

Making a difference in MSD prevention




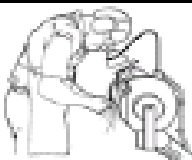
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Prevention Challenges

How many workplaces contain hazards

Only one tenth of the firms surveyed reported that no employees were exposed to any risk factor.

HAZARD ZONE JOBS CHECKLIST			
For each "caution zone job" find any physical risk factors that apply. If a hazard exists, it must be reduced below the hazard level or to the degree technologically and economically feasible.			
Movements or postures that are a regular and foreseeable part of the job, occurring more than one day per week, and more frequently than one week per year.	Hazard Exists 	Job Position evaluated: Date:	No. of employees in these jobs?
Awkward Posture			Comments/Observations
 <p>1. Working with the hand(s) above the head, or the elbows above the shoulders</p> <p>More than 4 hours total per day</p> <input type="checkbox"/>			
 <p>2. Repeatedly raising the hand(s) above the head, or the elbow(s) above the shoulder(s) more than once per minute</p> <p>More than 4 hours total per day</p> <input type="checkbox"/>			
 <p>3. Working with the neck bent more than 45° (without support or the ability to vary posture)</p> <p>More than 4 hours total per day</p> <input type="checkbox"/>			

(2001 Survey, Washington State, Silverstein et al., 2004).

Prevention Challenges

How many workplaces contain “substantial” hazards

Washington State workplaces reporting substantial MSD hazards, i.e., exposure for over 4hrs per day.

- 18.5% of all firms reported risk factors of intensive keying,
- 11.8% for repetitive activity of the whole arm and
- 11.6% for lifting or lowering above shoulders or below the knee while twisting

HAZARD ZONE JOBS CHECKLIST

For each “caution zone job” find any physical risk factors that are below the hazard level or to the degree technologically and economically

Movements or postures that are a regular and foreseeable part of the job, occurring more than one day per week, and more frequently than one week per year.

Awkward Posture

	<p>1. Working with the hand(s) above the head, or the elbows above the shoulders</p>	<p>More than 4 hours total per day</p>
	<p>2. Repeatedly raising the hand(s) above the head, or the elbow(s) above the shoulder(s) more than once per minute</p>	<p>More than 4 hours total per day</p>
	<p>3. Working with the neck bent more than 45° (without support or the ability to vary posture)</p>	<p>More than 4 hours total per day</p>

(2001 Survey, Washington State, Silverstein et al., 2004).

Prevention Challenges

How many workplaces are intervening against MSD:

In smaller companies, for those that had a case of MSDs in the last year, only about one-half had made even one MSD prevention action in their whole workplace

(2001 Survey, Washington State, Silverstein et al., 2004).



To make a difference we need to:

Understand MSDs sufficiently to...

determine risk factors well enough to...

enable workplaces to do risk assessments to...

choose relevant interventions from...

demonstrated efficacious interventions..

and put in place effective changes...

in large numbers of workplaces.



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Workplace hazard and risk identification and assessment

SOBANE APPROACH

SOBANE **Screening:** Everybody's job with some brief training

OOBANE **Observation:** Structured observation

AOBANE **Analysis:** Analysis with simpler methods

EOBANE **Expert** Expert methods and experience



Workplace hazard and risk identification and assessment

How do we do it, assuming our tools are good?

SOBANE

Screening:

Everybody's job, the working population of Ontario?



OOBANE

Observation:

Members of JOHSC or Workplace reps?



AOBANE

Analysis:

Certified members of JOHSC or workplace reps?



EOBANE

Expert

Ergonomists and some "HSA" consultants?



Workplace Interventions

Are we intervening successfully?

Possible explanations why recent systematic reviews have found only moderate evidence of ergonomic intervention effectiveness..

- 1. Our theories about injury and illness causation for MSDs are incorrect or incomplete in important ways**
- 2. The component attributable to exposure is only moderate**
- 3. The intervention was not efficacious,**
- 4. The implementation was not intense enough or sustained**
- 5. The study and its design were unable to detect any change.**

Workplace Interventions and Risk Factors

Risk Factors

Proportion of MSD

Moderate Work-Related Fraction: $b/(a+b)$
Low back pain, Kerr et al (2001)

Individual, leisure, not measured and not explained

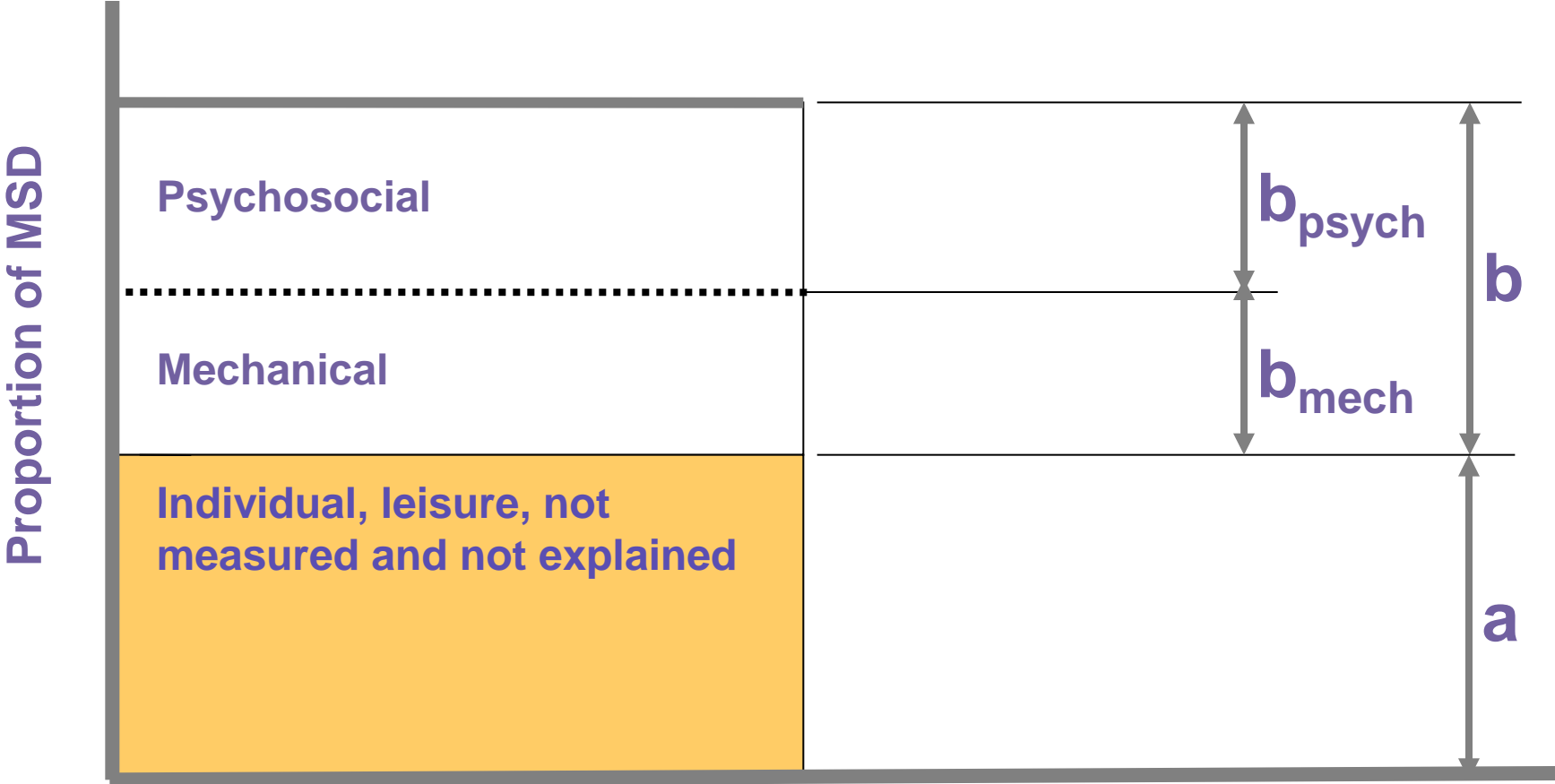
b

a



Workplace Interventions and Risk Factors

Risk Factors

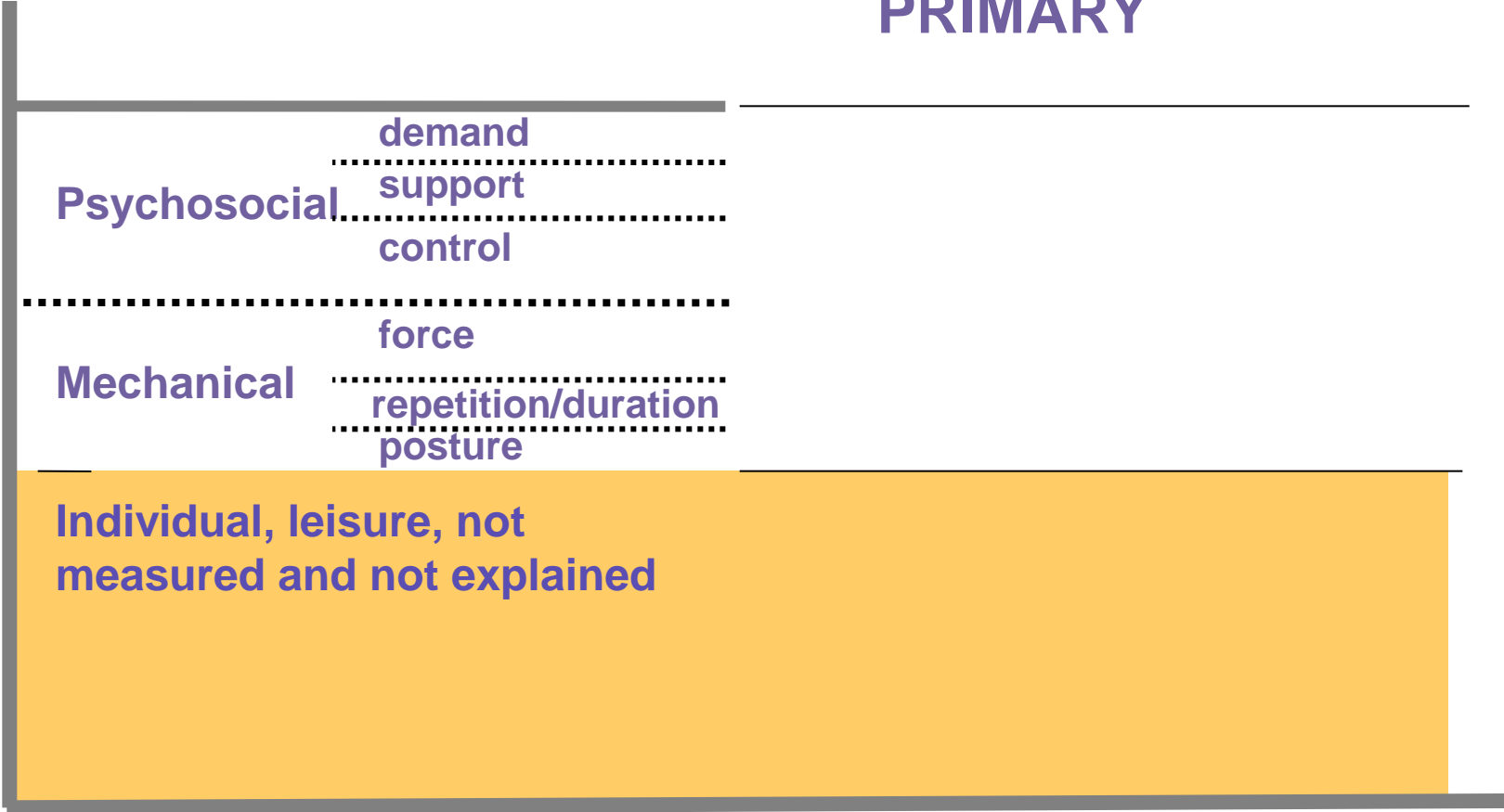


Workplace Intervention Programs: Minimal Effect

Primary

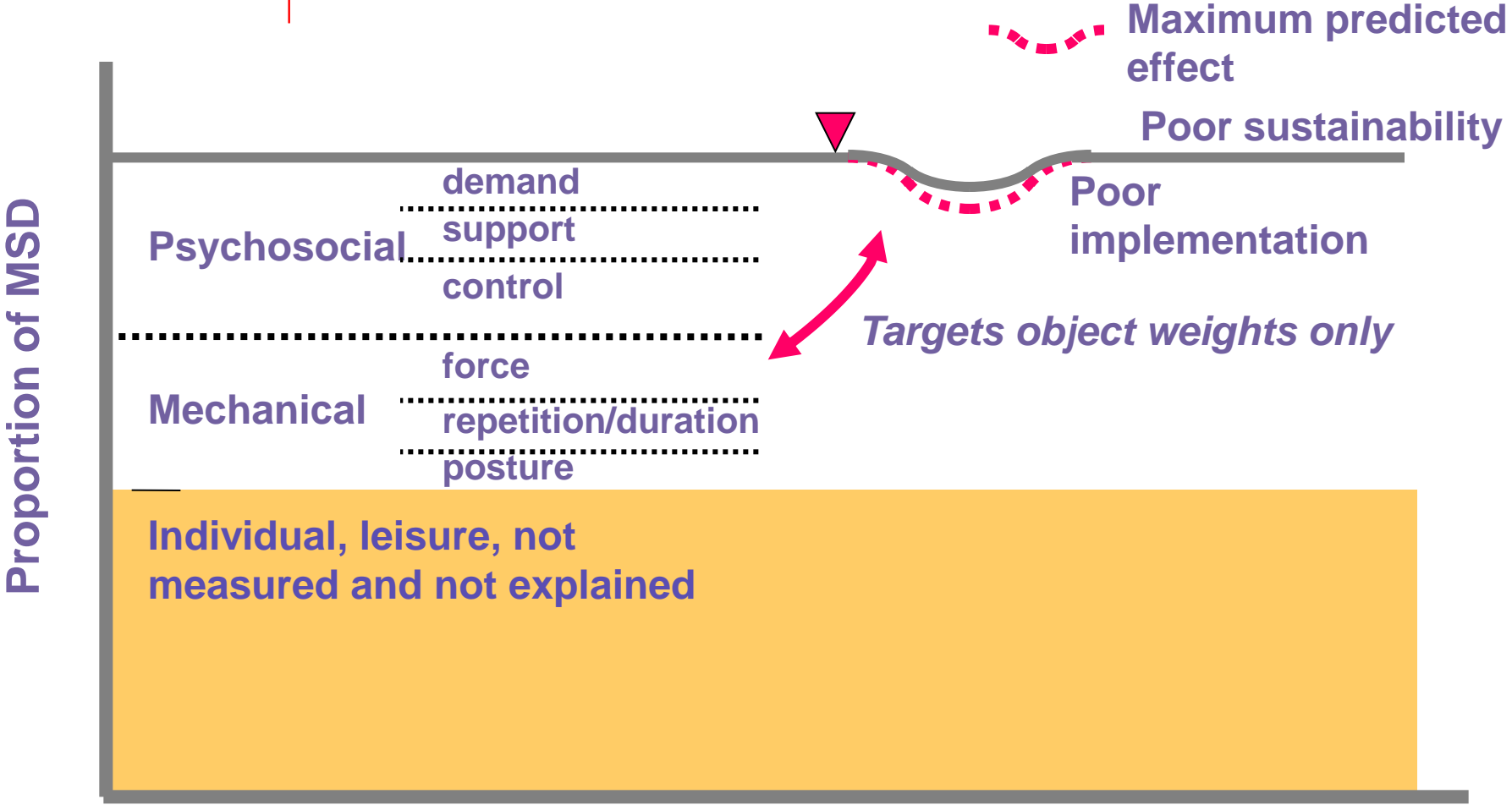
PRIMARY

Proportion of MSD



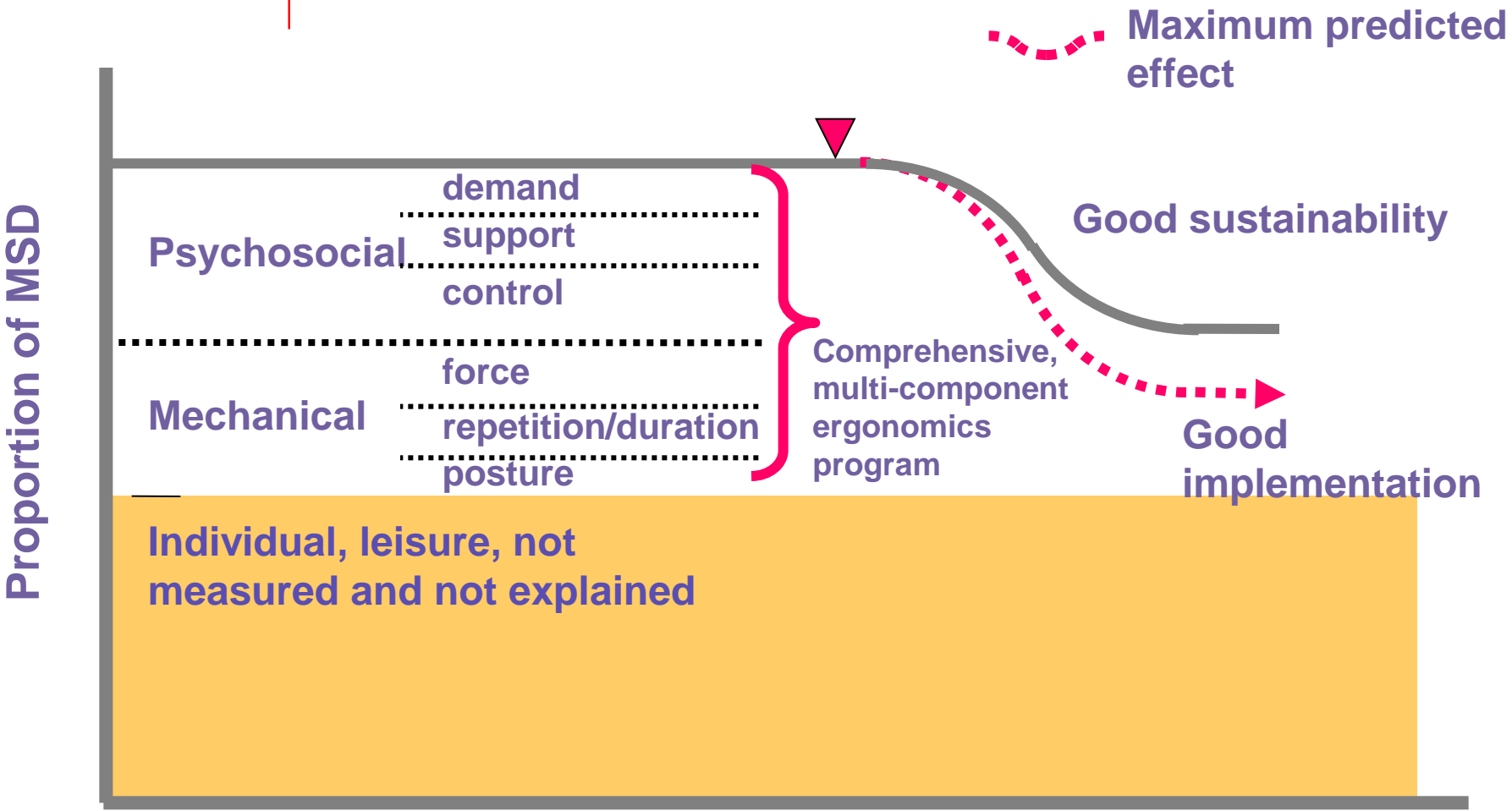
Workplace Intervention Programs: Poor Program

Primary: Program targets object weights only



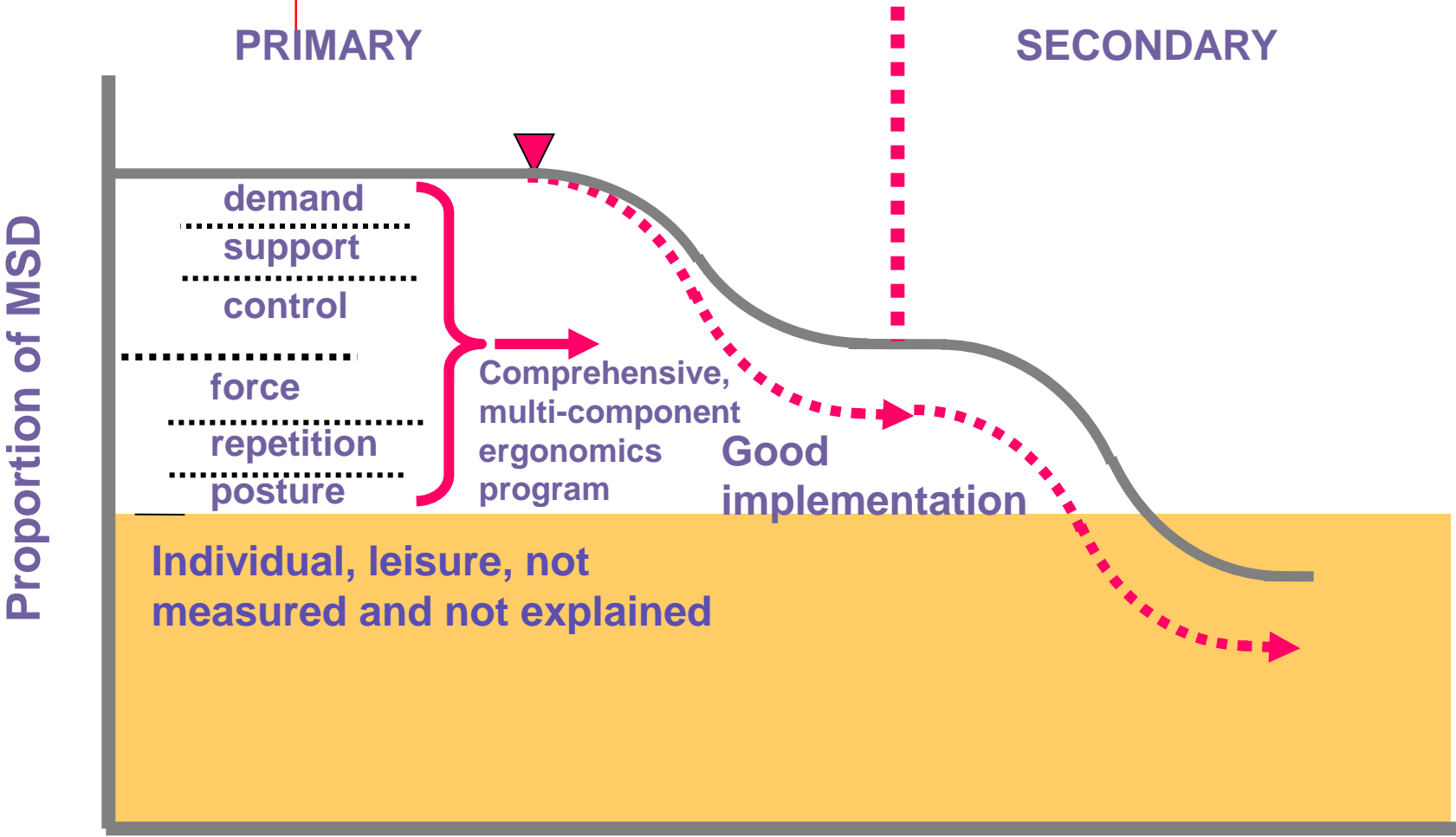
Workplace Intervention Programs: Good Program

Primary: Comprehensive, multi-component program



Workplace Intervention Programs: Good Program

Primary + Secondary:



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Questions and Thank You:

