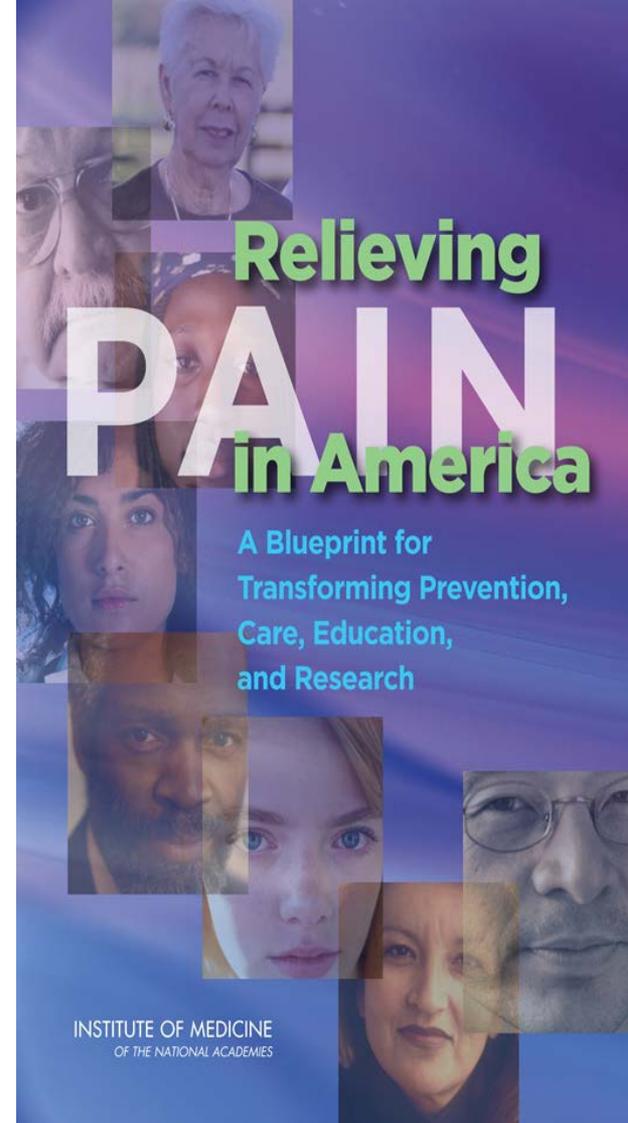


# Institute of Medicine: **Relieving Pain in America** *A Blueprint for Transforming Prevention, Care, Education, and Research*

IOM Committee on Advancing Pain Research, Care, and Education  
Board on Health Sciences Policy



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**The Institute of Medicine** asks and answers the nation's most pressing questions about health and health care.

The IOM is an independent, nonprofit organization that works outside of government to provide unbiased and authoritative advice to decision makers and the public.

Established in 1970, the IOM is the health arm of the National Academy of Sciences, which was chartered under President Abraham Lincoln in 1863.

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# Context

The *2010 Patient Protection and Affordable Care Act* required the Department of Health and Human Services (HHS) to enlist the Institute of Medicine (IOM) in **examining pain as a public health problem.**

Acting through the National Institutes of Health (NIH), HHS asked the IOM to assess the state of the science regarding pain research, care, and education and to make recommendations to advance the field.



# Statement of Task

Address the current state of the science with respect to pain research, care, and education; and explore approaches to advance the field.

Specifically, the charge to the IOM Committee was to:

- Review and quantify the public health significance of pain.
- Identify barriers to appropriate pain care and strategies to reduce such barriers.
- Identify demographic groups and special populations, and discuss related research needs, barriers, and opportunities to reduce such barriers.
- Identify and discuss what scientific tools and technologies are available.
- Discuss opportunities for public-private partnerships in the support and conduct of pain research, care, and education.



# Study Committee

19 Members with expertise in:

- Anesthesiology
- Biobehavioral nursing
- Bioethics
- Epidemiology and biostatistics
- Naturopathic care
- Neurosurgery
- Oral and maxillofacial surgery
- Palliative medicine
- Pediatric health
- Pharmacology
- Psychology and behavioral sciences
- Public health

Chair – Dr. Phil Pizzo, Dean, Stanford University School of Medicine

Co-Chair – Dr. Noreen Clark, Center for Managing Chronic Diseases, University of Michigan

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# Methods

- Literature Review
- Commissioned Paper
  - Economic burden of pain
- Public Workshops
  - Data collection
  - Public–Private partnerships
  - Cultural views of pain
  - Financing and resources for pain care
  - Basic science of pain and approaches to pain treatment
  - Regulation of pain drugs



# Methods (continued)

- Testimony from people living with pain, their caregivers, and other stakeholders
- Public input through website on:
  - Barriers to care
  - Ways to improve care
  - Undertreated groups
  - Experiences of those seeking care
  - Experiences of those providing care
  - Over 2,000 responses



# Underlying principles for report

- Pain management is a moral imperative
- Chronic pain can be a disease in itself
- The value of comprehensive treatment
- The need for interdisciplinary approaches
- The importance of prevention
- Wider use of existing knowledge
- Recognition of the conundrum of opioids
- Collaborative roles for patients and clinicians
- The value of a public health and community-based approach



# Need to foster a cultural transformation

- Pain is a national challenge
  - All people are at risk for pain
  - Pain is a uniquely individual, subjective experience
- Comprehensive and interdisciplinary (e.g., biopsychosocial) approaches are the most important and effective ways to treat pain
- Such care is difficult to obtain because of structural barriers – including financial and payment disparities
- A cultural transformation is needed to better prevent, assess, treat, and understand pain
- The committee's report offers a blueprint for achieving this transformation



# Four Key Areas

Committee offers *Findings* and *Recommendations* in the following areas:

- Public health challenges
- Pain care
- Education of providers
- Research



# Public Health Significance of Pain

*Public health is what we, as a society do collectively to assure the conditions for people to be healthy.*

—IOM, 1988, p. 19

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# Pain as a Public Health Challenge

## Findings

- **Pain is a public health problem**
  - Affects at least 100 million American adults\*
  - Costs society \$560–\$635 billion annually
  - Federal and state costs almost \$100 billion annually
  - Reduces quality of life

\* Doesn't include pain in children or people in long-term care facilities, the military, or prison

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# Pain as a Public Health Challenge

## Findings

- **More consistent data on pain are needed to:**
  - Monitor changes in incidence and prevalence
  - Document rates of treatment and under treatment
  - Assess health and societal consequences
  - Evaluate impact of changes in policy, payment, and care
- **A population-based strategy is needed to reduce pain and its consequences. It should:**
  - Heighten national concern about pain
  - Use public health strategies to foster patient self-management
  - Inform public about nature of pain
  - Focus on pain prevention



# Pain as a Public Health Challenge

## Recommendations

- **2-1. NCHS, AHRQ, other federal and state agencies, and private organizations should improve the collection and reporting of data on pain**
  - Incidence and prevalence
  - Interference with activities of daily living, work, disability
  - Utilization of clinical and social services
  - Costs of pain and pain care
  - Effectiveness of treatment
- **2-2. HHS Secretary should create a comprehensive population-level strategy for pain prevention, treatment, management, and research**
  - Describe coordination of efforts across public and private sector
  - Include agenda for developing research
  - Improve pain assessment and management programs
  - Proceed in cooperation with Interagency Pain Research Coordinating Committee and the NIH Pain Consortium and reach out to private-sector participants as appropriate.
  - Include ongoing efforts to enhance public awareness of chronic pain



# Care of People with Pain

*Appointment after appointment, test after test, and of course, nothing to really confirm (the diagnosis)....Having pain that I did not understand, as a physical therapist, fearing some dreadful disease was hard enough....So, in addition to pain, I had anxiety and depression....The medication that finally gave me better relief was pulled off the market recently by the FDA.*

—A person with chronic pain



# Care of People with Pain

## Findings

- **Pain care must be tailored to each person's experience**
  - Financing, referrals, records management need support this flexibility
  - The majority of care and management should take place through self-management and primary care, with specialty services being focused on recalcitrant or more complex cases.
  
- **Significant barriers to adequate pain care exist**
  - Gaps in knowledge and competencies for providers
  - Magnitude of problem
    - Half of primary care providers report feeling only “somewhat prepared”, 27% report feeling “somewhat unprepared” or “unprepared”
    - Inadequacies in subspecialty training
  - Systems and organizational barriers



# Care of People with Pain

## Recommendations

- **3-1. Health care provider organizations should promote and enable self-management of pain as the starting point of management**
  - Develop educational approaches and culturally and linguistically appropriate materials to promote and enable self-management
- **3-2. Population strategy described in Recommendation 2-2 should include developing strategies to overcome barriers to care**
  - Strategies should focus on ways to improve care for populations disproportionately affected by and undertreated for pain
- **3-3. Health professions education and training programs, professional associations, and other groups should provide educational opportunities in pain assessment and treatment in primary care**
  - Education should improve knowledge and skills in pain assessment and treatment



# Care of People with Pain

## Recommendations (continued)

- **3-4. Pain specialty professional organizations and primary care professional associations should support collaboration between pain specialists and primary care clinicians, including greater proficiency by primary care providers along with referral to pain centers when appropriate**
- **3-5. Payers and health care organizations should revise reimbursement policies to foster coordinated and evidence-based pain care**
- **3-6. Health care providers should provide consistent and complete pain assessments**



# Pain Education

*Education, Education, Education. Educate more physicians on proper diagnosis and proper pain management. Educate the person living with pain and their family on addiction versus physical dependency and proper storage of medication. Educate the public and press about the realities of pain medication and people living with pain.*

—A person with chronic pain



# Education Challenges Finding

- **Education is a central part of the necessary cultural transformation of the approach to pain**
  - The federal, state and local government and professional organizations are in a position to contribute to substantial improvements in patient and professional education



# Education Challenges

- Broad improvements in education are needed regarding
  - The multiple causes and effects of pain
  - The range of treatments available
  - The need to consider chronic pain as a biopsychosocial disorder
- Education efforts should be directed to
  - People with pain
  - General public
  - Health professionals



# Education Challenges

## Recommendations

- **4-1. Federal agencies and other stakeholders should expand and redesign education programs to transform understanding of pain**  
In concert with Recommendation 2-2, these entities should develop education programs for patients, the public, and health care providers
- **4-2. CMS, HRSA, accrediting organizations, and undergraduate and graduate health professions training programs should improve curriculum and education for health care professionals**
- **4-3. Education programs for health professionals should increase the number of health professionals with advanced expertise in pain care**



# Pain Research

*We want the best damn science this country can give us.*  
—An advocate for people with chronic pain

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# Research Challenges Finding

- **Research to translate advances into effective therapies is a continuing need**
  - Significant advances have been made in understanding basic mechanisms of pain but much remains to be learned
  - Data and knowledge gaps remain and have prevented advances from being translated into safe and effective therapies
  - Addressing these gaps will require a cultural transformation in the view of and approach to pain research
  - Pain is a topic of interest to virtually every NIH institute and center, but not a central concern of any one of them.



# Research Challenges (cont)

- National Institutes of Health (NIH) recognized the breadth of areas for new knowledge development related to pain when it developed its 2011 request for “new and innovative advances...in every area of pain research.”
- “Mechanisms, Models, Measurement, and Management in Pain Research Funding Opportunity Announcement”
- The committee considered NIH’s specification of topics to be comprehensive, and instead of attempting to repeat the effort to identify specific topics for research, *focused its deliberations on what is needed to optimize pain research initiatives.*



# Recommendations - Research

## **5-1. NIH should designate a lead institute within the NIH responsible for moving pain research forward, and increase support for and scope of the Pain Consortium**

- The lead institute should:
  - Include pain as a central part of its mission
  - Assume leadership of the Pain Consortium
  - Assess the effectiveness of the NIH in moving pain research forward
  - Identify funding needs
- The Pain Consortium should:
  - Hold more frequent, regular, structured, and productive meetings
  - Improve process for reviewing grant proposals related to pain
  - Work with pain advocacy groups to help identify public need related to treatment and management
  - Improve and expand public-private partnerships



# Recommendations - Research (continued)

- **5-2. Improve the process for developing new agents for pain control.**
  - Academia and industry should develop novel agents for the control of pain.
  - This does not mean simply recycling current drugs.
  - Requires basic and clinical science research to discover new classes of pain therapeutics and more efficient ways of developing them.
  - Requires that regulatory agencies, especially the Food and Drug Administration, develop new and expeditious ways to evaluate and approve new pain therapies.



# Recommendations - Research (continued)

- **5-3. Federal agencies and private funders of pain research should increase support for *interdisciplinary* research and training in pain**
  - National Institutes of Health
  - Agency for Healthcare Research and Quality
  - Centers for Disease Control and Prevention
  - Department of Defense
  - Department of Veterans Affairs
  - Private funders of pain research
    - Pharmaceutical manufacturing and research industry, pain advocacy groups, academic institutions
  - Focus on knowledge gaps



# Recommendations - Research (continued)

- **5-4. Public and private funders should increase the conduct of longitudinal research in pain**
  - Comparative effectiveness research
  - Novel randomized controlled trials
  - Goal to help ensure that patients receive the best care in both the short and long terms – at the best price.
  - Based on 5-1; Includes translational, population health, and behavioral aspects of pain care (social and multimodal aspects, not just medications and other single modalities); focus is on real-world situations (comparative effectiveness, not just efficacy).



# Recommendations - Research (continued)

- **5-5. With the support of NIH, academic institutions should increase the training of pain researchers**
  - Basic, translational, behavioral, population, and clinical pain researchers.
  - This training should recognize the interdisciplinary benefits of research on pain and pain management.
  - Agencies such as the National Center for Health Statistics, the Agency for Healthcare Research and Quality, and the Centers for Medicare and Medicaid Services should support the training of researchers interested in secondary analysis of pain related data collected by these agencies.



# THE BLUEPRINT

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# Blueprint for Transforming Pain Prevention, Care, Education, and Research

## Immediate: Start now and complete before end of 2012

- 2-2. Create a comprehensive population-level strategy for pain prevention, treatment, management, and research
- 3-2. Develop strategies for reducing barriers to pain care
- 3-4. Support collaboration between pain specialists and primary care clinicians, including referral to pain centers when appropriate
- 5-1. Designate a lead Institute at NIH responsible for moving pain research forward, and increase the support for and scope of the Pain Consortium



# Blueprint for Transforming Pain Prevention, Care, Education, and Research

**Near-Term and Enduring: Build on immediate recommendations, complete before 2015, and maintain as ongoing efforts**

- 2-1. Improve the collection and reporting of data on pain
- 3-1. Promote and enable self-management of pain
- 3-3. Provide educational opportunities in pain assessment and treatment in primary care
- 3-5. Revise reimbursement policies to foster coordinated and evidence-based pain care
- 3-6. Provide consistent and complete pain assessments

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# Blueprint for Transforming Pain Prevention, Care, Education, and Research

- 4-1. Expand and redesign education programs to transform the understanding of pain
- 4-2. Improve curriculum and education for health care professionals
- 4-3. Increase the number of health professionals with advanced expertise in pain care
- 5-2. Improve the process for developing new agents for pain control
- 5-3. Increase support for interdisciplinary research in pain
- 5-4. Increase the conduct of longitudinal research in pain
- 5-5. Increase the training of pain researchers

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# Summary

- Pain affects the lives of more than a hundred million Americans, making its control of enormous value to individuals and society.
- IOM recommendations serve the goal of creating a comprehensive, population-level strategy for pain prevention, management and research
- Magnitude of the problem is daunting. Limitations in knowledge and education of health care professionals are clear.
- Requires the medical community to effect a cultural transformation in how pain is perceived and judged.
- Requires collaboration of health care providers, with patients and their families, professional societies and advocacy groups, and state and federal government.
- Requires new public-private partnerships and an overarching approach that treats pain as a national public health problem.
- Requires that we are all part of the dialogue and the solution.



# DISCUSSION

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