# CDC Focus on the Future: Winnable Battles and Strengthening Epidemiology

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# Agenda

- CDC's Winnable Battles
- CDC's Strengthened Public Health Science
- Key Epi Priorities

# Winnable Battles

*We can make a big difference*

# Winnable Battles

- Each area is a leading cause of illness, injury, disability, or death
- Evidence-based, scalable interventions already exist and can be broadly implemented
- Our effort can make a difference
- We can get results within 1 and 4 years – but it won't be easy

# Key Winnable Battles

- Tobacco
- Nutrition, physical activity, obesity, and food safety
- Healthcare-associated infections
- Motor vehicle injury prevention
- Teen pregnancy prevention
- HIV prevention

# Tobacco

- **Why important?**
  - Leading preventable cause of death (kills 440,000 people annually in U.S.) and largest potential public health impact
  - 60% of Americans not protected from second-hand smoke –
    - 22 million are children under age 11
  - Tens of billions of dollars in medical expenses and lost productivity
- **What can we do?**
  - Increase excise taxes
  - Promote smoke-free environments
  - Media
  - Assist with FDA regulations

# Nutrition, Physical Activity, Obesity, and Food Safety

- **Why important?**
  - Obesity rates  have doubled for adults and tripled for children in past 20 years
  - Sodium reduction = 100,000 fewer deaths annually; artificial trans fat elimination = tens of thousands fewer deaths annually
  - Complex, globalized food supply with tens of millions of food-borne illnesses annually in U.S.
- **What can we do?**
  - Change environment to promote healthy food (e.g., trans fat, sodium reduction, junk food) and active living
  - Food procurement
  - Improve food-borne illness detection, response, and prevention

# Healthcare-associated Infections

- **Why important?**
  - Affects 1 in 20 patients in U.S. hospitals annually
  - Increases costs, length of hospitalizations, and deaths
  - Infections in blood stream, urinary tract, and surgical sites preventable
- **What can we do?**
  - Strengthen national surveillance through National Healthcare Safety Network
  - Increase implementation of evidence-based prevention guidelines in hospitals
  - Public reporting – data for action
  - Prevention reimbursement policies

# Motor Vehicle Injury Prevention

- **Why important?**
  - 45,000 deaths and 4 million ED visits each year
  - Leading preventable cause of death in young people
- **What can we do?**
  - 100% seat belt use = 4,000 fewer fatalities annually
  - Reductions in impaired driving = 9,000 fewer fatalities annually
  - Strong Graduated Drivers License policies = 350,000 fewer non-fatal injuries, 175 fewer deaths annually
  - Collaborate with transportation sector and other agencies to promote safety policies

# Teen Pregnancy Prevention

- **Why important?**
  - Teen birth rate rising after declining 1990-2005
  - Nearly 2/3 pregnancies under age 18 years unintended
  - Perpetuates cycle of poverty
  - Increases infant death, low birth weight, preterm birth, health care costs
- **What can we do?**
  - Increase access to long-acting reversible contraceptives
  - Improve reimbursement policies to cover teen family planning needs
  - Work to change social norms

# HIV Prevention

- **Why important?**
  - 1.1 million Americans have HIV – estimated 1 out of 5 unaware they are infected
  - Increasing unsafe sex and spread of syphilis and HIV in young men who have sex with men
  - Men who have sex with men approximately 50 times more likely to be infected than other men
- **What can we do?**
  - Increase HIV status awareness
  - Improve linkage to care
  - Prevention with Positives
  - Expand prevention programs to reduce risky behaviors

# Winnable Battles in Global Health

- Substantially reduce mother-to-child HIV transmission globally
- Reduce malaria morbidity and mortality by half in high-burden countries
- Reduce under-five mortality in developing countries through integrated package of preventive services

# Winnable Battles in Global Health (II)

- **Eliminate**
  - Lymphatic filariasis globally
  - Onchocerciasis in the Americas
- **Prevent and control high blood pressure by reducing salt intake in China**
- **Build health ministry infrastructure to prevent and control non-communicable diseases in developing countries**
  - Particularly to reduce smoking, injuries, and cardiovascular disease

# CDC Priorities

- Strengthen surveillance, epidemiology, laboratory services
- Improve ability to support state, tribal, local, and territorial public health
- Increase global health impact
- Increase policy impact
- Better prevent illness, disability, and death

# CDC's Realignment Strengthens Public Health Science

- New Office of Surveillance, Epidemiology, Lab Science
- Provide information faster and more effectively through informatics applications
- Health care system performance data

# OSELS Epidemiology and Analysis
**(Proposed)**

- Key Functions
  - Consult/support CDC programs in epidemiology, health economics & other key public sciences
  - Expand the scope of CDC epidemiology analytic capabilities
  - Support Chief Science Officer through translational research
  - Promote innovation in public health science
  - Provide quick response analytics & data synthesis

# Office of Surveillance, Epidemiology and Laboratory Services

- National Center for Health Statistics
- Laboratory Science, Policy, and Practice
- Public Health Informatics and Technology
- Epidemiology and Analysis
- Scientific Education and Professional Development

# Office of State, Tribal, Local and Territorial Support

- Best Practices
- Improving Grant Processes
- Public Health Law
- Public Health Apprentice Program
- Health Officer Orientation & Welcome Package
- Field Staff Training
- Performance Standards/ Accreditation
- Communications

# Key Issues

# Vital Registration

- **Need to improve timeliness and quality**
- **Challenges**
  - 12 states have not implemented 2003 birth certificate revision
  - Need more physicians to use Electronic Death Record
  - Need more physicians and hospital staff to use web-based tutorials
  - Improve outreach to physicians
  - Quality and feedback loops
- **Use Electronic Death Record data for timely, ongoing surveillance**
- **Epidemiologists should be active partners with vital registrars, not just passive users**

# Communicable Diseases

- **Foodborne outbreaks across state lines**
  - Often require complex and coordinated investigation
  - Number and requirements strain resources
- **Lessons from 2009 H1N1**
  - Incorporation of new systems and data for influenza surveillance (especially electronic laboratory reporting)
  - Immunization programs (e.g., vaccine distribution, improved uptake, ability to reach high-risk groups, monitoring of vaccine safety)
- **Health Care-Associated Infections**
  - Need stronger reporting systems – especially electronic laboratory reporting
  - New reporting requirements strain resources

# Healthcare Monitoring

- Services moving from hospitals and doctors' offices to ambulatory care centers, assisted living, home health care, and retail pharmacies
- Health care information systems are not standardized or linked with public health
- Inconsistent definitions
- Need to engage public health in health care policy
  - Prevention
  - Health care quality and safety
  - Community health focus
  - Standards and priorities for health IT

# Environmental Health

- Mistaken perception that environmental health investments no longer needed due to past successes (i.e., food and water safety)
- Community design and housing decisions don’t reflect public health concerns
- Effective interventions often require collaborations with environmental regulators
- Difficult to link environmental monitoring data with health surveillance data
- Concerns about exposure to hazardous substances
- New questions raised by advances in exposure assessment

# Injury

- A leading cause of illness and death
- Often viewed as outside public health realm
- Resources inadequate in relation to burden
- Key data often limited or unavailable; nontraditional sources needed (e.g., police records, etc.)
- Must work with outside partners (e.g., criminal justice system, transportation authorities)
- Politics (e.g., motorcycle helmets, speed limits)

# Questions

**For more information please contact Centers for Disease Control and Prevention**

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