minimum 8 days between initial and current blood pressure reading. Further filters to control for suspected shared accounts (two individuals using the same email address) are also applied.

Initial  
Blood Pressure Rating

Current  
Blood Pressure Rating



■ Ideal (<120/<80 mmHg)    
 ■ At risk (130-139/85-89 mmHg)    
 ■ Very high (160-179/100-109 mmHg)  
■ Normal (120-129/80-84 mmHg)    
 ■ High (140-159/90-99 mmHg)    
 ■ Severe (180/110+ mmHg)

# Body Mass Index Change

Repeat BMI Check Participants - Initial vs Current BMI Check



Body Mass Index  
(25+)



Initial Check  
High BMI Risk Participants

202  
(73.5%)

Net Change Participants  
BMI 25+

▲ 10

Current Check  
High BMI Risk Participants

212  
(77.1%)

% Change in BMI 25+  
Prevalence

▲ 5.0%

Total Repeat Participants

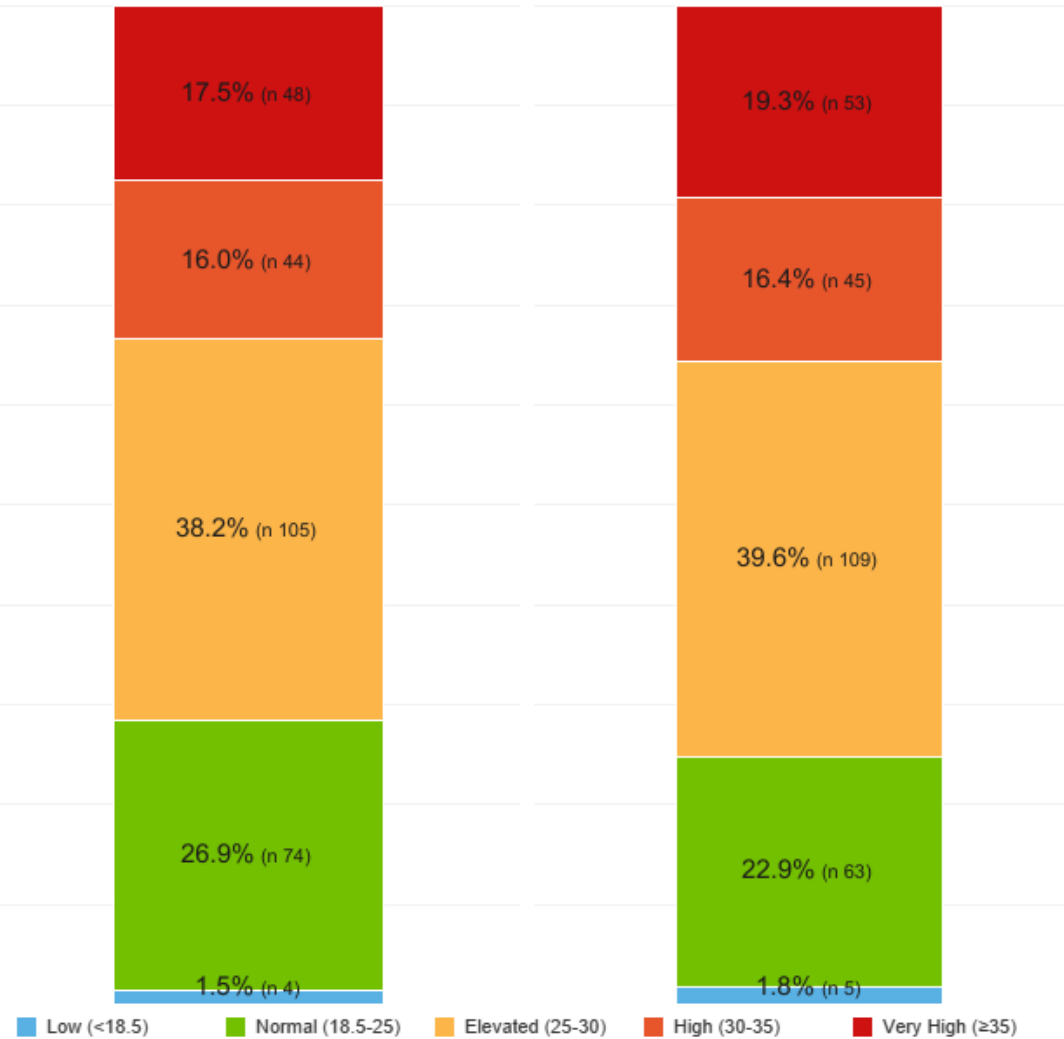
281

**Notes:**

An analysis of the proportion of Body Mass Index ratings, comparing individuals' initial and most recent health checks at a SiSU Health Station. The population is limited to individuals who have completed 2+ SiSU Health Station checks including a calculated BMI from weight and height, with the same email address, minimum of 8 days between initial and current check, and no pregnancy declared in any health checks. Further filters to control for suspected shared accounts (two individuals using the same email address) are also applied.

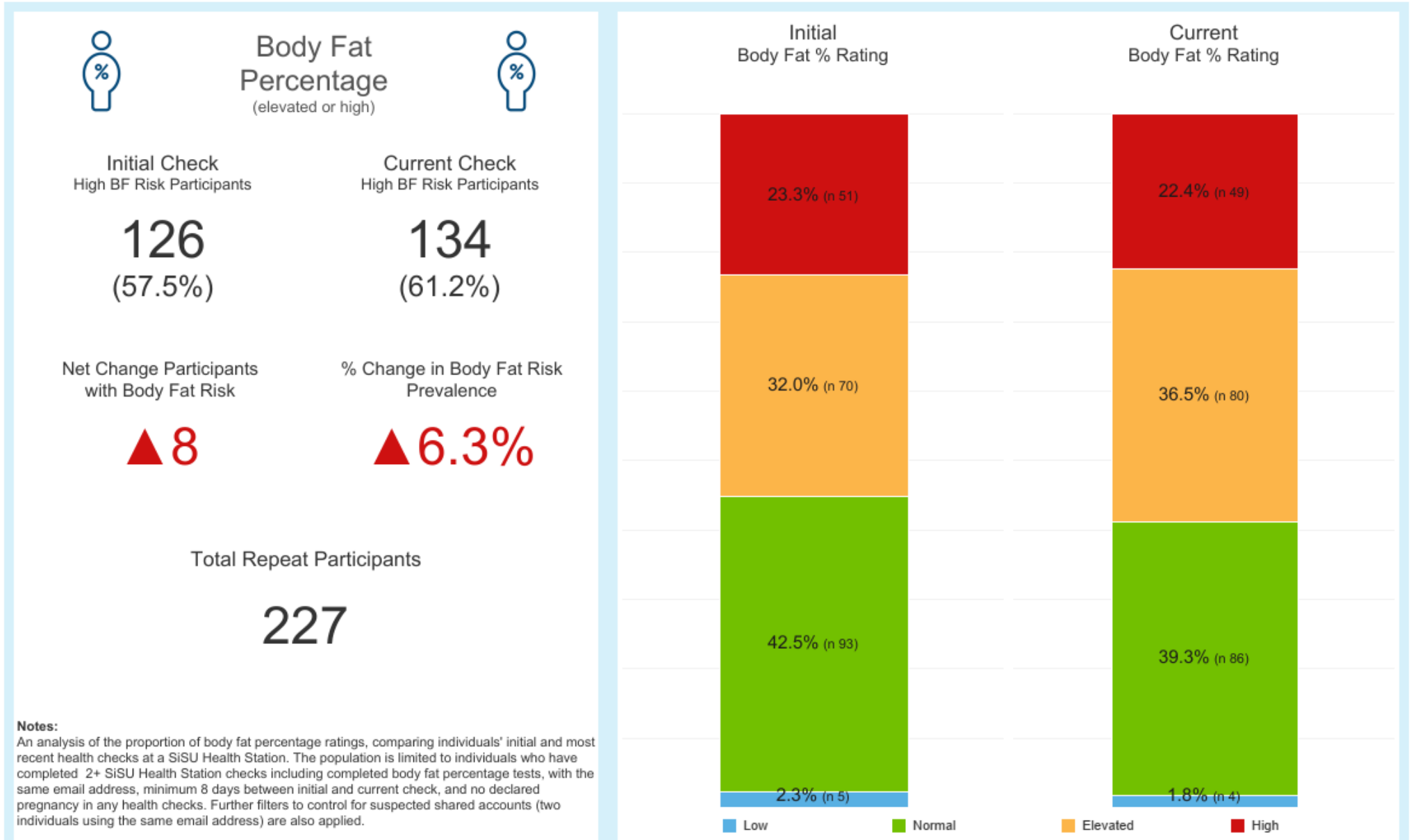
Initial  
BMI Rating

Current  
BMI Rating



# Body Fat Change

Repeat Body Fat Check Participants - Initial vs Current Body Fat Check



# Smoking Change

Repeat Participants - Initial vs Current Smoking Response



## Smoking Risk



Initial Check Smokers

**46**  
(16.7%)

Current Check Smokers

**44**  
(16.0%)

Net Change in Number of Smokers

**▼ 2**

% Change in Number of Smokers

**▼ 4.3%**

Total Repeat Participants

**280**

**Notes:**

An analysis of the proportion of members identifying as smokers, comparing individuals' initial and most recent health checks at a SiSU Health Station. The population is limited to individuals who have completed 2+ SiSU Health Station checks with the same email address. Further filters to control for suspected shared accounts (two individuals using the same email address) are also applied.

Initial Smoker Status

Current Smoker Status



Smoker

Non-smoker

# Weight Change

Repeat Weight Check Participants - Initial vs Current Weight Check



Overall Net Weight Change



**+ 3.9 kg**  
(n 195)

Each mark in the chart opposite represents an individual who has completed multiple weight checks.

**Green marks:** Participants who have lost weight

**Red marks:** Participants who have gained weight

The vertical axis indicates the weight change in kilograms. The higher the mark, the greater the change.

The horizontal axis indicates the BMI category of the participant's first weight check, providing further context to the weight change outcome.

Weight Change Analysis is based on the difference in weight in kg between individuals' initial and most recent Health Check. The population is limited to individuals with 2+ weight measurements, the same email address and no pregnancy. Further filters to control for suspected shared accounts (two individuals using the same email address) are also applied.

## How to read a Box & Whisker Plot

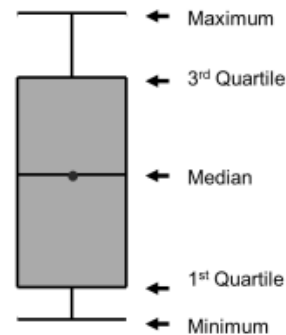
The box (grey area) illustrates:

\* the range of weight change recorded by the middle 50% of participants.

\* the median (amount of weight change recorded by the middle participants)

The whiskers (line extensions) illustrate:

\* the minimum and maximum weight change recorded

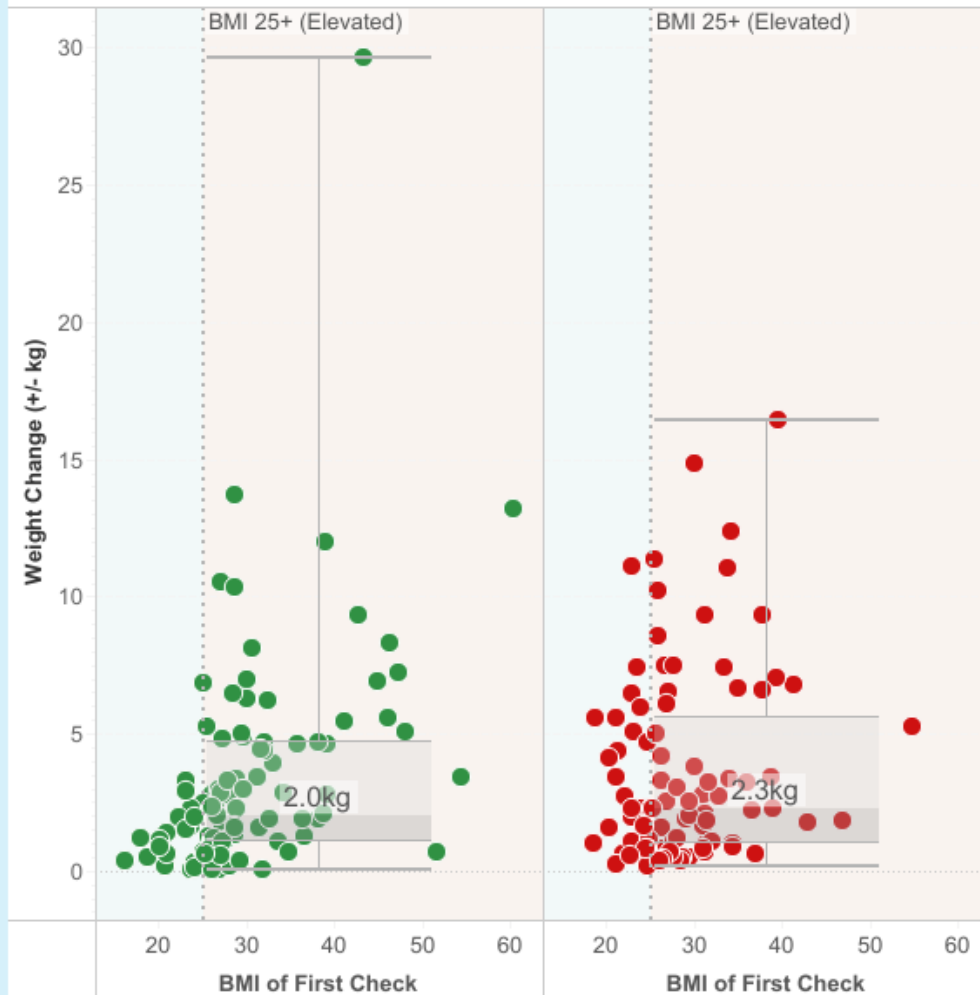


**-334.3 kg**  
Weight Lost

(n 99)

**+ 338.2 kg**  
Weight Gained

(n 92)



# Participant Satisfaction - Net Promoter Score (NPS)



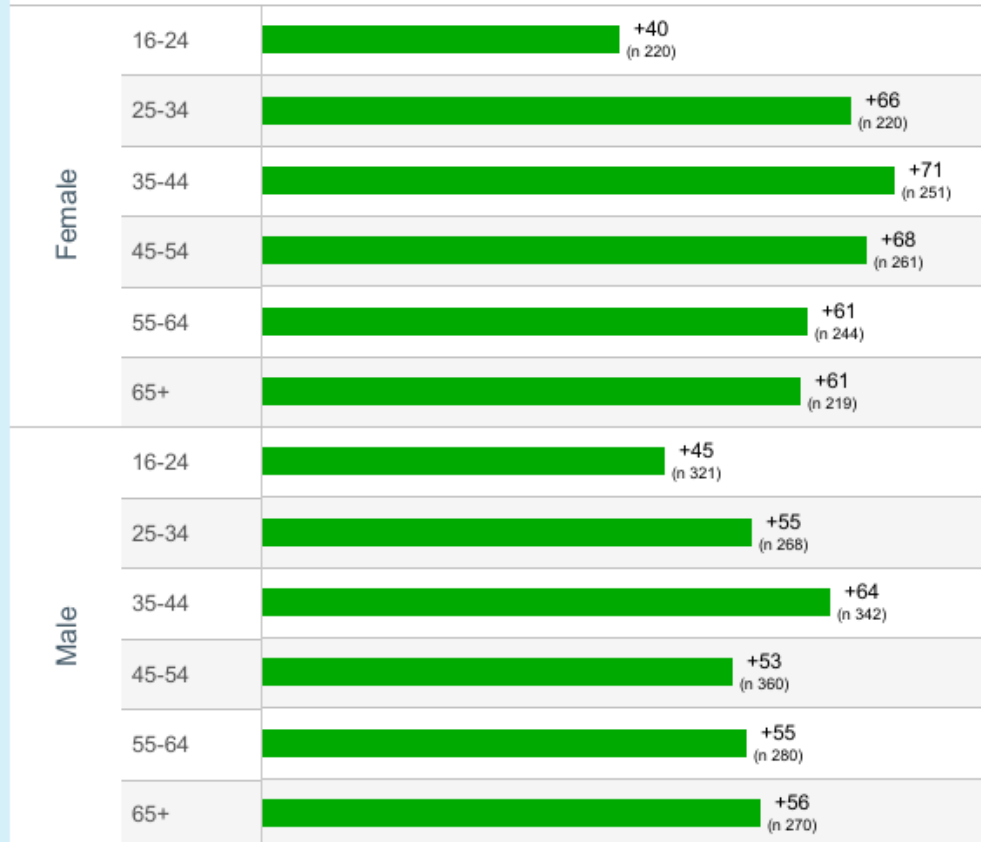
CLIENT  
Workers Lifestyle Group

**+58**  
(n 3,256)

Female **+62** (n 1,415)

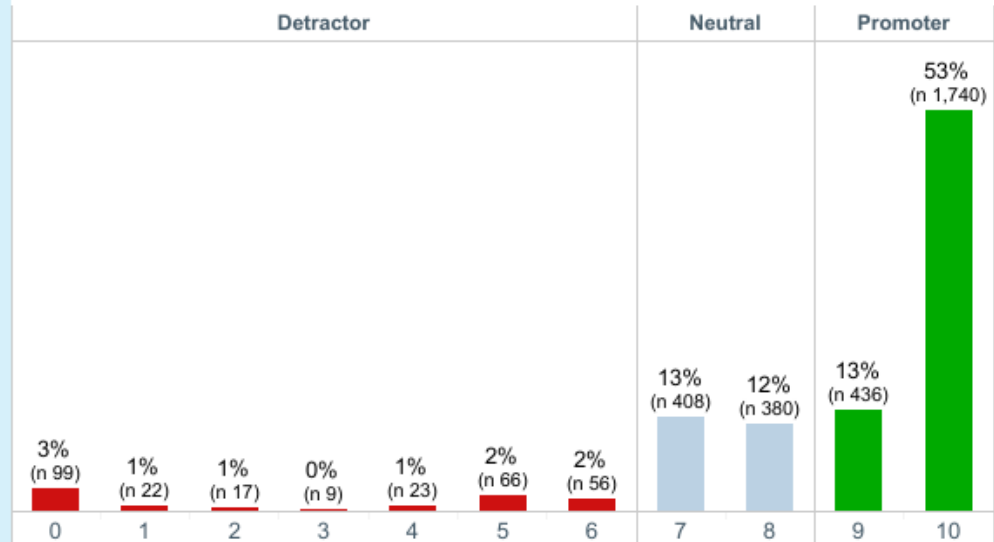
Male **+55** (n 1,841)

## Overall NPS by Age Group & Sex



## NPS Response Distribution

How likely would you be to recommend a health check via a SiSU Health Station to family members, friends or colleagues?  
0 = not at all likely, 10 = extremely likely



## NPS Category Distribution





# Supplementary Analyses



# SiSU Health Station Activity Summary by Site



## SiSU Health Station Deployment Duration



	Total Checks	% Female Checks	% Male Checks	Total Participants	% Repeat Users
Blacktown Workers Club	1,823	40.1%	59.9%	1,576	17.6%
Blacktown Workers Sports Club	3,105	42.0%	58.0%	2,772	18.4%
<b>Grand Total</b>	<b>4,928</b>	<b>41.3%</b>	<b>58.7%</b>	<b>4,312</b>	<b>17.4%</b>

# Station Usage by Hour & Weekday



## Check Count by Hour & Weekday

		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Night	12 AM	11	8	7	5	7	34	9
	1 AM	9	6	2	3	5	16	16
	2 AM	4	4	2	3	2	5	4
	3 AM				2	1	2	2
	4 AM	2						
	5 AM	2	1				2	1
Morning	6 AM	1	1				1	1
	7 AM		1		2		2	2
	8 AM	4	3	2	2	2	1	2
	9 AM	4	12	7	9	6	7	12
	10 AM	11	22	25	23	19	18	11
	11 AM	31	37	23	30	26	37	38
Afternoon	12 PM	29	34	36	27	42	50	56
	1 PM	70	36	50	75	82	111	76
	2 PM	56	30	64	88	70	128	138
	3 PM	32	23	26	29	26	38	73
	4 PM	20	25	24	26	32	40	54
	5 PM	47	21	29	55	38	35	100
Evening	6 PM	54	30	50	45	45	65	86
	7 PM	58	44	51	74	58	96	157
	8 PM	93	37	47	91	86	99	137
	9 PM	35	26	40	58	105	80	81
	10 PM	15	10	9	17	44	38	21
	11 PM	7	11	7	12	28	24	4

# Participant Distribution by Socio-Economic Index

## Median SEIFA Quintile (IRSAD)

# 3

### Socio-Economic Indexes for Areas (SEIFA)

Socio-Economic Indexes for Areas (SEIFA) is a product developed by the ABS that ranks areas in Australia according to relative socio-economic advantage and disadvantage.

### The Index of Relative Socio-economic Advantage and Disadvantage (IRSAD)

The Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) is one of the indexes within SEIFA. It summarises information about the economic and social conditions of people and households within an area, including both relative advantage and disadvantage measures.

The IRSAD quintile is a dimension which places the scores of individual areas into 1 of 5 groups of equal frequency, ranging from the 20% areas with the greatest disadvantage and a lack of advantage (IRSAD 1) to the 20% areas with the least disadvantage and a lack of advantage in general (IRSAD 5).

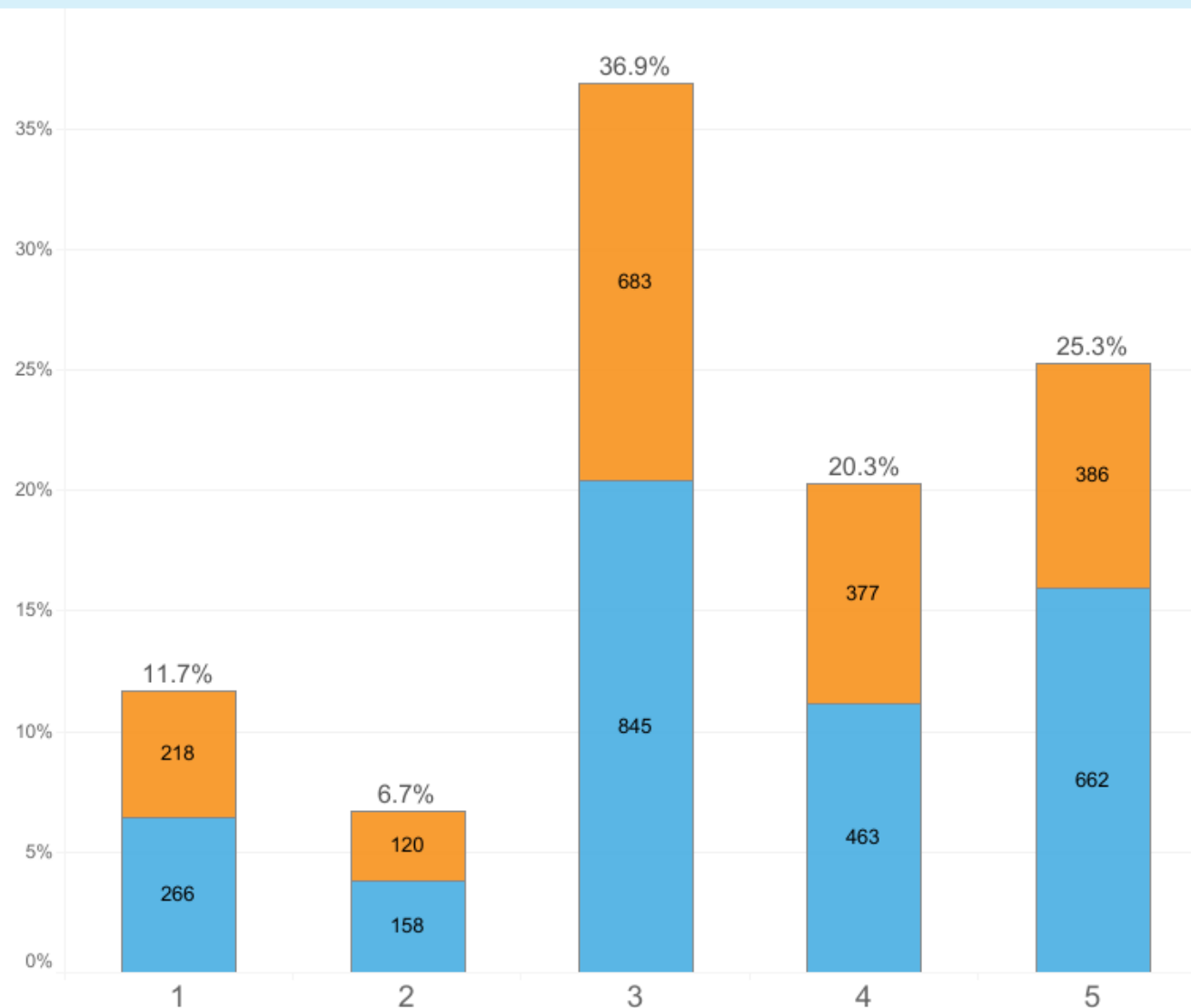
The SiSU reports use the IRSAD associated with a participants' residential postcode, not the location of the SiSU Station.

**Note:** If there are no participants who lives in a postcode link to a certain SEIFA quintile/decile, the quintile/decile is not shown in the graph.

## Total Participants by SEIFA Quintile (IRSAD)

Female

Male



# Have you had your BP measured in the last 12 months?

Constrained to only new SiSU Health members after implementation of the BP recency question, and to their initial response to the question.

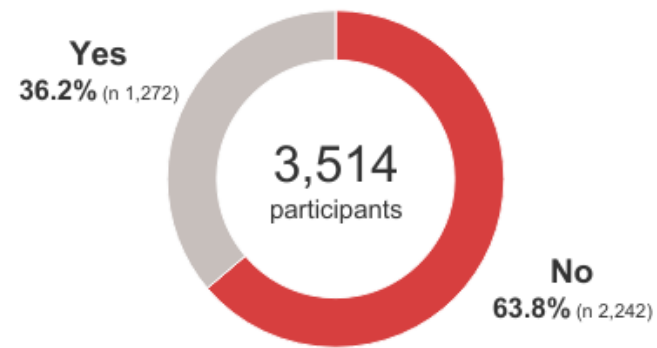


## 63.8%

of participants had **NOT** had their BP measured in the last 12 months

## 62.4%

of participants age 35-64 had **NOT** had their BP measured in the last 12 months



% Participants Answered "Yes" vs "No" by Sex & Age Group

■ No ■ Yes

	Female	Male
<b>Overall</b>	63% (n 932) No, 37% (n 543) Yes	64% (n 1,310) No, 36% (n 729) Yes
16 to 24	80% (n 190) No, 20% (n 48) Yes	84% (n 298) No, 16% (n 58) Yes
25 to 34	74% (n 179) No, 26% (n 63) Yes	81% (n 265) No, 19% (n 62) Yes
35 to 44	70% (n 191) No, 30% (n 82) Yes	72% (n 282) No, 28% (n 111) Yes
45 to 54	62% (n 158) No, 38% (n 95) Yes	63% (n 217) No, 37% (n 127) Yes
55 to 64	53% (n 139) No, 47% (n 122) Yes	51% (n 164) No, 49% (n 158) Yes
65+	40% (n 92) No, 60% (n 137) Yes	31% (n 98) No, 69% (n 219) Yes

# Participant Satisfaction - Net Promoter Score (NPS)



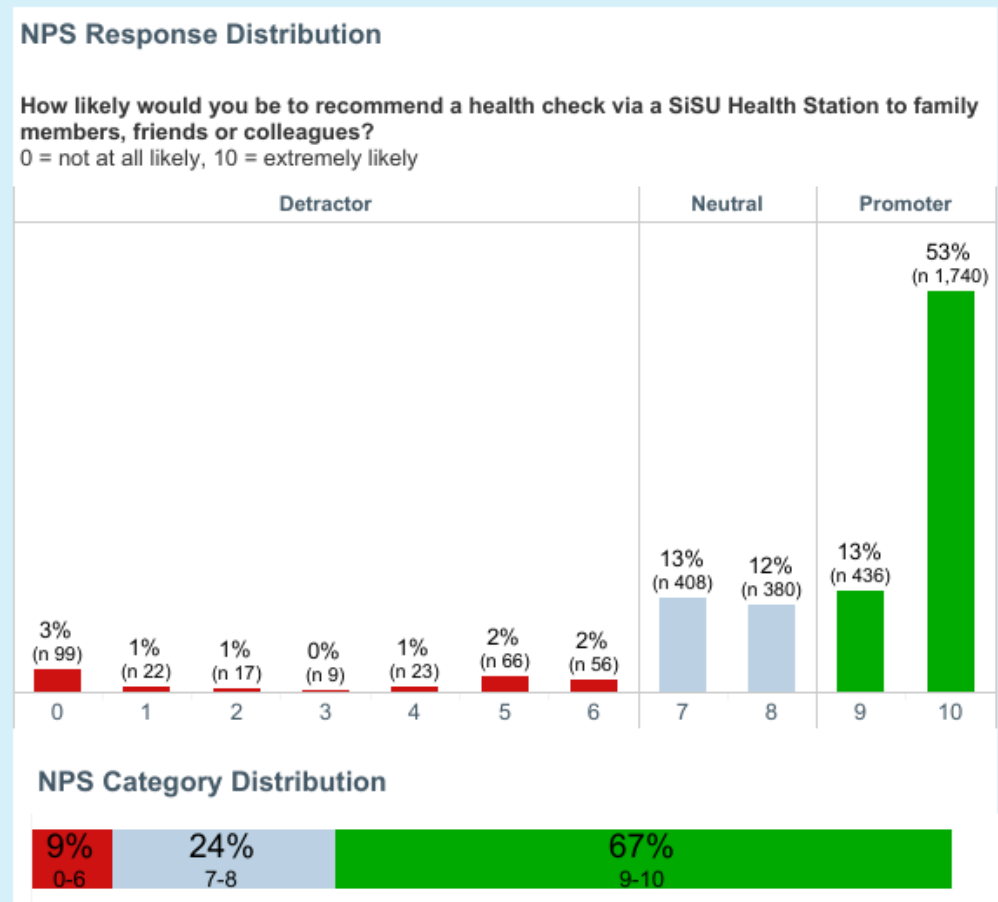
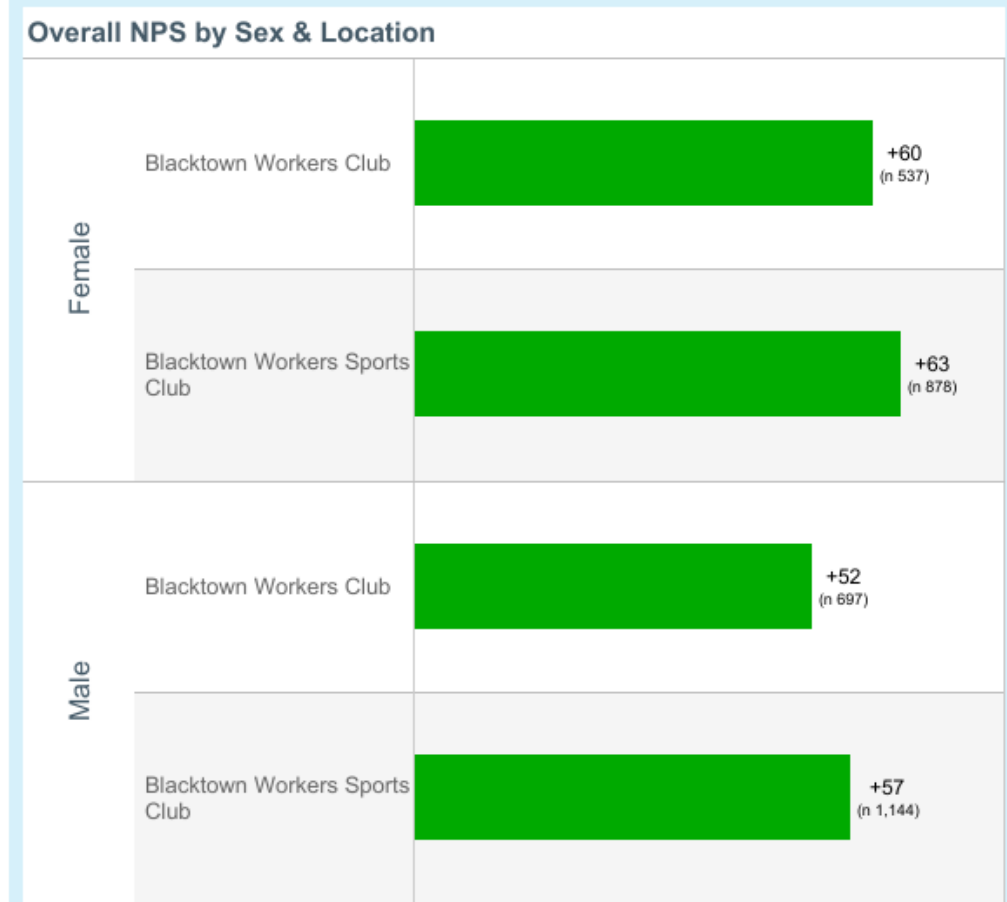
CLIENT

**Workers Lifestyle Group**

**+58**  
(n 3,256)

Female **+62** (n 1,415)

Male **+55** (n 1,841)



# Participant Satisfaction - Net Promoter Score (NPS)



CLIENT  
**Workers Lifestyle Group**  
**+58**  
 (n 3,256)

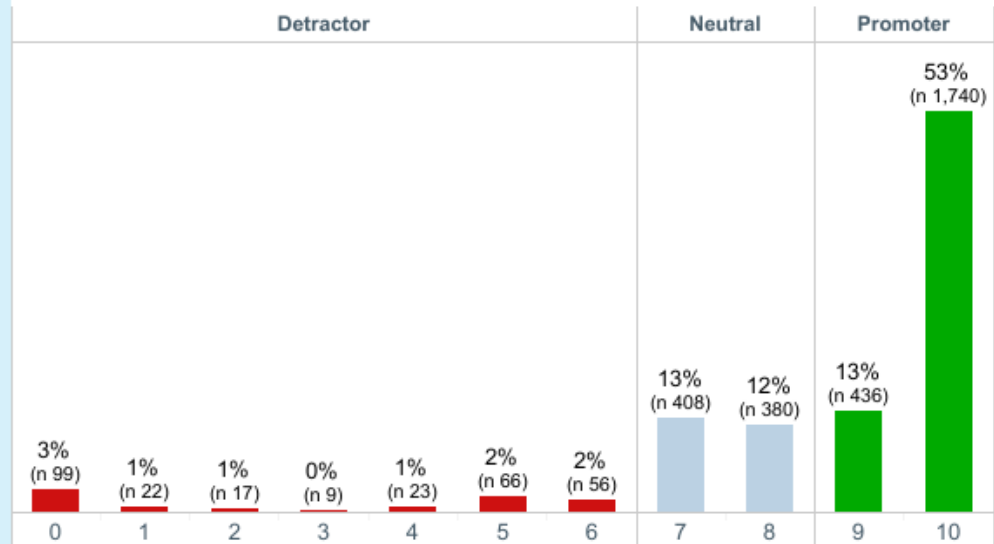
Female **+62** (n 1,415)  
 Male **+55** (n 1,841)

## Overall NPS by Location



## NPS Response Distribution

How likely would you be to recommend a health check via a SiSU Health Station to family members, friends or colleagues?  
 0 = not at all likely, 10 = extremely likely



## NPS Category Distribution





# Glossary

# Glossary of Key Terms and Calculations

Item	Description & Data	Measurement Method & Output Metric	Metric Range & Risk Thresholds	Source & Context																																						
<b>Age</b>	The age of the participant in years.  Participants must be a minimum of 16 years of age.	<b>Measurement Method:</b> Self-reported - calculated from Date of Birth as supplied by the user.  <b>Output Metric:</b> Integer (years)	<b>Output Metric Range:</b> 16+ years	The lower age limit has been implemented to comply with regulation regarding age of consent for individuals to generate and store personal and sensitive information. Additionally, the Health Check results may not be physiologically relevant to individuals under the age of 16 years.																																						
<b>AUSDRISK</b>	The Australian Type 2 Diabetes Risk Assessment Tool was developed by the Baker IDI Heart and Diabetes Institute on behalf of the Australian, State and Territory Governments as part of the COAG initiative to reduce the risk of type 2 diabetes	<b>Measurement Method:</b> Self-reported answers to the AUSDRISK questionnaire Many Australians, particularly those over 40, are at risk of developing type 2 diabetes through lifestyle factors such as physical inactivity and poor nutrition. Family history of diabetes and genetics also play a role in type 2 diabetes.	<b>Output Metric Range:</b> 0-30  <b>Risk Thresholds:</b> Low: 0-5 Intermediate: 6-11 High: ≥12	<a href="https://www.health.gov.au/sites/default/files/the-australian-type-2-diabetes-risk-assessment-tool-ausdrisk.pdf">https://www.health.gov.au/sites/default/files/the-australian-type-2-diabetes-risk-assessment-tool-ausdrisk.pdf</a>																																						
<b>Body Fat %</b>	Refers to the percentage of an individual's body mass which comprises adipose tissue, or fat.	<b>Measurement Method:</b> Machine generated - Bio-electrical impedance provides a prediction of body fat % by running a light electrical current through the body. It is considered to be the quickest, easiest and most practical method for a user on a self-service device.  <b>Output Metric:</b> % (to single decimal place)	A high body fat percentage is associated with an increased risk of stroke, high blood pressure, heart disease, type 2 diabetes and certain types of cancer.  <b>Body Fat Ranges for Standard Adults</b> <table border="1"> <thead> <tr> <th>Gender</th> <th>Age</th> <th>Low (BMI &lt; 18.5)</th> <th>Normal (BMI 18.5-24.9)</th> <th>High (BMI 25.0-29.9)</th> <th>Very High (BMI ≥ 30)</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Female</td> <td>20-39</td> <td>&lt; 21.0</td> <td>21.0-32.9</td> <td>33.0-38.9</td> <td>39.0</td> </tr> <tr> <td>40-59</td> <td>&lt; 23.0</td> <td>23.0-33.9</td> <td>34.0-39.9</td> <td>40.0</td> </tr> <tr> <td>60-79</td> <td>&lt; 24.0</td> <td>24.0-35.9</td> <td>36.0-41.9</td> <td>42.0</td> </tr> <tr> <td rowspan="3">Male</td> <td>20-39</td> <td>&lt; 8.0</td> <td>8.0-19.9</td> <td>20.0-24.9</td> <td>25.0</td> </tr> <tr> <td>40-59</td> <td>&lt; 11.0</td> <td>11.0-21.9</td> <td>22.0-27.9</td> <td>28.0</td> </tr> <tr> <td>60-79</td> <td>&lt; 13.0</td> <td>13.0-24.9</td> <td>25.0-29.9</td> <td>30.0</td> </tr> </tbody> </table> <small>* Based on <i>NIHWHO</i> guidelines for BMI * Based on <i>gallagher et al., American Journal of Clinical Nutrition, Vol.72, Sept. 2000</i></small>	Gender	Age	Low (BMI < 18.5)	Normal (BMI 18.5-24.9)	High (BMI 25.0-29.9)	Very High (BMI ≥ 30)	Female	20-39	< 21.0	21.0-32.9	33.0-38.9	39.0	40-59	< 23.0	23.0-33.9	34.0-39.9	40.0	60-79	< 24.0	24.0-35.9	36.0-41.9	42.0	Male	20-39	< 8.0	8.0-19.9	20.0-24.9	25.0	40-59	< 11.0	11.0-21.9	22.0-27.9	28.0	60-79	< 13.0	13.0-24.9	25.0-29.9	30.0	<b>Range:</b> 4 - 50%  <b>Risk Thresholds:</b> Refer to table below
Gender	Age	Low (BMI < 18.5)	Normal (BMI 18.5-24.9)	High (BMI 25.0-29.9)	Very High (BMI ≥ 30)																																					
Female	20-39	< 21.0	21.0-32.9	33.0-38.9	39.0																																					
	40-59	< 23.0	23.0-33.9	34.0-39.9	40.0																																					
	60-79	< 24.0	24.0-35.9	36.0-41.9	42.0																																					
Male	20-39	< 8.0	8.0-19.9	20.0-24.9	25.0																																					
	40-59	< 11.0	11.0-21.9	22.0-27.9	28.0																																					
	60-79	< 13.0	13.0-24.9	25.0-29.9	30.0																																					
<b>Blood Pressure (BP)</b>	Blood pressure (BP) refers to how much pressure there is inside arteries as they pump blood around the body.  BP is recorded as two figures:  <b>Systolic Pressure:</b> The pressure of the blood when the heart beats to pump blood out. <b>Diastolic Pressure:</b> The pressure of the blood when the heart rests in between beats.	<b>Measurement Method:</b> Machine generated - SunTech Blood Pressure Cuff.  <b>Accuracy:</b> Meets AAMI SP10-2002, EN 1060-4, ISO 81060-2. Clinically validated oscillometric measurement technique.  <b>Output Metric:</b> Millimetres of Mercury (mmHg)	<b>BP Range:</b> Systolic: 40-260mmHg Diastolic: 20-200mmHg, +/-3mmHg  <b>Risk Thresholds:</b> Optimal: 90-119/60-79mmHg Normal: 120-129/80-84mmHg High-normal: 130-139/85-89mmHg High: 140-159/90-99mmHg Very high: 160-179/100-109mmHg Severe: ≥180/≥110mmHg	National Heart Foundation of Australia. Guideline for the diagnosis and management of hypertension in adults - 2016. Melbourne: National Heart Foundation of Australia, 2016.  <a href="https://www.heartfoundation.org.au/images/uploads/publications/PRO-167_Hypertension-guideline-2016_WEB.pdf">https://www.heartfoundation.org.au/images/uploads/publications/PRO-167_Hypertension-guideline-2016_WEB.pdf</a>																																						



# Glossary of Key Terms and Calculations



Item	Description & Data	Measurement Method & Output Metric	Metric Range & Risk Thresholds	Source & Context
<b>Body Mass Index (BMI)</b>	BMI compares an individual's weight to their height in order to determine whether the individual is in a healthy weight range for their height.	<p><b>Measurement Method:</b> Calculation from Body weight (kg) / height (cm), squared (2)</p> <p><b>Output Metric:</b> Kilograms per meter (kg/m<sup>2</sup>) to single decimal point</p>	<p><b>Risk Thresholds:</b>                      Low: &lt;18.5 kg/m<sup>2</sup>                      Normal: 18.5 - 24.9 kg/m<sup>2</sup>                      Elevated: 25 - 29.9 kg/m<sup>2</sup>                      High: 30-34.9 kg/m<sup>2</sup>                      Very High: ≥35 kg/m<sup>2</sup></p>	
<b>Deductive Identification</b>	SiSU Health Group only produces reports using deidentified, aggregated data from its Members. In some cases, where there is a low number of employees/health checks at a given location, and/or where there is a significant gender skew, there is a potential risk that the identity of individuals could be deduced by the employer from the health profile presented in the report.	SiSU Health Group has determined that <u>if the total number of Health Checks per gender, per location in a report is less than 10*</u> , then that cohort shall be suppressed in the rating breakdown analyses for <b>Blood Pressure Risk Ratings, BMI Risk Ratings, Smoking Risk Ratings and Body Fat % Risk Ratings</b> . *threshold can be adjusted on request	A cohort of males / females at a given organisation location must have recorded at least 10 health checks in order for SiSU Health Group to report the "At Risk" prevalence figure, and rating breakdowns for each health risk.	For example, if <b>Office A</b> had recorded only 5 blood pressure checks from females, the prevalence of high blood pressure and the breakdown of blood pressure ratings for females at Office A would not be presented in the report. This avoids the situation where if all 5 health checks recorded high BP, the company could then deduce those individuals' blood pressure status.
<b>Health Check</b>	A Health Check is a record of engagement by an individual with the SiSU Health Station, where a minimum of one machine-generated measurement (blood pressure/heart rate/height/weight) has been completed.	<p><b>Measurement Method:</b> Distinct Count of Health Check ID</p> <p><b>Output Metric:</b> Integer</p>	N/A	SiSU Health Group's key measure of engagement and utilisation of its SiSU Health Stations.




# Glossary of Key Terms and Calculations



Item	Description & Data	Measurement Method & Output Metric	Metric Range & Risk Thresholds	Source & Context
<b>Health Outcome Analysis</b>	<p>Health Outcome Analysis is an analysis of all registered participants who have completed a minimum of two (2) SiSU Station health checks in their history with SiSU Health Group. It calculates the difference (delta) in measures between an individual's first and last health check.</p> <p>Depending on the metric being analysed, up to 6 separate filters are applied to exclude noise (pregnant women, shared user accounts etc)</p> <p>It is calculated from initial and most recent health check across participants' entire SiSU Health Group history, regardless of any specific date range or SiSU Station location.</p>	<p><b>Measurement Method:</b> The initial and current measurement per health metric are compared for the qualifying cohort of repeat Members for each health metric (e.g weight, BP risk, total risks). Cohort qualifying criteria vary for each metric (for example, Members who have ever declared pregnancy in any Health Check are excluded from all analysis except smoking).</p> <p><b>Output Metric:</b> <b>Blood pressure:</b> initial and current prevalence of At Risk BP; and BP category distribution <b>Body Fat %:</b> initial and current prevalence of At Risk BF%; and BF% category distribution <b>Smoking:</b> initial and current prevalence of smoking <b>BMI:</b> initial and current prevalence of At Risk BMI; and BMI category distribution <b>Weight:</b> overall net change in weight for the cohort; average weight change per user (weight gainers vs weight losers)</p>	<p><b>Output Metric Range:</b> For an individual: unlimited - within the range of human physiology. For a population: unlimited - based on the <i>n</i> of the cohort.</p>	<p>Provides definitive measurement of change in a number of health measures over time, for a qualifying cohort.</p>
<b>Height</b>	<p>The height of the individual using the SiSU Health Station while in a standing position.</p>	<p><b>Measurement Method:</b> Machine generated - HRLV-MaxSonar®- EZ™ Series Ultrasonic Range Finder</p> <p><b>Accuracy:</b> 1mm</p> <p><b>Output Metric:</b> Centimetres (cm) to single decimal point</p>	<p><b>Height Range:</b> 80-200cm</p> <p><b>Risk Thresholds:</b> N/A - Refer to Body Mass Index</p>	<p>Height is relevant to the calculation of the Body Mass Index (BMI).</p>



# Glossary of Key Terms and Calculations

Item	Description & Data	Measurement Method & Output Metric	Metric Range & Risk Thresholds	Source & Context												
<b>Net Promoter Score (NPS)</b>	NPS is a globally recognized method for measuring customer satisfaction and loyalty. The metric was developed by Fred Reichheld of Bain & Co. At its core, the Net Promoter Score tracks how customers represent a company to their friends, families and associates.	<p><b>Measurement Method:</b> Self-reported answer to the following question:</p> <p>"How likely would you be to recommend a health check via a SiSU Health Station to family members, friends or colleagues? Please give your answer on a scale where 0 means you are "not at all likely" and 10 means "extremely likely"</p> <p>The NPS is calculated by subtracting the total % of Detractors (scores 0-6) from the total % of Promoters (scores 9-10). Passives (scores 7-8) are excluded from the calculation</p> <p><b>Output Metric:</b> Integer</p>	<p><b>Output Metric Range:</b> -100 to +100</p> <p><b>Sample size (n):</b> This is always presented. A low (n) of &lt;100 entries tend to provide NPS scores of higher volatility.</p>	<p><a href="http://www.netpromotersystem.com/about/measuring-your-net-promoter-score.aspx">http://www.netpromotersystem.com/about/measuring-your-net-promoter-score.aspx</a></p>  <p><b>NPS = % PROMOTERS – % DETRACTORS</b></p>												
<b>Participants</b>	An individual engaging with the SiSU Health Station who has provided their email address to receive their Health Results email. Provision of an email address creates a Member account with a unique UserID.	<p><b>Measurement Method:</b> Distinct Count of UserID</p> <p><b>Output Metric:</b> Integer</p>	N/A	The benefits to an individual of providing their email address include access to their Health Check history online, and access to the SiSU Portal (including programs and meal/activity planners) for eligible employees.												
<b>Perceived Stress Scale (PSS-4)</b>	It measures the degree to which situations in one's life over the past month are appraised as stressful. Items were designed to detect how unpredictable, uncontrollable, and overloaded respondents find their lives. The PSS-4 poses general queries about relatively current levels of stress experienced.	<p><b>Measurement Method:</b> Self-reported answers to the following questions:</p> <ol style="list-style-type: none"> <li>In the last month, how often have you felt that you were unable to control the important things in your life?</li> <li>In the last month, how often have you felt confident about your ability to handle your personal problems?</li> <li>In the last month, how often have you felt that things were going your way?</li> <li>In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?</li> </ol>	<p><b>Output Metric Range:</b> 0-16</p> <table border="0"> <tr> <td><b>Questions 1 and 4</b></td> <td><b>Questions 2 and 3</b></td> </tr> <tr> <td>0 = Never</td> <td>4 = Never</td> </tr> <tr> <td>1 = Almost Never</td> <td>3 = Almost Never</td> </tr> <tr> <td>2 = Sometimes</td> <td>2 = Sometimes</td> </tr> <tr> <td>3 = Fairly Often</td> <td>1 = Fairly Often</td> </tr> <tr> <td>4 = Very Often</td> <td>0 = Very Often</td> </tr> </table> <p><b>Risk Thresholds:</b>                      Low: 0-5                      Medium: 6-10                      High: 11-16</p>	<b>Questions 1 and 4</b>	<b>Questions 2 and 3</b>	0 = Never	4 = Never	1 = Almost Never	3 = Almost Never	2 = Sometimes	2 = Sometimes	3 = Fairly Often	1 = Fairly Often	4 = Very Often	0 = Very Often	Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. <i>Journal of Health and Social Behavior</i> , 24, 385-396.
<b>Questions 1 and 4</b>	<b>Questions 2 and 3</b>															
0 = Never	4 = Never															
1 = Almost Never	3 = Almost Never															
2 = Sometimes	2 = Sometimes															
3 = Fairly Often	1 = Fairly Often															
4 = Very Often	0 = Very Often															
<b>Resting Heart Rate</b>	Refers to the number of times the heart beats per minute while the individual is in a sitting position.	<p><b>Measurement Method:</b></p> <p><b>Accuracy:</b> (+/-2%)</p> <p><b>Output Metric:</b> Beats per minute (bpm)</p>	<p><b>Heart Rate Range:</b> 30-220 bpm</p> <p><b>Risk Thresholds:</b>                      Low: &lt;40 bpm                      Normal: 40 - 79 bpm                      Elevated: 80 - 99 bpm                      High: 100 - 119 bpm                      Very High: 120+ bpm</p>	<p>Generally, a lower resting heart rate is an indicator of physical fitness, as the heart is more efficient at pumping blood around the body.</p> <p><i>American Heart Association (All About Heart Rate (Pulse)), Mayo Clinic (Heart rate: What's normal)</i></p>												

# Glossary of Key Terms and Calculations



Item	Description & Data	Measurement Method & Output Metric	Metric Range & Risk Thresholds	Source & Context
<b>SEIFA Quintile (IRSAD)</b>	<p>IRSAD in SEIFA 2016 summarises information about the economic and social conditions of people and households within an area, including both relative advantage and disadvantage measures. SiSU Health Group look up IRSAD of participants' postcodes.</p> <p>A low quintile indicates relatively greater disadvantage and a lack of advantage in general.</p>	<b>Output Metric:</b> Integer	<b>Output range:</b> 1-5	<p>SEIFA 2016 (IRSAD): <a href="https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2033.0.55.001~2016~Main%20Features~IRSAD~20#:~:text=The%20Index%20of%20Relative%20Socio,relative%20advantage%20and%20disadvantage%20measures">https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2033.0.55.001~2016~Main%20Features~IRSAD~20#:~:text=The%20Index%20of%20Relative%20Socio,relative%20advantage%20and%20disadvantage%20measures</a></p>
<b>Sex</b>	<p>Sex refers to sex assigned at birth and is typically based upon a person's reproductive system and other physical characteristics. Sex at birth may also be understood as the sex recorded at a person's birth (for example, what was recorded on their birth certificate).</p>	<p><b>Measurement Method:</b> Self-reported</p> <p><b>Output Metric:</b> "Male" or "Female"</p>	<b>Output Metric Range:</b> "Male" or "Female"	Sex is relevant to the Health Check, as is factored into the calculation of Body Fat %.
<b>SiSU Global Benchmarking</b>	<p>Provides a comparative dataset against which the client's health profile can be compared for a number of health risk metrics.</p>	<p>The client's demographic and health profile is benchmarked at the GICS Industry Group level and with Australian Bureau Statistics (ABS) 2017-18.</p> <p>While the client's data is included in the respective benchmark, the proportion of the data pool the client represents can be deducted in the report.</p>	<p>SiSU Global Benchmarking™ features comparisons for:</p> <ul style="list-style-type: none"> <li>• Blood pressure - % At Risk</li> <li>• BMI - % At Risk</li> <li>• Smoking Prevalence</li> <li>• High AUSTRISK Prevalence</li> </ul>	<p>The SiSU Global Benchmarking pool is automatically refreshed on a daily basis, as data is pulled in from across the global SiSU Health Station network.</p> <p>Australian Bureau Statistics (ABS) 2017-18: <a href="https://www.abs.gov.au/statistics/health/health-conditions-and-risks/national-health-survey-first-results/latest-release">https://www.abs.gov.au/statistics/health/health-conditions-and-risks/national-health-survey-first-results/latest-release</a></p>
<b>Weight</b>	<p>The weight of the individual using the SiSU Health Station while in a standing position.</p>	<p><b>Measurement Method:</b> Machine generated: NCI Technology Weight Scale</p> <p><b>Accuracy:</b> -0.1kg to +0.1kg</p> <p><b>Output Metric:</b> Kilograms (kg) to single decimal point</p>	<p><b>Weight Range:</b> 5-250kg</p> <p><b>Risk Thresholds:</b> N/A - Refer to Body Mass Index</p>	Weight is relevant to the calculation of the Body Mass Index (BMI).



# Glossary of Key Terms and Calculations

Item	Description & Data	Measurement Method & Output Metric	Metric Range & Risk Thresholds	Source & Context
<b>AUSDRISK</b>	The Australian Type 2 Diabetes Risk Assessment Tool was developed by the Baker IDI Heart and Diabetes Institute on behalf of the Australian, State and Territory Governments as part of the COAG initiative to reduce the risk of type 2 diabetes	<p><b>Measurement Method:</b> Self-reported answers to the AUSDRISK questionnaire</p> <p>Many Australians, particularly those over 40, are at risk of developing type 2 diabetes through lifestyle factors such as physical inactivity and poor nutrition. Family history of diabetes and genetics also play a role in type 2 diabetes.</p>	<p><b>Risk Thresholds</b> (Your risk of developing type 2 diabetes within 5 years):</p> <p>5 or less: Low risk Approximately one person in every 100 will develop diabetes.</p> <p>6-11: Intermediate risk For scores of 6-8, approximately one person in every 50 will develop diabetes. For scores of 9-11, approximately one person in every 30 will develop diabetes.</p> <p>12 or more: High risk For scores of 12-15, approximately one person in every 14 will develop diabetes. For scores of 16-19, approximately one person in every 7 will develop diabetes. For scores of 20 and above, approximately one person in every 3 will develop diabetes.</p>	<p><a href="https://www.health.gov.au/sites/default/files/the-australian-type-2-diabetes-risk-assessment-tool-ausdrisk.pdf">https://www.health.gov.au/sites/default/files/the-australian-type-2-diabetes-risk-assessment-tool-ausdrisk.pdf</a></p>

