

REACH II: Michigan Data

Presented by
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Background

- NIOSH-certified respirators (N95 or higher) are recommended for use during activities that have a high likelihood of generating infectious respiratory aerosols.
- Pandemic Influenza A (H1N1) detected in Michigan on May 1, 2009; it was widespread by June 2009.
- Michigan's hospital and public health partners initially struggled to meet the demand for N95 respirators.
- NIOSH commissioned this research to look at policy implementation around respirator usage.

Objectives

Describe Michigan hospital managers' and healthcare workers'...

- experiences, observations, and opinions regarding respirator use and workplace safety
- potential barriers to implementing the respiratory protection program
- awareness of facility's respiratory protection program for influenza and other airborne transmissible diseases including
 - risk assessment
 - medical evaluation
 - fit testing
 - training
 - program evaluation
- policies and procedures for donning, doffing, and storing respirators

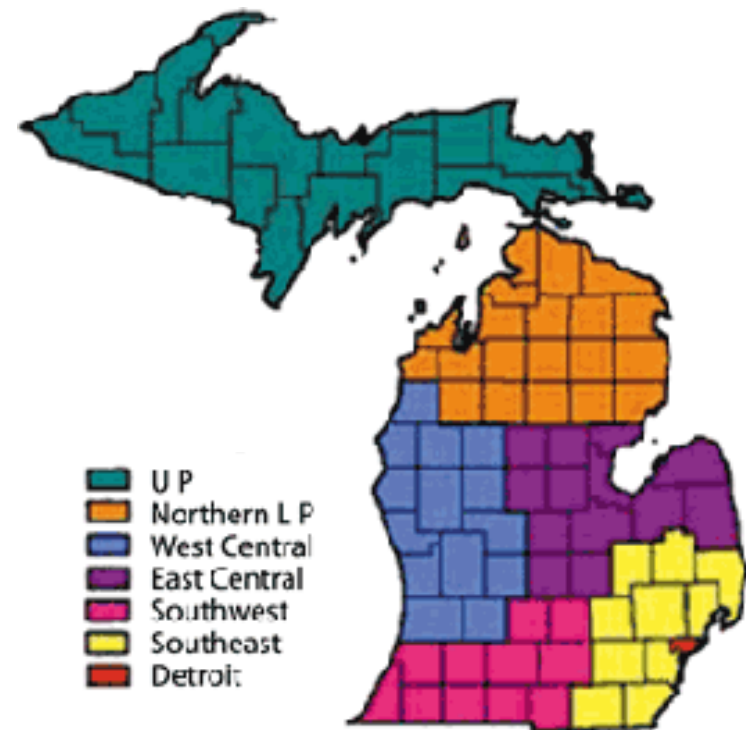
Methods

- The Michigan Department of Community Health's Bureau of Health Licensing provided a mailing list for 114 acute care and 36 critical access licensed hospitals.
- Sample Selection
 - Started with random, stratified sample by region and hospital bed count.
 - Sent participation invitation letter to the Infection Prevention or Employee Health Nurse Manager.
 - Formed partnerships with the Michigan Society for Infection Prevention and Control and the Association of Occupational Health Professionals in Healthcare.
 - Ended up reaching out to 74 hospitals total.
 - Final sample: healthcare workers (n = 102), unit managers (n = 26), hospital managers (n = 27)

Sample - Facilities

Eleven Michigan hospitals participated in the study.

- 1 small, Northern LP
- 2 small, West Central
- 1 large, East Central
- 2 small, East Central
- 3 large, Southeast
- 1 large, Southwest
- 1 small, Southwest



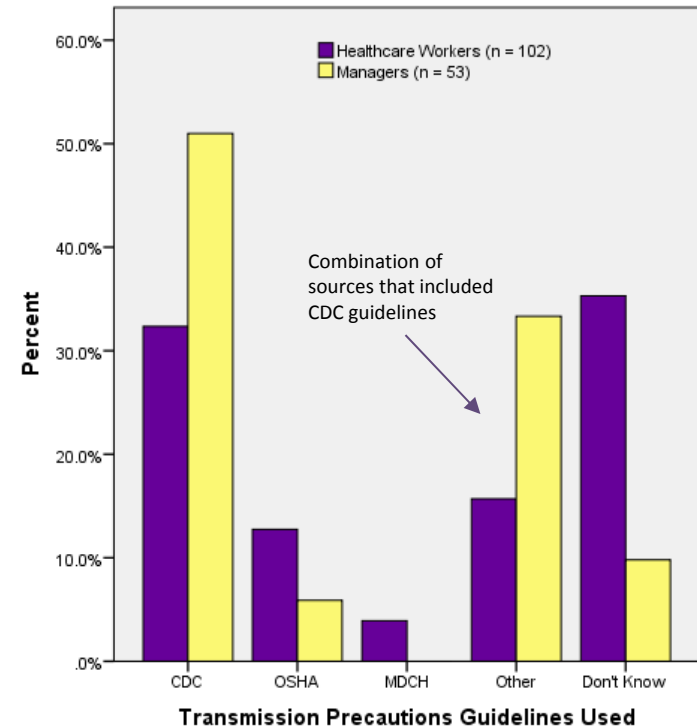
Sample - Respondents

	Managers	Healthcare Workers
Sample Size (n)	53	102
Length of Time in Current Position	> 5 years (34%) 2-4 years (28%) < 1 year (17%)	> 5 years (62%) 2-4 years (14%) < 1 year (14%)
Level of Education	Four-Year degree (47%) Graduate degree (28%) Associate education (15%)	Associate education (39%) Other (29%) Four-Year degree (23%)
Hospital Department	Other (54%)* ER (23%)* ICU (12%)* Med/Surg (12%)*	Other (58%) ER (17%) ICU (13%) Med/Surg (13%)

* Unit Manager (n = 26) responses only; Hospital Manager survey included more specific response categories.

Policy and Guidelines

- Most respondents (84%) believed their facility had an RPP.
- Just over half (51%) of all respondents reported that the CDC guidelines* were most frequently used to determine transmission precautions.
* or a combination of sources that included CDC guidelines
- Just over one-third (35%) of healthcare workers didn't know which transmission precaution guidelines were used at their facility.

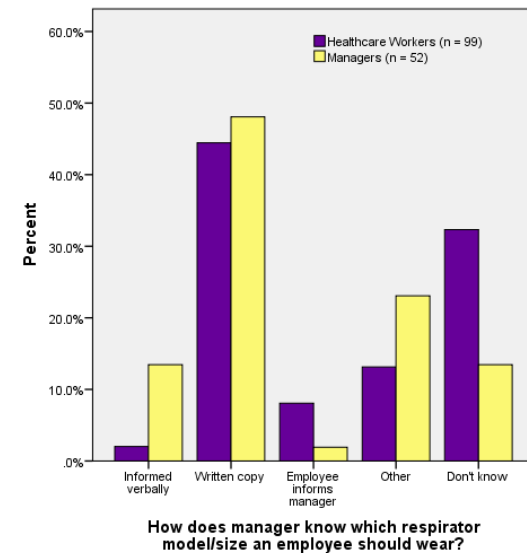
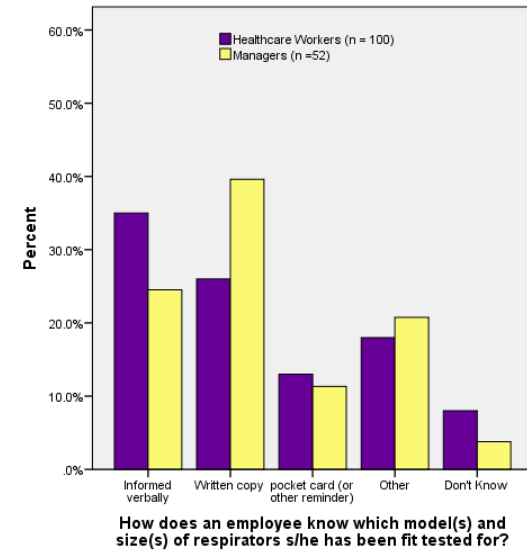


Medical Evaluation / Fit Testing

	Response	Managers	Healthcare Workers
Do employees receive medical evaluation and clearance before wearing a respirator?	Yes	85%	82%
	No	9%	10%
	Don't Know	4%	8%
How frequently are employees medically evaluated?	At hire, then as required	68%	3%
	At hire, then annually	11%	75%
Do employees have a fit test at hire?	Yes	87%	68%
	No	4%	24%
	Don't Know	8%	8%
Do employees receive fit testing before being allowed to wear an N95 respirator?	Yes	93%	93%
	No	2%	4%
	Don't Know	6%	2%
How often do employees receive fit testing?	At hire, then annually	45%	76%
	At hire only	43%	3%

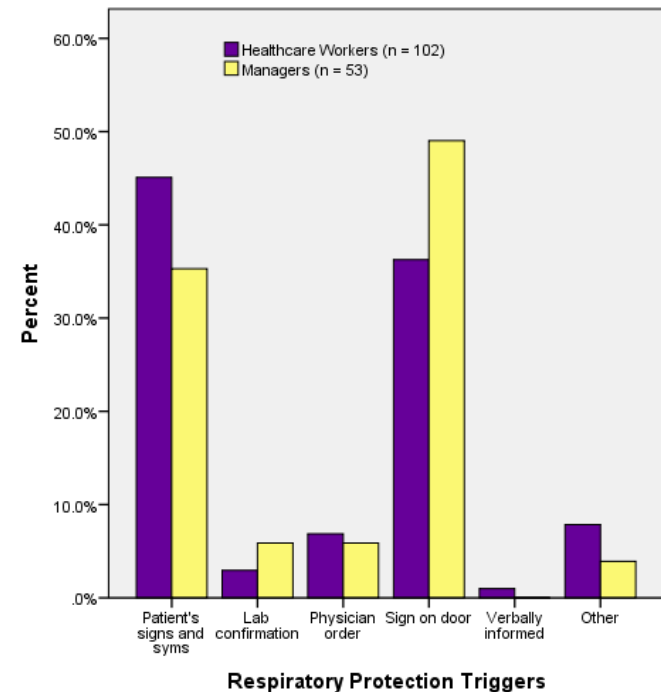
Which Respirator?

- Healthcare workers most often reported receiving verbal (34%) notification of the respirator they had been fit tested and approved to wear.
- Just under half of managers (47%) and healthcare workers (43%) stated that managers would be notified in writing regarding the respirator an employee was approved to wear.



Respiratory Protection Triggers

- About 45% of healthcare workers indicated that a patient's signs and symptoms would trigger the employee to use respiratory protection.
- Almost half (49%) of managers said a "sign on the door" would prompt an employee's use of respiratory protection.



Training

		Managers	Healthcare Workers
Know how to properly use respiratory protection		96%	86%
Know when to use respiratory protection		100%	94%
Cannot wear respirator without training		88%	72%
Length of training	1-15 mins	59%	67%
	16-30 mins	26%	15%
Training format	In-person	66%	56%
	Online	21%	27%
How often training required?	At hire, then annually	81%	67%
	Don't know	8%	13%
	At hire	6%	7%

Influenza Questions

- Almost all healthcare workers (99%) said that free influenza vaccines were available last year, and almost all (94%) said they would be free and available this year.
- Almost all hospital managers (98%) said there were last year, and would be this year, free influenza vaccines available.
- Healthcare workers reported they had received (76%) or planned to receive (11%) the influenza vaccine this year.

Worker Safety

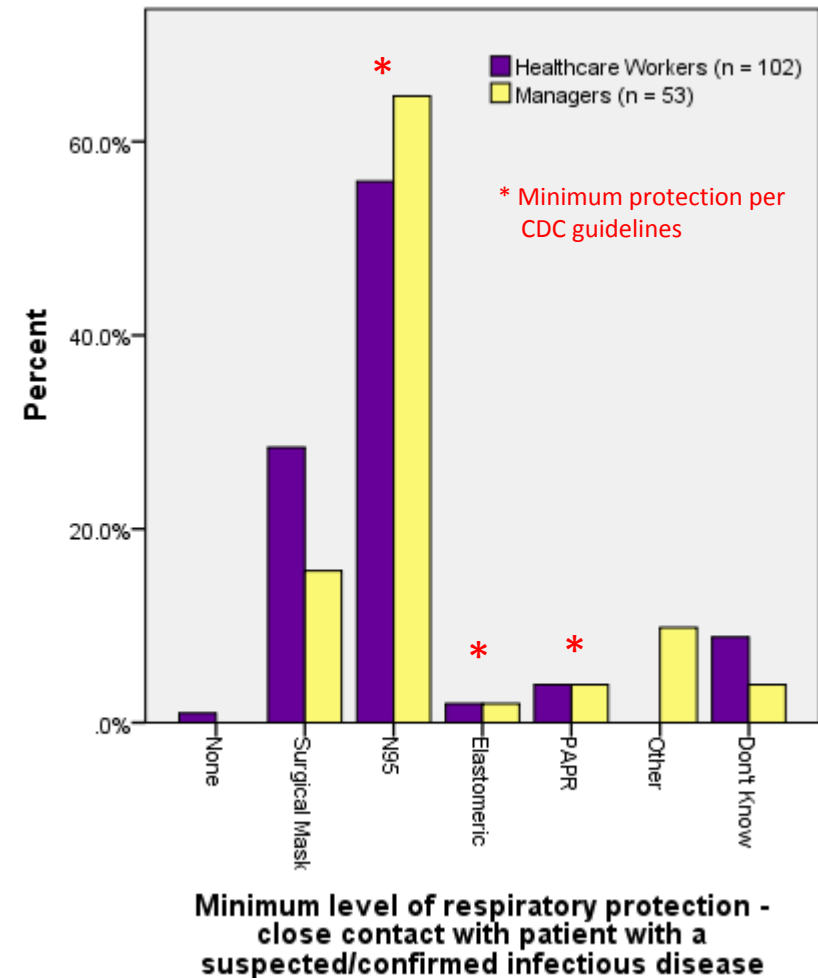
Healthcare workers were asked...	Agree	Disagree	Don't Know
A properly fitted respirator can protect workers from on-the-job exposure to airborne infectious diseases.	99%	0%	1%
An N95 respirator is more effective than a surgical mask at protecting workers from airborne infectious diseases.	95%	1%	4%
Workers at my workplace use respirators when they are required.	88%	2%	9%
Supervisors correct workers if they do not wear a respirator when required.	66%	6%	28%
Supervisors correct workers if they do not wear a respirator properly.	53%	10%	37%

Worker Safety

Healthcare workers were asked...	Agree	Disagree	Don't Know
At my workplace, safety hazards are quickly corrected.	91%	3%	5%
At my workplace, all reasonable steps are taken to minimize workers' risk of exposure to airborne infectious diseases.	91%	6%	3%
The health and safety of workers is a high priority with management where I work.	93%	2%	5%
Workers are provided with training about respiratory protection.	90%	8%	2%
Management communicates information about safety and health on a regular basis.	78%	13%	10%
Management seeks feedback from workers about health and safety issues.	69%	20%	12%

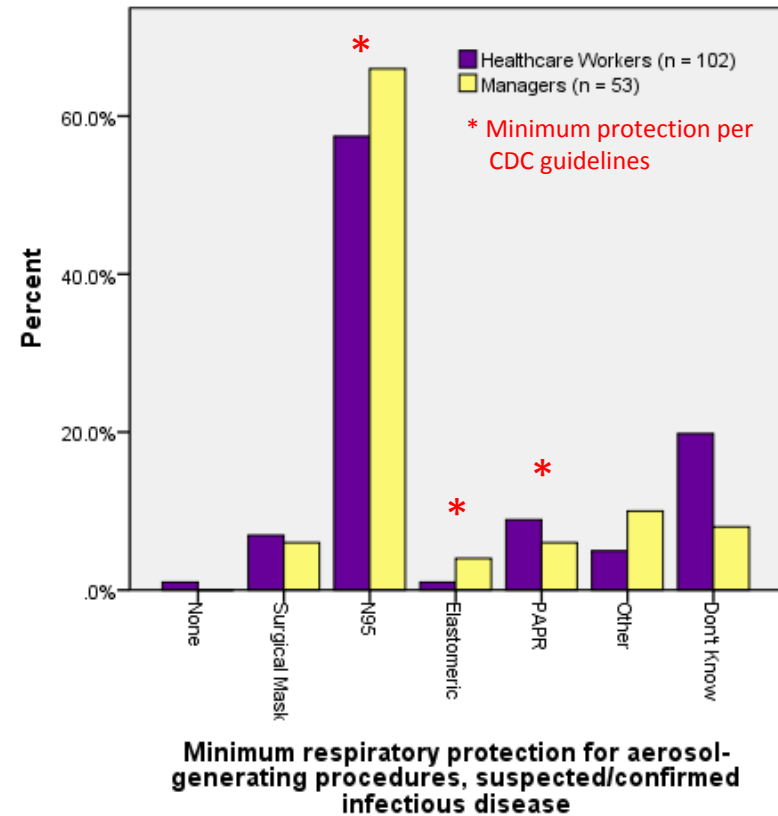
Scenario Questions

- Over half (56%) of healthcare workers reported that an N95 mask was required when in close contact with a patient suspected/confirmed of having an airborne infectious disease.



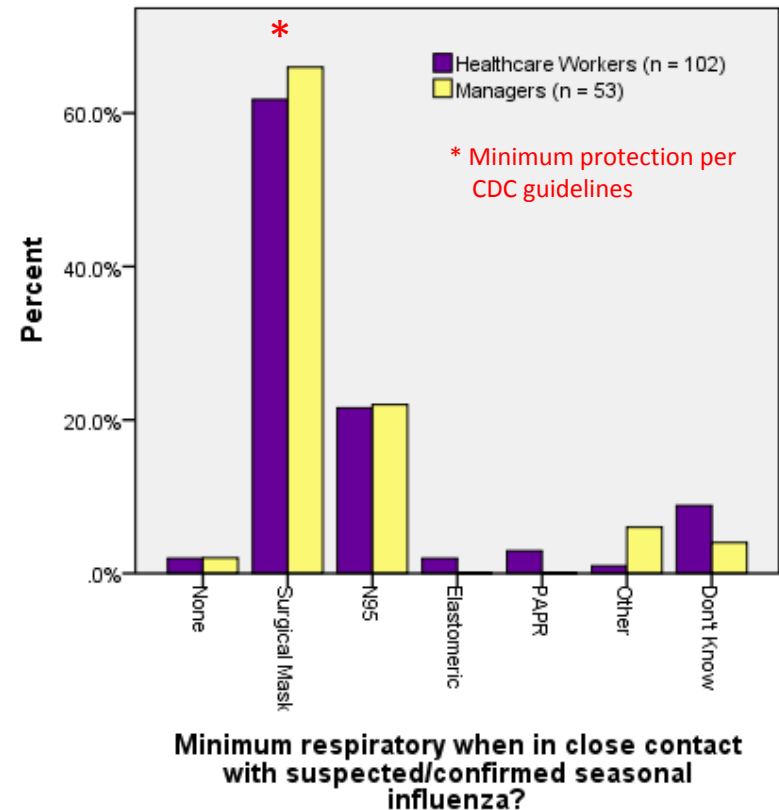
Scenario Questions

- Most healthcare workers (57%) and managers (62%) reported an N95 as the minimum protection required when performing aerosol-generating procedures with a patient having a suspected or confirmed infectious disease.



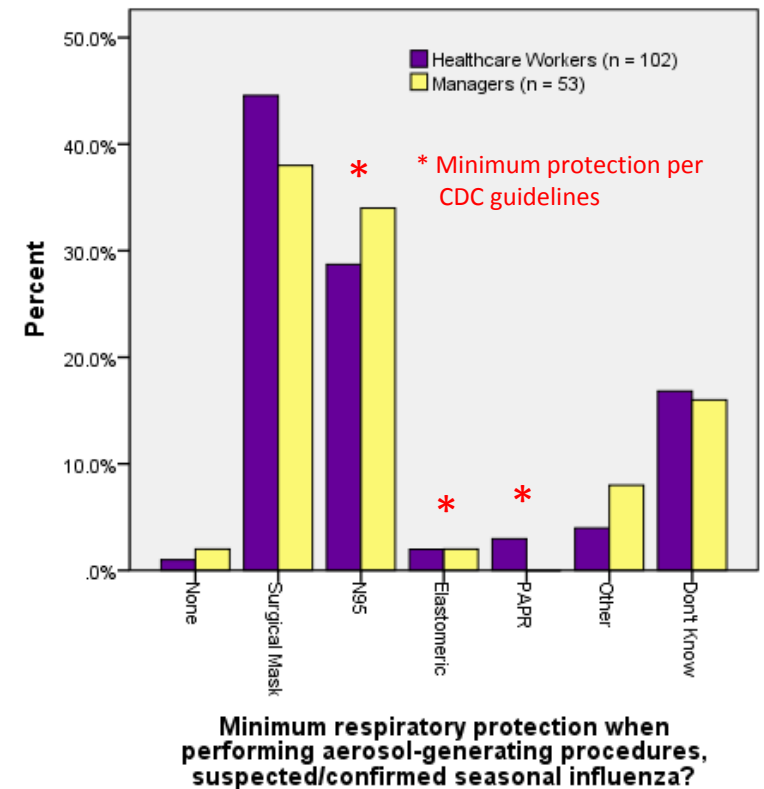
Scenario Questions

- Most healthcare workers (62%) and managers (62%) reported a surgical mask as the minimum protection required when in close contact with patients who have suspected or confirmed seasonal influenza.



Scenario Questions

- Most healthcare workers (44%) and managers (36%) reported a surgical mask as the minimum protection required when performing aerosol-generating procedures on a patient who has suspected or confirmed seasonal influenza.
- The minimum protection required for this scenario, per CDC guidelines, is an N95, Elastomeric, or PAPR.



Additional Information

Healthcare workers were asked...	Yes/Agree	No/Disagree	Don't Know
I know the proper person to speak to when I have questions about respirator protection? (n = 102)	95%	4%	1%
Workers' input on respiratory protection is well received in this unit? (n = 102)	65%	9%	26%
Do healthcare workers need more respirator training than they currently receive? (n = 102)	35%	58%	7%
Does the length of time you'll spend in a patient's room influence your decision to not/wear a respirator? (n = 100)	15%	83%	2%

Conclusions

- Most healthcare workers receive medical evaluation and clearance before donning a respirator.
- Employees receive a fit test before donning a respirator.
- Managers can enhance worker safety by strictly monitoring and enforcing a respirator fit test at hire and then an annual re-fit.
- Employees believe that a properly fit respirator provides protection against infectious respiratory aerosols.
- A substantial proportion of healthcare workers and managers are unsure of the minimum protection required for different conditions.

Additional Information

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