

POSTER SESSION - Tuesday, September 29, 2009

POSTER TITLE	Page #
1 - ABC ACTIVITIES.....	3
2 - Addressing disaster preparedness among the physician population in Pueblo County, Colorado	3
3 - Adolescent Risky Sexual Behaviors and HIV/AIDS Related Education Among a Population-based cohort: Analysis and Implications for Public Health Program Implementation of School-based HIV/AIDS Interventions in Colorado.....	4
4 - Adolescent Suicide Attempts and Suicidal Ideation: Exploring new Perspectives with Risk and Protective Factors in Suicide Prevention Research.....	5
5 - Assessing the Impact of a Chronic Care Registry on the Quality of Care	6
6 - The Association Between Physical Activity, Mental Health, and Quality of Life: A Population-Based Study	7
7 - The Baby Mamas - A Wellness Group for Pregnant and Parenting Teens	8
8 - Consequences of Informative Dropout on Evaluating Risk in Longitudinal Cohort Studies	8
9 - The Cost-effectiveness of a Pilot Vaccination Clinic: Providing Immunizations in the School and Billing Third Party Payers.....	9
10 - Could a Global Measure of Self-Rated Health Provide Clinical Indications of Adolescent Health Risks?	10
11 - The CRN Cancer Communication Research Center	11
12 - Data Review and Dissemination: From Input to Ownership	12
13 - Early Childhood Obesity Prevention: A call to action.....	12
14 - The Effectiveness and Feasibility of Recalling All Adolescents Enrolled in a School-Based Health Center for their Recommended Vaccines	13
15 - Evaluation of the Centering Pregnancy program in a public health clinic in Anchorage, Alaska.....	14
16 - Expanding the Colorado Health Emergency Line for the Public Beyond Emergency Response	15
17 - Getting from There to Here: Disability and the Health Divide	15
18 - A Group Visit Approach to Improving Individual Diabetes Care	16
19 - Implementing a Tobacco Free Hospital Policy.....	16
20 - Integrating an Education and Referral System into Primary Care: A Hereditary Cancer Education and Utilization Project.	17
21 - Integrating Public Health into Colorado's Medical Home System.....	18
22 - LUCAR: We believe that we can make a difference.....	19

POSTER SESSION - Tuesday, September 29, 2009

23 - Mental Health Administrators' and Providers' Knowledge, Attitudes and Behaviors about Tobacco Cessation	19
24 - Norovirus Outbreak Surveillance Utilizing Traditional Methods and GIS.....	20
25 - Occupational Lead Surveillance in Colorado	21
26 - Outcomes of a Health Department-Community Health Center Program of Post-Partum Treatment for Latent Tuberculosis Infection Detected During Prenatal Screening of Pregnant Women - Denver Colorado, 2000-2005	22
27 - Preconception health - A survey to assist family planning programs or clinics in determining clients attitudes, knowledge, and belief regarding preconception health.	22
28 - Prenatal Education for Rural Interior Alaska	23
29 - Promoting and Improving the Oral Health of Montana's Children Ages 0 to 6 Years	24
30 - Promoting exclusive breastfeeding for up to 6 months in an identified population of female applying for pre natal Medicaid	25
31 - Public Health Mapping in Colorado: Google Earth and Google Maps Examples	25
32 - "The Sky's the Limit": Early Childhood Councils and Health Partners working together to identify and solve health problems in children 0-8 years of age.	26
33 - Social Networking & Public Health	27
34 - A Survey of Hospital Policies Regarding Critical Test Values Notification and Perinatal Quality Issues in Utah	27
35 - Uniting Public Affairs Research and Public Health: Exploring the Latest Evidence in Administration, Management and Policy.....	28
36 - Using Interactive Voice Response Technology to Assess Community Health Data: Lessons from LiveWell Colorado.....	29
37 - Using Participatory Research to Prevent Colon Cancer in Rural Colorado: Results of a Community-Based Intervention	30

POSTER SESSION - Tuesday, September 29, 2009

BREAK and POSTER SESSION 10:00 a.m. – 11:15 a.m.

Jacks

1 - ABC ACTIVITIES

Chris Douglas, State Supervisor, Nutrition Coordinator for WIC, Wyoming Department of Health

Brief Description: This poster session informs, educates, and empowers people about health issue of obesity and ways to help prevent obesity. It mobilizes community partnerships to identify and solve the health problem of obesity by involving so many organizations, agencies, and programs.

Abstract: Purpose/Need:

According to the CDC, "Overweight (for children) is defined as a Body Mass Index (BMI) at or above the 85th percentile and lower than the 95th percentile. Obesity is defined as a BMI at or above the 95th percentile for children of the same age and sex. These definitions are based on the 2000 CDC (Centers for Disease Control and Prevention) Growth Charts for the United States and expert committee". For two to five years olds, "data from NHANES surveys (1976-1980 and 2003-2006) show that the prevalence of obesity has increased "from 5.0% to 12.4%". This CDC web page goes on to report that "obese children and adolescents are more likely to become obese as adults." Further, it states, "Some consequences of childhood and adolescent obesity are psychosocial. Obese children and adolescents are targets of early and systematic social discrimination. The psychological stress of social stigmatization can cause low self-esteem which, in turn, can hinder academic and social functioning, and persist into adulthood. Obese children and teens have been found to have risk factors for cardiovascular disease (CVD), including high cholesterol levels, high blood pressure, and abnormal glucose tolerance." Less common health conditions associated with increased weight include asthma, hepatic steatosis, sleep apnea, and Type 2 diabetes.

Lessons Learned:

It takes much support and encouragement to develop life-long healthy habits. If many organizations can be giving the same basic message repeatedly to the parents and caretakers of Colorado children, the adults are more likely to hear the message and thus, turn the message into action.

Relevance:

The future health of the children of Colorado depends on the habits they develop today. If parents and caretakers of the children of Colorado can assist the children to be more active, there is a better chance of the children growing up to be adults of healthy weight.

Through the development of a working relationship with various programs, agencies, organizations, and institutions focused on the prevention of obesity in Wyoming, a larger number of children and the adults who care for them will be reached with greater success than if one agency or organization was working by itself. The ABC ACTIVITY is an eye-catching educational tool for organizations to display to promote physical activity and to praise adults for assisting in preventing obesity. It provides a take home bookmark which will serve as a reminder of ways to increase physical activity in children throughout each day.

By developing healthy habit of being physically active everyday, the children have a greater chance of maintaining physical activity as the mature as this will have become a normal daily routine for them. To not be physically active would be abnormal if they have been doing this all of their life. Thus, Sustainability of Public Health would be more solid as the public would be healthier.

Learning Objectives: (1) Develop a working relationship with various programs, agencies, organizations, and institutions to help prevent obesity in Wyoming. (2) Develop a tool that promotes physical activity in the preschool age children that can be utilized by people who live and work with preschool age children.

Public Health Topic(s): Maternal and Child Health; Health Promotion, Disease Prevention, Education; Physical Activity, Food, and Nutrition

Essential Service(s): Inform, Educate, Empower; Mobilize Community Partnerships; N/A

Target Audience: People who live or work with preschool age children

2 - Addressing disaster preparedness among the physician population in Pueblo County, Colorado

Anne Hill, Health Educator, Pueblo City-County Health Department

Brief Description: The presentation addresses educating physicians in Pueblo County on disaster preparedness and response during a three year project funded by the Colorado Medical Society. Emphasis of the project shifted from pandemic influenza to all-hazards. The project found that engaging physicians in disaster preparedness was difficult due to time constraints and lack of interest; office managers and staff took more of a leadership role in developing disaster plans and stockpiling supplies for offices.

Abstract: After 9/11 federal and state governments emphasized preparedness training among medical professionals as being integral to public health disaster response. From 2006-2009, Pueblo City-County Health Department (PCCHD) in collaboration with Pueblo County Medical Society (PCMS) received funds from the Colorado

POSTER SESSION - Tuesday, September 29, 2009

Medical Society to provide training and education to local physicians and offices on disaster preparedness and planning.

During Phase I of the project, PCCHD presented to physicians offices and office staff on pandemic influenza planning. Described as a learning process, Phase I presentations demonstrated that Pueblo's physicians had not considered planning for a pandemic situation or reflected on the impact of a pandemic on the community. During Phase II of the project, PCCHD made returned to physicians offices and presented on all hazards preparedness. Based on qualitative and quantitative data collected during Phase II, the all hazards approach proved more relevant to the physician population because of recent local and national disasters.

Emergency preparedness activities with the physician population in Pueblo County are on-going. In Phase III, PCCHD conducted a survey of over 300 physicians on their disaster readiness and developed a three-part disaster plan template to share with local physicians offices.

Preliminary outcomes from the project demonstrate improved relationships among PCCHD and the medical community, especially in areas related to alternate care facility planning and surge capacity. The project also solidified PCCHD's role as the lead organizer and coordinator for health related emergencies in the County. Of note, though the program engaged physicians in disaster education, exercises and drills, the project was more successful in reaching office managers and staff, who demonstrated interest in learning about preparing offices.

The research project conducted by PCCHD has direct relevance to health professionals in Colorado, specifically because medical surge capacity is a goal among local and statewide public health agencies and hospitals. Educating physicians on disaster preparedness is necessary since physicians play an important role in supporting medical surge capacity and public health's response to disasters. The project relates to three of the Ten Essential Services:

- Since the project's inception, the aim has been to inform physician's offices on how to become more prepared and resilient in the face of man-made or natural disasters. (Inform, educate, and empower people about health issues.)

- By improving the disaster preparedness and education of physicians' offices, these health care personnel are better able to treat, triage, and provide linkages to patients in need of correct health care. (Link people to needed personal health services and assure the provision of health care when otherwise unavailable.)

- Lastly, the project educates the health care workforce to become vital responders in disasters. (Assure a competent public health and personal healthcare workforce.)

The project is directly related to the 2009 Public Health Conference in the Rockies Theme: Uniting Public Health. Specifically, the project works to ensure that physicians' offices are able to respond, react, and recover from disasters as quickly as possible. Well prepared offices and staff will not only be able to help those in need, but are also able to support the public health and emergency response system during disasters. This strengthens the

ability of public health to deal with disasters as well as enhances the connection between medical and public health professionals.

Learning Objectives: (1) Discuss the rationale for the multi-phased project to train community physicians and offices about pandemic influenza and all-hazards preparedness. (2) Assess how disaster preparedness efforts can strengthen public health efforts and sustainability locally and statewide. (3) Identify 5 lessons learned when working with the physician population in disaster preparedness and planning.

Public Health Topic(s): Emergency Preparedness and Response; Enhancing Public Health Systems; Other

Essential Service(s): Inform, Educate, Empower; Link People; Assure a Competent Workforce

Target Audience: Health educators working in emergency preparedness and response and physicians

3 - Adolescent Risky Sexual Behaviors and HIV/AIDS Related Education Among a Population-based cohort: Analysis and Implications for Public Health Program Implementation of School-based HIV/AIDS Interventions in Colorado

Stephen Nkansah-Amankra, Assistant Professor, Colorado School of Public Health/University of Northern Colorado, Ashley Walker, Assistant Professor, Colorado School of Public Health/ University of Northern Colorado

Brief Description: The session starts with background information on adolescent HIV/AIDS risks and protective factors, then we will assess the prevalence of HIV/AIDS among adolescents across the state. We will describe the research questions and methods for operationalizing constructs for the study. Next, will discuss the research design, statistical methods, and then present the results. In the discussion section, we will discuss pertinent issues emerging from the research and discuss interpretation of the results. Finally, we will explore practice-based steps to improve HIV/AIDS education programs in schools across the state.

Abstract: Population of persons infected with HIV/AIDS in the United States is highest among the industrialized countries, and this trend is set to continue in the next decades. Annually, the United States reports more than 17,000 deaths from AIDS or HIV related deaths. Although the overall incidence of HIV/AIDS mortality worldwide is declining, rates in the developing countries have declined less and within the industrialized countries, racial disparities among the minorities continue to be higher for Blacks. In the United States, some of the explanatory factors accounting for differences in HIV/AIDS racial disparities include differences in treatment availability, health system factors, limited access to HIV/AIDS information, and unequal treatment options accentuated

POSTER SESSION - Tuesday, September 29, 2009

by issues of poverty. However, these disparities in access to treatment and other options do not fully account for intra-states differences in reporting of HIV/AIDS among the ethnicities and other population groups. Based on the existing framework for prevalence reduction in the industrialized world, it is difficult to account for increasing reporting of HIV/AIDS among adolescents in the United States. Moreover, since the advent of the pandemic it has been proposed that providing accurate and unbiased education on HIV and AIDS to populations, and adolescents in particular, serves as a potent social "'vaccine' for preventing infections and other sequelae to the spread of the epidemic. Although previous investigations of HIV/AIDS risks among adolescents have been extensively elaborated in the literature, the relationships among these risks have been equivocal. For adolescents with problem behaviors (co-occurring behavioral risks), the interrelationships among antecedent risk and protective factors in determining HIV/AIDS infections and other risky sexual behaviors have been less clear among prevention scientists. Thus, it is necessary to explore and address the differences in the prevalence of co-occurring problem behavioral risks and other behavioral vulnerabilities predisposing adolescents to HIV/AIDS as well as other antecedent risks. The main purpose of the current project was to evaluate relationships among adolescent risky sexual behaviors, problems behaviors and other antecedent risky behaviors as determinants of HIV/AIDS education within the context of diverse array of schools psychosocial factors.

Methods: Characteristics of students participating in Colorado Youth Behavioral Risk Survey for the period 2003-2007 will be merged and compared using χ^2 tests for categorical variables and the Wilcoxon rank sum test for non-normally distributed continuous variables. Variables associated with HIV/AIDS education at a level of $P < 0.05$ will be entered into a multiple logistic regression model in a manual stepwise fashion, starting with those with the lowest P-value and proceeding through those with the highest value, to identify factors associated independently with HIV/AIDS education. The likelihood ratio test will be used to compare nested models to determine which variables are retained in multivariable models at a significance level <0.05 .

Results: Differences in the risk and other vulnerabilities will have higher implications for theory-based HIV/AIDS interventions and other public health program implementations across the state.

Conclusions: Although issues of HIV/AIDS and other antecedent risks appears to have been taken over by other emerging public health programs, the unique impact of the infections on populations will demand different techniques to minimize spread in the years ahead.

Learning Objectives: (1) To evaluate antecedent risks for HIV/AIDS education and other sexually transmitted diseases across the state (2) Assess interrelationships among antecedent risks, problem behaviors and other behavioral vulnerabilities within the context of school-based HIV/AIDS education programs.

Public Health Topic(s): Reproductive Health; Epidemiology and Statistics; Health Promotion, Disease Prevention, Education

Essential Service(s): Mobilize Community Partnerships; Research; Inform, Educate, Empower

Target Audience: School educators, Public Health Preventions specialists, researchers, Adolescent Coalition Groups and program managers

4 - Adolescent Suicide Attempts and Suicidal Ideation: Exploring new Perspectives with Risk and Protective Factors in Suicide Prevention Research

Stephen Nkansah-Amankra, Assistant Professor, Colorado School of Public Health/University of Northern Colorado, Community Health Program, Ashley, DWalker

Brief Description: The session will briefly discuss current knowledge and research on suicidology and focus on adolescent suicide rates across the state and the nation. We will elaborate on some previous research in the state of CO and gaps or questions that remains unanswered (using the current risk and protective factors). We will briefly elaborate on research objectives and discuss the questions guiding the study. The study design will be discussed and operationalization of constructs/variables assessed. We will explore the analysis plan. Finally, we will present the results and elaborate what it means in the discussion section. Issues emerging requiring attention of public health practice will be greatly emphasized. Options for audiences' perspectives and way forward for adolescent suicide research across the state will be discussed.

Abstract: Introduction and Background: Suicide and suicidal behaviors among adolescents is a priority public health concern which has spawned an extensive array of epidemiological studies, and further interest in exploring relations linked to these destructive behaviors is growing. Currently, adolescent suicide is the third leading cause of mortality among young people of age 15-25 in the U.S. Although suicide rates in the U.S., is predominantly a white male phenomenon particularly among the older age groups, concerns on the rapid rise in rates of suicides and suicidal attempts among African-American adolescents and other minorities in the country are increasing. Suicide rate in Colorado is almost 36% higher than the national reported average and statewide youth suicide is the second leading cause of death. Much of the etiologies of suicide and suicide attempt consistently suggests adolescent destructive behaviors are the end result of specific behavioral, biological, cognitive, emotional and other psychosocial risks becoming overbearing for the individual. However, it is also known that almost 30-40% of adolescents attempting suicide or completing suicide may not demonstrate any of these characteristics to warrant further concerns. Thus, assessing exposures beyond the risk and protective factors linked to adolescent growth and development might be equally compelling in

POSTER SESSION - Tuesday, September 29, 2009

the understanding and prevention of self destructive behaviors during early and later years of adulthood. Additionally, it has recently been suggested that because suicide is a complex phenomenon involving many interrelated factors, official statistics might not reveal the broad array of factors associated with self destructive behaviors that most young people eventually endure. Despite many documented relationships among suicide and other suicidal behaviors, a number of questions remain about how specific aspects of suicidal attempts or suicidal ideation is related to an individual's self perception of health as being good or poor, and the extent to which these perceptions can predict responses to other suicidal behaviors. The main purpose of this study will be to explore the extent to which adolescent self perception of health is related to suicidal attempts or other suicidal behaviors and to determine how suicidal behaviors might be linked with adolescents' problem behaviors (co-occurring health risks).

Methods: The data for the study comes from 2005 Colorado Youth Risk Behavioral Survey. Descriptive statistics will be used to characterize the sample and χ^2 to assess bivariate relations. Series of ordinal multiple logistic regression models will be used to assess relationships among suicidal behaviors (dependent variables) and adolescent self rated health, problem behaviors and other behavioral, lifestyle and psychosocial variables as predictors.

Outcome/Results: The findings of this study would have clinical and public health implications in terms of determining focus on specific adolescent life distress when other clinical information is unavailable in much of suicide prevention programs.

Conclusion: Suicide and suicide attempts exert tremendous impact on public health resources and a heavy toll on families as well as other community relationships. Assessing and addressing key factors linked to adolescent destructive behaviors is a public health imperative. Interventions designed could target age appropriately the specific needs of the young person.

Learning Objectives: (1) Evaluate the extent to which "traditionally" known risk and protective factors assist in determining adolescent self destructive behaviors (suicidal attempt, suicidal ideation and suicidal injuries) compared to self rated health. (2) Assess the most predictive validity of adolescent suicidal behaviors, injuries and problem behaviors, and explore how these could be the focus of suicide prevention strategies across the state. (3) To explore practice-based strategies for improving public health advocacy in prevention of adolescent suicide and other destructive behaviors.

Public Health Topic(s): Injury, Suicide and Violence Prevention; Epidemiology and Statistics; Health Promotion, Disease Prevention, Education

Essential Service(s): Research; Inform, Educate, Empower; Mobilize Community Partnerships

Target Audience: Public Health Practitioners, Researchers, Policy makers, program managers and others (parents) interested in improving adolescent health.

5 - Assessing the Impact of a Chronic Care Registry on the Quality of Care

Susan Moore, MSPH, Assistant Director, Health Services Research, Denver Health, M. Josh Durfee, MSPH, Research Project Coordinator, Denver Health

Brief Description: Nonadherence to best-practice guidelines for diabetes care is pervasive and costly in physical and financial terms. Computerized disease registries can be used to improve the quality of chronic disease care both during and between visits. This poster describes the results of a study assessing whether diabetes outcomes can be improved through using a registry to support the provision of reports to patients and providers. Two types of report cards were examined: 1) customized, patient-centered report cards; and 2) provider performance report cards with patient-level data.

Abstract: Objective:

To assess whether diabetes outcomes can be improved through using a registry to support the provision of reports to patients and providers. Two types of report cards were examined: 1) customized, patient-centered report cards; and 2) provider performance report cards with patient-level data.

Public Health Relevance:

Nonadherence to best-practice guidelines for diabetes care is pervasive and costly in physical and financial terms. Computerized disease registries can be used to improve the quality of chronic disease care both during and between visits.

Design & Methods:

The study included 5,457 English or Spanish-speaking patients with a diagnosis of diabetes and a recorded visit within 18 months. Customized report cards containing health status information as measured by clinical indicators (HbA1c, LDL, and BP) were distributed to patients quarterly through mailings and at the point of care for all visits during the intervention period.

Patients were surveyed at midpoint and post-intervention to assess report card utility and patient satisfaction.

Surveys were self-administered and printed in both English and Spanish. A self-addressed, postage-paid envelope was included to facilitate response.

Sixty primary care providers at eight community health clinics received a quarterly provider report card based on patients' diabetic control status as measured by clinical indicators. Providers at intervention clinics also received a quarterly list containing the names of up to ten patients outside diabetic control.

Key informants identified one health care provider per site as "diabetes champion" (DC). Confidential guided interviews were conducted with each DC at midpoint and post-intervention. Interviews were transcribed and audio recorded.

Analysis:

Clinical outcomes were quantitatively examined and adjusted for age, race/ethnicity, gender, baseline outcome performance, and degree of illness. Generalized estimated

POSTER SESSION - Tuesday, September 29, 2009

equations (GEE) accounted for within-subject visit correlation. Measures included:

- Mean HbA1c
- % of patients with controlled HbA1c, LDL, and BP
- % of patients with HbA1c, LDL, and BP tested in the past year

Report card utility was evaluated by qualitative assessment of patient and provider satisfaction. Open coding was used to develop heuristic codes from themes and patterns that emerged during content analysis of survey and interview data. Initial codes were reexamined in context and refined into an objective code set, which was used in a final inductive analysis.

Findings:

Randomization to both point-of-care report card and provider performance interventions significantly increased the percentages of patients with HbA1c levels lower than 7 ($p < 0.01$) and LDL levels under 100 mg/dl ($p < 0.01$) respectively, compared to patients randomized to the control groups. No significant improvement was seen for patients that were mailed quarterly report cards.

Survey respondents found report cards to be clear (89.6%), correct (83.9%), and helpful (87.6%), and preferred to continue receiving them (83.9%). Most felt their providers helped them understand (55.3%) and use (51%) the report card. Many respondents indicated self-efficacy (67.4%) and perceived improvement in their diabetes (52.7%).

Providers indicated varying degrees of integration between report cards and their personal or clinic-based treatment strategies. Satisfaction was mixed, with some providers indicating difficulty accessing their reports and others observing that information presented without guidance is of limited value.

Conclusions:

A patient-centered approach to diabetes management using chronic disease registries may improve quality of care and clinical outcomes. Patients value receiving personalized health information and being active participants in their own care. Providers cited barriers to improving health outcomes through provider performance feedback.

Learning Objectives: (1) To describe the effect on diabetes health outcomes of customized health report cards provided to patients and primary care practitioners. (2) To discuss the impact of customized report cards on the process and quality of diabetes care. (3) To discuss the effectiveness of customized report cards in providing health information to diabetes patients and providers.

Public Health Topic(s): Chronic Disease; Health Disparities and Underserved Populations; Other

Essential Service(s): Research; Evaluate; Inform, Educate, Empower

Target Audience: Primary care providers

6 - The Association Between Physical Activity, Mental Health, and Quality of Life: A Population-Based Study

Christine Demont-Heinrich, MPH Candidate, Colorado School of Public Health

Brief Description: This study was conducted to assess the association between physical activity, mental health, and quality of life using the 2007 Colorado Behavioral Risk Factor Surveillance System. A powerpoint slide show will be used to display the prevalence of mental health outcomes and quality of life outcomes by physical activity status among Colorado adults. A logistic regression analysis was also used to determine the association between physical activity and mental health and quality of life. Although this study is cross-sectional, it supports the current research that physical activity is associated with mental health and quality of life in Colorado adults.

Abstract: Introduction - Physical activity improves physical health in numerous ways and may also improve mental health and quality of life. Experimental and epidemiological studies have demonstrated an association between physical activity and mental health but these studies included only certain sub-populations. Population-based studies that include both sexes and a wide age range are scarce. The aim of this paper is to examine the association between physical activity and mental health and quality of life using a population-based surveillance system.

Methods - A cross-sectional study was designed using data from the 2007 Colorado Behavioral Risk Factor Surveillance System (BRFSS) to study the association between physical activity and mental health and quality of life. The study sample consisted of 5,934 completed surveys that included questions pertaining to physical activity, mental health, and quality of life. Logistic regression was used to determine the association between physical activity and mental health and quality of life while controlling for age, race/ethnicity, and level of education.

Results - The prevalence of serious psychological distress was higher in those who reported no physical activity than those who did report physical activity. Adults who reported no physical activity were more likely to have diminished quality of life compared to adults who did report physical activity. Colorado adults who reported no physical activity were more than twice as likely to have been classified as having serious psychological distress compared to Colorado adults who reported doing physical activity (OR 2.31 95% CI 1.43-3.73). Colorado adults who reported no physical activity were 3.5 times more likely to self-report fair or poor health compared to Colorado adults who reported physical activity (OR 3.57, 95% CI 2.81-4.55). The odds of being dissatisfied or very dissatisfied with life was 2.5 times higher in Colorado adults who reported no physical activity compared to Colorado adults who reported being physically active (OR 2.51, 95% CI 1.73-3.64). Those who reported no physical activity were more likely to report more mentally unhealthy days, more physically unhealthy days, and more activity limitation days than those who reported physical activity.

POSTER SESSION - Tuesday, September 29, 2009

Conclusions - The results of this study demonstrate that Colorado adults who reported no physical activity also reported poorer mental and poorer quality of life compared to those who reported physical activity. Public health programs should include physical activity in their promotion strategies not only to improve physical health but also because it may improve mental health and quality of life as well.

Learning Objectives: (1) Explain how using a population-based surveillance system such as the Behavioral Risk Factor Surveillance System (BRFSS) can be used to analyze associations between physical activity, mental health, and quality of life. (2) Describe the results of the association between physical activity, mental health, and quality of life using the 2007 Colorado BRFSS. (3) Discuss how public health programs should incorporate physical activity into their programs not only to improve physical health but also mental health and quality of life as well.

Public Health Topic(s): Epidemiology and Statistics; Health Promotion, Disease Prevention, Education; Physical Activity, Food, and Nutrition

Essential Service(s): Diagnose and Investigate; Research; Develop Policies and Plans

Target Audience: public health professionals, physicians, health educators, researchers

7 - The Baby Mamas - A Wellness Group for Pregnant and Parenting Teens

Vicki Swarr, Program Coordinator, Prenatal Plus Program, Tri-County Public Health Department

Brief Description: This session presents the development, implementation, and evaluation of a template for Mother-Infant group therapy; a multi-agency and multi-disciplinary effort.

Abstract: Background
Researchers such as Roseanne Clark are paving the way in the field of Mother-Infant Therapy Groups (M-IGT). A recent study proposed that "relationally focused treatments may address the mother's individual needs so that she can become more emotionally available" for her developing infant (Clark, 2008). M-IGT moves beyond traditional individual psychotherapy and shifts into a group approach aimed at relieving mom's depressive symptoms while providing baby with developmental stimulation. This project, while built upon the foundation of M-IGT, seeks to apply a wellness curriculum using the expertise of mental health, nursing and public health theories.

Purpose
The foremost purpose of this project is to develop a fundamental template for Mother-Infant Group Therapy that can be replicated and offered to the community using available community resources.

Methods

While the heart of the project was the multi-disciplinary and multi-agency collaboration and planning, the fundamental work consisted of three components: curriculum development, implementation of group therapy and evaluation. These three components were planned and executed using logic models.

Results/Outcomes

The most obvious outcome of the collaboration was the successful implementation of the group. The Baby Mamas-as the teens named the group- participated in eleven weeks of M-IGT. Preliminary data was favorable in relation to the reactions of the participants to the weekly interaction. Pre- and post- Edinburgh Postnatal Depression Scale (EPDS) results showed a group decline in depressive symptoms from a median of 6.2% to 4.5%. Informal feedback from both group participants and volunteer professionals demonstrated that the experience was positive and thought provoking. While the teens did not report an increased number of support systems, they were 19% more likely to view a counselor as a source of support at the completion of the project.

Implications for Public Health

Attending to the mental health needs of pregnant and parenting moms has sweeping implications for healthy children and thus a healthy society. Public health agencies, mental health agencies and local schools have the expertise and ability to address even the costliest of therapies in successful and effective ways.

Mental health and public health are integrally linked because the significant role each can play in health promotion and disease prevention. (NACCHO August 2007).

Learning Objectives: (1) Incorporate theories of infant mental health therapies as part of an intervention within multi-agency and multi-disciplinary collaboration. (2) Identify available research that addresses Perinatal Depression and Infant Mental Health to incorporate into curriculum for group therapy. (3) Develop a replicable group template that can be disseminated to accommodate varying resources.

Public Health Topic(s): Maternal and Child Health; Reproductive Health; Health Promotion, Disease Prevention, Education

Essential Service(s): Inform, Educate, Empower; Mobilize Community Partnerships; Research

Target Audience: Professionals that work with or are interested in perinatal depression, infant mental health, multi-agency collaboration and community partnerships.

8 - Consequences of Informative Dropout on Evaluating Risk in Longitudinal Cohort Studies

Samantha MaWhinney, Associate Professor, Colorado School of Public Health, Jeri Harwood, Asst Prof of Pediatrics, University of Colorado

Brief Description: Individuals with disease progression and/or increased risk may be more likely to dropout of

POSTER SESSION - Tuesday, September 29, 2009

longitudinal cohort studies. Over time, remaining subjects are healthier with lower risks. Analyses exploring the relationship between longitudinal outcomes and risk must therefore account for subject loss. We introduce new statistical methods to more accurately estimate the impact of risk on outcomes in the presence of informative dropout. The method can be implemented using standard statistical software. A motivating example using data from the Multicenter AIDS Cohort Study (MACS) will be presented.

Abstract: Introduction: Longitudinal cohorts are a valuable resource for public health research providing data to address clinical, risk and prevention-oriented hypotheses. Dropout due to loss to follow-up or death is common in prospective longitudinal cohort studies. Patients that drop out may be more likely to have disease progression and/or experience increased risk. Here the cohort evolves over time to be biased towards healthier subjects with lower risk and results from analyses that ignore dropout will be incorrect. Despite the likelihood of informative dropout, traditional methods, such as mixed- or random-effects models are frequently used. This may be partially due to the complexity level of existing statistical methods. In addition, investigators may be naïve to possible biases and loss of power when failing to account for dropout.

Methods: We introduce a newly developed statistical method to account for dropout. Our method is relatively simple to implement using standard software.

Data: A well known longitudinal cohort study is the Multicenter AIDS Cohort Study (MACS) which is an ongoing prospective study of the natural and treated histories of HIV-1 (HIV) infection in homosexual and bisexual men conducted by sites in Baltimore, Chicago, Pittsburgh and Los Angeles (<http://www.statepi.jhsph.edu/macsmacs.html>). Since 1984, a total of 6973 men have been enrolled (2821 uninfected at baseline in the MACS Public Data Set of 5622 participants) with data and specimens collected at semiannual visits.

Clinical Hypotheses: Due to informative dropout among drug users and subjects with disease progression, methods that account for dropout will decrease bias and provide increased power to assess the effect of drug use on clinical HIV outcomes.

Risk and Prevention-Oriented Hypotheses: To direct prevention efforts among drug-using men who have sex with men (MSM), it is important to understand (1) the effect of drug use on sexual risk behaviors; (2) the impact of drug use on treatment adherence and (3) predictors of high risk injection drug use (IDU). Due to informative dropout among drug users and subjects with high risk behaviors, methods that account for dropout will decrease bias and provide increased power to assess the effect of drug use on risk and prevention-oriented outcomes.

Results: The new statistical methods will be applied to existing MACS data to assess the impact of drug use among MSM on longitudinal clinical, risk and prevention-oriented outcomes. The proposed analyses will provide guidance and further refinements in treatment strategies and prevention efforts among drug-using MSM. To demonstrate the impact on nonignorable dropout on the

results, findings will be compared to methods which do not account for dropout.

Additional Non-Presenting Authors:

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Learning Objectives: (1) Identify longitudinal cohorts and corresponding analyses that may be impacted by informative dropout. (2) Describe the potential impact of informative dropout on study conclusions.

Public Health Topic(s): Epidemiology and Statistics; Infectious Disease Control; Other

Essential Service(s): Research; Evaluate; N/A

Target Audience: Epidemiologists, Public Health Researchers

9 - The Cost-effectiveness of a Pilot Vaccination Clinic: Providing Immunizations in the School and Billing Third Party Payers

Deborah Rinehart, Research Projects Coordinator, Denver Health, Colleen "Kelly" Busch, RN, BSN, MSN, Denver Health, M. Josh Durfee, MSPH, Denver Health

Brief Description: The School-based Vaccination Project is a collaborative immunization project between Denver Public Health, Denver Community Health Services, the University of Colorado Denver Children's Outcomes Research Program and Denver Public Schools. The project is funded by two grants from the Centers for Disease Control and Prevention. The first year of the project consisted of one Tdap pilot clinic. Information from the pilot will be used to inform the second year of the project which will consist of flu vaccination clinics in twenty elementary schools and catch up vaccination clinics in eight middle schools. These clinics will be conducted during the 2009-2010 school year. The overall goals of the project are to implement and evaluate the feasibility of providing vaccinations in the school setting and billing third party payers and to determine the costs of the program relative to the outcomes. Understanding the barriers and

POSTER SESSION - Tuesday, September 29, 2009

facilitators to providing vaccinations to children in schools and obtaining adequate reimbursement by billing third party payers will provide important information in developing innovative and sustainable models of immunization delivery. This presentation will focus on the lessons learned and the preliminary cost evaluation findings from the pilot Tdap clinic.

Abstract: The School-based Vaccination Project is a collaborative immunization project between Denver Public Health, Denver Community Health Services, the University of Colorado Denver Children's Outcomes Research Program and Denver Public Schools. The project is funded by two grants from the Centers for Disease Control and Prevention. The first year of the project consisted of one Tdap pilot clinic conducted in a Denver public middle school. Information from the pilot will be used to inform the second year of the project which will consist of flu vaccination clinics in twenty elementary schools and catch up vaccination clinics in eight middle schools. These clinics will be conducted during the 2009-2010 school year. The overall goals of the project are to implement and evaluate the feasibility of providing vaccinations in the school setting and billing third party payers and to determine the costs of the program relative to the outcomes. Understanding the barriers and facilitators to providing vaccinations to children in schools and obtaining adequate reimbursement by billing third party payers will provide important information in developing innovative and sustainable models of immunization delivery. This presentation will focus on the lessons learned and the preliminary cost evaluation findings from the pilot Tdap clinic.

The pilot clinic was held in April 2009 at a DPS middle school. As part of the clinic, 443 out of 906 students were identified as needing the Tdap vaccination. Information about Tdap and the clinic was mailed along with vaccination consent forms to the parents of these children. Two mailings were made and 164 consents were returned (36%). The consent forms also asked for information regarding the child's insurance status as well as information on vaccine contraindications. About a third of the families were uninsured, a third had government insurance and a third had private commercial insurance. The entire clinic took approximately four hours, providing vaccinations to 157 students and was divided into three waves by grade. All consented children for each grade arrived at the same time, were given their consent forms and waited for an available vaccinator. Once vaccinated, the students returned their consent forms and clinical paperwork to an administrator who entered their information into appropriate vaccination systems. The children were observed for 5 minutes after being vaccinated and then returned to class. A clinic observer randomly timed vaccination sessions. The average time across these observations was approximately 2 minutes (1 minute and 59 seconds). All children were vaccinated in approximately two-and-a-half hours.

The pilot Tdap vaccination clinic provided invaluable information on how to obtain insurance information from families, query multiple systems to identify children in need of vaccination, obtain parental consent, conduct the

clinic, and bill third party payers (e.g., Medicaid and commercial insurance companies). Several data collection points were set up to assess the cost of the project which included staff time logs (billing, clinical and school staff), clinic sign-in sheets and evaluation interviews with clinical and school staff after the clinic. Understanding and identifying effective methods for vaccination delivery is an important public health concern in Colorado. This poster will present the lessons learned from the pilot Tdap clinic along with preliminary cost evaluation findings. This project supports two of the Ten Essential Services: mobilizing community partnerships and evaluating the effectiveness and cost of services.

Learning Objectives: (1) To describe a pilot vaccination project that provided a school Tdap clinic and billed third party payers. (2) To discuss the importance of assessing cost and the variables that should be considered.

Public Health Topic(s): Immunizations; Health Promotion, Disease Prevention, Education; Public Health Nursing

Essential Service(s): Evaluate; Research; Mobilize Community Partnerships

Target Audience: public health nurses, evaluators

10 - Could a Global Measure of Self-Rated Health Provide Clinical Indications of Adolescent Health Risks?

Ashley Walker, Assistant Professor, University of Northern Colorado/CSPH, Stephen Nkansah-Amankra, Assistant Professor University of Northern Colorado/CSPH

Brief Description: The session will include a description of the study's design. A summary of findings related to self-rated health, adolescent problem behaviors and other health risks related to poor health conditions among adolescents will be discussed. Benefits and the usefulness of self-rated health as an evaluation tool will be presented.

Abstract: Promoting healthy practices among young people in the United States is one key strategy for reducing disease burden and improving the health of the adolescents in the country. To achieve the objectives set by Healthy People 2010, researchers have emphasized the need to explore social determinants of health as they relate to the burden of disease among younger populations. Past health related research has identified that using a subjective rating of overall health might serve as a predictor for a young person's physical health and mental health functioning. However, it is unclear how the subjective health rating reflects adolescent health risks, problem behaviors and other preexisting health conditions. The purpose of this study was to evaluate the relations among self rated health (SRH), adolescent problem behaviors and other health risks related to poor health conditions among adolescents participating in the Healthy Kids Colorado and Colorado Behavioral Risk Surveys. In

POSTER SESSION - Tuesday, September 29, 2009

order to meet the purpose stated above, we evaluated the association between SRH and a set of behavioral and other health risks including pre-existing medical conditions using Colorado Youth Risk Behavioral Survey (2005) using PROC SURVEY logistic regression models. The results from this study indicated that adolescent females are more likely to self-report poor health status compared to boys; however, analyses done separately suggested that boys were more likely to report negative health outcomes. This association is even greater for racial groups. Black males and other minority groups (compared with white male boys) had 4.32 times the risk of poor health. Furthermore, self-assessed health is associated with poor psychosocial functioning than physical functioning among Colorado adolescents. The information from this study will further inform public health professionals in Colorado about the usefulness of a subjective rating of health status for Colorado adolescents. The information gained from this research meets the following five services of the ten essential services of public health identified by the profession:

1. Monitor health status to identify community health problems.
2. Diagnose and investigate health problems and health hazards in the community
3. Assure a competent public health and personal healthcare workforce.
4. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
5. Research for new insights and innovative solutions to health problems.

The attendees will receive practical guidelines regarding the benefits of using self-rated health as a tool to evaluate adolescent health and well-being. This study validates the importance of exploring the relationship between psychosocial factors (sadness, suicidal ideation, depression) and physical health.

Learning Objectives: (1) Participants will be able to identify the three most important predictive factors associated with adolescent poor self-rated health among Colorado High school students participating in the survey. (2) Participants will be able to describe the benefit of utilizing self-rated health as a global measure for physical and mental health functioning. (3) Participants will be able to apply the information gained to promote future research and programming in adolescent health

Public Health Topic(s): Epidemiology and Statistics; Health Promotion, Disease Prevention, Education; Enhancing Public Health Systems

Essential Service(s): Monitor; Research; Evaluate

Target Audience: public health professionals and clinicians

11 - The CRN Cancer Communication Research Center

Adrienn Borsika Rabin, PhD, MPH, PharmD, Research Coordinator, Institute for Health Research Kaiser Permanente Colorado, Sarah Madrid, MA, ABD PhD; Center Coordinator; Cancer Communication Research Center, Kaiser Permanente Colorado, James W. Dearing, PhD; Center Director and Senior Investigator; Cancer Communication Research Center, Kaiser Permanente Colorado

Brief Description: We propose an integrated set of four, large posters that will describe the structure and primary objectives of a new Center of Excellence in Cancer Communication Research and explain how this research center that bridges 14 HMO institutions. One poster will be devoted to the overall structure, key personnel, and primary objectives of the Cancer Research Network Center for Cancer Communication Research and will show how this Center is linked to the Cancer Research Network, an established HMO network. Three further posters will discuss how the primary objectives of the CRN CCRC are achieved through large (R01) and smaller (developmental) research projects and the work of two major Cores: the Discovery and Dissemination Core. Participants will have the opportunity to meet with three of the key figures of the Center and discuss opportunities for potential collaborations and services for research support provided by the Center.

Abstract: We propose an integrated set of four, large posters that will describe the main components of a new research center that bridges HMO institutions.

Background: The Cancer Research Network Cancer Communication Research Center (CRN CCRC) was established in September 2008 at Kaiser Colorado's Institute for Health Research. The CRN CCRC is one of five Centers of Excellence in Cancer Communication Research funded through the National Cancer Institute. **Objectives:** The CCRC's objectives are to discover the most promising practice-based approaches to cancer communication and care coordination, and to disseminate those approaches. Integrated care delivery systems represent promising opportunities to study these approaches, and the CRN CCRC, with its embedded organizational focus, will take advantage of the CRN as a virtual laboratory.

Specific Aims: The CRN CCRC 1) leverages the existing infrastructure of the CRN to support both the discovery and dissemination of practice-based communication strategies and organizational resources; 2) supports four investigator-initiated research projects to advance communication theory and to evaluate strategies informed by theory; and 3) provides administrative, financial, and scientific support to new investigators, including clinicians, in the development of pilot projects, and assists in submission of broader, investigator-initiated proposals to be submitted for extramural funding.

Methods: Two R01-scale investigator-initiated research projects will advance and test communication theory. The first will characterize patients' and providers' experiences communicating about errors in cancer care; investigate the

POSTER SESSION - Tuesday, September 29, 2009

health system factors that promote or inhibit effective communication; and develop, disseminate, and evaluate provider training materials and patient informational materials. The second will develop and test an intervention to decrease patient uncertainty and improve psychosocial and communicative outcomes during the period from suspicion of cancer through diagnosis and plan of care. The Center's research projects will be augmented and supported by Shared Resource Cores. The Discovery Core will identify the most promising practice-based innovations and approaches; the Dissemination Core will focus on data harmonization and applying dissemination science to effective interventions. Participants will have the opportunity to meet with three of the key figures of the Center and discuss opportunities for potential collaborations and services for research support provided by the Center.

Learning Objectives: (1) Describe the structure of a national Center of Excellence in Cancer Communication Research and how it is integrated into the research network of 14 HMO institutions (including Kaiser Permanente Colorado). (2) Discuss the primary objectives of a national Center of Excellence in Cancer Communication Research. (3) Explain how the primary objectives of a national Center of Excellence in Cancer Communication Research are being operationalized through a number of research projects, workgroups, and intensive collaboration across 14 HMO institutions.

Public Health Topic(s): Enhancing Public Health Systems; Chronic Disease; Health Disparities and Underserved Populations

Essential Service(s): Research; Evaluate; Assure a Competent Workforce

Target Audience: physicians, health educators, health care and public health practitioners and researchers involved with cancer prevention and care

12 - Data Review and Dissemination: From Input to Ownership

Patti Iwasaki, Senior Professional Research Assistant, 2040 Partners for Health, Tracey Stewart, MA.Ed, Colorado Center on Law and Policy, Debbi Main, PhD, Health and Behavioral Sciences, UCD, Charlene Barrientos-Ortiz, School of Public Health, George Ware, MS, E. Montclair Resident, Steve Lockhart, BA, Psy., E. Montclair Resident

Brief Description: Persons attending this skill building session will practice setting an agenda, using a consensus building model of decision-making. The session will begin with skill-building, establish operating principles and setting an agenda. Cultural proficiency, communication style differences and humor will be woven into the session.

Members of DRAD will share lessons and challenges in reviewing and disseminating the data and will discuss the evolving process from presenting data to proposing new

research. Members will discuss challenges of design and access, the built environment and disappearing resources, and perspectives of "initiative" associated with different models of organizing, definitions of community and health.

Abstract: Data Review and Dissemination (DRAD) is an essential and critical core of community-based participatory research (CBPR) taking place in five urban neighborhoods in Metro Denver. The project began in 2007 as a CBPR study, Taking Neighborhood Health to Heart (TNH2H), funded by the National Heart, Lung and Blood Institute. The TNH2H study was designed to examine the influence of the built environment on health and health disparities among people living in five diverse neighborhoods - East Montclair, Northeast Park Hill, Northwest Aurora, Park Hill and Stapleton. Residents, researchers and staff of the community-academic collaborative will describe and share the history, processes and challenges of building community, doing research and how we transform health, healthcare...and ourselves.

Persons attending this skill building session will practice setting an agenda, using a consensus building model of decision-making. The session will begin with skill-building, establish operating principles and setting an agenda. Cultural proficiency, communication style differences and humor will be woven into the session.

Members of DRAD will share lessons and challenges in reviewing and disseminating the data and will discuss the evolving process from presenting data to proposing new research. Members will discuss challenges of design and access, the built environment and disappearing resources, and perspectives of "initiative" associated with different models of organizing, definitions of community and health.

Learning Objectives: (1) Describe history of CBPR study and share composition, creation, and accomplishments of DRAD (2) Practice agenda setting and consensus building model with public health practitioners (3) Discuss challenges of data ownership, guarding against stigma, models of organizing and funding

Public Health Topic(s): Health Disparities and Underserved Populations; Built Environment; Other

Essential Service(s): Mobilize Community Partnerships; Inform, Educate, Empower; Research

Target Audience: Public Health practitioners engaged in CBPR or who want to work with CBPR

13 - Early Childhood Obesity Prevention: A call to action

Shana Patterson, RD, COPAN Nutrition Coordinator, Colorado Department of Public Health and Environment, Connie Carroll-Hopkins, Cindy Dormer, Metropolitan State College of Denver

Brief Description: This poster presentation will serve to raise awareness and give some practical strategies that

POSTER SESSION - Tuesday, September 29, 2009

local health departments can develop to mobilize community partnerships to identify and solve health problems as it relates to childhood obesity.

Abstract: Colorado enjoys the distinction of being the leanest state in the nation. Lower obesity translates to lower health care costs and this likely translates to a comparatively bright economic future for the state. However, recent health surveillance data warn that Colorado's status as the leanest state is in jeopardy. Unlike other states, our obesity rates and, especially, our childhood obesity rates continue to climb. A brief review of recently published research points to this life-phase and population segment as an exceedingly important target. Metropolitan State College of Denver, in partnership with The Colorado Department of Public Health and Environment, completed an environmental scan on early childhood obesity prevention; which shows us that child care is a critical target for obesity prevention. Consider that:

- In Colorado it is estimated that 59% of children spend a significant portion of their day in licensed out-of-home care arrangements;
- Child care providers are a sizeable, reachable, educated, child-motivated, and practical target for obesity prevention efforts;
- Early childhood is a biologically critical period for the prevention of obesity;
- Early childhood is a critical period for learning to like healthy foods;
- Early childhood is a critical period for gross motor development, physical activity and physical education
- The results of this scan will serve to inform, educate, and empower people about health issues and in this poster we will illustrate the following questions:
- What would it take to slow and perhaps stop the rise of childhood obesity in Colorado?
- Is it possible to implement programs and policies in Colorado child care centers that are comprehensive enough to affect children's body mass index?
- How could public health activists help to identify and disseminate obesity prevention programs that are likely to be adopted, adequately implemented and sustained over time?

It is crucial that public health workers, child care providers and other community members mobilize partnerships to combat this public health threat. Additionally, resources must be devoted to increasing the comprehensiveness of Colorado's nutrition and physical activity programs.

References: Environmental Scan of Early Childhood Obesity Prevention in Colorado (2009)

Learning Objectives: (1) Participants will be able to define two recommendations for improving obesity prevention efforts in their communities. (2) Participants will value and be able to describe two reasons why slowing and perhaps stopping the rise of childhood obesity in Colorado is a critical public health concern.

Public Health Topic(s): Maternal and Child Health; Physical Activity, Food, and Nutrition; Health Promotion, Disease Prevention, Education

Essential Service(s): Inform, Educate, Empower; Mobilize Community Partnerships; Monitor

Target Audience: : Local health department staff, medical staff, academic staff, health educators, nurses

14 - The Effectiveness and Feasibility of Recalling All Adolescents Enrolled in a School-Based Health Center for their Recommended Vaccines

Jennifer Barrow, Project Manager, University of Colorado Denver, Alison Saville, MSPH, MSW, University of Colorado Denver

Brief Description: This session will discuss the use of recall as a method to increase immunization rates among adolescents in a school-based health center (SBHC) setting. Recall is a method whereby children in need of a vaccination are notified (usually by phone, postcard, or letter) to visit their provider to receive needed shots. The effectiveness of this method in a SBHC will be presented, and the feasibility of conducting recall for all adolescents enrolled with a SBHC will be explored. This session is relevant to public health officials in Colorado who are interested in exploring methods to increase immunization rates among adolescents. The research supports the Essential Service #10 regarding research for new insights and innovative solutions to health problems. It also supports the Uniting Public Health theme in that it contributes to an overall goal of improving immunization rates for recommended vaccines in Colorado.

Abstract: Background: Several new vaccines have been licensed for adolescents in the last five years, yet coverage rates for tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap), meningococcal (MCV4), and human papillomavirus vaccine (HPV) remain relatively low. Patient recall systems are an evidence-based strategy to improve vaccination rates in young children. This method has not fully been examined among adolescent populations or within the school-based health center (SBHC) setting. SBHCs have been identified as a potentially promising setting to vaccinate adolescents as health services, including vaccines, are provided on-site. At schools with a SBHC, parents can enroll their child by providing consent for general health services, plus any vaccines that the student may need.

Methods: In the 2008-2009 school year, a study of recall for adolescents who had not received Tdap, MCV4 or the first HPV (among females) was conducted in four SBHCs in the Denver Public Schools. Approximately 265 female and 264 male sixth graders were eligible to participate in the study. Among females, a demonstration project was conducted to assess the highest immunization rates that a SBHC could achieve over six months. Among males, a randomized controlled trial (RCT) was conducted with half of the males receiving recall and the other half receiving usual care to evaluate the effectiveness of this method. Eligible adolescents included those enrolled in the SBHCs and deficient for one of the three vaccines. Once a list

POSTER SESSION - Tuesday, September 29, 2009

was created, a health technician recalled each adolescent by either sending a postcard or hall pass to the student's classroom requesting they come to the clinic, calling the classroom asking the teacher to send a particular student to the clinic, or physically going to the classroom to get the student and escort them to the clinic. Each adolescent was recalled up to two times. At the end of the study period, the proportion of adolescents receiving at least one of the needed vaccines, and the proportion that were up-to-date (UTD) for Tdap, MCV4 and the first dose of HPV (females only) was assessed utilizing data in the Colorado Immunization and Information registry (CIIS). A qualitative assessment evaluating the process and barriers of conducting recall in SBHCs was completed using direct observations and interviews with SBHC providers and staff.

Results: At the end of the demonstration project, 71% of the females had come in for at least one vaccine and 50% were UTD. At the end of the RCT, 62% of the recalled males had received at least one vaccine and 62% were UTD, compared to 42% and 40%, respectively, of the males who did not receive recall.

The qualitative assessment revealed that the SBHCs were able to incorporate recall into their clinic operations, but many encountered barriers. These barriers included: competing healthcare priorities, difficulty locating adolescents, limited capacity to vaccinate everyone in need, teacher or administration prohibiting students from leaving class for a clinic visit, and SBHC staff turnover. **Conclusions:** The demonstration project with the females revealed that high immunization rates can be achieved by recalling them within the SBHC. Additionally, the randomized controlled trial with the males revealed that this method is effective in improving immunization rates. Although recall appears to be an effective method for improving immunization rates, the feasibility of conducting recall for all adolescents enrolled in a SBHC may be challenging.

Learning Objectives: (1) Describe the method of immunization recall in a School-based Health Center (SBHC) (2) Discuss the effectiveness of recall for adolescents in a SBHC (3) Discuss the feasibility of recall as a routine method for improving immunization rates for all adolescents in a SBHC

Public Health Topic(s): Immunizations; Maternal and Child Health; Enhancing Public Health Systems

Essential Service(s): Research; Evaluate; Link People

Target Audience: Immunization public health professionals, adolescent public health professionals, public school nurses, school-based health center providers

15 - Evaluation of the Centering Pregnancy program in a public health clinic in Anchorage, Alaska

Rebecca Puckett, Not applicable, Not applicable

Brief Description: Evaluation of the Centering Pregnancy program is presented. This program is a model of prenatal care that takes women out of the exam rooms and into a group setting. The program evaluation focused on birth outcomes and overall health and well being of the families who participated in the program compared to those who received traditional prenatal care.

Abstract: Centering Pregnancy is a model of prenatal care that takes women out of the exam rooms and into a group setting. The model has three components: health care assessment, education, and support. Each session is conducted in a group facilitated by a credentialed health provider and a co-facilitator.

The Anchorage Neighborhood Health Clinic, a public health clinic in Anchorage, Alaska implemented Centering Pregnancy in 2006. This study is the first large-scale evaluation of the program at the Anchorage Neighborhood Health Clinic. The study was comprised of three parts- a retrospective cohort study, a focus group, and a quantitative evaluation by the staff of the clinic. The retrospective cohort study examined the program's impact on birth outcomes, breastfeeding rates, and incidences of post-partum depression. One cohort was comprised of patients enrolled in the Centering Pregnancy program and the second cohort was comprised of patients enrolled in traditional prenatal care. Confounding factors such as a history of preterm birth, history of mental or physical health issues, and drug abuse during pregnancy were accounted for.

The focus group, which was comprised of women who had recently been through the Centering Pregnancy program and had given birth, gathered qualitative information concerning the satisfaction and preparedness level of the Centering Pregnancy participants. The staff evaluation identified areas for improvement in the coordination and execution of the program.

The study showed that providing prenatal care in a group setting has no adverse effect on birth weight or preterm birth. In fact, for some women, this type of prenatal care was shown to have a positive impact on birth outcomes. The women who participated in the Centering Pregnancy program were less likely to develop post-partum depression and more likely to breastfeed their infants beyond discharge from the hospital. The participants showed a high level of satisfaction with their prenatal care.

As this study shows, the Centering Pregnancy model is an innovative and effective way to provide prenatal care for public health clinic patients in an urban setting. The Centering Pregnancy model can be adapted for use at a variety of clinics, both public and private. In addition to being a cost effective way to deliver health care, it is a positive experience that appeals to many at-risk women and is a sustainable alternative to traditional prenatal care.

Learning Objectives: (1) Evaluate data from an evaluation of Centering Pregnancy program. (2) Measure the impact of Centering Pregnancy on mother's health. (3) Measure the impact of Centering Pregnancy on infant's health.

POSTER SESSION - Tuesday, September 29, 2009

Public Health Topic(s): Maternal and Child Health; Reproductive Health; Health Promotion, Disease Prevention, Education

Essential Service(s): Evaluate; Inform, Educate, Empower; Link People

Target Audience: MCH professionals, clinic administrators

16 - Expanding the Colorado Health Emergency Line for the Public Beyond Emergency Response

Alexandra Hopkins, RN, MPH, Public Health Prevention Specialist, Colorado Department of Public Health and Environment, Nancy Enyart, MA, Colorado Department of Public Health and Environment

Brief Description: The Colorado Health Emergency Line for the Public (COHELP) was developed to provide consistent and accurate information to the state's public during public health events and to provide a method for gathering statewide data on public health issues. Due to the current economic climate, COHELP is in danger of losing its funding source. The sustainability of COHELP is dependent not only on outside funding but expanding the function of the system beyond emergency response.

Abstract: Purpose: Due to the current economic climate, The Colorado Health Emergency Line for the Public (COHELP) is in danger of losing its funding source. COHELP was started in 2002 through funds provided to Rocky Mountain Poison and Drug Center by the Emergency Preparedness and Response Division at the Colorado Department of Public Health and Environment. The sustainability of COHELP is dependent not only on outside funding but expanding the function of the system beyond emergency response. If COHELP ended it would not only result in a loss of the funds invested to date but a loss of capacity to handle the health information needs of Colorado's residents.

Background: COHELP was developed to provide consistent and accurate information to the state's public during public health events and to provide a method for gathering statewide data on public health issues. Staffed by information specialists, it uses both telephony, including an integrated voice response unit (IVR), and web-based technology to deliver services. COHELP has the infrastructure needed to maintain access to information during an emergency with the capacity to handle 1000 calls per hour.

Utilizing advanced technology, caller data can be collected based on zipcode allowing health agencies to track dissemination of information while answering questions and providing referrals to community based services. Regardless of determinants such as housing, education and socio-economic status, individually relevant information can be provided via the most accessed communication instrument, the telephone. In addition, this supports isolated areas of the state without requiring additional infrastructure.

Methods: To continue the operation of COHELP and increase its sustainability, the Emergency Preparedness and Response Division along with Rocky Mountain Poison and Drug Center are identifying opportunities to apply for public and private funding. These grant opportunities are focused not only on emergency preparedness and response, but expanding COHELP to be a day-to-day source for public health information. This has also involved reaching out to partners in chronic disease, occupational health, health disparities, child and adolescent health as well as outside the health department with the goal of increasing knowledge and subsequently use of the program.

Results/Lessons Learned: Although this project is in the preliminary phases, success of COHELP will be demonstrated by flexibility, surge capacity and health disparities measures. A grant application has been submitted to the Robert Wood Johnson Foundation focusing on the use of COHELP to reach vulnerable populations. Upon receipt of the grant funds anticipated evaluation measures include (1) increased use by residents for day-to-day public health questions, concerns and issues; (2) increased use by local public health agencies to distribute program messages; (3) increased use by emergency preparedness programs as a component of information dissemination.

Learning Objectives: (1) Describe the current use of COHELP in Colorado. (2) Explain the capabilities of COHELP in public health education. (3) Discuss the possibilities of using COHELP to meet the needs of Colorado residents.

Public Health Topic(s): Health Promotion, Disease Prevention, Education; Emergency Preparedness and Response; Enhancing Public Health Systems

Essential Service(s): Inform, Educate, Empower; N/A; N/A

Target Audience: Public health professionals, public health nurses, health educators

17 - Getting from There to Here: Disability and the Health Divide

Jo Ann Shoup, Project Manager, Kaiser Permanente Colorado

Brief Description: Assuring a competent public and personal health care workforce is one of the Ten Essential Services of Public Health (EPHS) framework. Cultural competence within public health workers is vital to strengthening the infrastructure of public health. While there has been positive movement and growth to achieve cultural competence and proficiency, health disparities exist. Using three existing models of disability, this session will provide a historical perspective of physical disability and the health gaps that exist, in particular, for women with physical disabilities.

POSTER SESSION - Tuesday, September 29, 2009

Abstract: Cultural competence within the public health workforce is an essential component to closing the gap in health disparities. While there has been positive movement and growth to achieve cultural competence and proficiency, health disparities exist. In particular, women with disabilities face significant disparities in access to healthcare as compared to women without disabilities. Unfortunately, this is a population of people that is seldom incorporated into the discussions of health disparities. Specifically, the concept of disability will be applied to three common models of disability: moral model, medical model, and the social model. Then, social, economic, and health disparities will be presented, using data from the Center for Research on Women with Disabilities to highlight the gaps in health between women with physical disabilities and women without disabilities. The characteristics and possible causes of health disparities for women with physical disabilities will be addressed. These comprise gender and disability related health disparities including the disproportionate prevalence of health conditions, barriers to preventive health services, and lack of health information. Finally, strategies are highlighted for illuminating this issue within the context of public health, including policy aspects from the Americans with Disabilities Act.

Learning Objectives: (1) Attendees will be able to identify three frameworks used to describe disability culture. (2) Attendees will increase awareness about the health disparities of women with physical disabilities. (3) Attendees will describe how framing disability contributes to health disparities.

Public Health Topic(s): Health Disparities and Underserved Populations; Other; Chronic Disease

Essential Service(s): Assure a Competent Workforce; Inform, Educate, Empower; N/A

Target Audience: Nurses, Physicians, Health Educators

18 - A Group Visit Approach to Improving Individual Diabetes Care

Ingrid Lobo, MD, University of Colorado Hospital

Brief Description: poster presentation

Abstract: Almost 8% of the US population has diabetes, the management of which is difficult to achieve for both patients and physicians. Group visits have emerged as a strategy for improving control of this chronic illness. In group visits, a health care provider (e.g. physician, nurse, diabetes educator) makes didactic presentations focusing on topics such as monitoring blood glucose, taking medications, nutrition, exercise, mood, food shopping, and eating out. Patients are given the opportunity to share with each other their experiences related to living with and managing their diabetes. Depending on medical needs, clinicians may also provide individualized evaluations and treatment recommendations. Utilized most commonly within group-model HMOs (e.g. Kaiser Permanente),

group visits have begun to find greater application in traditional fee-for-service environments, including academic medical centers, but their efficacy has not been definitively established.

We have implemented diabetes group visits in two general medicine clinics associated with the University of Colorado Hospital. The goal is to determine whether group visits improve quality of care, decrease utilization of inpatient and emergency room services, improve patient satisfaction, and are a clinical- and cost-effective way of delivering diabetes care in an academic practice setting. At each clinic site, 15 English-speaking adults over 18 years of age with poorly controlled diabetes (HbA1c>6.5%) have been invited to participate in the group visit program. A medical doctor conducts group visit sessions monthly for 3 months and then every three months to complete a year-long program. This poster will review the benefits of diabetes group visits, describe how a group visit program was implemented at the University of Colorado, and summarize the public health potential to disseminate these types of programs in the community and underserved areas.

Learning Objectives: (1) Describe the significance of group visits and the role they play in chronic disease management. (2) Describe the group visit model implemented in the outpatient internal medicine clinics at the University of Colorado. (3) Explain the importance of several group visit outcomes including patient attendance, educational topics, patient and provider satisfaction, quality of care measurements, sustainability and implementation in other health care environments.

Public Health Topic(s): Chronic Disease; Health Promotion, Disease Prevention, Education; Physical Activity, Food, and Nutrition

Essential Service(s): Inform, Educate, Empower; Diagnose and Investigate; Monitor

Target Audience: public health program directors and providers, physicians, health educators

19 - Implementing a Tobacco Free Hospital Policy

Amber Leytem, Health Education Specialist, Denver Public Health, EileenDuin, Worksite Wellness Coordinator, Denver Public Health

Brief Description: Using the PDSA (Plan, Do, Study, Act) Model, this poster explains the steps Denver Health took to implement a tobacco free campus policy in November 2008.

Abstract: Tobacco free campus policies are becoming increasingly popular across Colorado and throughout the nation. Large worksites, such as hospitals and colleges, are taking progressive action to protect their employees, patients, students, and visitors from the health risks of secondhand smoke exposure and tobacco use on all campus grounds, including outdoor spaces. In doing so,

POSTER SESSION - Tuesday, September 29, 2009

these businesses are also creating a culture of health and wellness on their campus.

Denver Health, Colorado's primary "safety-net" hospital, provides health care services to twenty-five percent of all Denver residents and employs more than 5000 employees. In addition to its main campus in downtown Denver, Denver Health also has 10 off-site locations, including Community Health Clinics, Denver CARES, and the Rocky Mountain Poison and Drug Center.

Denver Health implemented a tobacco free campus policy on November 20, 2008 prohibiting the use of any tobacco product on all premises owned, operated, leased or maintained by Denver Health, including grounds, parking lots/structures, and ramps. The policy also prohibits the use of tobacco products in vehicles owned by Denver Health and any personal vehicles parked on Denver Health property.

This poster presentation describes the steps taken to develop and implement Denver Health's tobacco free campus policy through the PDSA (Plan, Do, Study, Act) model. Through the poster presentation, public health professionals will be able to apply similar techniques in working towards their own successful policy change within worksites.

This poster presentation supports learning on how to develop policies and plans that support individual and community health efforts and to enforce laws and regulations that protect health and ensure safety. It supports the theme of Uniting Public Health by showcasing the system-wide effort to implement public health policy within a large and complex hospital system.

Learning Objectives: (1) Using the PDSA (Plan, Do, Study, Act) Model, this poster explains the steps Denver Health took to implement a tobacco free campus policy in November 2008. (2) Describe the reasons for implementing a tobacco free campus policy and communication materials used to educate patients and visitors on the new policy.

Public Health Topic(s): Tobacco, Alcohol, and Drug Use; Health Promotion, Disease Prevention, Education; Chronic Disease

Essential Service(s): Develop Policies and Plans; Enforce Laws and Regulations; Mobilize Community Partnerships

Target Audience: health educators, public health nurses, public health professionals, physicians

20 - Integrating an Education and Referral System into Primary Care: A Hereditary Cancer Education and Utilization Project.

Jan Lowery, PhD, MPH, Cancer Epidemiologist & Assistant Professor, Colorado School of Public Health, Krystal Morwood, MS, CHES, University of Colorado

Cancer Center, TomGottlieb, MD, Denver Oncology Consortium

Brief Description: The purpose of this project is to increase awareness about hereditary cancer among care providers and at-risk patients, and to increase utilization of genetic services among those likely to benefit. The presentation will discuss the successes and barriers to working within clinics, process improvement, and future implications.

Abstract: Purpose: The purpose of this project is to increase awareness about hereditary cancer among care providers and patients at increased risk, and to increase utilization of genetic services among those likely to benefit. It is critical to identify individuals in families with these syndromes as they have lifetime risk for developing cancer that exceeds 80%. Once identified, these individuals can be provided recommendations for medical management to decrease risk of cancer or detect cancer early when it is treatable. Lacking are systematic methods for identifying high-risk individuals. The most predictive factor for whether an individual is at-risk for hereditary cancer is family history.

Methods: A simple family history screening tool was implemented within participating clinics to facilitate identification of patients at-risk for hereditary cancer, including patients with and without cancer. The tool was implemented into primary care and oncology clinics in the Metro-Denver area represented by the Denver Oncology Consortium (DOC), including Metro Community Provider Network (MCPN), New West Physicians (NWP) and Rocky Mountain Cancer Centers (RMCC), and the University of Colorado Cancer Center (UCCC) and State Network of Colorado Ambulatory Practices & Partners (SnoCap). Individuals identified as high-risk are navigated to receive proper follow-up and if appropriate, genetic counseling and testing. On-site educational sessions for physicians and clinic staff were conducted by genetic counselors.

Results/Lessons Learned: Educational sessions were conducted at 18 participating clinics (including over 115 providers). As of April 2009, 7,973 individuals were screened for hereditary cancer and of these, 1,120 (14%) were identified as high risk. High-risk individuals were mailed education about hereditary cancer and invited to complete a more extensive family history questionnaire for further evaluation. Of those patients who completed the questionnaire, 61 have received genetic counseling and 38 have had genetic testing. Individuals counseled were provided screening recommendations and information about other risk reduction strategies.

The Generations project has demonstrated that a screening tool can effectively identify patients at high risk for hereditary cancer in a primary care setting. Therefore future expansion involving cancer registries or additional health clinics is possible. This project has not been successful however, in getting patients to follow-through on referral for genetic counseling. A relatively low percentage of family history questionnaires are returned. Patient surveys are currently underway to assess how to improve return rates.

POSTER SESSION - Tuesday, September 29, 2009

The paper screening tool system currently in place may not be sustainable over time. Though clinics seem willing to hand out paper forms for a limited amount of time, maintaining a system that requires large volumes of paper records, especially as many clinics move towards electronic medical records, is not realistic or feasible for many clinics with limited staff. Integrating the paper forms into existing clinic systems including electronic medical records will be explored.

This project has many parallels to other public health issues. Many public health professionals are searching for ways to improve clinic processes and to educate patients about preventive services. The Colorado Generations experience can unite professionals with this goal, and provide a forum to share new solutions to common challenges.

Learning Objectives: (1) Describe 3 barriers for patients making referral appointments. (2) List 2 ways to integrate a chronic disease referral system into primary care practices. (3) Explain 2 ways that a similar project can be expanded.

Public Health Topic(s): Chronic Disease; Health Promotion, Disease Prevention, Education; Enhancing Public Health Systems

Essential Service(s): Inform, Educate, Empower; Develop Policies and Plans; Link People

Target Audience: Primary Care Providers, Cancer/Cancer Research Professionals, Health Educators, Nurses

21 - Integrating Public Health into Colorado's Medical Home System

Eileen Forlenza, Director - Colorado Medical Home Initiative, Colorado Department of Public Health and Environment

Brief Description: The Public Health system in Colorado is well positioned for a more comprehensive application of the essential services in building a Medical Home system. Integrating Public Health with the health care delivery system is a strategy at the core of health care reform discussions. The Colorado Medical Home Initiative is dedicated to building a quality system of health care and is supported by legislation passed in 2007. This session will explain how Public Health can play a key role in implementing the Medical Home model statewide.

Abstract: Colorado faces challenges in health care delivery that are clearly documented and encompass rapid growth, health disparities, cultural diversity, geography and poverty. The Medical Home model has been adopted at the national and federal level as a method for improving health care delivery. Since 2001, the Colorado Medical Home Initiative (CMHI) has been dedicated to promoting this model and in 2007 the Colorado legislature solidified the State's commitment with the passage of SB-07-130. Local Public Health agencies are already providing

essential services to support a Medical Home system by identifying local systems barriers and providing direct consultation and technical assistance to health care providers. For example, local agencies have reported procedural difficulties with access to public insurance through the electronic enrollment system and have provided gap-filling services to families to resolve these issues. Local Public Health agencies identify shortages of health care providers and the need for coordination of health care among behavioral, medical and oral health care providers. Local Public Health agencies often offer consultation to providers regarding new insurance policies or legislation; technical assistance to providers for the provision of immunizations; provide tool kits for programs, such as Women, Infants and Children (WIC); and information on smoking cessation techniques and resources. The Public Health system in Colorado is well positioned for a more comprehensive application of the essential services in a Medical Home System. The recent passage of the Public Health statute will standardize the delivery of these essential services across all Public Health agencies in the state. Through the Alliance and the annual Colorado Public Health Association conference, education, networking and inter-community Medical Home system mentorship can evolve. Mobilizing community partnerships is an area of expertise for Public Health and can be leveraged in many ways to address health care barriers. Extracting the consumer voice through family leaders has also proven to be a powerful tool within the Title V CDPHE programs to build effective systems. Data collected through the CMHI indicates that providers and local practices report the lack of state infrastructure as a barrier to implementing the medical home model. Therefore, a goal of the CMHI is to assure implementation of a sustainable medical home system in local communities by supporting Public Health leaders to convene and lead their communities in addressing barriers to personal health care delivery. Projects within the CMHI have successfully connected Public Health with the health care system to solve pressing health system problems at both the state and local levels. While all of the 10 Essential Services contribute to this mission, the role of Public Health to "mobilize community partnerships to identify and solve health problems" and "link people to needed personal health services and assure the provision of health care when otherwise unavailable" most clearly supports this approach. This session will apply the 10 Essential Services that support local Public Health leaders in their scope of work. Strategies that define how state and local Public Health leaders can build a Medical Home system will be highlighted. This session will share best-practice models that address cultural competence, through innovative programs that engage health care consumers as partners in the Medical Home model.

Learning Objectives: (1) Explain the role of Public Health in building a medical home system, supported by the Colorado Medical Home Initiative. (2) Explain how Public Health essential services are critical in supporting a systemic approach to the patient/family-centered Medical Home. (3) Define the Medical Home model as a team approach to health care delivery.

POSTER SESSION - Tuesday, September 29, 2009

Public Health Topic(s): Enhancing Public Health Systems; Health Promotion, Disease Prevention, Education; Maternal and Child Health

Essential Service(s): Mobilize Community Partnerships; Link People; Inform, Educate, Empower

Target Audience: Public health agencies, physicians, health educators, health facility administrators, public and private payers

22 - LUCCHAR: We believe that we can make a difference

Charlene Barrientos Ortiz, Program Coordinator, UC Denver, Fernando Pineda-Reyes, He is the CEO of CREA Results. He has a degree in Clinical Biochemistry and Pharmaceutical Chemistry.

Brief Description: Participants will hear from both the Community Advisory Committee and the research team about the process of partnership, community engagement and next steps in partnership. They will present the community engagement principles the partnership incorporates into the research process that have extended outside of the partnership to include work with CTSA.

Abstract: Background: Latinos/Hispanics face heart disease in disproportionate numbers and have less access to culturally appropriate lifestyle modification interventions than other groups. LUCCHAR (Latinos Using Cardio Actions to Reduce Risk) is a study conducted at Denver Health and The University of Colorado to promote heart disease prevention among Latinos/Hispanics in Denver, Colorado. We are in partnership with a Latino Community Advisory Committee (CAC) of Spanish and English speaking Latinos. Here we discuss approaches how community partners contributions are valued as an equal research partner on the LUCCHAR project.

Methods: The CAC is made up of 15 community members who self identify as Latino/ Hispanic. The CAC meets quarterly to review study procedures and comment on study products such as health promotion materials, and study recruitment protocols. Recently UC Denver was funded by NIH as a CTSA. Through the Community Engagement section, LUCCHAR has hired two of the CAC members as Community Liaisons and has one CAC representative on the PACT Council which is the governing body to the Community Engagement component to further the communication and build trust with the Latino community at-large and to have a community voice at various levels.

Results: The Community Liaisons and LUCCHAR representative have increased their understanding of translational research and of their role as gatekeepers for research projects in the community. Working directly with other project staff and with various components they have taken a leadership role with project data dissemination in community and to general audiences using various methods and are trainers for the training in translation research and CBPR. The CAC intends to parlay their experience into a speakers' bureau to present critical

information on Latino Heart Health in community settings and this work would be considered the foundation for future work.

Conclusions: Forming a CAC, hiring community gatekeepers can offer researchers critical access to community members that will substantially improve communication of research data results and a good example of translational research. It will offer community members opportunities to learn about research in a culturally proficient manner and to equitably distribute benefits and burdens of research in the Latino community. In addition the CCTSI will be exposed to culturally competent information on how to work with partnerships, deliver messages to and be inclusive of Latinos.

Learning Objectives: (1) List four key steps in engaging the Latino community as advisors to research projects (2) Identify benefits associated with establishing community advisory committees for research

Public Health Topic(s): Health Disparities and Underserved Populations; Health Promotion, Disease Prevention, Education; Enhancing Public Health Systems

Essential Service(s): Mobilize Community Partnerships; Link People; Research

Target Audience: Traditional and non-traditional health care providers, researchers, community members involved in the reach process, administrators, community health outreach workers, and community members at large.

23 - Mental Health Administrators' and Providers' Knowledge, Attitudes and Behaviors about Tobacco Cessation

John Mahalik, PhD, MPA, Director of Research, University of Colorado Denver, Behavioral Health & Wellness Program, Mandy Graves May, M.P.H., University of Colorado Denver, Behavioral Health & Wellness Program, Chad Morris, Ph.D., University of Colorado Denver, Behavioral Health & Wellness Program, Carsten Baumann, M.A., Colorado Department of Public Health and Environment; Epidemiology, Planning, Evaluation Branch, Scott LeBeau, University of Colorado Denver, Behavioral Health & Wellness Program

Brief Description: There is a dearth of research regarding mental health provider and administrator knowledge, attitudes and behaviors around smoking cessation interventions with their clients. Information is needed to determine what strategies might be the most effective in decreasing the tobacco-related health disparities these individuals face. Considering this knowledge gap, the University of Colorado Denver-Behavioral Health & Wellness Program developed a survey which collected mental health administrators' and providers' ratings of current knowledge, provision, and perceived effectiveness of tobacco control strategies, but also inquired into respondents awareness of the presence or absence of tobacco-free policies at their places of employment. Survey findings will be presented with

POSTER SESSION - Tuesday, September 29, 2009

implications for creating more effective tobacco control strategies in partnership with behavioral health organizations, incorporating their feedback on facilitators and barriers.

Abstract: Persons with mental illnesses in Colorado smoke at rates over two times the general population (40% vs. 17%) and suffer from increased associated morbidity and mortality (Morris, 2006). In public mental health settings, nicotine dependence is only documented in 2% of mental health records, and only 1.5% of persons treated by a psychiatrist receive treatment for smoking cessation (need ref). Furthermore, mental health providers themselves smoke at higher rates (30-35%) (Strouse, Hall & Kovac, 2004). There is a dearth of research regarding mental health provider and administrator knowledge, attitudes and behaviors around smoking cessation interventions with their clients. Information is needed to determine what strategies might be the most effective in decreasing the tobacco-related health disparities these individuals face. Considering this knowledge gap, the University of Colorado Denver- Behavioral Health & Wellness Program developed a 117-item survey which collected mental health administrators' and providers' ratings of current knowledge, provision, and perceived effectiveness of tobacco control strategies, but also inquired into respondents awareness of the presence or absence of tobacco-free policies at their places of employment. The survey was disseminated via a web-based survey tool to 20 mental health centers and organizations statewide. Responses were collected from 462 providers and administrators, including program managers, clinicians, case managers and clinical supervisors. We will present survey findings and implications for creating more effective tobacco control strategies in partnership with behavioral health organizations, incorporating their feedback on facilitators and barriers.

Learning Objectives: (1) Attendees will be able to describe the unique challenges tobacco presents for persons with mental illnesses; (2) Attendees will be able to explain the barriers to tobacco cessation service delivery within the mental health system and exploring potential solutions to these barriers; (3) Attendees will be able to discuss Colorado mental health administrators' and providers' knowledge, attitudes and behaviors regarding tobacco cessation interventions and tobacco-free policies.

Public Health Topic(s): Health Disparities and Underserved Populations; Health Promotion, Disease Prevention, Education; Tobacco, Alcohol, and Drug Use

Essential Service(s): Inform, Educate, Empower; Develop Policies and Plans; Research

Target Audience: Public Health Professionals (Practitioners, Researchers and Administrators), Behavioral Health Professionals, Policy Makers, Public Health Stakeholders and Clients

24 - Norovirus Outbreak Surveillance Utilizing Traditional Methods and GIS

Lori Kennedy, Epidemiologist, Denver Public Health, Stephanie Stark, LPN, Denver Public Health, Carol McDonald, RN, BSN, Denver Public Health

Brief Description: This poster session will describe an investigation into norovirus outbreaks in Denver County and the different surveillance techniques utilized. Surveillance methods will be discussed, explaining both the advantages of using one method versus another, and also the limitations that must be considered when selecting a surveillance method. Public health investigators will describe their findings from the investigation, including how the variety of surveillance techniques enhanced their understanding of norovirus outbreaks, particularly in institutional settings, and what remains unanswered.

Abstract: Noroviruses are the most common causes of gastroenteritis in the United States, and have been recognized for their increasing role in institutional outbreaks, such as long-term care facilities, child care centers, and physical rehabilitation centers. Person-to-person transmission is a common mode by which the virus is spread in institutional settings, and until 2009, a national surveillance system for outbreaks transmitted via person-to-person contact was nonexistent. Thus, it has been a challenge for local, state, and national public health officials to characterize these outbreaks and the potential factors which may be associated with their increasing frequency. Denver County has been no exception, and investigators at Denver Public Health (DPH) Epidemiology and Surveillance were prompted to analyze local outbreak data within the city and county to further understand an increase in outbreaks that has been recognized but not well understood.

Investigators queried local surveillance data to characterize outbreaks within the city and county of Denver from 2006-2008. In 2008 alone, DPH Epidemiology and Surveillance program identified 22 norovirus outbreaks, 21 (95.5%) of which occurred in institutional settings. Though the introduction of the virus to the facilities remains unknown, investigators utilized geographic information systems (GIS) software to explore hypotheses related to increased outbreaks associated with norovirus. Investigators mapped outbreaks by location of facility to first understand whether a geographical relationship with illness was plausible and continued by analyzing surveillance data to describe the outbreaks by person, place, and time. Differences between norovirus outbreaks occurring in institutional settings and non-institutional settings were explored. Upon completion of the analysis, public health officials communicated their findings with local partners and institutions, both revealing what was found and what is still unknown.

Learning Objectives: (1) Describe the burden of norovirus outbreaks on institutional facilities within Denver County. (2) Investigators will share a variety of techniques used in surveillance, both traditional and emerging in the communicable disease epidemiology field, including GIS

POSTER SESSION - Tuesday, September 29, 2009

mapping. (3) Discuss the advantages and limitations of using different surveillance techniques.

Public Health Topic(s): Epidemiology and Statistics; Application of Geographic Information Systems in Public Health; Infectious Disease Control

Essential Service(s): Monitor; Diagnose and Investigate; N/A

Target Audience: public health nurses, epidemiologists

25 - Occupational Lead Surveillance in Colorado

Corey Campbell, MS, Public Health Prevention Specialist, CDC/Colorado Department of Public Health and Environment, Amy Warner, MPH, CDPHE

Brief Description: The Colorado Department of Public Health and Environment (CDPHE) Occupational Health Surveillance Program will discuss the development of an occupational lead surveillance program in Colorado. Presenters will discuss the protocol used to identify sources of adult lead exposure in Colorado and adult lead testing procedures. Presenters will also discuss how workers exposed to lead can expose their families to harmful health effects by taking home lead on their clothes, skin, hair, tools, and in their vehicles. This showcase will demonstrate how characterizing lead exposure through and developing educational strategies and interventions may reduce occupational lead exposure in Colorado.

Abstract: Purpose

In 2008, the Colorado Department of Public Health and Environment (CDPHE) began developing an Occupational Health Surveillance Program to promote the health, safety and quality of life of workers in Colorado. Specifically, the department is collecting, analyzing, and disseminating data about work-related injuries, illnesses and hazards in Colorado; and is utilizing this data to prioritize state occupational health needs. This program is being developed based on the Ten Essential Functions of Public Health and the three core public health functions. One of the Healthy People 2010 national public health objectives is to reduce the prevalence of adult elevated blood lead levels (BLL) to zero (objective 20-7). According to the Centers for Disease Control and Prevention (CDC) 95% of reported adult elevated BLL are work related. Over 120 different occupations throughout the United States have reported a documented exposure to lead. To reach the Healthy People 2010 objective, more surveillance and preventive interventions are needed to identify and reduce workplace exposure to lead.

Methods

Occupational exposure to lead is an important public health issue for both workers and their communities. Colorado has documented occupational exposures to lead in many industries, including construction, manufacturing, mining, painting, radiator repair, smelting, welding and firing ranges. In addition to workplace exposure to lead, exposed workers can return home in their contaminated

work clothes, thus creating a source of residential exposure to lead.

Employers whose employees are at risk for lead exposure are required to conduct medical monitoring to determine exposure to lead per the Occupational Safety and Health Administration (OSHA) Lead Standard. Elevated BLL results are the only occupational health condition reportable to the CDPHE per Colorado Revised Statute 25-1-122.

Results

In 2007, the department began developing a dedicated electronic reporting lead database to collect and analyze reports of childhood and adult BLL tests. In 2008, the Occupational Health Surveillance Program began analyzing these tests. In 2008, 1,498 adult BLL tests were reported to the department. Fifty-seven tests (3.8%) were elevated (greater than 25 micrograms per deciliter (ug/dL)) and 10 tests (<1%) were equal to or greater than 40 ug/dL, a level that requires employer action to reduce and monitor exposure.

Colorado has a passive system for elevated blood lead surveillance that most likely underestimates the true burden. Many workplaces where lead exposure occurs do not conduct employee medical monitoring, particularly smaller businesses that are not covered by the OSHA Lead Standard. More active surveillance could detect additional cases by actually following-up on reported cases and testing additional people that were exposed to lead.

This program showcase will discuss the strengths and limitations of occupational lead surveillance in Colorado. Presenters will discuss lead testing procedures and the protocol used to identify lead exposure sources. This includes the department's reporting processes, and follow-up interviews to determine the source of exposure. Through analysis of the BLL follow-up data, CDPHE has begun to identify patterns of high-risk occupations, industries, and geographical regions. Based on this data, CDPHE will begin to target high-risk industries and regions to ensure at-risk workers are being tested and efforts are being made to mitigate lead exposure. Presenters will also discuss how characterizing lead exposure and developing educational strategies and interventions may reduce occupational lead exposure in Colorado.

** This abstract has not been completely cleared through the CDC clearance process.

Learning Objectives: (1) Attendees will be able to describe occupational lead exposure and testing in Colorado including the sources of lead exposure and lead testing procedures. (2) Attendees will be able to explain CDPHE's occupational health lead surveillance program and the strengths and limitations of occupational lead surveillance in Colorado. (3) Attendees will be able to discuss occupational prevention efforts to reduce worker and community lead exposure.

Public Health Topic(s): Other; Epidemiology and Statistics; Health Promotion, Disease Prevention, Education

Essential Service(s): Monitor; Diagnose and Investigate; Inform, Educate, Empower

POSTER SESSION - Tuesday, September 29, 2009

Target Audience: Environmental and occupational public health professionals

26 - Outcomes of a Health Department-Community Health Center Program of Post-Partum Treatment for Latent Tuberculosis Infection Detected During Prenatal Screening of Pregnant Women - Denver Colorado, 2000-2005

Kerri McClory, Training and Education Coordinator, Colorado Department of Public Health and Environment

Brief Description: Poster explaining the background, methods, objectives and results of the study.

Abstract: Background: Targeted tuberculin testing for latent tuberculosis infection (LTBI) is a strategic component of tuberculosis (TB) control that finds persons at high risk for developing TB who would benefit by treatment of LTBI, if detected (1). Screening pregnant women for LTBI and risk of subsequent TB disease at the same time that they are obtaining medical services through community health centers is an approach that increases collaboration between community health centers and TB treatment programs. Many community health centers provide medical services to populations with prevalent LTBI. Combining efforts with public health agencies could lead to higher treatment completion rates and a decrease in TB.

Objectives: The purpose of this study was to determine the proportion of pregnant women who completed treatment at the Denver Metro Tuberculosis Clinic (DMTC) from 2000-2005.

Methods: This was a retrospective cohort study of 1824 pregnant women with a positive TST evaluated at the DMTC from 2000-2005. Demographic information, treatment initiation, and completion rates were analyzed. **Results:** Of the 1824 women, 947 (52%) initiated therapy, and of these 484 (51%) completed. Of those completing, 315 (65%) received the full 9 months of INH. Women who initiated treatment did not differ significantly from those who did by age, country of birth, and county of residence. Women 25-29 years of age were more likely to complete treatment than those 18 years and younger (AOR 0.29, CI .152-.564). Six women did not complete treatment because of adverse events occurring from 2 days to 4 months after starting INH; one of these had laboratory-confirmed hepatotoxicity and recovered after INH was discontinued. Additionally, for the years 2000-2005, five active cases of TB were discovered and diagnosed in this cohort.

Conclusion: LTBI is treatable, and increasing efforts toward finding persons at-risk for infection and treating it progresses to disease is an important prevention strategy. The overall treatment completion rate for pregnant women who came to DMTC and who were eligible to start treatment for LTBI was only 27%. The reason that the Denver results were better is unknown, but this allows for the possibility that program enhancements could improve the completion rate. Collaborations with community health

centers extend the capacity of TB control programs in jurisdictional public health agencies and could be decisive in the success targeted testing and treatment programs

Learning Objectives: (1) Discuss efforts towards identifying at-risk persons for infection and treating it to prevent disease. (2) Collaborations with community health centers extend the capacity of TB control programs in jurisdictional public health agencies and could be decisive in the success targeted testing and treatment programs.

Public Health Topic(s): Health Promotion, Disease Prevention, Education; Epidemiology and Statistics; Health Disparities and Underserved Populations

Essential Service(s): Mobilize Community Partnerships; Link People; Inform, Educate, Empower

Target Audience: Nurses, physicians, health educators

27 - Preconception health - A survey to assist family planning programs or clinics in determining clients attitudes, knowledge, and belief regarding preconception health.

Michelle K. Anzlovar, Public Health Nurse, Tri-County Public Health Department

Brief Description: This presentation will share information with public health nurses and other public health professionals regarding the importance of providing preconception health information for women attending family planning clinics.

Abstract: Background

Despite advances in medicine and prenatal care, birth outcomes are worse in the United States than in other developed countries. Many babies are born prematurely or have low birth weight. Currently in the United States the preterm birth rate has increased to 12.8% of all births. Low-birth weight is at 8.3%, the highest level in four decades. Also, infants delivered at less than 37 weeks gestation has climbed 20% since 1990.

Prenatal care which usually begins at 11-12 weeks of pregnancy comes too late to prevent a number of serious maternal and child health problems. The fetus is most susceptible to developing certain problems in the first 4-10 weeks after conception before care is normally initiated. Because women are unaware that they are pregnant during the early stage of their pregnancy they are unable to reduce risks to their own health and that of their baby. In order to help reduce these risks, women need to optimize their health prior to pregnancy.

Preconception health is a women's health before she becomes pregnant. It focuses on the condition and risk factors that could affect a woman if she becomes pregnant as well as factors that could affect the fetus or infant. There are several maternal risk factors that have been identified that contribute to premature births, chronic infant health problems, and to fetal and infant death. The

POSTER SESSION - Tuesday, September 29, 2009

modifiable risk-factors include smoking, alcohol or drug use, inadequate folic acid intake, obesity, use of medications that cause birth defects, and certain pre-existing conditions.

Since more than half of all pregnancies in the U.S. are unplanned, it is important that education and counseling are provided to all women of reproductive age, whether or not they are actively trying to become pregnant. Family planning are great venues to provide comprehensive information to women of childbearing age information regarding preconception health. However, through literature review it has been found that only some information is given to clients and that they are missing other important information.

Purpose

The main purpose of this project was to develop a tool that family planning clinics could use to determine what clients attitudes, knowledge, and beliefs regarding preconception health and to assess the need for further information such as the development of a brochure.

Method

A review of recommendations from various national agencies and health care professional organizations were reviewed. This review included recommendations from the U.S. Centers for Disease Control and Prevention, the Maternal and Child Health Bureau, the American College of Obstetrics and Gynecology and published papers on preconception health. Topics were identified from this review and were used to determine the most salient issues that should be addressed in a focused survey of clients.

Results/Outcomes

Through this research of the literature and from recommendations from the CDC a survey tool was developed in both English and Spanish to hand out to clients during family planning clinics. The surveys questions are to be answered by the clients and then a follow-up information sheet will be given to clients with correct answers and additional information.

Implications for Public Health

Integrating components of preconception health into family planning clinics will increase the client's knowledge, attitudes and beliefs regarding preconception health.

Learning Objectives: (1) Identify factors associated with preconception health. (2) Utilize information on preconception health to improve pregnancy outcomes. (3) Assess women's attitudes, beliefs, and knowledge regarding preconception health.

Public Health Topic(s): Maternal and Child Health; Health Promotion, Disease Prevention, Education; Reproductive Health

Essential Service(s): Inform, Educate, Empower; Assure a Competent Workforce; Research

Target Audience: Public Health professionals

28 - Prenatal Education for Rural Interior Alaska

Laura Kolasa, Public Health Nurse II, Fairbanks Regional Public Health Center

Brief Description: Session presents the design and implementation of a distance prenatal education program for Native Alaskan women in Interior Alaska. Pre and post evaluations were also designed to assess effectiveness of the educational effort.

Abstract: Background:

Pregnant women living in the rural villages of Interior Alaska have few prenatal educational opportunities, and experience many barriers to receiving adequate prenatal care due to distance from care providers.

Purpose:

The purpose of this pilot project was to analyze current perinatal data for prenatal women in rural Interior Alaska and assess perceived learning needs in order to design a relevant prenatal education program and evaluation tool that could be delivered by distance education methods.

Methods:

- Prenatal Education Questionnaire was developed and given to women who were currently pregnant or had delivered within the past year to assess topics they were interested in and their desired learning format.
- Questionnaire was then analyzed with Epi Info Software and incorporated into the planning process.
- Birth data for this population was analyzed with Epi Info based on postpartum referral documents from Fairbanks Memorial Hospital.
- Collaboration multi-disciplinary and multi-agency partners to assess for appropriate educational materials and evaluation tools.
- Design of education program in a mailing format to be sent to prenatal women on a routine basis during pregnancy emphasizing areas that were perceived learning needs or areas that where these women fell outside of the Healthy Alaskans 2010 goals.
- Development and implementation of evaluation tools in early post partum period, at six months post partum, and at infant's first birthday to assess for effectiveness of education.
- Search for funding to develop the program.

Results/Outcomes:

The prenatal education questionnaires responses made it evident that prenatal education was desired by childbearing women in rural villages of Interior Alaska. Analyzing the data showed that only 53% of these women

POSTER SESSION - Tuesday, September 29, 2009

initiated breastfeeding, and only 25% were exclusively breastfeeding. This became a target for education for this population. The program has now been developed, and the pilot phase is being initiated through routine mailings to currently pregnant women with evaluation follow up taking place in the early post partum phase, at 6 months and 1 year after birth.

Learning Objectives: (1) Assess birth outcome statistics and perceived prenatal learning needs for childbearing Native Alaskan women in the Interior Region of Alaska through review of statistical data and learning assessment survey. (2) Design and initiate a pilot prenatal education effort based on literature review, birth outcome statistics, and survey results for rural Native Alaskan women in Interior Alaska designed around results of literature review and survey feedback. (3) Design and use evaluation tool of program effectiveness through pre and post test learning assessments.

Public Health Topic(s): Maternal and Child Health; Reproductive Health; Health Promotion, Disease Prevention, Education

Essential Service(s): Inform, Educate, Empower; Evaluate; Research

Target Audience: Maternal and Child Health professionals

29 - Promoting and Improving the Oral Health of Montana's Children Ages 0 to 6 Years

Ann M. Buss, MCH Coordination Section Supervisor, Department of Public Health and Human Services

Brief Description: The goal of this poster presentation is to increase the knowledge of individuals interested in public health, with an emphasis on policy makers, as to the importance of oral health prevention activities. It is based on the University of Washington's evidence-based Access to Baby Child Dentistry Program, which focuses on preventive and restorative dental care for Medicaid-eligible children from birth to age six and Montana-specific data analysis.

Abstract: Background: Research supports the fact that dental disease is a preventable public health problem, disproportionately affecting low income and Native American children. Tooth decay and caries are preventable, using available technology; however, poor oral health continues to negatively impact our nation, particularly some of our most vulnerable: infants and children 0-6. In Montana, minimal resources have been available for addressing the oral health care needs of infants and young children, resulting in limited data sets supporting the need for improved access to oral health care services for this target population. In November, 2007 the Family and Community Health Bureau (FCHB) received one time only funds earmarked for addressing the oral health care

needs of infants and young children and those of pregnant women.

This one time money, established partnerships with Montana's eighteen Community School Readiness Teams (CSRT) who were willing to host community public health forums, with an emphasis on preventing early childhood caries. At this public health forums, the CSRT administered a FCHB designed Oral Health Questionnaire to the attendees.

Purpose:

The project had two purposes, both of which supported the FCHB ongoing quest for oral health funding. The research determined that the University of Washington's evidence-based Access to Baby Child Dentistry (ABCD) Program was an efficacious and cost effective method for addressing early childhood caries. The CSRT were recognized as a repository of valuable oral health data that may support the implementation of the ABCD Program in Montana.

Methods:

The project involved an extensive literature search of evidence-based prevention activities, resulting in the research paper: Promoting and Improving the Oral Health of Montana's Children Ages 0 to 6 Years: Is the ABCD Program Montana's Answer?

The project also entailed:

1. Working with the FCHB Epidemiology Unit on designing the Oral Health Questionnaire and developing an ACCESS database; and,
2. Working with the 18 Community School Readiness Teams to ensure that the Oral Health Questionnaires were submitted to the FCHB.

Results/Outcomes:

A preliminary review of the 12 Montana Community School Readiness Teams' data indicates that a significant number of Montanans are unaware of the importance of a child's baby teeth as well as the need for a child to see a dentist prior to their first birthday. This initial analysis signifies the need for an educational campaign stressing the importance of the benefits, from both an economical and developmental point of view, of oral health prevention activities beginning at birth.

Building on partnerships, established through the Title V, Maternal and Child Health (MCH) Block Grant, the results of this study will supplement Montana's current activities addressing their MCH Block Grant State Performance Measure #4: Percent of Medicaid-eligible children who receive dental services as a part of their comprehensive care.

Implications for Public Health:

The December 2008 State Health Policy Monitor article, *The Role of Physicians in Children's Oral Health*, summarizes the positive impact that an oral health prevention program, i.e. the ABCD Program might have on a state's infants and young children:

Because dental disease is largely preventable, the consequences of a lack of oral health care are often unnecessary. Untreated dental disease can lead to dietary problems, infection, missed school days, and a lower quality of life. Since cavities can form soon after the eruption of the first tooth, early preventive oral health care is essential to mitigating the infectious and rapidly progressive dental decay that occurs in high-risk children.

POSTER SESSION - Tuesday, September 29, 2009

Learning Objectives: (1) Participants will be able to describe the perception amongst Montanans as to the importance of infants and children having their first dental visit prior to the eruption of their first tooth based on data analysis of 12 Montana Community School Readiness (2) Participants will be able to identify at least one, research-based oral health prevention approach for infants and children. (3) Participants will learn what action steps Montana has taken to address the oral health care status of infants and children ages 0 to 6 years.

Public Health Topic(s): Maternal and Child Health; Health Promotion, Disease Prevention, Education; Health Disparities and Underserved Populations

Essential Service(s): Mobilize Community Partnerships; Inform, Educate, Empower; Link People

Target Audience: Public and Private Health Care Professionals, Policy Makers, Parents

30 - Promoting exclusive breastfeeding for up to 6 months in an identified population of female applying for pre natal Medicaid

Lola Ogunmodede, Public Health Nurse, Tri-County Public Health Department

Brief Description: Development of a questionnaire to assess breastfeeding practices among women applying for pre natal Medicaid.

Abstract: According to CDC, both babies and mothers gain many benefits from breastfeeding; breast milk is easy to digest and contains antibodies that can protect infants from bacterial and viral infections. The National Immunization Survey, in CDC data and statistics stated that United States reported that only 31.1% of U.S. children were breastfeed exclusively through 3 months of age. Only 11.0% of U. S. children were breastfeed exclusively through 6 months of age.

Among infants born in 2005 who were breastfed, 25% were supplemented with formula within 2 days of birth. According to Family Practice Notebook, LLC, lowest breast feeding rates are among women under the age of 20 years, unemployed, unmarried, lower socioeconomic class and poor social support. Many women in this category living the Tri County area come to TCHD office to apply for Medicaid when they are pregnant.

TCHD would like to assess a random sample of pregnant women who are applying for Medicaid to evaluate how they have come up with the feeding method for their babies that they are expecting and need for breastfeeding benefit resources.

Through this project, TCHD hopes to obtain a better understanding of the perceptions of pregnant women when it comes to nutrition for babies. This project will guide Tri County Health Department of the common practices of low social economic class mothers in our community. This project will also guide the formation of

targeted effort to promoting breastfeeding in the Tri County area.

Methods

Questionnaires will be administered to pregnant women who applied for Medicaid at the Aurora TCHD office, from 3/1/09 to 4/30/09. Questionnaires will be either Spanish or English. Language line will be made available for other languages. On the questionnaire, a woman will be asked to mark whether she is planning to:

1. Breastfeed exclusively for at least the first 6 months.
2. Both breastfeed and give formula, if so why?
3. Give formula only, if so why?

During the PE clinic with a Registered Nurse, Clients will be assessed on their current knowledge of benefits of breastfeeding to the baby and the mother. Questions will be asked regarding specifics on their plans on feeding their babies.

Data Analysis

Data will be analyzed using Epi Info statistical software in collaboration with the TCHD personnel from the Epidemiology, Planning and Communication (EPC) department.

Results and outcomes

The practicum/result is still ongoing. Pregnant mothers will learn the benefits of breastfeeding for them and the baby. They will learn that more nutrients are present in breast milk than formula. Implementation of this program will set the stage for other health departments and county offices where pregnant women go to apply for Medicaid Insurance.

Implications for Public Health

- Both babies and mothers gain many benefits from breastfeeding. Breast milk is easy to digest and contains antibodies that can protect infants from bacterial and viral infections.

Learning Objectives: (1) Utilize MCH leadership skills to improve breast feeding rates. (2) Incorporate public health theories and skills to develop population-based health services. (3) Public Health professionals working with pregnant women on Medicaid at Tri County Health Department (TCHD) office in Aurora, Colorado.

Public Health Topic(s): Maternal and Child Health; Reproductive Health; Health Promotion, Disease Prevention, Education

Essential Service(s): Diagnose and Investigate; Inform, Educate, Empower; Evaluate

Target Audience: Public Health professionals

31 - Public Health Mapping in Colorado: Google Earth and Google Maps Examples

Mark Egbert, GIS Coordinator, Colorado Department of Public Health and Environment

Brief Description: This is an interactive demonstration of the capacity and the uses of Google Earth and Google

POSTER SESSION - Tuesday, September 29, 2009

Maps. Public Health Information that is available to these applications will be emphasized.

Abstract: Google Earth and Google Maps have become very widely used visualization tools. This has happened, in part, because these applications are easy to use and they are available to almost anyone who has an Internet connection.

In this presentation, we will discuss some of the ways that these Google applications can be used to map public health-related topics in Colorado. We will explore the public health information that is currently available to these applications. Additionally, freely available geocoders will be briefly demonstrated. Finally, the methods that are used to develop layers for Google Earth and Google Maps will be discussed.

Learning Objectives: (1) The attendees will learn ways to use Google Earth and Google Maps in their own work. (2) The attendees will develop a cursory understanding of the public health information currently available to Google Earth and Google Maps. (3) The attendees will be able to describe how new layers are made available to Google Earth and Google Maps.

Public Health Topic(s): Emergency Preparedness and Response; Epidemiology and Statistics; Environmental Health

Essential Service(s): Inform, Educate, Empower; Mobilize Community Partnerships; Monitor

Target Audience: Public health professionals, epidemiologists, environmental health professionals

32 - "The Sky's the Limit": Early Childhood Councils and Health Partners working together to identify and solve health problems in children 0-8 years of age.

Heather Dubiel, Nurse Consultant, Colorado Department of Health and Environment/TBD

Brief Description: The poster presenters will discuss their counties' identified needs concerning children's health issues. The councils will present information on their process of collaboration and partnerships and identify their health issues and their innovative ideas on how to improve them. The Early Childhood Colorado Framework will be presented.

Abstract: Colorado ranks 44th among states in percentage of uninsured children and 51st in percentage of uninsured children living at or below 200% of the federal poverty level. Prior to the current economic downturn, Colorado experienced the highest national increase (73%) in the number of children living in poverty. At the end of 2007 approximately 180,000 Colorado children were eligible for, or enrolled in, Medicaid and Child Health Plan Plus and were without a usual source of care or medical home. Current economic turmoil will only exacerbate these numbers in the near future. The Colorado Trust

believes that providing uninsured, low-income working families with access to health is essential for a prosperous Colorado. The Colorado Trusts vision is one of equitable access, in which health systems, institutions and points of service are culturally appropriate and responsive to the community they serve, and in which quality behavioral, physical and oral health care are accessible and affordable for all, without exception for race, ethnicity, socioeconomic status or geographic location.

The Colorado Trust is working to advance access to health for all children by identifying strategic investments that will support a coordinated system of policies, programs and services that improve and expand children's access to health insurance coverage and health care services. Children and families utilize health services primarily in their local communities. Therefore, building systems on the local level is essential to addressing the unique needs and circumstances of each community. The Colorado Trust collaborated with the CDPHE to provide technical assistance to the state's 31 Early Childhood Councils. These local councils are currently in the planning phase of a five year, five million dollar grant to improve access to care at the local level. Through collaboration with their local public health agencies and others in the health community, these councils can develop innovative ideas to improve children's health. Using the early childhood Colorado Framework as a guide, these partners will identify local children's health issues and identify ways to mobilize community partnerships to identify and solve these health problems. One local early childhood council and their health partner will present an example of this collaboration in their community.

U.S. Variations in Child Health System Performance - A State Scorecard, The Commonwealth Fund, May 2008.

2008 Kids Count in Colorado, Colorado Children's Campaign, June 2008.

Cost and Coverage Impacts of Five Proposals to Reform the Colorado Health Care System, Appendix A: Characteristics of the Uninsured in Colorado. Prepared for The Colorado Blue Ribbon Commission for Health Care Reform by The Lewin Group, December 29, 2007.

Learning Objectives: (1) Attendees will be able to describe two ways that public health agencies and other early childhood partners can collaboratively impact child health outcome measures (2) Attendees will be able to describe the health outcome measures of the early childhood Colorado framework.

Public Health Topic(s): Maternal and Child Health; Built Environment; Built Environment

Essential Service(s): Mobilize Community Partnerships; Monitor; Monitor

Target Audience: Those desiring more information on how to partner with community members and coalitions on health issues. Those interested in what local counties did to identify health issues. Anyone who is interested in children's health.

POSTER SESSION - Tuesday, September 29, 2009

33 - Social Networking & Public Health

Umit Kaya, *Project Leader, Colorado School of Public Health*, Jessica Bondy, *Assist. Professor, Colorado School of Public Health*

Brief Description: Social networking has encouraged new ways to communicate and share information. Social networking websites are being used regularly by millions of people. Users benefit by interacting with a like minded community and finding a channel for their energy and giving. It is possible to use social networking tools and concepts at ten Essential Public Health Services. We will address those and give samples. We will also focus how social networking could be used to unite public health in Colorado.

Abstract: Social networking has encouraged new ways to communicate and share information. Social networking websites are being used regularly by millions of people. Users benefit by interacting with a like minded community and finding a channel for their energy and giving. The same technologies are making it possible for public health organizations, advocacy groups, government agencies and nonprofit organizations to update consumers on relevant health news and deliver health-awareness messages and alerts to email accounts, wireless devices and mobile phones. Online collaborations known as wikis, which let different users jointly work on Web-based information, are developing to help communities plan for public-health emergencies, such as fluwikie.com, a flu-pandemic planning site. Virtual communities allow individuals to be accessible. People establish their real identity in a verifiable place. These individuals then interact with each other or within groups that share common interests and goals. They can also post their own user generated content in the form of blogs, pictures, slide shows and videos. Like a social network, the consumer essentially becomes the publisher. Overall, it is possible to use social networking tools and concepts at ten Essential Public Health Services. We will address those and give samples. We will also focus how social networking could be used to unite public health in Colorado.

Learning Objectives: (1) Describe social networking concept and tools (2) Explain best social networking practices in public health (3) Discuss how we can apply social networking in Colorado for public health benefits

Public Health Topic(s): Built Environment; Enhancing Public Health Systems; Health Promotion, Disease Prevention, Education

Essential Service(s): Inform, Educate, Empower; Link People; Develop Policies and Plans

Target Audience: Public Health Community

34 - A Survey of Hospital Policies Regarding Critical Test Values Notification and Perinatal Quality Issues in Utah

Deborah M. Ellis, *Perinatal Mortality Review Coordinator, Utah Department of Health*

Brief Description: The poster will present the results of a qualitative survey sent to all birthing hospitals in the state of Utah with questions on critical test values notification and perinatal quality issues. The survey is the first step toward creating a statewide perinatal quality collaborative which will establish some uniform community practice standards for obstetrics and neonatology.

Abstract: Background

In 1999 the Institute of Medicine released a seminal report on medical errors entitled *To Err is Human*, followed in 2001 by *Crossing the Quality Chasm*. These two publications launched national attention upon improving the safety of the nation's health care. It is impossible to provide safe care without measuring and attending to quality and the processes by which care is delivered. The Obama health care reform proposals also contain pointed reference to measures of quality.

There are currently no national standards of safety and quality for the provision of care for pregnant and parturient women and neonates. Several national organizations are currently involved in vetting indicators for perinatal quality, such as the National Quality Forum, National Perinatal Information Center and the Joint Commission. A few states have hospitals which voluntarily participate in the measurement of perinatal quality indicators (California, Maryland, Massachusetts, Ohio). The American College of Obstetricians and Gynecologists (ACOG) is promoting critical looks into processes involved in the practice and provision of obstetrical care.

Purpose

Childbirth is the most common reason for hospital admission. In the absence of national standards for safe and high quality perinatal care, it is imperative to move toward locally consensus-built prioritized and standardized maternal and neonatal clinical measures of safe, quality care.

Methods

A thirteen question qualitative survey on Critical Test Values Notification and Perinatal Quality Issues was sent to a clinical expert and a quality expert at each birthing hospital in Utah (n=80). The surveys were sent and returned electronically, per respondents' choice.

Specific activities to facilitate the project included:

- consultation with Utah Department of Health Reproductive Health Program Manager and Patient Safety Director for input into survey questions
- IRB approvals of survey from Utah Department of Health and Intermountain Health Care (largest hospital system in Utah, comprising nearly half of the survey hospitals)

POSTER SESSION - Tuesday, September 29, 2009

- telephone and email answering of questions about purposes of survey, which have served more to reassure respondents, build trust and open doors for future involvement in a statewide perinatal quality care initiative

Results/Outcomes

Analysis of themes and survey responses are currently in process and will be noted on the poster presented at the Colorado Public Health Association meeting in September 2009.

Relevance to Colorado Public Health

It is anticipated that results of the survey will be relevant to Maternal Child Health Professionals in Colorado as, similar to Utah's population distribution, there is a large urban corridor of population with the remainder of the population thinly distributed over a large rural area. In Utah, obstetrical and neonatal quality indicators are only just beginning to be discussed or monitored in the university hospital setting and in the two large corporate hospital systems. Community hospitals and small rural facilities do not yet seem to be engaged in, or even exposed to, ideas of quality as inseparable from patient safety, especially in the realm of perinatal issues.

Public health may be more sustainable if it is willing to partner with hospitals and health care providers in the move toward surveillance of quality and improvement of care. Public health may initiate conversations among institutions and provider groups, form statewide or regional collaboratives, and offer or coordinate data collection for perinatal indicators.

Learning Objectives: (1) Use data, levels of evidence and evaluative criteria in proposing policy change. (2) Discuss various strategies, including supportive evidence, for the implementation of a policy. (3) Identify and assemble team members appropriate to a given task.

Public Health Topic(s): Maternal and Child Health; Reproductive Health; Enhancing Public Health Systems

Essential Service(s): Inform, Educate, Empower; Mobilize Community Partnerships; Monitor

Target Audience: Maternal and Child Health Professionals in Public Health and Clinical Care, Policy Makers and Community Partners

35 - Uniting Public Affairs Research and Public Health: Exploring the Latest Evidence in Administration, Management and Policy.

Danielle M. Varda, PhD, Assistant Professor, University of Colorado Denver, School of Public Affairs, Sara E Miller, MPA; Doctoral Student School of Public Affairs, Executive Director Colorado Foundation for Public Health and the Environment, Robyn Mobbs, MBA; Doctoral Student School of Public Affairs; Instructor and Head of

Administration and Finance, Colorado WIN Partners, University of Colorado Denver School of Medicine, Jo Ann Shoup, MA, MSW, MS; Doctoral Student School of Public Affairs; Project Manager, Institute for Health Research, Kaiser Permanente Colorado

Brief Description: The first third of the session will be didactic presentation of research identified. The second third of the presentation will provide resources to attendees to better understand this research and how it can be applied to public health. The final third will present current research will be presented and being conducted by the four presenters and feedback will be sought from the audience. A question and answer time will be built in to the presentation.

Abstract: In an effort to achieve high levels of public health program delivery, the Ten Essential Services of Public Health (EPHS) were designed in 1994 to provide a working definition of public health and a guiding framework for local public health systems. The EPHS focus on planning and assessment, encouraging evidence-based practice and rigorous methodology. While these guidelines have helped to reshape the current field of public health, there have been few efforts to bridge disciplinary gaps as a way to further strengthen the field of public health. Specifically, the field of public affairs can provide a wide range of resources to public health practitioners and scholars in the areas of public management, policy development, and administration. This presentation will present the findings from a comprehensive literature review of the applications of public affairs that have relevance to the field of public health. Following the EPHS framework, the review categorizes those methodologies and findings that are relevant to public health practice and research, with an emphasis on how the field of public affairs can contribute to the field of public health.

In particular, the primary focus will be on the foundations of public affairs, and how it can be applied in our wide array of communities, situations, and public health systems. Specific attention is placed on the areas of program management and collaboration theory. Finally, past and ongoing public affairs research projects from the University of Colorado School of Public Affairs will be presented in the areas of immunization, public health systems research, partnerships, and networks, illuminating the public health benefits of interdisciplinary approaches.

Learning Objectives: (1) Attendees will describe how Public Affairs Research relates to Public Health (2) Attendees will increase awareness of the future direction of Public Affairs Research in the context of Public Health in Colorado. (3) Attendees will understand how to access and use Public Affairs Research for evidence based discourse in Public Health administration, management, policy development, and collaboration/networking, among others.

Public Health Topic(s): Enhancing Public Health Systems; Health Promotion, Disease Prevention, Education; Other

POSTER SESSION - Tuesday, September 29, 2009

Essential Service(s): Research; Mobilize Community Partnerships; Assure a Competent Workforce

Target Audience: Public and Environmental Health Program Managers, health researchers, evaluators, and policy administrators.

36 - Using Interactive Voice Response Technology to Assess Community Health Data: Lessons from LiveWell Colorado

Tristan Sanders, Sr. Research Assistant, Kaiser Permanente Colorado, Bonnie Leeman-Castillo, PhD, Kaiser Permanente Colorado

Brief Description: LiveWell Colorado (LWCO) is a statewide collaboration with a mission of inspiring and advancing policy, environmental and lifestyle changes that promote health through the prevention and reduction of obesity. LWCO has provided funding to 17 communities throughout Colorado to develop and implement multi-sectoral initiatives that aim to increase healthy eating and active living (HEAL) among community members. Since 2006, evaluators have used semi-annual interactive voice response (IVR) surveys in funded communities to collect health data from community members. Limited published literature exists on the use of IVR technology for population-based health data collection. In this presentation, LWCO evaluators will describe the LWCO IVR survey design and data analysis, and discuss the advantages and limitations of using IVR technology as compared to other survey and primary data collection methods.

Abstract: Purpose: Community wide interventions for physical activity and healthy eating are strongly recommended by the United States Preventive Services Task Force. LiveWell Colorado (LWCO) is a statewide collaboration with a mission of inspiring and advancing policy, environmental and lifestyle changes that promote health through the prevention and reduction of obesity. Seventeen LWCO-funded communities have developed and implemented program, policy, and environmental change strategies to support healthy eating and active living (HEAL) consistent with the US Preventive Service Task Force recommendations. Since 2006, Kaiser Permanente's Institute for Health Research has used semi-annual interactive voice response (IVR) surveys to evaluate HEAL behaviors in these communities. Limited published literature exists on the use of IVR technology for population-based health data collection. The purpose of this presentation is to describe the IVR survey design and data analysis, and discuss the advantages and limitations of using IVR technology.

Methods: From 2006-2008, we administered a 17-item English and Spanish language IVR survey in all LWCO communities. The survey consisted of Behavioral Risk Factor Surveillance Survey (BRFSS) questions on physical activity, diet, access to and availability of healthy foods, quality of health, and body mass index. Some communities received additional questions to evaluate

specific community strategies. A randomly selected sample of landline telephone numbers were contacted in pre-specified LWCO community census tracts. Communities were given \$250 each year to advertise the survey. Consenting participants were entered into a gift card drawing as incentive to participate. Post-stratification data weighting on age and sex adjusted for non-response and non-coverage bias, and allowed for reporting of population estimates.

Results: Of the 11,017 LWCO survey respondents over a 2 year period, 81% of respondents were female, 11% were Hispanic, and 63% were White. Response rates varied from year to year but ranged from 8.23% to 21.07% in 2008. Two years of data indicate increased awareness of LWCO initiatives and increased awareness of healthy community changes. Though some data on physical activity and healthy eating point to positive trends, it is too early in community HEAL initiatives implementation to expect significant change. Therefore, we will administer the IVR semi-annually up to ten years in each community to evaluate long-term health trends.

Conclusion: IVR technology has the ability to collect population-level health data on a large sample in a short time period. Further research is needed to understand the reasons for low response rates and to identify ways for improvement. Limitations of IVR technology include non-coverage bias and the exclusion of residents utilizing cellular telephones.

Relevance: IVR is a novel and cost-effective approach for collecting population-level data on healthy eating and active living behaviors as compared to human-administered surveys. These features are attractive to communities, public health professionals and evaluators seeking to obtain community-level data while reaching a large sample in a short time. This presentation will address evaluation and research aspects of the Ten Essential Services. LiveWell Colorado embodies the conference theme of "Uniting Public Health" as it unites community leaders, community members, public health researchers, and public and private stakeholders in a partnership working toward a vision that all Coloradoans enjoy a lifestyle of healthy eating and active living.

Learning Objectives: (1) Describe the rationale for using interactive voice response (IVR) technology to collect community-based health data. (2) Discuss the evaluation methods used to assess healthy eating and active living among IVR respondents in LiveWell Colorado communities. (3) Identify advantages and limitations of using IVR technology as compared to other survey methods.

Public Health Topic(s): Physical Activity, Food, and Nutrition; Health Promotion, Disease Prevention, Education; Other

Essential Service(s): Evaluate; Research; Mobilize Community Partnerships

Target Audience: Public health professionals and leaders of community based organizations seeking to improve community health

POSTER SESSION - Tuesday, September 29, 2009

37 - Using Participatory Research to Prevent Colon Cancer in Rural Colorado: Results of a Community-Based Intervention

Linda Zittleman, MSPH, High Plains Research Network Associate Director, University of Colorado Denver, High Plains Research Network Community Advisory Council, Community Member, Rural Eastern Colorado

Brief Description: This session will be co-presented by a member of the High Plains Research Network Community Advisory Council (local rural community member) and a member of the academic research team that partnered to develop a community-based colon cancer prevention intervention. The session will inform attendees of how the community's knowledge of their rural communities was applied to develop a culturally relevant set of main messages and intervention materials. Hard copies of each component will be shared. The session will also present the study evaluation methods and results. Time will be reserved for a conversation between attendees and both presenters.

Abstract: Purpose/Need: Despite effective prevention and early detection screening methods, colorectal cancer is the second leading cause of cancer death in the United States. A partnership of residents and researchers developed a CDC-funded community-based intervention to increase colon cancer screening rates in rural eastern Colorado. Development: A participatory research approach was used to develop and implement a multi-component practice and community-based campaign consisting of newspaper articles and ads, small media print materials, and community talks, linking community members to their local physician. Local residents were used in materials and implementation strategies. Nine counties in the High Plains Research Network region of rural eastern Colorado received the intervention, and six counties in southeast Colorado served as a control region. Results: A pre-post analysis of the non-randomized controlled intervention was conducted to determine the effect of a rural intervention on colon cancer screening rates. A random digit dial telephone survey of residents age 50 was conducted pre-intervention (n=1005) and 6 to 18 months post-intervention (n=1048). Post rates increased significantly within the intervention group: any screening test 75.9% pre vs. 81.2% post, p=.04; colonoscopy: 43.4% vs. 54.7%, p=.0003. The control group had substantial contamination with over 45% reporting exposure to at least one intervention products, eliminating the possibility of a comparison between intervention and control. Respondents reporting exposure to at least one intervention product reported higher screening rates at posttest than those not exposed: any screening test 82% vs. 75.1%, p=.01; FOBT 66.2% vs. 53.8%, p=.0001, flexible sigmoidoscopy 36.2% vs. 28.7%, p=.01; and colonoscopy 55.2% vs. 49.2%, p=.057. Over 122 local residents participated in materials production and distribution. Lessons Learned: Community members are eager to participate in health education efforts. Colon cancer screening rates increased in the intervention

groups. The level of cross-communication about the intervention throughout eastern Colorado was unanticipated and resulted in a highly contaminated control group. Exposure to the intervention was associated with higher colon cancer screening rates. Relevance to Public Health: This project is as an example of a grass roots public health effort. This session will share what was learned about several of the Ten Essential Services, including informing, educating, and empowering people about a preventable chronic disease; mobilizing community partnerships; and research. The session will illustrate how participatory research and community engagement bring together people from different backgrounds (medical, public health, and community), promote public health efforts, and are a great tool to sustain programs and interventions.

Learning Objectives: (1) Describe the use of participatory research in the development of a community-based colon cancer prevention intervention. (2) Explain how engaging the community has the potential to influence intervention materials, implementation strategies, and sustainability. (3) Explain the rationale for and results of the intervention.

Public Health Topic(s): Health Promotion, Disease Prevention, Education; Chronic Disease; Health Disparities and Underserved Populations

Essential Service(s): Mobilize Community Partnerships; Inform, Educate, Empower; Research

Target Audience: public health workers, health educators, nurses and providers, community members, health media design consultants
