MCH Epidemiology
Training Course Introduction and Overview of MCH Initiatives and Indicators

Pre-Course Webinar
May 5th
Outline

- Purpose and history of the training course
- Description of 2014 class
- Broader resources for training, continuing education
- Data resources
- Overview of MCHB and Office of Epidemiology & Research
- Selected MCHB Initiatives and Indicators
- Selected Partner Initiatives
Course Purpose and History

• To build state and local epi capacity
  • In late 80’s, health departments move from providing direct services to core public health functions: assessment, policy development, assurance
  • OBRA ’89 established data monitoring and reporting requirements for MCH Block Grant
  • States requested epi support and training
CDC and MCHB Partnership

- MCH Epi Program established by CDC/DRH and HRSA/MCHB (state assignee program)
- State/local training course, MCHB started sponsoring in 2002
- MCHB started funding schools of public health
- CSTE fellowship and GSEP internship programs
- Still ongoing need: 2009 CSTE MCH Epi Capacity report concluded that despite significant increases in capacity, only half of states have substantial capacity
Course Structure & Content

• Series of pre and post-training webinars

• In-person training: lectures, discussion, hands-on exercises

• Ongoing technical assistance

• Covering needs assessment, multivariable statistical methods, program evaluation, economic evaluation, QI discussions, effective data presentation/translation
Importance of Feedback

- Alternating skill level: beginner, more advanced
- Breakout sessions: choose between a more advanced topic and open Q&A / consulting
- Roundtables for group exercises
- Recording sessions for broader use
Success Stories

• Want to hear your stories/examples of impact
  • What analyses and products were undertaken or improved as a result of training or TA?

  “the course had a very big influence on this paper we published in Pediatrics last year. I was really struggling with how to do the modeling when I went through the course, and Deb Rosenberg and Kristin Rankin really helped me clarify my thinking on how to approach it, and what pitfalls to look for.”

  - Past participant from Oregon
About You

- 41 trainees from 25 different States
- 28 in State Health Depts
- 10 in City or County Health Depts
- 2 in Tribal epi
- 1 Academic research associate
Program Responsibilities

• Home Visiting (7)
• Infant Mortality – Perinatal Vitals (7)
• Child Death Review / Injury, Violence (5)
• Family Planning (5)
• CSHCN or newborn screening (4)
• Adolescent Health (3)
• Healthy Start (3)
• Maternal Mortality (3)
• Medicaid linkage/analysts (3)
• PRAMS coordinators/analysts (3)
• WIC (3)
• Immunization/infectious disease (2)
Other CDC, HRSA Training Resources

- CDC MCH Epi Conference, listserv, grand rounds
  http://www.cdc.gov/reproductivehealth/mchepi

- MCHB DataSpeak and EnRICH webinars, listservs
  http://www.mchb.hrsa.gov/researchdata
  http://list.nih.gov/cgi-bin/wa.exe?SUBED1=MCH_EPIDEMIOLOGY_GENERAL&A=1
  http://list.nih.gov/cgi-bin/wa.exe?SUBED1=MCH_RESEARCH_GENERAL&A=1

- Public Health Training Centers
  http://bhpr.hrsa.gov/grants/publichealth/trainingcenters

- MCH Navigator
  http://navigator.mchtraining.net/
Additional Training Resources

- AMCHP – archive of annual skill-building training from AMCHP and MCH Epi conferences
  http://www.amchp.org/programsandtopics/data-assessment/
- CityMatCH – PPOR training and TA requests
- MCHepi.org
Data Resources

- HealthyPeople.gov, HealthIndicators.gov
- CountyHealthRankings.org
- Title V Information System
  https://perf-data.hrsa.gov/mchb/TVISReports/
- MCH Data Connect
  http://dvn.iq.harvard.edu/dvn/dv/dataconnect
- Peristats
  http://www.marchofdimes.com/peristats/
- NSCH, NS-CSHCN, PRAMS, YRBSS, BRFSS, NIS, administrative records
Mission: To provide leadership, in partnership with key stakeholders, to improve the physical and mental health, safety and well-being of the maternal and child health (MCH) population which includes all of the nation’s women, infants, children, adolescents, and their families, including fathers and children with special health care needs.

Through:
- Title V Block Grant to States
- Special Projects of Regional and National Significance
- Community Integrated Service Systems (CISS) grants
Director: Michael D. Kogan, PhD

Office Mission: To conduct and support research and provide national leadership around the development, advancement, and utilization of scientific knowledge.

Promote the use of this scientific knowledge to inform practice and policy that will support health promotion and disease prevention for women, children, youth and families.
Office Goals

- Build data, research, and analytic capacity at the national, state, and local levels
- Strengthen and develop the present and future workforce in MCH epidemiology and research
- Conduct, support, and disseminate research/data to strengthen the evidence base in MCH
  - Intramural epidemiology program
  - Extramural research program
- Provide analytic support, consultation, and leadership to selected Bureau programs and initiatives
BUILDING DATA CAPACITY
National Surveys with State-level Data

National Survey of Children’s Health (NSCH)

• 2003, 2007, 2011
• ~ 1,800 children per state
• Physical, mental, emotional health

National Survey of Children with Special Health Care Needs (NS-CSHCN)

• ~ 750 CSHCN per state
• Health care experiences and needs of CSHCN and their families
• The two surveys will be merged and conducted annually for more timely data

• Survey will move from random-digit dialing to address-based

• Content is being refined and developed to address emerging priorities (e.g. family resilience, school readiness, reasons for insurance gaps, length of well-child visit)

• New survey will be conducted in 2015/2016; cognitive testing this summer
State Systems Development Initiative (SSDI)

- **Strengths:** Provides funds to support data capacity and infrastructure
  - Typically funds staff, linkages, systems
- **Weaknesses:** there is a lack of standardization and unevenness in capacity across states
- **Goal for 3.0:** Develop a consensus-based, common set of state MCH reporting measures, definitions, and data elements
SSDI Minimum/Core Dataset

• OER led a group to develop a minimum data set (national sources, most essential indicators) and a core data set (e.g. linkages, PRAMS)
  • Considerations of availability, quality, simplicity, impact, predictive value, connection to wellness

• Expected Results
  • Improved data comparability/consistency
  • Support sharing of data/analytic tools
  • Standard set of indicators that can be used for needs assessment, program/policy development, QI; ability to add new indicators
### Draft Examples

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Core</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Infant mortality rate</td>
<td>• Weight gain during pregnancy</td>
</tr>
<tr>
<td>• Low birth weight</td>
<td>• Low-risk cesarean</td>
</tr>
<tr>
<td>• Timely follow-up to newborn screening</td>
<td>• Back to sleep</td>
</tr>
<tr>
<td>• CSHCN medical home, transition</td>
<td>• Emergency department visits in Medicaid</td>
</tr>
<tr>
<td>• Child death rate</td>
<td>• Asthma hospitalization</td>
</tr>
<tr>
<td>• Teen birth rate</td>
<td>• Vaccination in Medicaid</td>
</tr>
<tr>
<td>• Child health insurance</td>
<td>• Motor-vehicle Injury</td>
</tr>
</tbody>
</table>
STRENGTHEN AND DEVELOP THE PRESENT AND FUTURE WORKFORCE IN MCH EPIDEMIOLOGY AND RESEARCH
Training and Development

- This course!
- MCH Epi Program (CDC/HRSA)
- Graduate Student Epidemiology Program
- MCH Epidemiology Doctoral Training Grants
- EnRich Webinars
CONDUCT, SUPPORT, AND
DISSEMINATE RESEARCH/DATA
TO STRENGTHEN THE
EVIDENCE BASE IN MCH
Division of Epidemiology

- Conduct population-based research to identify, describe, and monitor MCH outcomes, patterns of need and opportunities to target programs

Examples of recent studies:


Division of Research

Director: Stella Yu, PhD

- Extramural research portfolio focused on developing and testing the effectiveness of new models of care and policies to improve the delivery and quality of health care for MCH populations

- **Secondary Data Analysis**: Investigator-initiated and Autism Intervention Research (one-year)

- **Multi-year Research Grants**: Investigator-initiated, focused on intervention research for general MCH, autism, home visiting

- **New R40 grants in Policy Analysis**: Barriers and impact of ACA

- **Translational Research Networks**: e.g. AAP Pediatric Research in Office Settings, ACOG Pregnancy-Related Care Network, Lifecourse Research Network, Autism Intervention, Home Visiting

- **http://mchb.hrsa.gov/research/**
Dissemination Efforts

- Publications promoted via listservs, webinars
- MCHB MCH Epidemiology, Research Listservs
- Special Journal Issues
- DataSpeak webinars
- Chartbooks
  - Children’s Health USA
  - Women’s Health USA
- Technical Assistance
Data Resource Center
www.childhealthdata.org

Data Snapshots are national and state-level profiles featuring whole child overviews or topic-specific reports. You can view an available snapshot or customize your own data snapshot. Customizable profiles, where you can choose your own indicators, are marked with an asterisk.

To view your data snapshot, follow the two easy steps below:

1. Click on the map (a state, region or nationwide) to view your snapshot.
2. Select a snapshot from the list of categories below.

1. Click on your state, HRSA Region, or Nationwide to view your snapshot.
PROVIDE ANALYTIC SUPPORT, CONSULTATION, AND LEADERSHIP TO SELECTED BUREAU PROGRAMS AND INITIATIVES
Key Initiatives/Programs OER Supports

- Healthy People 2020
- Federal Interagency Forum on America’s Children
- National Children’s Study
- MCH 3.0 – Performance Measures
- Infant Mortality CoIIN
MCH 3.0 – Transformation of Block Grant

• Goal remains to improve the health of America’s mothers, children, and families, including children with special health care needs

• Through core public health functions and ten essential services

• Improving access, quality, integration, equity, and accountability
Public Health Framework

ASSESSMENT
- Evaluate
- Monitor Health
- Diagnose & Investigate

POLICY DEVELOPMENT
- System Management
- Research
- Inform, Educate, Empower
- Mobilize Community Partnerships
- Develop Policies

ASSURANCE
- Enforce Laws
- Link to / Provide Care
- Assure Competent Workforce

Policy Development

Public Health Framework
Transformation

1. Reduce burden
   • Reducing data reporting
   • Simplifying/clarifying and reducing the number of forms; streamlining narrative and application

2. Retain flexibility
   • Choice in national performance measures (8)
   • State-specific performance measures (5)
   • State-developed structural/process measures

3. Improve accountability and document impact
   • Fewer performance measures directly tied to Title V activities (15)
Performance Measure Framework

1. National Outcome Measures
2. National Performance Measures
3. State-Initiated Structure / Process Measures

- National Outcome Measures and Performance Measures would be drawn from national data sources and prepopulated for States to analyze.

- State-initiated Structure/Process Measures would be developed by the States to measure strategies and activities of the Title V program toward the national measure.
Framework Measure Example

• **National Outcome Measure:** Infant and Postneonatal Mortality, Sudden Unexpected Infant Deaths (SUID)

• **National Performance Measure:** Percent of infants placed to sleep on their backs (Healthy People 2020 indicator)

• **Possible State-Initiated Structure/Process Measures:**
  1) Percent of birthing hospitals that have adopted a safe sleep policy
  2) Percent of birthing hospitals that have received formal training from the MCH Department
  3) Implementation of public service announcements (PSA) to raise awareness of safe sleep broadly and/or through partner organizations
  4) Use of data from Fetal and Infant Mortality Review (FIMR) or Child Death Review to inform programming efforts and preventive information
• Women’s/Maternal Health
• Perinatal/Infant Health
• Child Health
• Adolescent Health
• CSHCN
• Cross-cutting
Well-woman visit (BRFSS)
Definition: % of women 18-44 with past-year preventive visit
• Potential outcomes
  ➢ Severe maternal morbidity
  ➢ Low birth weight, preterm birth
  ➢ Fetal and infant mortality

Low-risk cesarean (Birth certificate)
Definition: % cesarean among term, singleton, vertex, first births
• Potential outcome
  ➢ Severe maternal morbidity

* All measures are preliminary
Perinatal/Infant Health*

Perinatal Regionalization (Linked Birth – AAP Directory)
Definition: % VLBWs born in facilities with level III+ NICUs
  • Potential outcomes
    ➢ Perinatal, neonatal, infant mortality

Breastfeeding (NIS)
Definition: % infants breastfed to 6 months
  • Potential outcome
    ➢ Sleep-related Sudden Unexpected Infant Death (SUID)

Safe Sleep (PRAMS)
Definition: % infants placed to sleep on their backs
  • Potential outcomes
    ➢ SUID, postneonatal, infant mortality

* All measures are preliminary
**Child Health**

**Developmental Screening (NSCH)**
Definition: % children ages 9-71 months receiving a developmental screening using a parent-completed screening tool

**Oral Health (NSCH or EPSDT)**
Definition: % children ages 0-6 with a past-year preventive dental visit

- Potential outcomes
  - Healthy and Ready to Learn
  - Children in excellent/very good health

* *All measures are preliminary*
Adolescent Health*

**Adolescent well-visit (NSCH)**
Definition: % of adolescents aged 12-17 with a well-visit in the past year

- Potential outcomes
  - Immunization
  - Overweight or obese (BMI at or above the 85th percentile)
  - Adolescents in excellent/very good health
  - Adolescent suicide and death rate

**Bullying (YRBSS and/or NSCH)**
Definition: % adolescents who report being bullied

- Potential outcomes
  - Adolescent suicide and death rate

* All measures are preliminary
Children with Special Health Care Needs*

Medical Home (NSCH)
Definition: % children with and without CSHCN that have a medical home

Transition (NSCH)
Definition: % adolescents ages 12-17 with and without CSHCN who received services necessary to make transitions to adult health care
  • Potential outcome
    ➢ Percent of children and youth with special health care needs (CYSHCN) receiving care in a well-functioning system

* All measures are preliminary
Adequate Insurance Coverage (NSCH)
Definition: % children who are adequately insured (continuous

- Potential outcomes
  - Percent of children without health insurance
  - Percent of children and youth with special health care needs (CYSHCN) receiving care in a well-functioning system

Injury (HCUP – State Inpatient Databases)
Definition: Rate of injury-related hospitalizations per population aged 0-19

- Potential outcome
  - Child death rate

* All measures are preliminary
Cross-cutting*

Physical Activity (YRBSS and NSCH)
Definition: % of children ages 6-17 who are physically active at least 60 minutes per day
• Potential outcomes
  ➢ Overweight or obese (BMI at or above the 85th percentile)

Household Smoking (NSCH)
Definition: % children in households where someone smokes
• Potential outcomes
  ➢ Severe maternal morbidity
  ➢ Low birth weight, preterm birth
  ➢ Neonatal, postneonatal, SUID, infant mortality
  ➢ Percent of children in excellent/very good health

* All measures are preliminary
Other Points to Consider

- We hope to provide data by demographic stratifiers to monitor disparities
  - Age, sex, race/ethnicity, poverty, CSHCN, etc

- Structural/process measures can be selected to match up to an essential public health service
OTHER NEW(er) MCHB PROGRAMS & INITIATIVES
Home Visiting (MIECHV)

- Authorized in the Affordable Care Act under Title V
  - Administered by HRSA and ACF
- Grants to States and Tribal Organizations to serve at-risk communities identified in needs assessments
- Serve pregnant women, families, children from birth to 5
- Six benchmark areas for improvement:
  1. Maternal and newborn health
  2. Child injury, maltreatment, ED visits
  3. School readiness and achievement
  4. Crime and domestic violence
  5. Family economic self-sufficiency
  6. Coordination and referrals for other community resources and supports
• FY14 $400M; serving ~80,000 parents/children
• Formula and Competitive Grants
• 75%+ to evidence-based models
  • 14 models http://homvee.acf.hhs.gov/
• ≤25% to promising approaches
• Competitive grants require implementation and/or impact evaluation
• QI projects through MCHB
• National evaluation through ACF
Collaborative Improvement & Innovation Network (CoIIN) to Reduce Infant Mortality

• Partnership among the States, HRSA, Association of State and Territorial Health Officials (ASTHO), Association of Maternal and Child Health Programs (AMCHP), CDC, CityMatCH, CMS, March of Dimes, National Governors Association (NGA), National Institutes of Health (NIH)

• Began in the 13 Southern States in January 2012, launching now in Region V, with national expansion by the end of 2014

• States share best practices and receive technical assistance to make progress toward shared goals in common priority areas

• Keys to Success
  • Collaborative learning
  • Rapid cycle improvement
  • Measurement system with real-time data
  • Partnership and leadership
By August 2014:

- Reduce non-medically indicated early elective delivery (< 39 weeks) by 33% (Birth Certificate, BC)
- Reduce smoking rate among pregnant women by 3% (BC)
- Increase to 90%, or 20% above baseline, mothers delivering Very Low Birth Weight (VLBW) infants at the appropriate level of care (BC)
- Increase safe sleep practices by 5% (Pregnancy Risk Assessment Monitoring System, PRAMS)
- Change Medicaid policy to increase number of women who receive interconception care (ICC) in 5-8 states (Medicaid-linked data)
- Title V SSDI supplement, and key federal partners CDC and CMS, are helping to improve data timeliness and quality
Accomplishments

- **Early Elective Delivery**: Overall 28% decline in early elective deliveries since 2011 baseline
- **Smoking Cessation**: Overall 6% decline in smoking during pregnancy since 2011 baseline
- **Interconception Care**: 7 out of 8 states documented Medicaid policy or procedure change to improve ICC access or content
- **Perinatal Regionalization**: significant engagement of partners and mobilization of teams in the states to address levels of care designations in context of 2012 American Academy of Pediatrics (AAP) guidelines
- **Safe Sleep**: collaborative learning sessions to share best practices and innovations are being conducted monthly
Region V CoNN Priorities

- Social Determinants of Health
- Preconception Health / Interconception Care
- SIDS / SUID / Safe Sleep
- Early Elective Delivery
National Expansion of CoIIN

• Infant Mortality Summits in July
• National Initiative for Child Health Care Quality (NICHQ) providing QI support
• SSDI will support data reporting, timeliness, and quality efforts
Healthy Start 3.0

• Community-based program that links women to health and social services to improve perinatal outcomes and reduce disparities
• New focus on 5 key aspects
  • Improve women’s health
  • Promote quality services
  • Strengthen family resilience
  • Achieve collective impact
  • Increase accountability through QI, monitoring, evaluation
• Emphasis on population health, standardization, evidence-based practices, continuous quality improvement
Healthy Start 3.0 Levels

- **Level 1: Community-Based Healthy Start**
  - Essential services for individual-level impact
  - 69 grants serving 500+ women per year each

- **Level 2: Enhanced Services Healthy Start**
  - Stimulate community collaboration to achieve community impact (e.g. FIMR, PPOR)
  - 9 grants serving 800+ women per year each

- **Level 3: Leadership and Mentoring Healthy Start**
  - Serve as a hub for place-based initiatives and inter-sectoral collaboration to achieve collective impact; serve as mentors and leaders for other grantees
  - 10 grants serving 1,000+ women per year each
MCH Workforce Development Center

• Awarded to UNC in partnership with AMCHP
• Will provide training/TA to MCH Title V Program Leaders/Staff, partners, MCH students to help implement health reform in 4 key areas
  • Access to Care
  • Quality Improvement
  • Systems Integration
  • Change Management

http://www.amchp.org/Transformation-Station
Federal Partner Initiatives

CDC – Division of Reproductive Health
CAPT Wanda Barfield MD, MPH, Director

• Focus on Pregnancy, Infant, Women’s Health
  Prevention of Teen/Unintended Pregnancy
  • Family planning expansions
  • LARC
  • Quality measures
    1. % contraceptive clients using a most or moderately effective method of
       contraception
    2. % contraceptive clients using LARC


http://www.cdc.gov/reproductivehealth/
Federal Partner Initiatives

CMS – Center for Medicaid and CHIP Services
Stephen Cha, MD, MPH, Chief Medical Director

• Focus on delivery system improvement
  • CHIPRA Maternal and Child Health Care Quality Core Sets
    • e.g., behavioral risk assessment, antenatal steroids, immunization, well child care, weight assessment/counseling, medication management
  • Strong Start Initiative
    • Reducing Early Elective Delivery
    • New Models of Prenatal Care
      • Group Care, Birth Centers, Maternity Care Homes, Home Visiting

Additional Select Partners

AMCHP
http://www.amchp.org/programsandtopics/data-assessment/
- Lifecourse Metrics Project
- Infant Mortality Toolkit

ASTHO
http://www.astho.org/healthybabies/
- Healthy Babies Initiative
- Fact Sheets/Resources, e.g. 17-P, safe sleep
Additional Select Partners

CityMatCH  http://www.citymatch.org/projects/active
  • Institute for Equity in Birth Outcomes
  • MCH Lifecourse Toolbox

March of Dimes  
  • Toward Improving the Outcomes of Pregnancy III
  • Healthy Babies are Worth the Wait
FINAL THOUGHTS
Consequential Epidemiology

- Applied epidemiology with immediate connection to improving population health
- Simple and sophisticated methods with focus on purpose and impact – connection to programs
- Descriptive stats – who, what, when, where?
  - Describe distribution of disease patterns (program targets)
- Multivariable stats – why, how?
  - Identify independent determinants that influence content of interventions and evaluate their success; assess whether trends and patterns are real; account for the array and complexity of factors related to outcomes (confounding, interaction)
Asking the Right Questions

- What is the purpose? So what?
- Do you have request/buy-in from who will use the information?
- Has it been done before? Is it likely to be different than findings from previous studies?
- Is it primarily etiologic or risk factor-focused versus quantifying the contribution or potential impact of an intervention? Or return on investment?
- Will you have a dissemination/translation plan?
Getting the most from the course

• Network with one another; share tricks & tools
• There will be a lot of material; some may be a stretch but there are many references to continue learning more
• Seek out TA during and after course
Contact Information

Ashley Hirai (Schempf), PhD
AHirai@hrsa.gov
301.443.1496