

NIOSH Public Meeting: Total Inward Leakage

June 26th, 2007
Coraopolis, PA

Andrew Pope, Ph.D.
Director
Board on Health Sciences Policy

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES



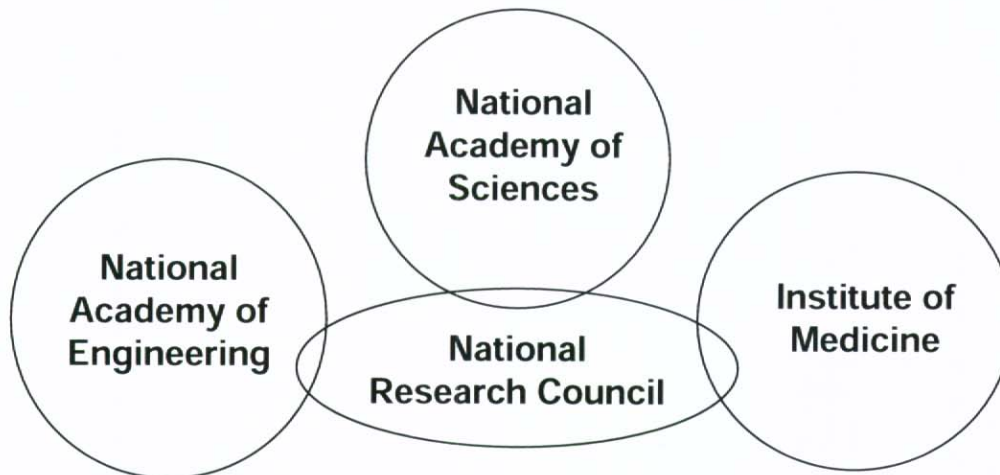
What I will cover today:

- What is the IOM
- IOM Report: Assessment of the NIOSH Head-and-Face Anthropometric Survey of U.S. Respirator Users

INSTITUTE OF MEDICINE



The National Academies



INSTITUTE OF MEDICINE



History of Origins

- **1863 – NAS Charter**
- **1916 – NRC Established**
- **1964 – NAE Established**
- **1970 – IOM Established**

INSTITUTE OF MEDICINE



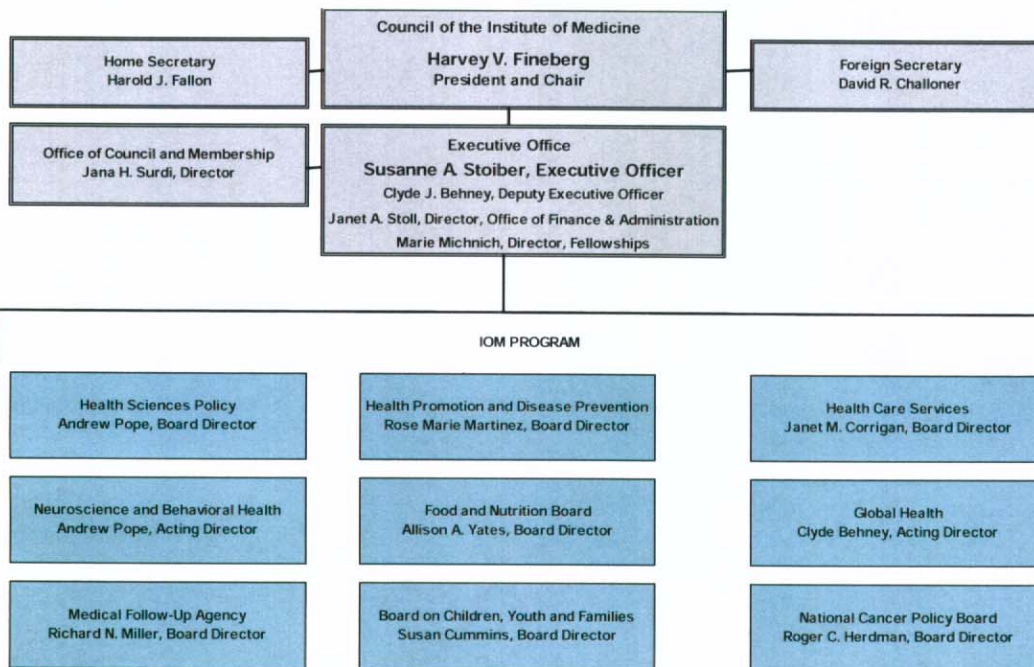
CONGRESSIONAL CHARTER FOR THE NATIONAL ACADEMY OF SCIENCES

... the Academy shall, whenever called upon by any department of the Government, investigate, examine, experiment, and report upon any subject of science or art ...

Approved, March 3, 1863.

ABRAHAM LINCOLN, President.

INSTITUTE OF MEDICINE



INSTITUTE OF MEDICINE



Study Initiation

- **Congressional Mandate**
- **Agency Request**
- **Self-Initiated**

INSTITUTE OF MEDICINE



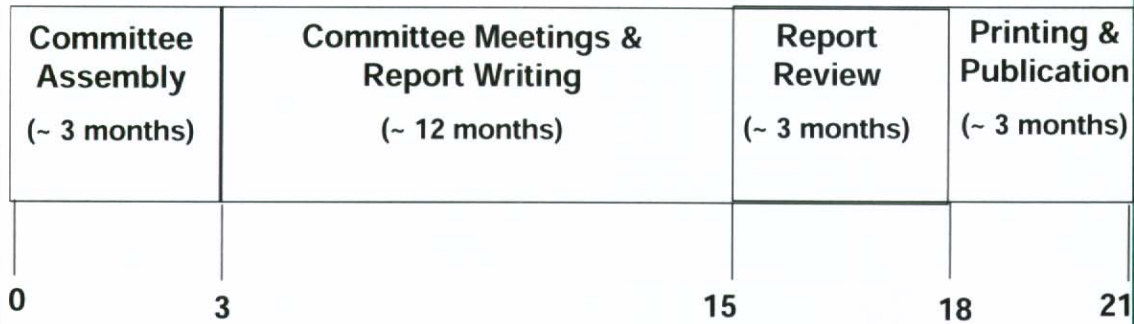
Unique Strengths

- Reputation for independence and objectivity
- Stature of Academies' membership
- Ability to get the very best to serve
- Pro bono* nature of committee service
- Special relationship to government
- Quality assurance and control procedures

INSTITUTE OF MEDICINE



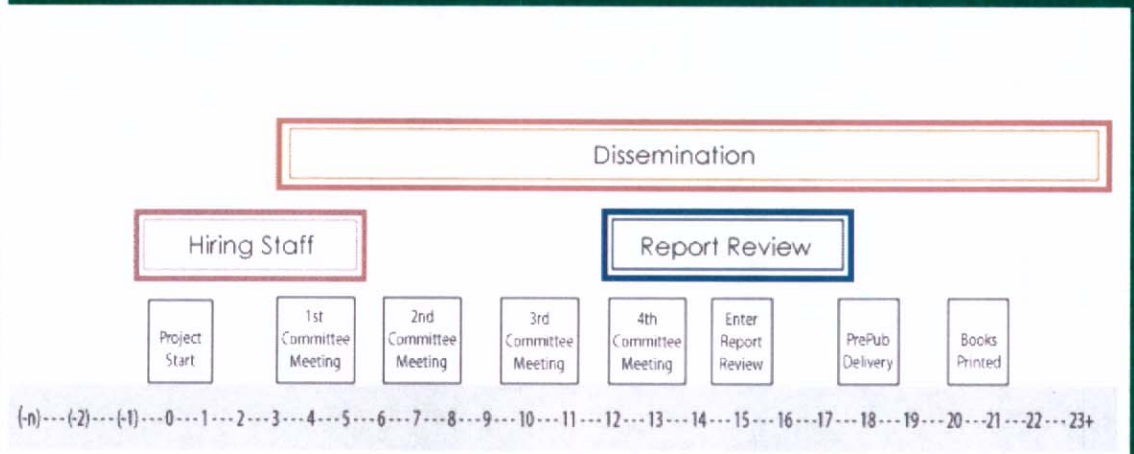
Timeline of the Committee Process



INSTITUTE OF MEDICINE

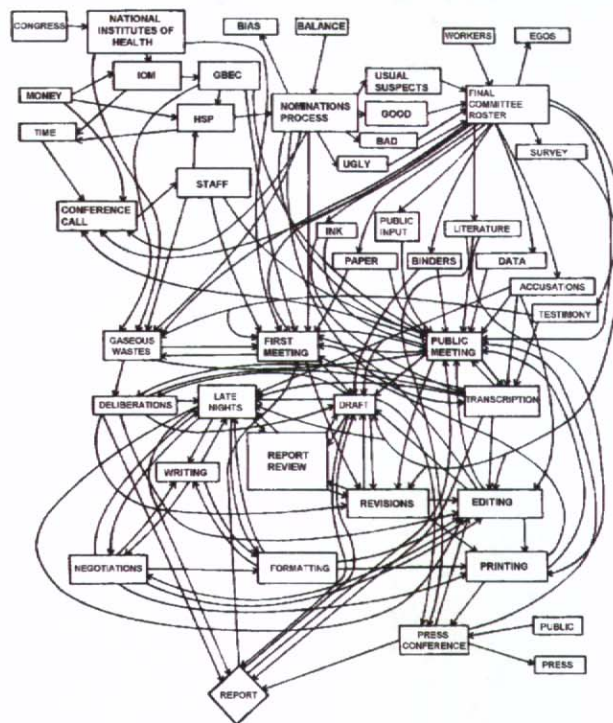


INSTITUTE OF MEDICINE



INSTITUTE OF MEDICINE





INSTITUTE OF MEDICINE



IOM Activities for NIOSH

- **Committee on PPE for the Workforce (COPPE)**
 - Three open meetings in FY06
 - Meeting 1 FY07: Oct 23-24, 2006
 - Workshop: Feb 22, 2007 – **PPE during an Influenza Pandemic: Research, Standards, Certification and Testing Directions**
- **Review of Anthropometrics Survey and Respirator Panel Modifications**
 - Three open meetings in FY06
 - Final report released Jan 2007
- **Review of BLS Survey of Respirator Use**
 - Three open meetings in FY06
 - Final report released Feb 2007
- **National Academies Evaluation of Personal Protective Technology (PPT) Cross Sector**
 - Evidence package to National Academies Aug 2007
 - National Academies evaluation Sept 2007



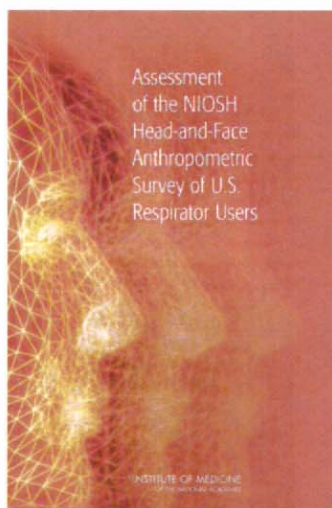
THE NATIONAL ACADEMIES
Division of the Sciences, Engineering, and Public Policy



INSTITUTE OF MEDICINE



Assessment of the NIOSH Head-and-Face Anthropometric Survey of U.S. Respirator Users



INSTITUTE OF MEDICINE



Abbreviated Statement of Task

- Examine the content and the form of the study, the sample and its sample methodology, and the adequacy of the resultant data.
- Determine if the revised panel is representative of the U.S. workforce and the adequacy of the anthropometric features and parameters considered in the revised panel.
- Identify additional analyses that NIOSH might undertake.
- Examine how the data obtained from the study was analyzed, conclusions reached from the data, and recommend additional information that NIOSH might derive from current and possible future efforts.

INSTITUTE OF MEDICINE



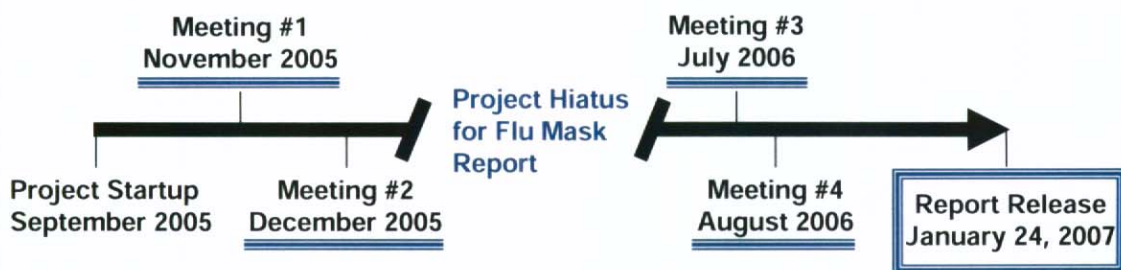
Committee Roster

JOHN C. BAILAR III, (*Chair*), University of Chicago, Illinois
LISA M. BROSSEAU, University of Minnesota, Minneapolis
HOWARD J. COHEN, University of New Haven, West Haven, Connecticut
ALAN L. HACK, Los Alamos, New Mexico
SUBHASH R. LELE, University of Alberta, Edmonton, Canada
YOUCHENG LIU, Yale University School of Medicine, New Haven, Connecticut
JOAN T. RICHTSMEIER, Pennsylvania State University, University Park
KNUT RINGEN, Seattle, Washington
JAVIER ROJO, Rice University, Houston, Texas
ALBERT A. SCIARRETTA, CNS Technologies, Inc., Springfield, Virginia

INSTITUTE OF MEDICINE



Project Timeline



INSTITUTE OF MEDICINE



Major Findings: Overarching Themes

1. The results of the NIOSH-sponsored Anthrotech study represent a clear improvement over the anthropometric data and corresponding LANL fit-test face panels that have been used since the 1970s;
2. The NIOSH-sponsored Anthrotech study has a number of weaknesses that limit its effectiveness and reliability.
3. There are certain steps that should be taken to address the weaknesses, in order to move toward more effective testing and certification of respirators in the future.

INSTITUTE OF MEDICINE



For More Information

Report Available at:

www.nap.edu

Andrew Pope:

apope@nas.edu

INSTITUTE OF MEDICINE

