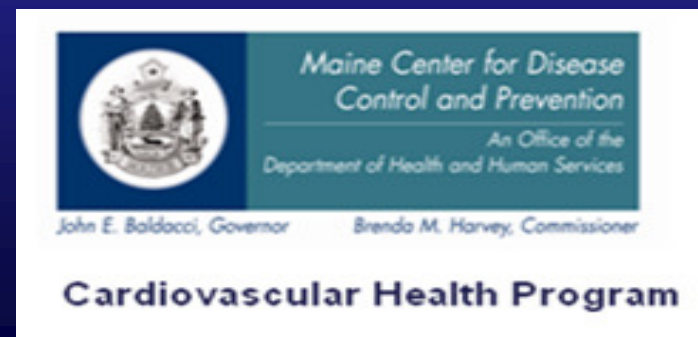


# Implementation and Evaluation of a Maine Worksite Pilot to Improve Blood Pressure Control November 2010

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Care Development



# Presenter Disclosures

Ruth Dufresne

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- (1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:**

No relationships to disclose

The findings and conclusions in this presentation are those of the presenters and do not necessarily represent the views of the Maine Center for Disease Control and Prevention/DHHS, Maine Cardiovascular Health Program or collaborators (Medical Care Development , University of New England and Maine Center for Public Health).

# Acknowledgements

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- Wendie Lagasse, Debra Wigand; Maine CDC, DHHS
- Worksites (names omitted to ensure privacy)
- Melissa Furtado, Sarah Martin; Maine Center for Public Health
- Kira Rodriguez, Ron Deprez; UNE

# Need

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- Nearly 1 in 3 adults has high blood pressure (HBP), 1 of the nation's leading causes of death, responsible for ~ 1 in 6 deaths among adults annually
- By reducing systolic pressure by 12-13 points, we can reduce heart attacks by 21% and strokes by 37%

# Evidence-Based

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- A meta-analysis of worksite interventions to improve employee cardiovascular health found a \$3 to \$6 return on investment over 2-5 year period.

# Evidence-Based (cont.)

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Most effective interventions provide:

- 1) Screening, health risk assessments (HRA), referrals
  - 2) Environmental supports for behavior change;
  - 3) Financial & other incentives;
  - 4) Policies that support healthy lifestyles; &
  - 5) Health education classes, workshops, medical self-care & support groups with goal setting
- (Matson Koffman et al, 2005)

# Maine Worksite BP Pilot

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- Jan 2008, Maine CDC/DHHS Cardiovascular Health Program (MCVHP) & Wellness Council of Maine began implementation & evaluation of a worksite pilot with 2 small, rural, manufacturing worksites already doing comprehensive worksite wellness

# Goals & Objectives

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- *Long-Term Worksite Objective:*  
Increase the percentage of employees that are taking an active role in controlling BP by 9/10
- *Supporting Worksite Objective:*  
Implement at least 1 environmental change at each worksite by 6/09

# Worksite BP Environmental Changes

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- Reliable, calibrated, appropriately sized electronic BP measurement equipment onsite
- Staff trained in proper manual BP measurement and control
- Promotion of availability of BP monitoring for all employees, especially those at-risk for or w/ HBP

# Worksite BP Environmental Changes (cont.)

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- Expectation that all employees will know their BP numbers and importance of BP control through pilot activities
- Use the numerous opportunities to receive guidance, support & referral to control their blood pressure

# Evaluation

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- Resources
- Mixed methods
  - Qualitative methods - process evaluation - key informant interviews
  - Quantitative methods - outcome evaluation - employee surveys, HRA data

# Employee surveys

## Response Rates

	Baseline (2008)	Year 1 (2009)	Year 2 (2010)
	Number of respondents/Number of employees (Percent)		
Worksite A	47/88 <b>(53%)</b>	33/36 <b>(92%)</b>	14/25 <b>(56%)</b>
Worksite B	55/140 <b>(39%)</b>	61/126 <b>(48%)</b>	37/132 <b>(28%)</b>

# Demographics

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- Worksite A: more than half of respondents  $\geq 50$  years old
- Worksite B: Almost half of respondents 35 to 49 years old
- Based on 95% confidence intervals, no significant differences in age or gender between years

# Blood Pressure

## Knowledge of their BP numbers

	Baseline (2008)	Year 1 (2009)	Year 2 (2010)
Worksite A	<b>89%</b>	<b>100%</b>	<b>92%</b>
Worksite B	<b>94%</b>	<b>95%</b>	<b>97%</b>

# Actions to Control HBP

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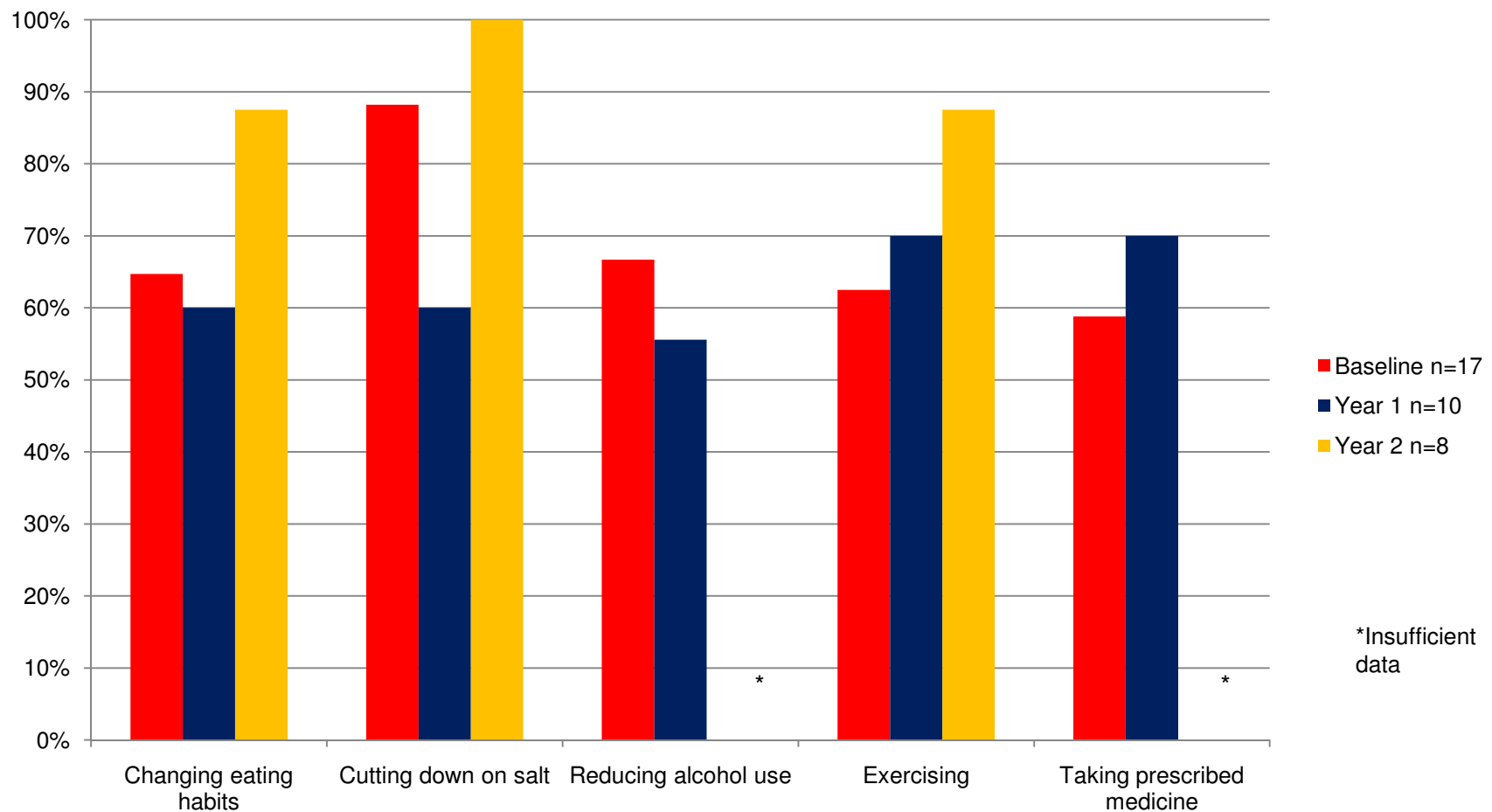
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In all years,

- Vast majority of respondents with borderline or HBP reported taking recommended actions based on JNC7\* guidelines

\*The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure

# Worksite A - Actions to Control HBP



# Worksite A - Actions to Control HBP (cont.)

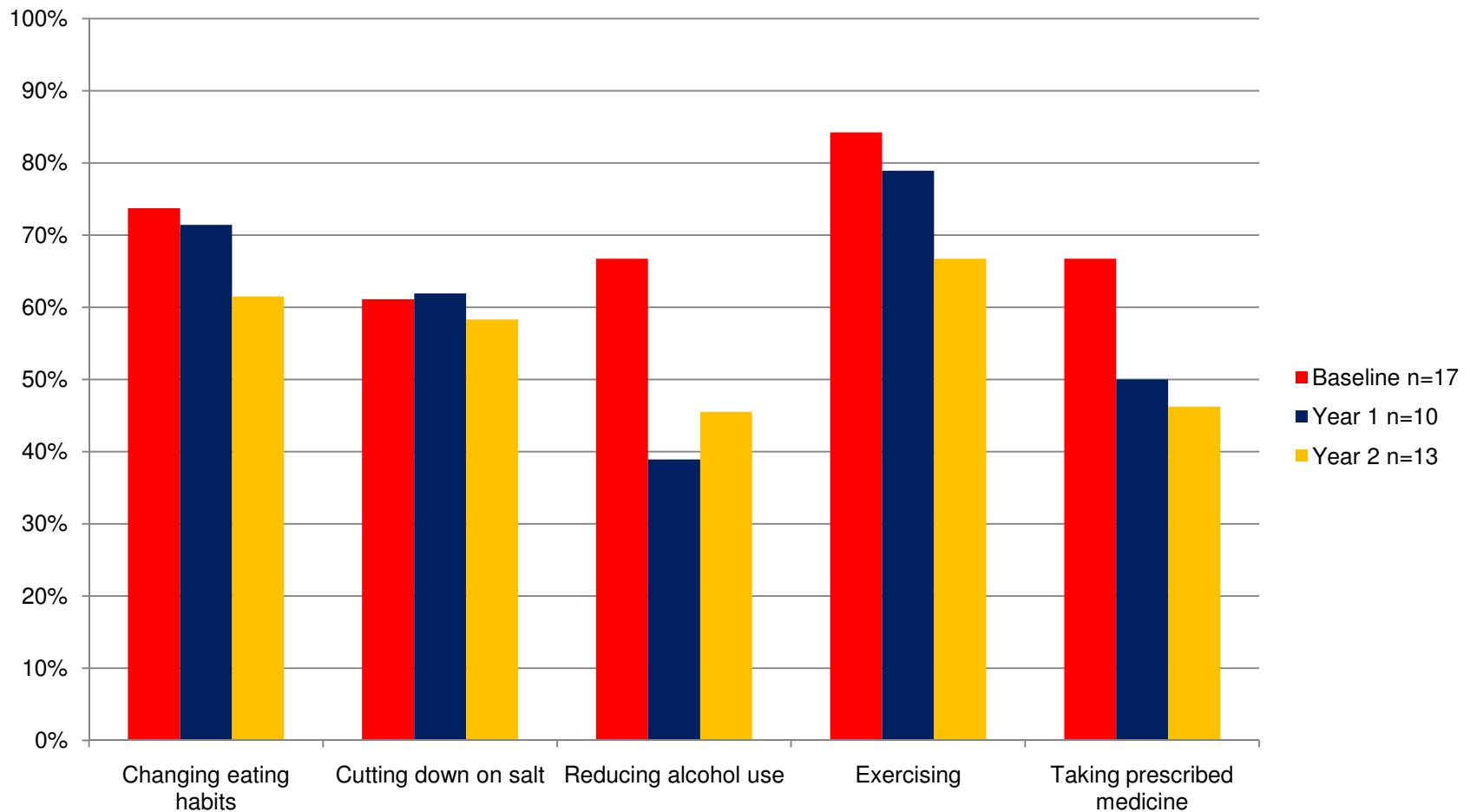
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Reading left to right horizontally across columns:

- Changing eating habits = 65, 60, 88
- Cutting down on salt = 88, 60, 100
- Reducing alcohol = 67, 56, NA
- Exercising = 63, 70, 88
- Taking prescribed medicine = 59, 70, NA

# Worksite B: Actions to Control HBP



# Worksite B: Actions to Control HBP (cont.)

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Reading left to right horizontally across columns:

- Changing eating habits = 74, 71, 62
- Cutting down on salt = 61, 62, 58
- Reducing alcohol = 67, 39, 46
- Exercising = 84, 79, 67
- Taking prescribed medicine = 67, 50, 46

# BP Control

## Self-Reported Normal BP

	Baseline (2008)	Year 1 (2009)	Year 2 (2010)
Worksite A	<b>60%</b>	<b>61%</b>	<b>62%</b>
Worksite B	<b>67%</b>	<b>74%</b>	<b>72%</b>

# HRA data

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- Percent of employees at goal for BP (<140/90 mmHg)
  - Worksite A: 78% pre-pilot, 80% midpoint\*
  - Worksite B: 87% pre-pilot, 85% midpoint\*

\*Not done at end of pilot

- Worksite A: Average BP (Worksite B didn't do)
  - 2002 - 128/79
  - 2009 - 123/74

# Worksites' perceived pilot successes

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- “I think it’s amazing that in the past year 100% of employees with HBP have reduced their sodium intake to control their BP.”
- “Since the BP clinic, our employees with HBP have gotten their BP consistently down to <140/90. And for some of these employees it was really out of control.”

# Limitations

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- Low response rates for employee survey for some years & small numbers limit usefulness of quantitative data and statistical testing
- Small number of employees & short duration of pilot makes it challenging to show impact of intervention.

# Conclusions

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- Worksites added a level of BP assessment and control that they did not have prior to the pilot and that is not seen in most employee health management programs

# Conclusions (cont.)

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- Qualitative and Quantitative data show promising process as both worksites had some successes and improvements in short-term outcomes.

# Conclusions (cont.)

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- Improved CVH policies and environments
- Some increase in employees at one worksite reporting lifestyle behavior change to control HBP
- Some improvement in BP control among those with HBP

# Conclusions (cont.)

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- Low cost
- Feasible for most small businesses that do not have onsite occupational health or offer health assessments or screenings
- Spreading through Wellness Council of Maine and Healthy Maine Works

# Contact

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