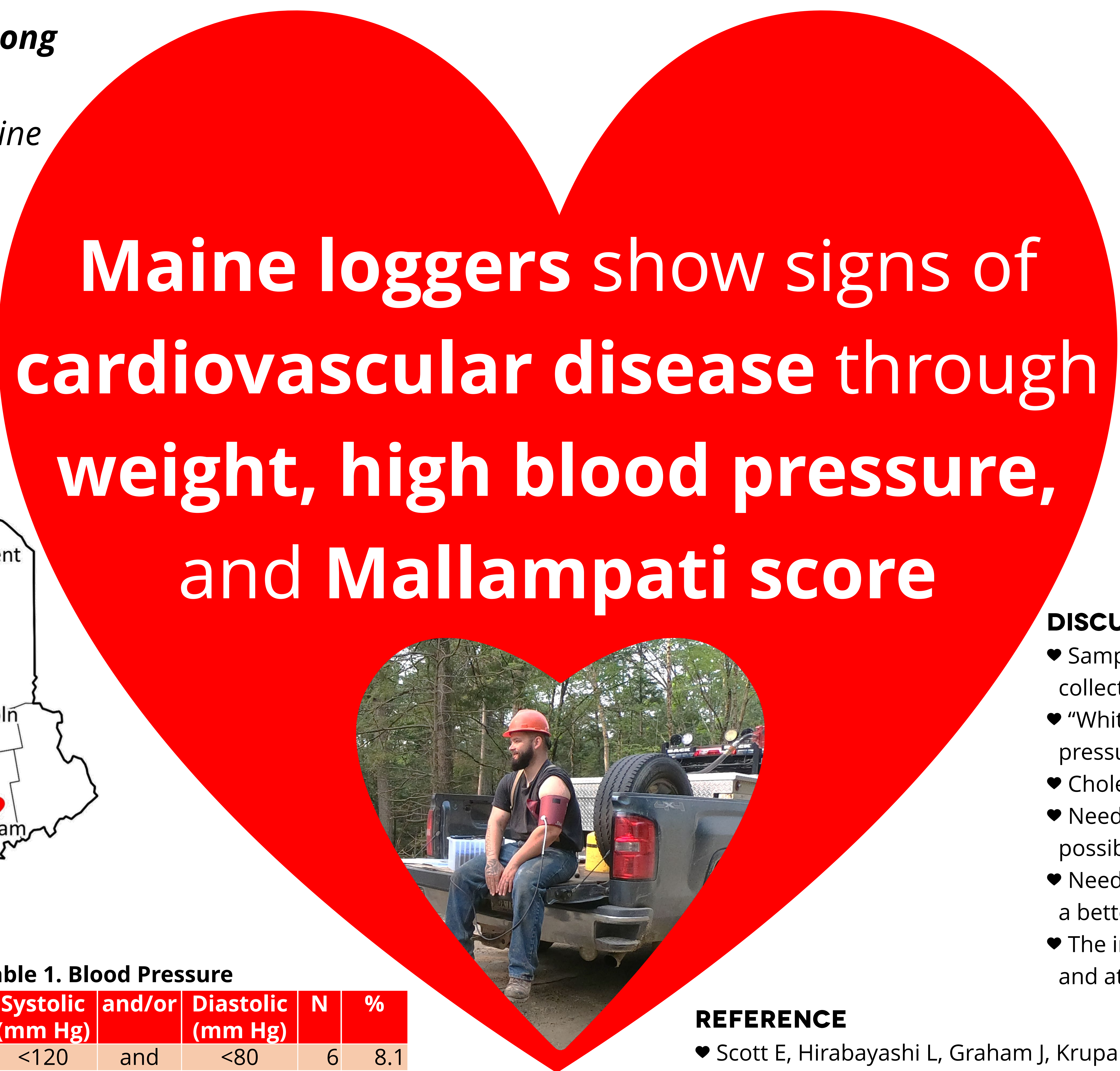


Cardiovascular Risk Factors Among Maine's Logging Workforce

Health Screening Results from Maine Loggers' Health and Safety Study

PRESENTER: **Cristina S. Hansen-Ruiz**



Maine loggers show signs of cardiovascular disease through weight, high blood pressure, and Mallampati score

- ♥ $\overline{\text{Glucose (non fasting)}} = 106.6 \text{ g/dL (SD 26.1)}$
- ♥ $\overline{\text{HDL (non fasting)}} = 42.6 \text{ g/dL (SD 8.9)}$
- ♥ $\overline{\text{Total cholesterol (non fasting)}} = 157.8 \text{ g/dL (SD 33.2)}$
- ♥ $\overline{\text{Cholesterol ratio (total/HDL) (non fasting)}} = 3.8 \text{ (SD 0.9)}$
- ♥ No significant correlation between Mallampati scores and hypertension ($p=0.2377$)
- ♥ Mallampati scores are significantly associated with higher BMI ($p=0.0038$) and age ($p=0.0045$)
- ♥ Significant difference in BMI across the four levels of hypertension (omnibus $p=0.0103$)
- ♥ Significant difference ($p=0.04$) in BMI between the hypertensive type I (29.1 kg/m^2) and the hypertensive type II (32.6 kg/m^2)

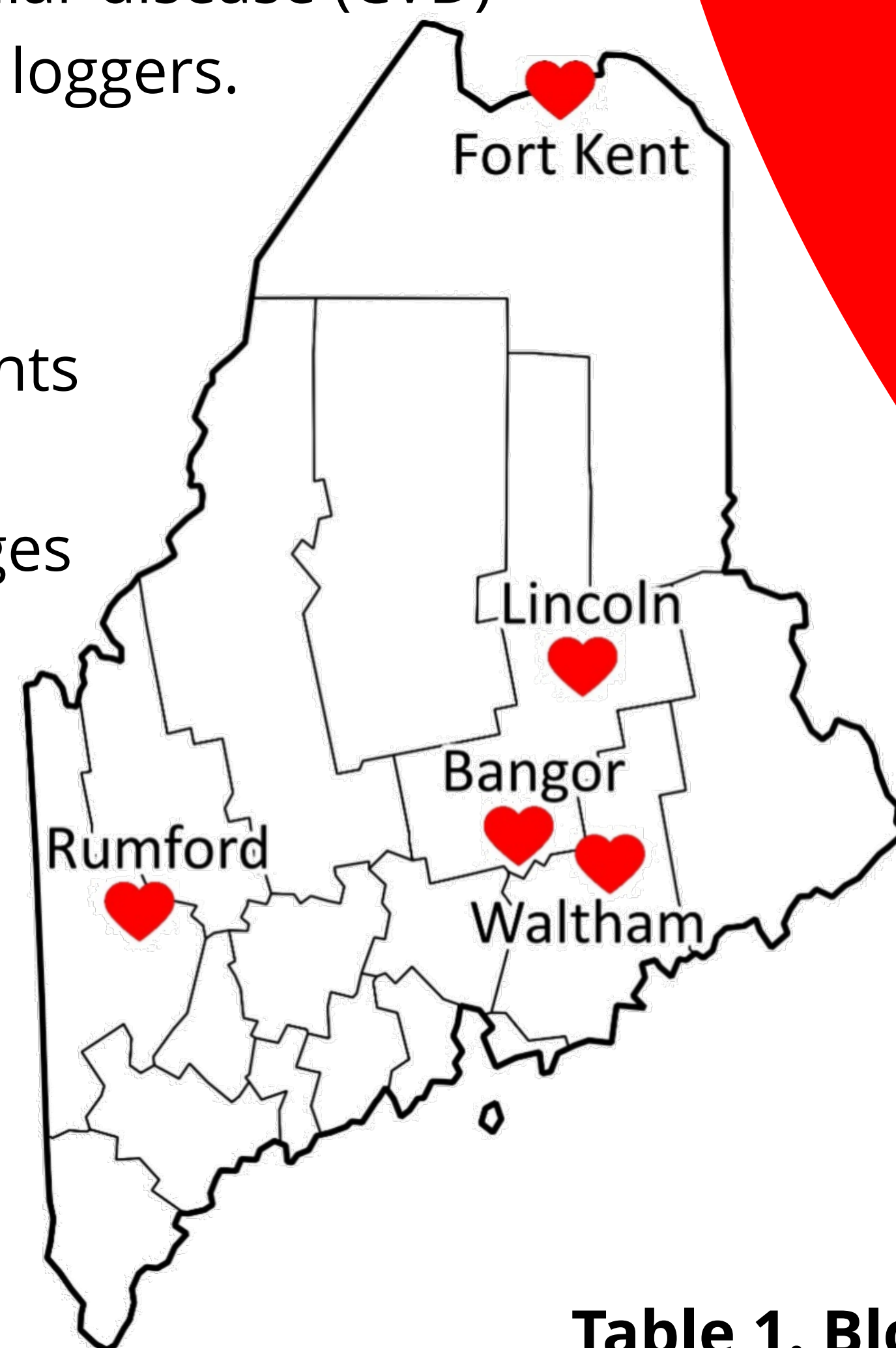
INTRO

While logging is known to be one of the most dangerous civilian occupations, less is known about the impact of work mechanization on chronic disease risk factors of loggers. This study reports cardiovascular disease (CVD) risk factors among Maine loggers.

METHODS

Physical health assessments and surveys collected at:

- ♥ Logging company garages (4 locations)
- ♥ Logger Trade Show



RESULTS

♂ 97.1% ♀ 2.9%

- ♥ $\overline{\text{Age}} = 46 \text{ years}$
- ♥ $\overline{\text{BMI}} = 30.6 \text{ kg/m}^2 \text{ (SD 4.9)}$
- ♥ $\overline{\text{Waist to hip ratio}} = 0.95 \text{ (SD 0.07)}$

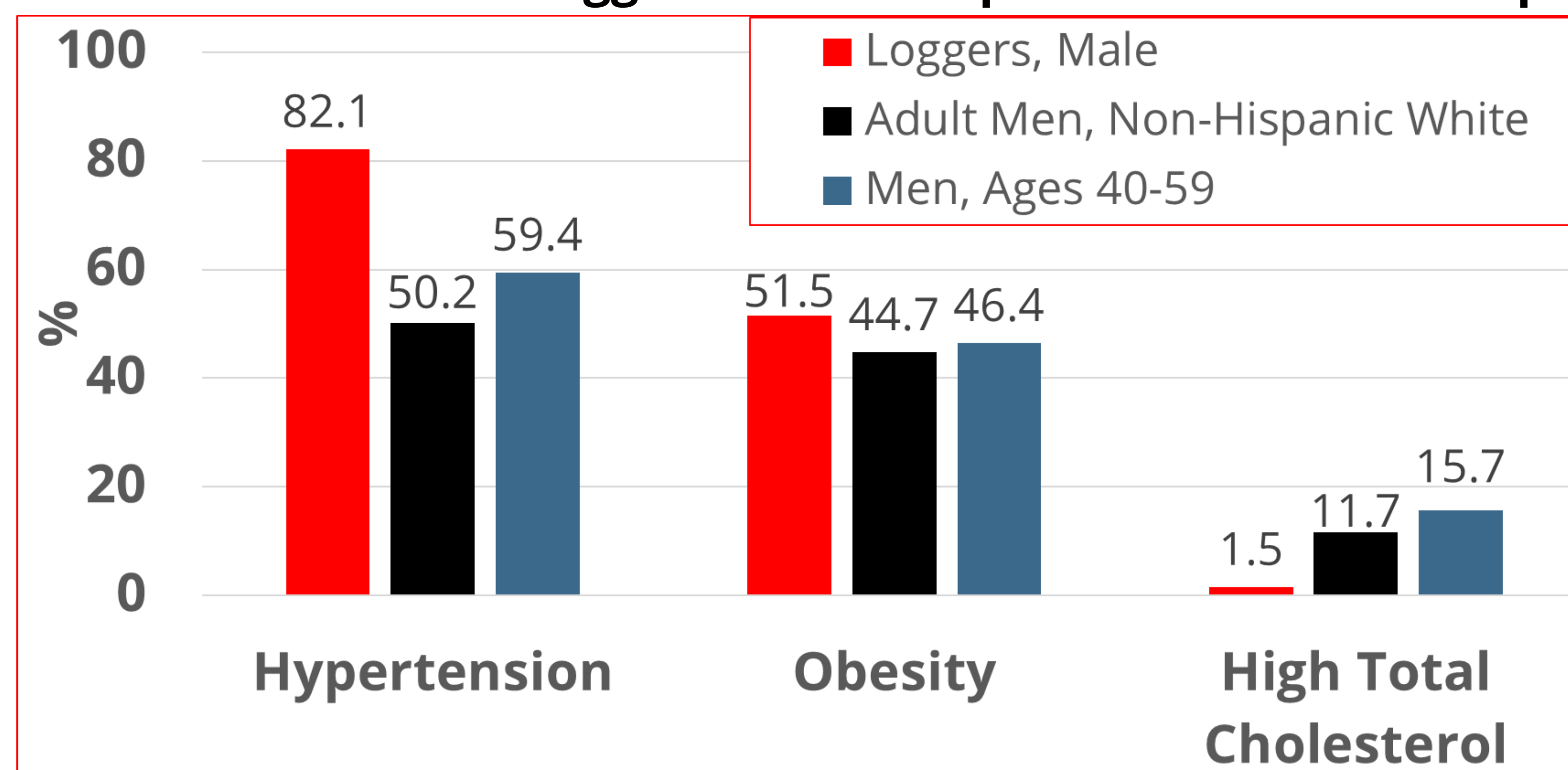
Table 1. Blood Pressure

Blood Pressure	Systolic (mm Hg)	and/or	Diastolic (mm Hg)	N	%
Normal	<120	and	<80	6	8.1
Elevated	120-129	and	<80	8	10.8
Hypertension I	130-139	or	80-89	26	35.1
Hypertension II	≥140	or	≥90	34	45.6

Table 2. Mallampati Score

n	%
34	45.3
23	30.7
10	13.3
8	10.7

Figure 1. Comparison of hypertension, obesity, and high total cholesterol between loggers and a comparative national sample



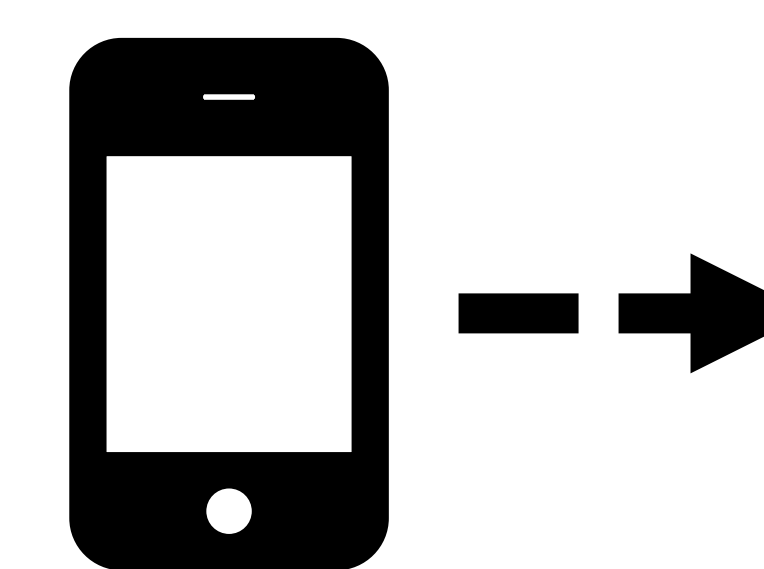
DISCUSSION/LIMITATIONS

- ♥ Sample size was impacted by cancellation of data collection due to the pandemic
- ♥ "White coat syndrome" may have impacted blood pressure measurements.
- ♥ Cholesterol and glucose levels were good
- ♥ Need to assess noise exposure at work as a possible effect for hypertension
- ♥ Need to analyze body fat percentage for providing a better picture for health than BMI
- ♥ The industry needs to keep their workers healthy and attract the new generations

REFERENCE

- ♥ Scott E, Hirabayashi L, Graham J, Krupa N, Jenkins P. Not Quite Out of the Woods: Overall Health and Chronic Disease Risk Factors among Maine Logging Workers. *J Occup Environ Med.* 2022;64(3):236-242. https://journals.lww.com/joem/Fulltext/2022/03000/Not_Quite_Out_of_the_Woods_Overall_Health_and.8.aspx

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