



Columbia University
MAILMAN SCHOOL
OF PUBLIC HEALTH

The Influence of Safety Culture and Climate on Compliance with PPE

Institute of Medicine

*Workshop on Personal Protective Equipment for
Healthcare Workers in the Event of Pandemic Influenza
Washington, DC*

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Robyn R.M. Gershon, MHS, DrPH
Mailman School of Public Health
Columbia University

Outline

1. Definitions
2. Impact on safety climate on:
 - PPE compliance
 - Willingness to report to duty
3. Responsibilities
4. Recommendations

Safety Culture

- **Safety Culture:**
 - The organizational commitment to safety
 - Policies, procedures, training, provision of PPE, etc.
 - Senior leadership support
 - Demonstration that safety is an institutional value
 - Employees' health and safety in a high priority

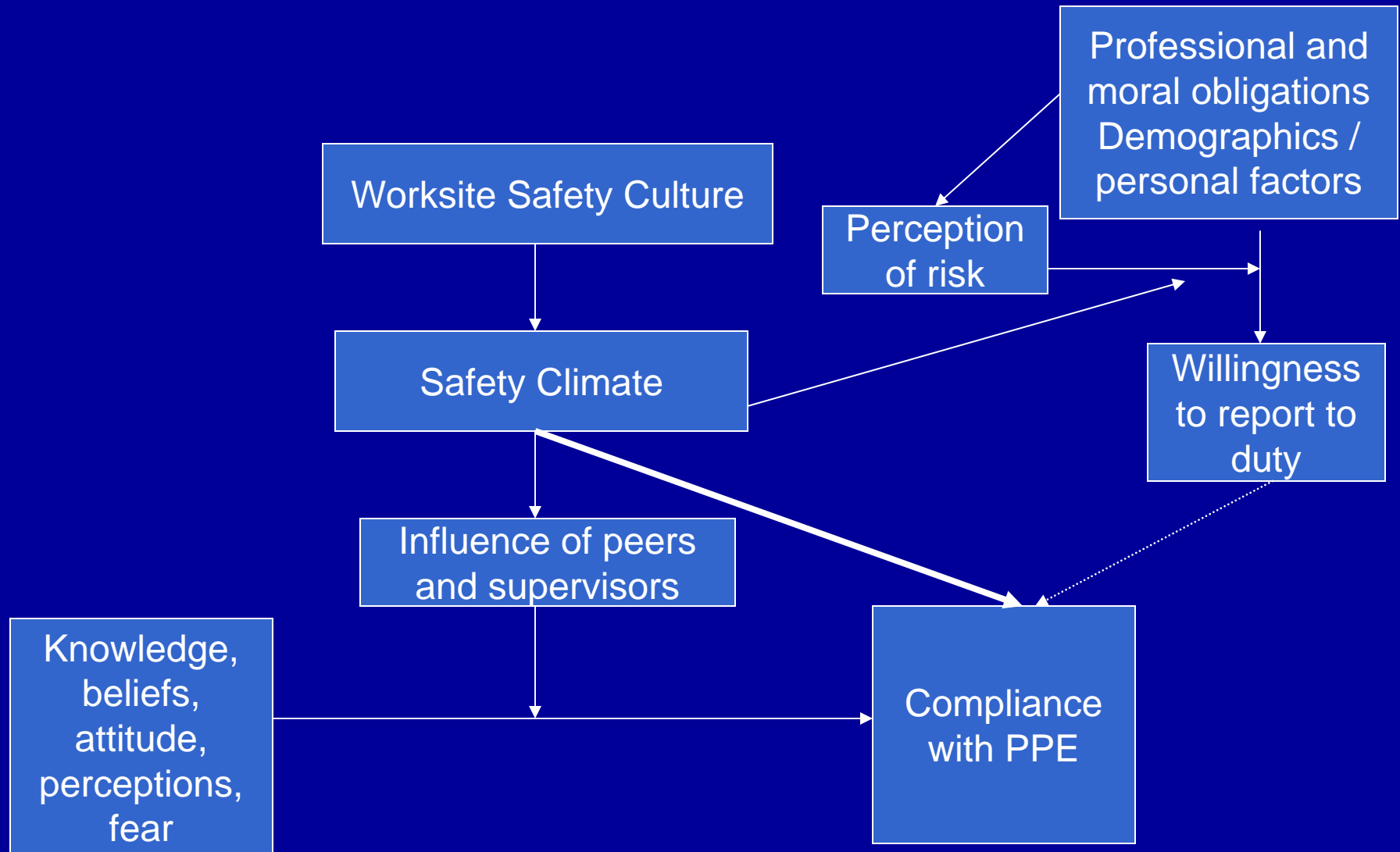
Safety Climate

- **Safety Climate:**
 - The collective employee perception of the safety culture
 - Measured using safety climate scales
 - Usually stable, but can be changed

The Importance of Safety Culture/Climate

- Repeatedly shown to be the best predictor of:
 - Adoption of safe work practices
 - Injury/exposure rates
- Also significantly associated with:
 - Employee satisfaction
 - Patient safety
- More recently shown to be important in terms of “willingness to report to duty”

Compliance with PPE



Compliance with Respiratory PPE

- Suboptimal compliance well documented
 - Prison-based HCWs (N=408), 2001
 - Providing care to known or suspected TB patients
 - » 31% wore respirators
 - » 22% wore surgical masks
 - » 18% never used any respirator PPE
 - » Training = respirator use doubled the rate of use
 - Physicians in training 2004 (N=298)
 - 21% training
 - 18% fit-tested
 - 37% wore respirators

The Importance of Safety Climate on PPE Use

- Organizational focus on PPE is especially important with respect to respiratory PPE
 - Uncomfortable
 - May hinder communication
 - Multiple layers of compliance needed (e.g., fit-testing, medical surveillance, etc.)
 - Training and modeling is required
 - Skills training in context may be needed
 - Knowledge regarding efficacy of PPE may be low in some employees. Additional education may be required.

Addressing these concerns and barriers can lead to...

- Increased compliance
- Reduction in risk of transmission
- Greater willingness to report to duty

Willingness to Report

- 2004 survey of NYC HCWs (N=6,428)
 - 48% were willing to report during SARs outbreak
 - Major barriers
 - Fear for family
 - Fear for self
- 2005 survey of public health employees (N=303)
 - 54% likely to report during a pandemic
 - Perceived risk highly correlated
- 2006 survey of NYC home health workers
 - 35% of RNs (N=217) willing to provide home care to infected pandemic patients
 - 11% of aides (N=1025) willing to provide care to infected pandemic patients

Responsibilities

- *“Healthcare providers need to strike a balance between fear for their own safety and their duty to provide care for the sick.” (Singer, BMJ: Dec. 2003)*
- **Confronting Fear:**
 - Education
 - Provision of effective PPE
 - Assurance of efficacy of PPE and institutional support for use
 - Assurance of environmental controls

Responsibilities

Health Care Workers

- Duty to provide care to patients

Facilities

- Duty to provide health services AND protect workforce

Recommendations

Policies/Procedures in Place

- Employee Health and Safety Issues
 - Training, PPE, engineering controls
 - Training must address risk perceptions as well
 - Support for employees' with peri-disaster and post-disaster mental health problems
- Employee and Labor Relations
 - Employee has medical/physical limitations to respirator use
 - Employee must be quarantined at work/home
 - Employee refuses to report

Summary

- Effective emergency response to a pandemic requires system **capacity, appropriate, effective emergency plans and a competent workforce** that is both *able and willing* to report to duty and to work safely
- Policy guidelines must address health care professionals' duty to care **AS WELL AS** the responsibilities of employers to protect the health and well-being of employees
- Understanding the facilitators and barriers to employees' compliance to respiratory protection use and addressing these will help improve compliance, reduce risk, and promote willingness

Contact Information

For additional information, please contact:

Dr. Robyn Gershon, (212) 305-1186
(rg405@columbia.edu)

Useful Links:

<http://eprep.columbia.edu>

<http://www.nycepce.org>

<http://cumc.columbia.edu/dept/hhcwstudy/>

<http://www.mailman.hs.columbia.edu/CPHP/hospcomps.pdf>

http://www.ncdp.mailman.columbia.edu/program_cphp.htm

<http://www.mailman.hs.columbia.edu/CPHP/wtc/documents/JournalofUrbanHealth.pdf>