

Mask Use and Pandemic Flu  
*Institute of Medicine*

The Community Public Health Perspective

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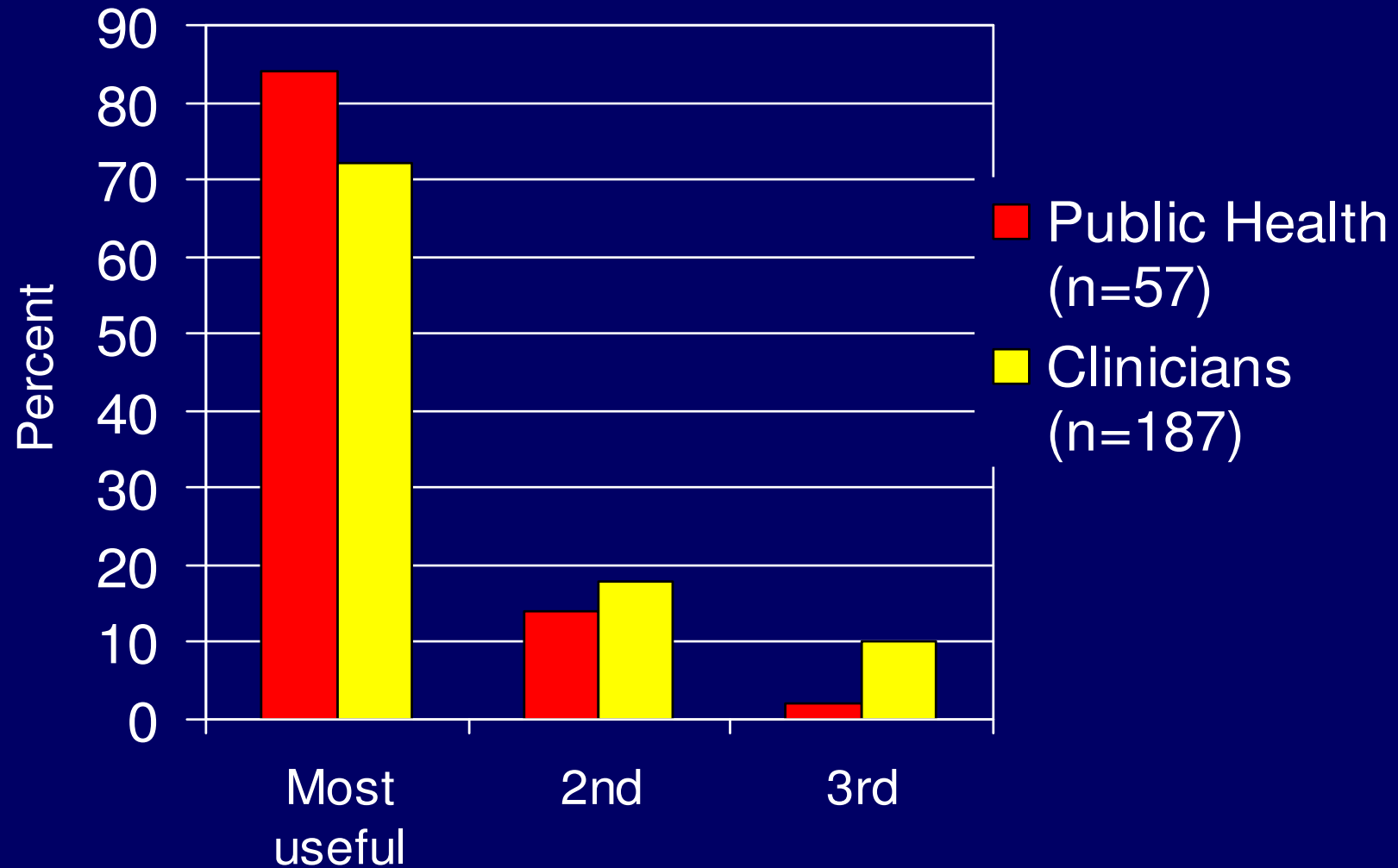
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# Mask Use and Pandemic Flu - IOM

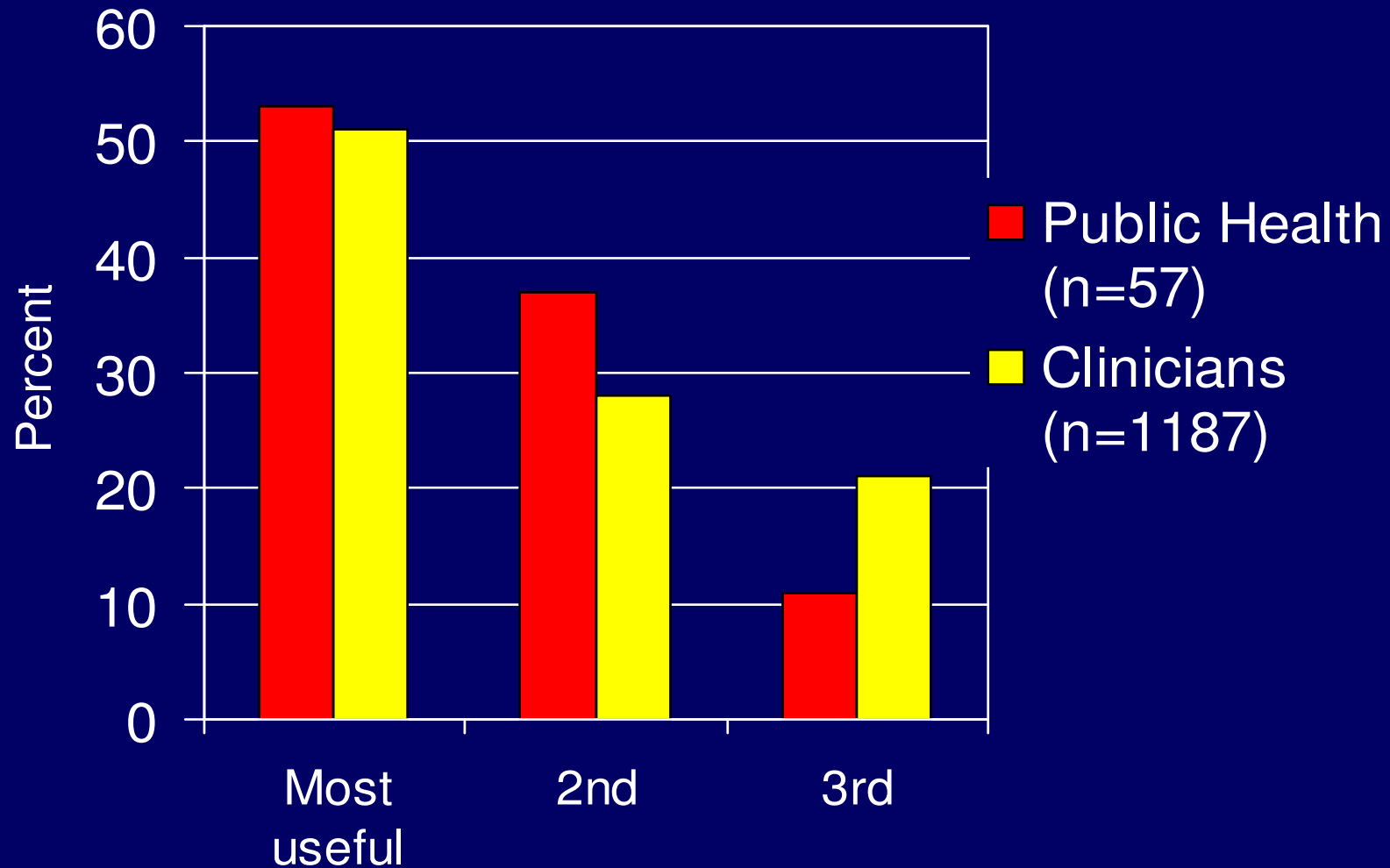
## A Survey of Local Health Officers & Clinicians

- E-mail web-survey to public health listserv subscribers for clinicians and WA State local health officers, public health staff, FEB 2006 (n~700, not all addresses valid)
- Total respondents 244
- Technical problems limited responses
- Clinical respondents (n=187)
  - 124 (66%) MD, 63 (34%) non-MD clinician
  - Multiple specialties, incl. ED, FP or IM/IM subspecialty
  - Infection control professionals
- Public Health respondents (n=57)
  - 19 (33%) MD, 38 non-MD public health professionals
  - 13 of 16 Health Officers (11 MDs) representing 35 local health jurisdictions in Washington State

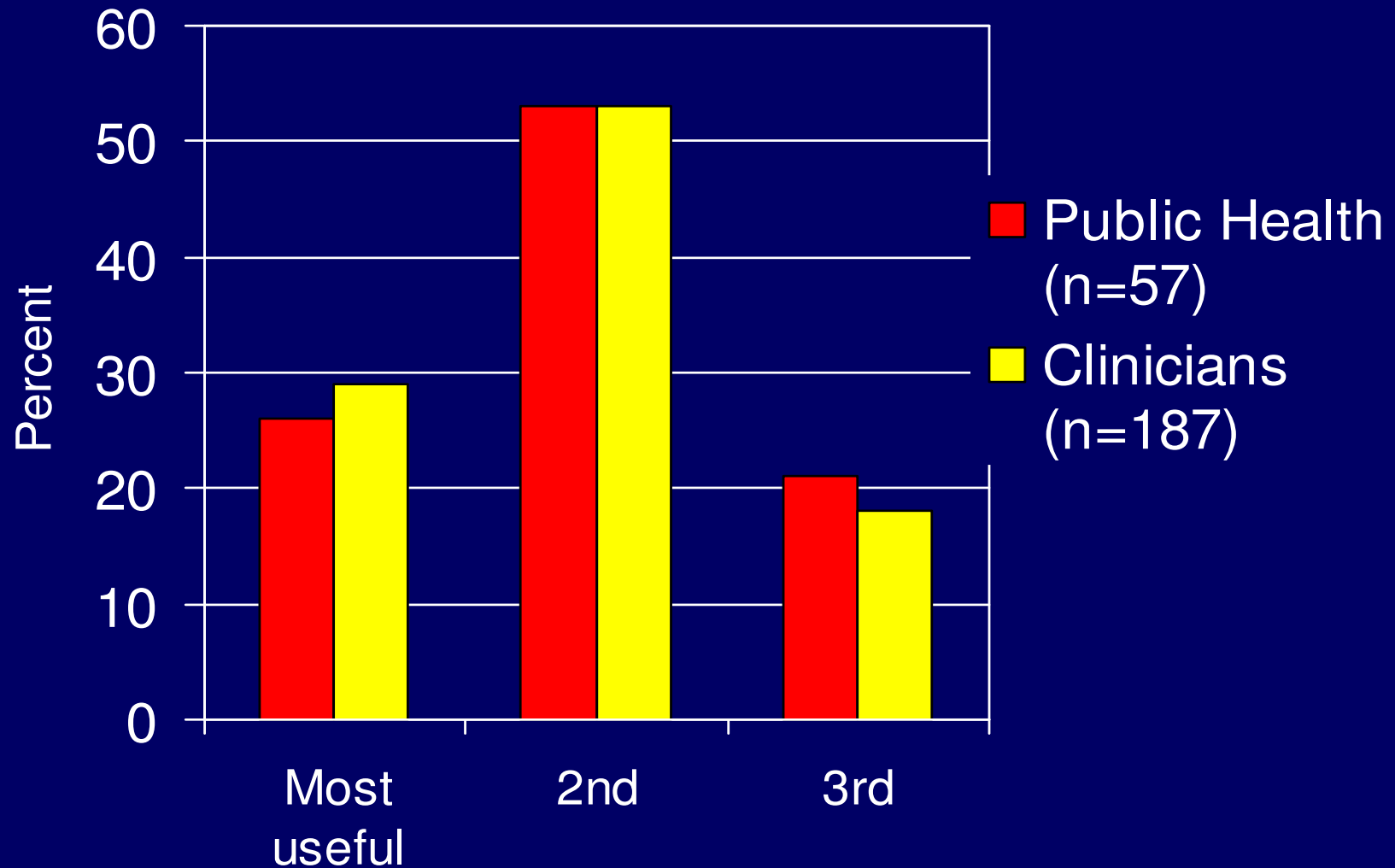
How useful do you think hand hygiene would be for protection against spread of influenza among the public during a severe pandemic? (Rank 1-3, 1= most useful)



How useful do you think social distancing measures would be for protection against spread of influenza among the public during a severe pandemic? (Rank 1-3, 1= most useful)



How useful do you think mask use would be for protection against spread of influenza among the public during a severe pandemic? (Rank 1-3, 1= most useful)



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- Lack of clear data on which to base a recommendation = dilemma
- Does community mask use make sense despite insufficient data for evidence-based recommendation?
- Arguments in Favor
  - “Common sense”: Seems reasonable based on important role of droplet transmission
  - Might decrease  $R_0$ , slow spread

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### Arguments in favor

- “What’s good for the goose...”
- Masks are routinely recommended in healthcare settings to protect healthcare workers from infection
- HHS Pandemic Plan: Infection Control Supplement 4
  - “...Protect persons caring for influenza patients in healthcare settings from contact with the pandemic influenza virus. Persons who must be in contact should wear a surgical or procedure mask for close contact with infectious patients.”
  - “Although no studies have assessed the use of masks at home to decrease the spread of infection, use of surgical or procedure masks by the patient and/or caregiver during interactions may be of benefit.”

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### Arguments in favor

- HHS Pandemic Plan recommends other unproven but potentially beneficial interventions
  - Supplement 7: Antiviral Drug Distribution and Use (\$1.4 billion...)
    - “...Appropriate use of these agents during an influenza pandemic *may* reduce morbidity and mortality and diminish the overwhelming demands that will be placed on the healthcare system.... *The effectiveness of antivirals against a new pandemic influenza virus cannot be predicted... There are no data on the effectiveness of neuraminidase inhibitors in preventing either serious morbidity (e.g., requirement for intensive care) or mortality.*”
  - Social distancing measures

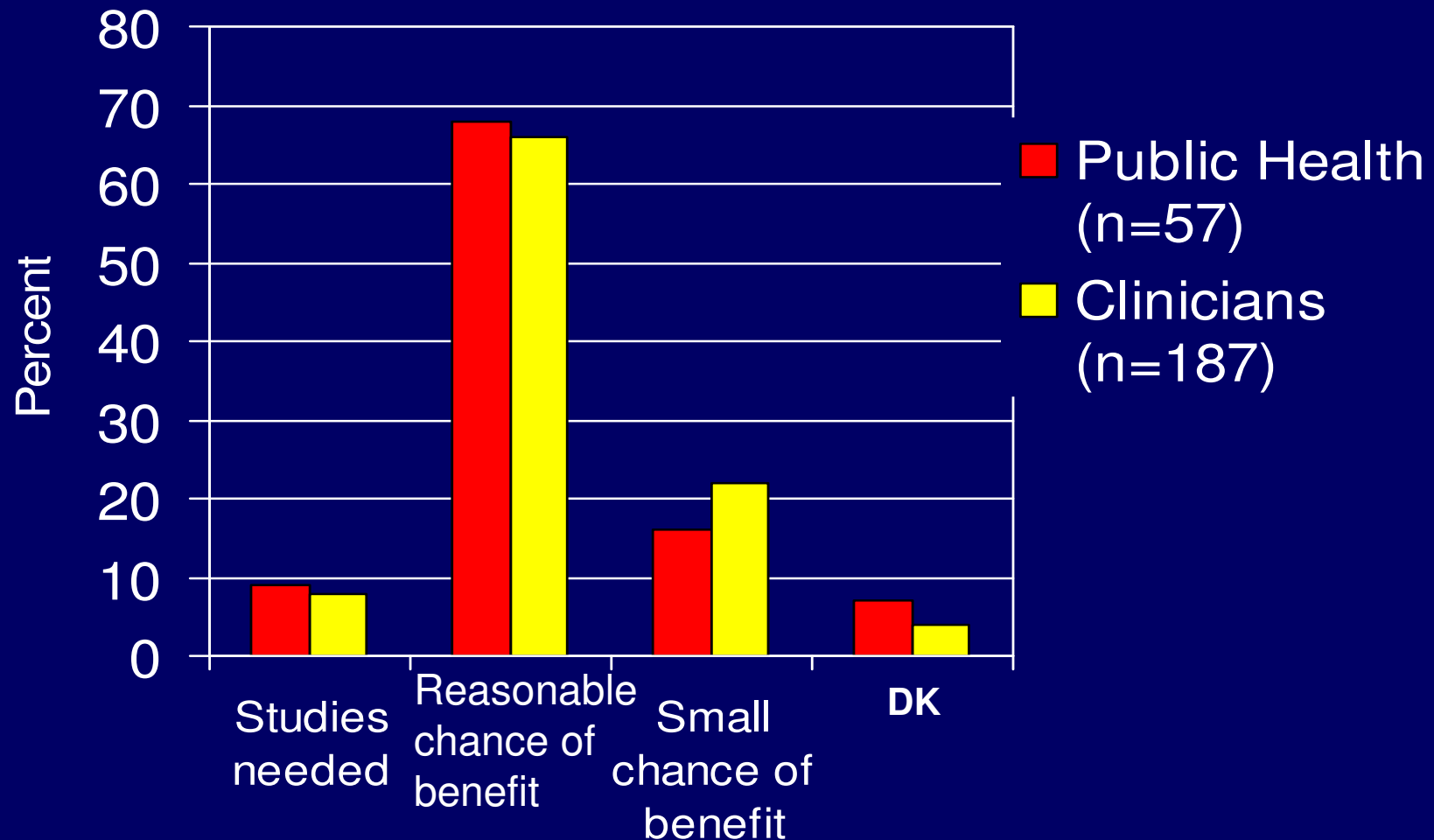
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### Arguments in favor

- Permissive language in HHS Pandemic Plan
- HHS Pandemic Plan: Recommendations for Infection Control in Community Settings
  - “Although the use of masks in community settings has not been demonstrated to be a public health measure to decrease infections during a community outbreak, *persons may choose to wear a mask as part of individual protection strategies that include cough etiquette, hand hygiene, and avoiding public gatherings. Mask use may also be important for persons who are at high risk for complications of influenza.*”

In the absence of data from controlled studies, how much evidence do you think is needed in order to recommend mask use to the general public during a severe influenza pandemic?



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- Need to know more about public opinion, expectations, values, behavior

# Have we learned our lessons about pandemics?

By Anita Manning, USA TODAY, 2/20/2006

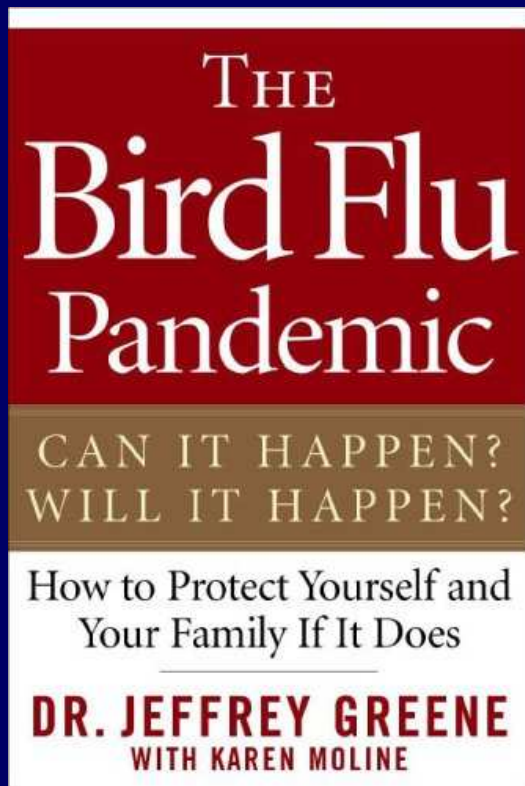
## The right mask is a must

“...Michael Bell of the Centers for Disease Control and Prevention says *masks are most important for people who are sick and those who are likely to be in contact with them.*”

There are two basic types:

**Surgical masks...**are designed to keep germs in, Bell says. They should be worn to reduce the risk of exposing others. If a person comes in (to a hospital) coughing, we put a mask on them,” Bell says. “*For those who are not going to be exposed to the virus because of their work but who want to have a measure of security,*” Bell says, “*surgical masks are the best choice.* Surgical masks are available for 25 to 45 cents each.”





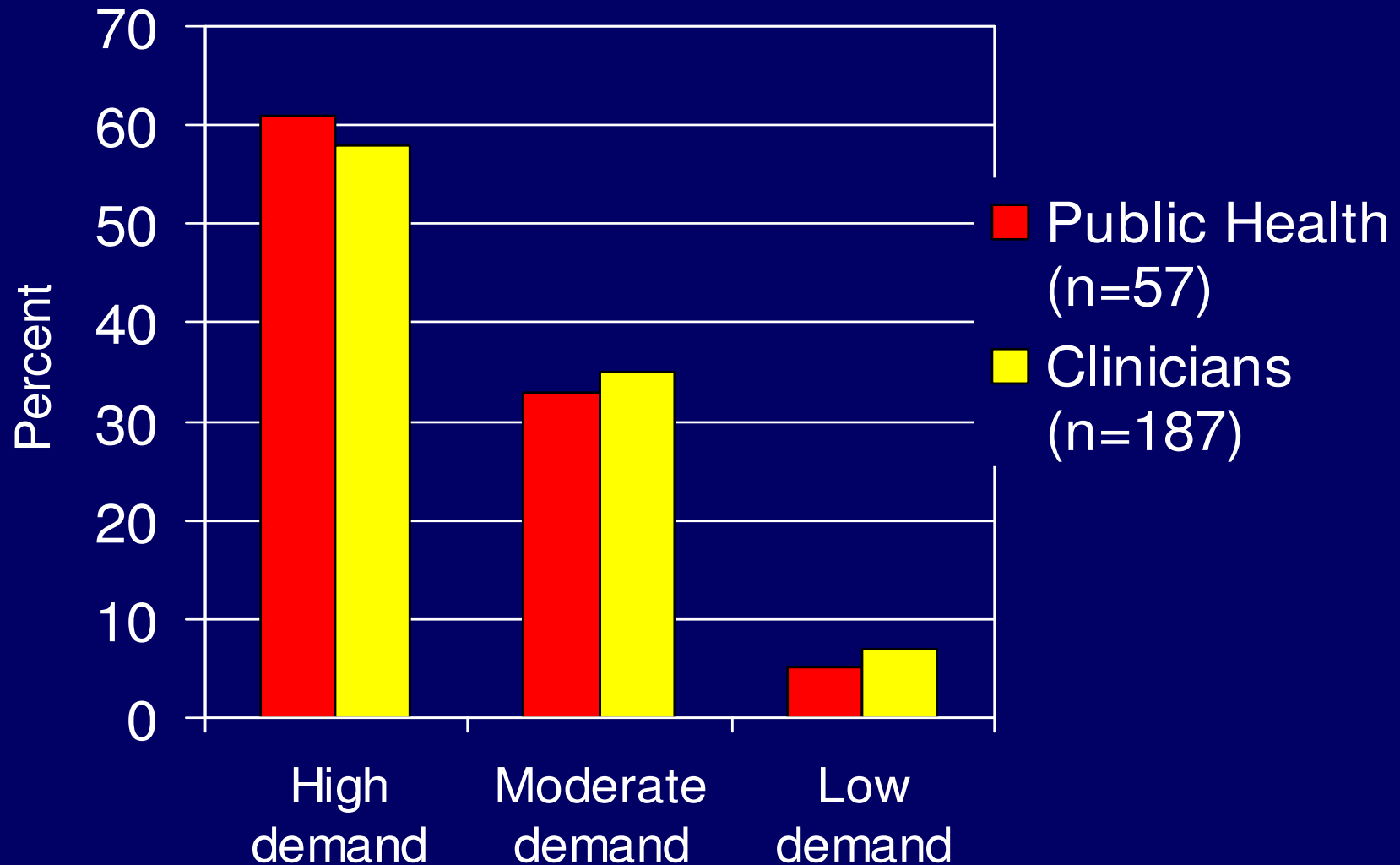
Dr. Jeffrey Greene

- ID Section Chief, Tisch Hospital, New York University
- One of the best doctors in NY (*NY Magazine*)
- One of the best doctors in America (*American Health Magazine*)
- One of the Best Doctors in the Nation (*Town & Country Magazine*)

### **About Face Masks**

*If there is a flu epidemic or pandemic and you still need to go outside, the best protection you'll have is a properly fitting face mask...The N95 face mask is the industry standard. I suggest you research the different types of face masks on the internet, and order a supply to have on hand.*

In the absence of a formal recommendation for mask use, how much would citizens and businesses want to obtain masks for protection during a severe influenza pandemic?



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### Arguments against

- Cost: who pays?
- May reduce availability of masks for healthcare workers and healthcare facilities
- False security: may decrease compliance with other disease control recommendations
- Loss of trust if perceived as ineffective
- Disposal of used masks
- Adverse implications for future public health policy making?

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### Practical considerations

- Ethical principles: access to masks must be fair
- Recommend? Mandate? Permit? Enforce?
- Distribution system
  - What type of system: Private, public, public-private?
  - Must be transparent and fair
  - Resource implications for public health agencies?
- Security

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### Practical considerations

- Standardized plans for implementation?
  - When should masks be worn, at all times or only during certain circumstances?
  - Timing of implementation: local, regional, national trigger? When to recommend stopping mask use?
  - How would mask use fit with other community containment/social distancing measures (i.e., implement before, during, or after measures such as closing schools and limiting public gatherings?)
- Prioritization to first responders, “high-risk” populations, essential workers? If so, how to accomplish?

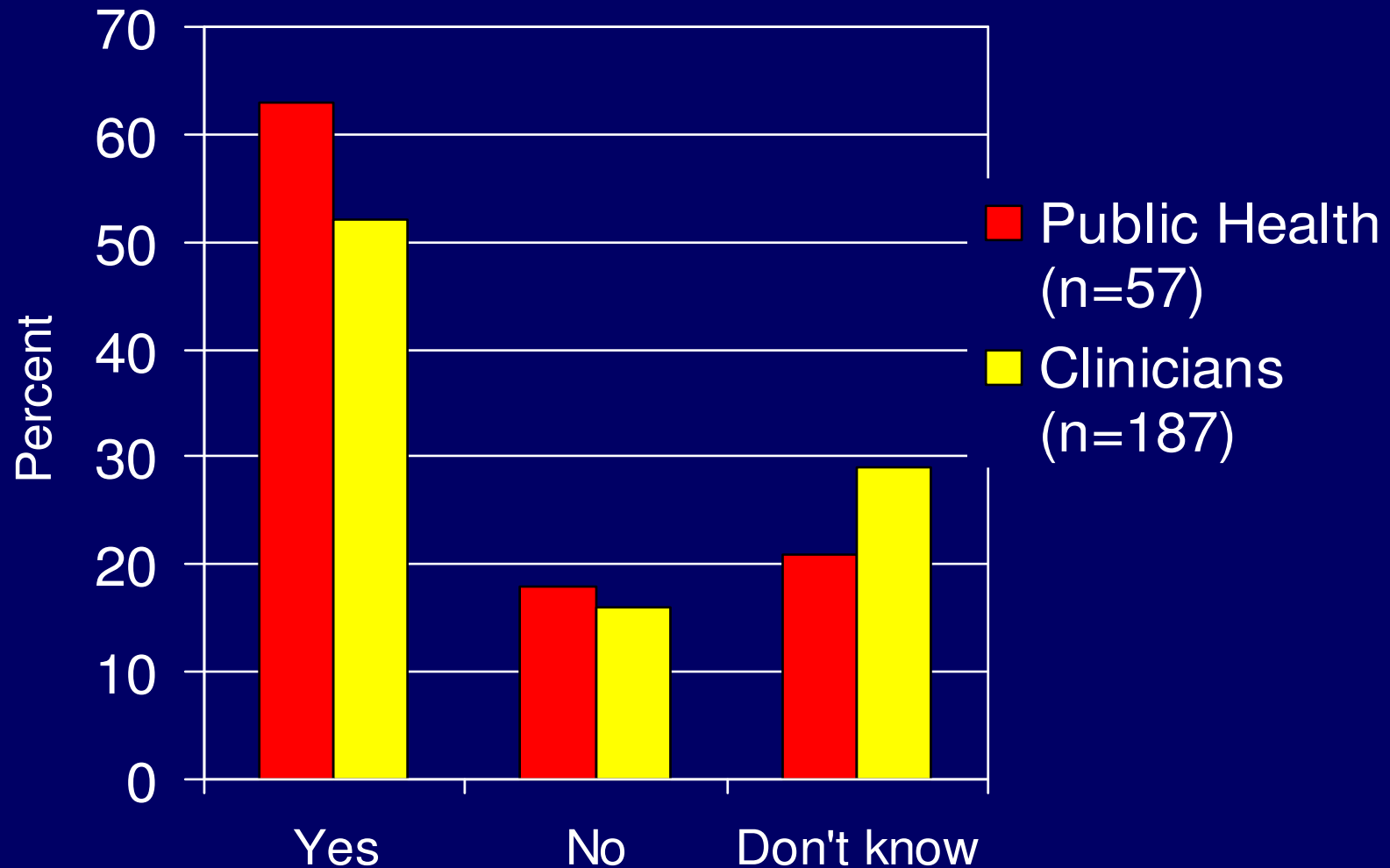
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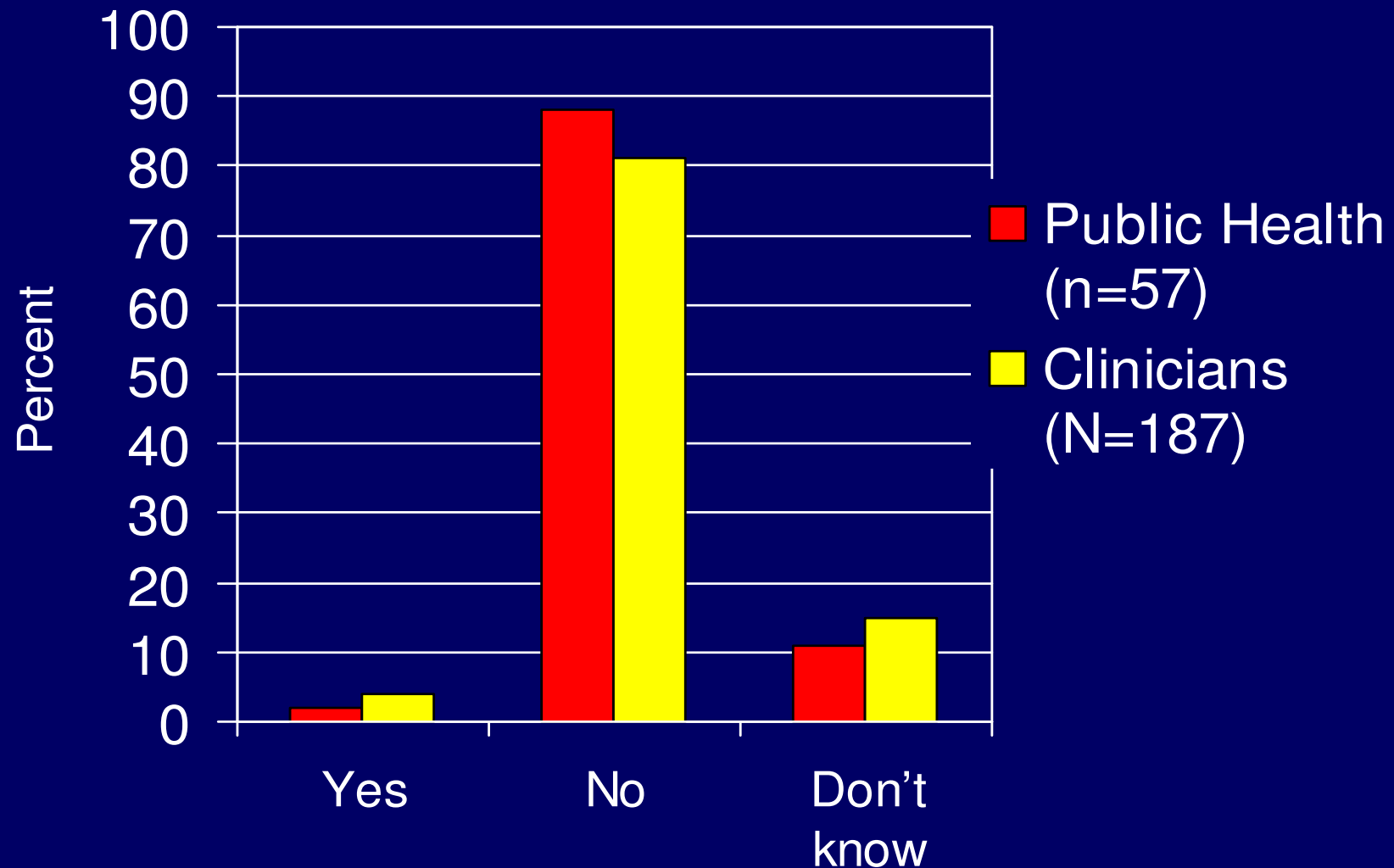
### Practical considerations

- Pressure to act: Some health officers have already recommended masks (N95)
- Recommendation with inadequate supply is counterproductive
- Desire to avoid conflicting recommendations (i.e., vaccination requirements for Katrina emergency responders)

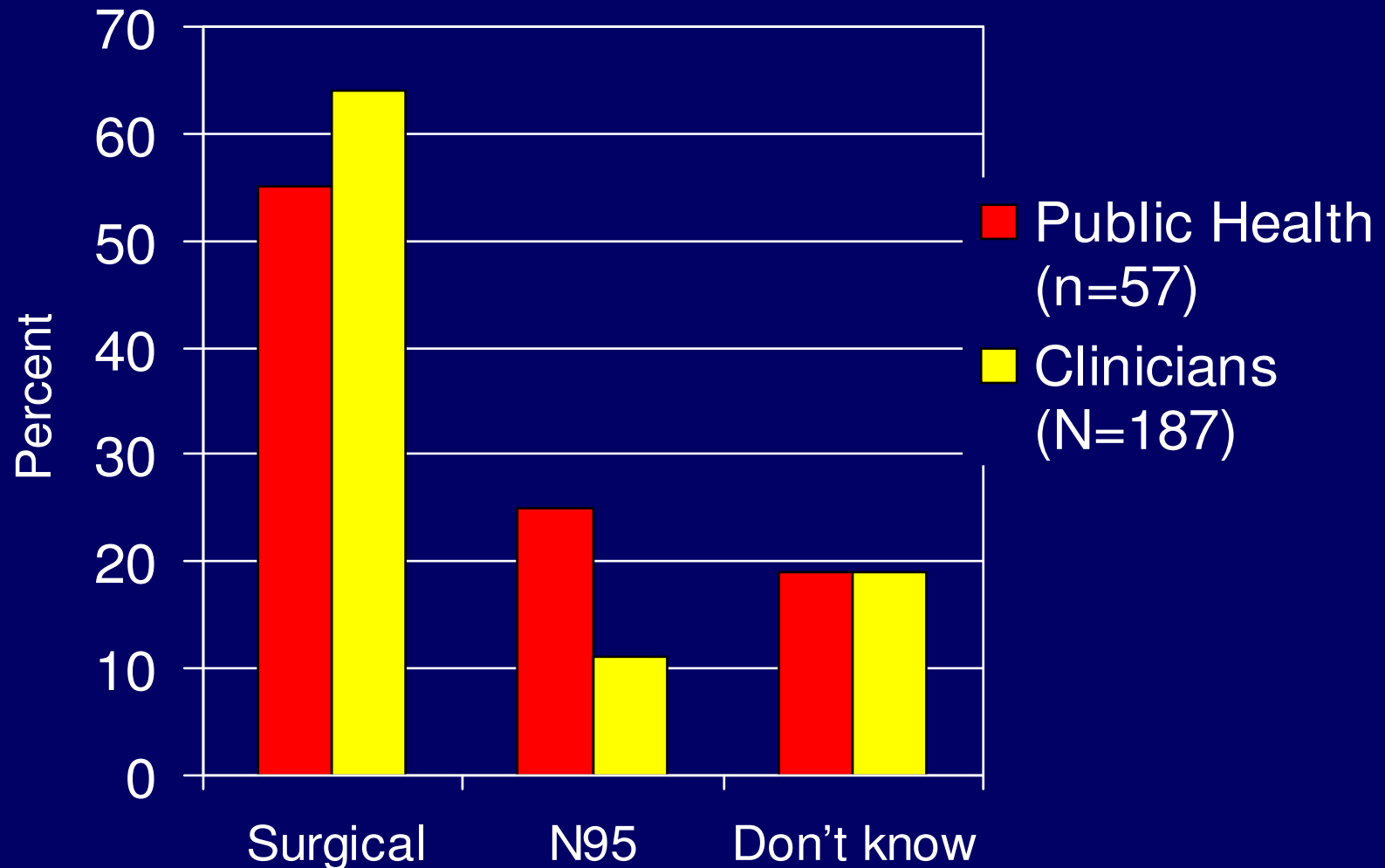
Based on available information, should mask use by the general public be recommended during a severe influenza pandemic?



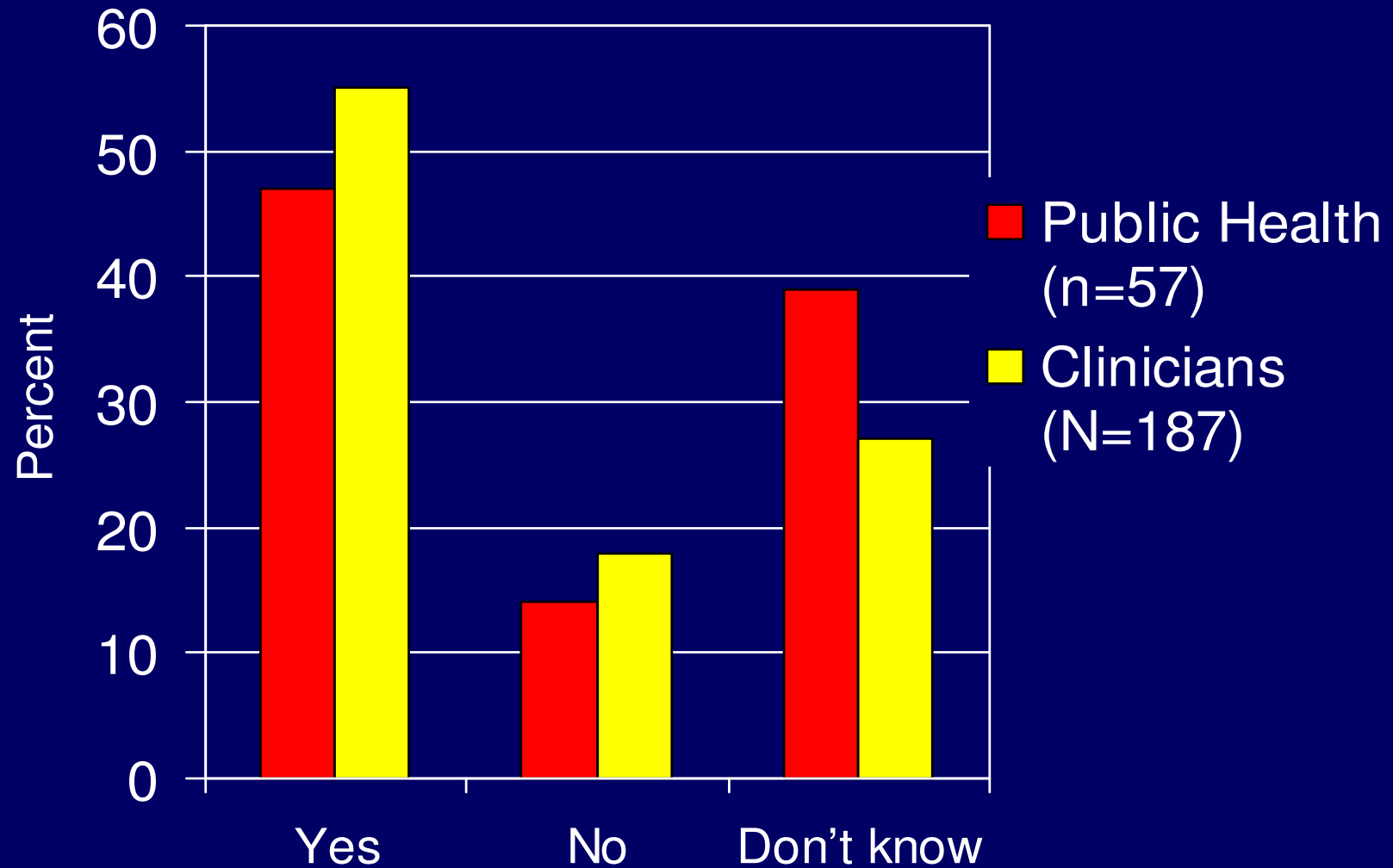
# Should mask use by the general public be discouraged during a severe influenza pandemic?



If you think mask use by the general public is reasonable, do you think surgical/procedure or N95 or similar respirator masks should be used?



Would reusable (washable) masks be useful if such a product was available?



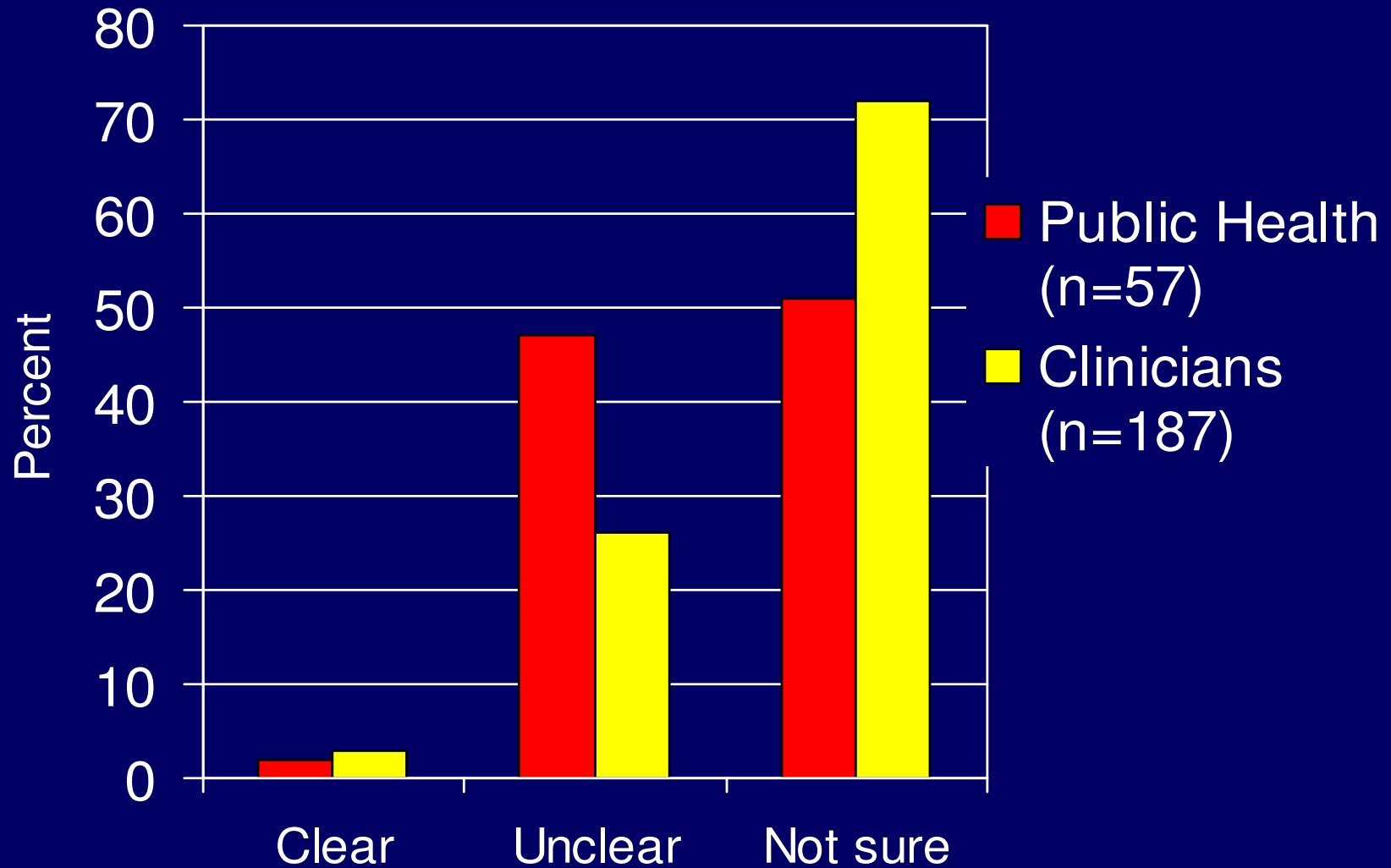
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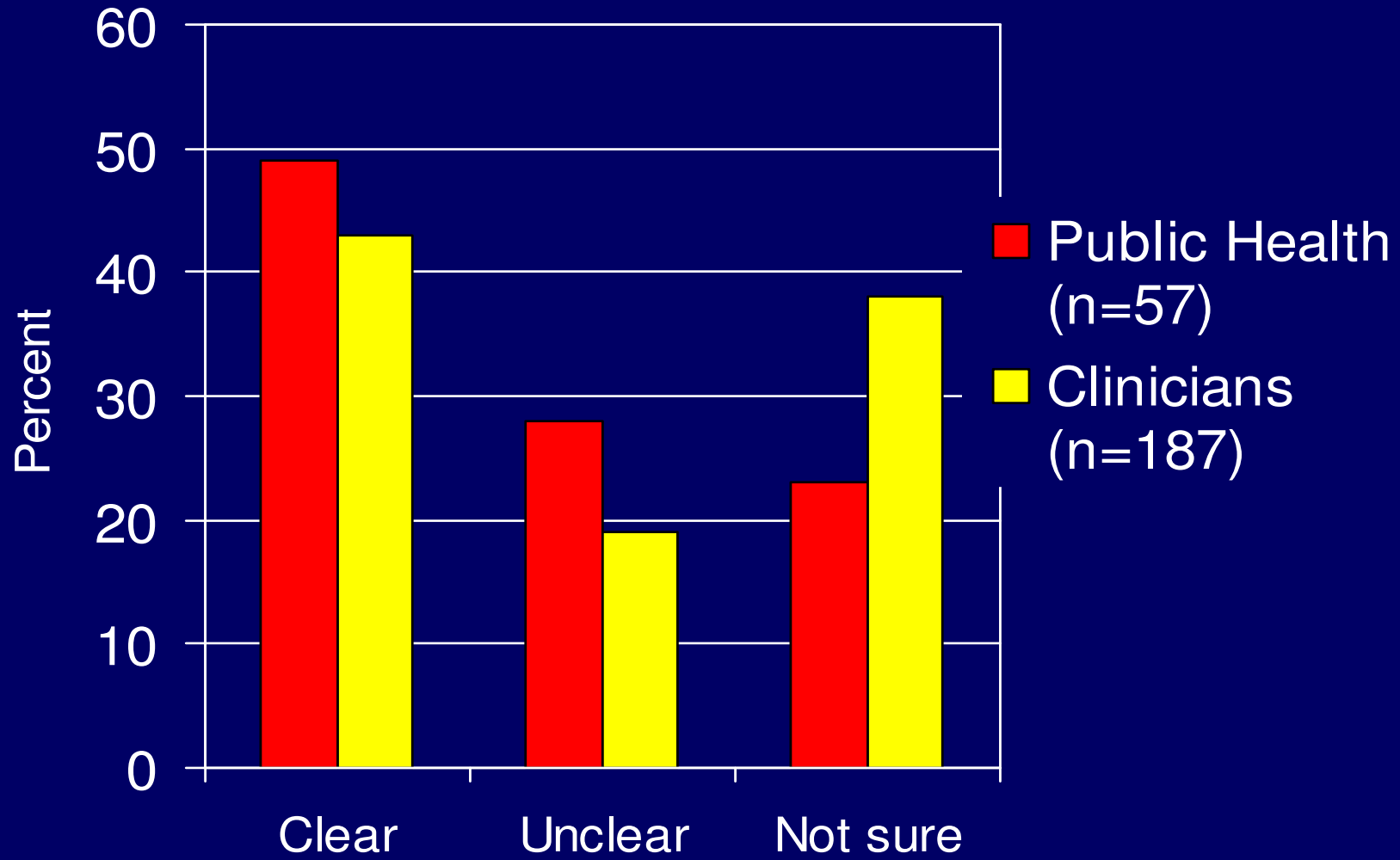
- How High the ~~Moon~~ Ivory Tower?\*
- “I’m an LHJ administrator with 25-plus years experience and I’m stunned at the narrowness and insensitivity of the epi [*sic*] community on this issue. Masks are far from perfect, but in a pandemic where we’re without effective pharmaceuticals, they are one of the few tools available to reduce (no one says fully prevent) transmission. Only a fool in a very high ivory tower would want to withhold this from the public.”

*\*Apologies to Nancy Hamilton & Morgan Lewis*

How clear are the current national recommendations on mask use in the community during an influenza pandemic?



How clear are the current national recommendations on mask use by HCW in healthcare settings during an influenza pandemic?



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- Conclusions
  - Mask use in the community seems reasonable to many, a “no-brainer” to others
  - Need to attempt to reach consensus among public health community
  - Any recommendation should be placed in proper context within overall personal protection plan prioritizing respiratory etiquette, hand hygiene, social distancing, etc.
  - Need clear, simple and effective professional and public communication on this issue regardless of ultimate decision: Rationale for, or for not, recommending needs to be clearly communicated

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Thank you

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