Prevention in the Prairies: Tobacco Prevention and Sodium Reduction Initiatives in Kansas

Masters of Public Health Field Experience
Kansas State University

Jacqueline Garvey
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Outline

- Introduction to Public Health Impacts
- Overview of Tobacco Use around the Country
- Kansas Department of Health and Environment Tobacco Prevention and Cessation Grant
- Overview of Sodium Consumption
- Kansas Department of Health and Environment Sodium Reduction Grant
- Conclusion
Introduction to Public Health Methods

- Health
  - An ever changing variable in life

- Public Health
  - Examines population as a whole
  - Social Ecological Model (SEM)

- Organizations Working Towards Health
  - World Health Organization (WHO)
  - Centers for Disease Control and Prevention (CDC)
  - Kansas Department of Health and Environment (KDHE)
Introduction to Public Health Methods

- SEM
  - Also known as the McLeroy’s Ecological Model of Health Behavior
  - Health and behavior are influenced by outside factors
  - Multi-disciplinary values
  - Examines various levels at which an individual’s health may be impacted
  - Levels include:
    - Intrapersonal
    - Interpersonal
    - Institutional
    - Community
    - Social
Introduction to Public Health Methods

- **WHO**
  - Global level
  - Researches all impacts of health
  - Defines health as:
    “the state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”
  - Focusing on joining public health with sustainable development
  - “A healthy environment is a prerequisite for good health”
Introduction to Public Health Methods

- CDC
  - National Level
  - Funds programs across the country to lower the impact of disease and illness on Americans
    - Arthritis awareness,
    - Overdose prevention,
    - Tobacco control and prevention,
    - And sodium reduction
  - Implemented a National Tobacco Control Program (NTCP) in many states, including Kansas
Introduction to Public Health Methods

- KDHE
  - Bureau of Health Promotion (BHP)
  - State level
  - Promotes the health of its residents while protecting them from disease, illness, and injury
  - Separates environmental factors from health factors to better concentrate efforts on health
  - The BHP “collects, analyzes and publishes information on many aspects of the health status of Kansas residents. Assessment includes examining trends in health, disease and injury.”
Introduction to Public Health Methods

- Field Experience
  - Epidemiologist intern
  - Researched and compiled data for two prevention grants: tobacco prevention and cessation, and sodium reduction
  - Both grants exemplify the SEM
- Tobacco Prevention and Cessation
  - Funded by the Department of Health and Human Services
  - Statewide initiative to prevent new smokers and educate current smokers on ways to quit
- Sodium Reduction
  - Funded by the CDC
  - Cross-sectional study
  - Baseline sodium consumption in Shawnee County
Tobacco Prevention and Cessation

• Introduction
  • Leading cause of disease and illness
  • Most preventable cause of death
  • All age groups are affected by tobacco in some form
  • A recreational drug that is the root of many diseases

• Statistics
  • Related healthcare costs exceed $96 billion each year
  • Secondhand smoke causes 1 in 5 deaths
  • In Kansas, 18% of the adult population are smokers and 12% of the youth population are smokers
Current Smoking Prevalence Among Adults by Demographic Characteristics

- National (median): 18.4%
- Kansas: 17.9%
- 65+ years old: 8.2%
- 45-64 years old: 18.2%
- 25-44 years old: 21.9%
- 18-24 years old: 19.7%
- More than high school degree: 12.2%
- High school degree: 26.5%
- Less than high school degree: 25.5%
- Male: 19.8%
- Female: 16.1%
- Native Hawaiian / Pacific Islander: 30.6%
- American Indian / Alaska Native: 17.2%
- Asian: 17.3%
- Hispanic: 24.5%
- African American: 17.4%

*** Data not shown because sample size is less than 50.

Source: BRFSS, 2007-2008
Tobacco Prevention and Cessation

• National Tobacco Control Program
  • Conducted by the CDC
  • Across all fifty states and eight territories
  • Encompasses four goals:
    1. “To eliminate exposure to secondhand smoke,
    2. To promote quitting among adults and young people,
    3. To prevent initiation among youth,
    4. And to identify and eliminate disparities among populations
Tobacco Prevention and Cessation

- Prevention Programs
  - In Oregon, the state health department is focusing on prevention in lower income individuals and the mentally disabled
    - People with lower income and lower education are three times more likely to smoke, in the state
    - Now focusing efforts on lower income school districts
    - Enforced three new policy changes regarding tobacco use in mental health facilities; few policies were already in place
Tobacco Prevention and Cessation

- Chronic Disease Risk Reduction (CDRR) in the KDHE
  - Provides funding and technical assistance to Kansas communities
  - From June 2010 to July 2011, the CDRR worked to reduce chronic disease through evidence-based strategies that impact tobacco use
  - Each county or group of counties proposed initiatives to reduce tobacco use in their own community
  - Promotes community progress in three stages:
    1. Planning
    2. Capacity Building
    3. Sustainability and maintenance
Tobacco Prevention and Cessation

- **CDRR in the KDHE**
  - In the state fiscal year, Kansas was given $1,277,752 in federal grants to be used on tobacco control.
  - Grantees were required to provide at least 25% of matching funds.
  - Grantees raised $544,077; producing a total of $1,821,829.
  - Thirty-seven approved grantee applications.
  - Produced 96 initiatives in the state.
  - My responsibility was to compile the grantees reviews, write the final report, and contact grantees.
Tobacco Prevention and Cessation

- Media, Access, Point of Purchase, Price, and Social Services (MAPPS) Strategy
  - CDC evidence-based strategies

- Each grantee used these strategies within their own initiatives

- Grantees were allowed to propose more than one initiative
Tobacco Prevention and Cessation

First Stage: “Planning”

- Grantees formed functioning, sector-diversified coalitions
- Provided a snapshot of the community needs
- Initiatives were compliant with CDC’s Community Health and Group Evaluation (CHANGE) tool
- Kansas is a leader in the CHANGE program
- Vital to accomplish a successful planning stage in order to advance to next steps
<table>
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Source: BRFSS, 2010-2011
Second Stage: “Capacity Building”

- Grantees must progress through planning stage
- Focuses on community-based prevention programs
- Grantees may choose one of three categories:
  1. Prevent smoking among young people
  2. Eliminate nonsmoker’s exposure to secondhand smoke
  3. Promote quitting
Tobacco Prevention and Cessation

• Successful Programs
  • In Osage County, grantees utilized the Respect Thy Neighbor toolkit
    • Example of grassroots connections
  • In Northeast Region, seven school districts and one community college became tobacco-free
  • In Cowley County, grantees reported a 93% tobacco-free compliance rate among retailers
  • In Ottawa County, 33% of schools have implemented a curriculum change to increase awareness of devastating effects of tobacco
Smoking Prevalence Among Kansas High School and Middle School Students, A Youth Tobacco Survey

Source: BRFSS, 2010-2011
Tobacco Prevention and Cessation

- Kansas Indoor Clean Air Act
  - Prohibited smoking in restaurants, bars, taxicabs, lobbies, and places of employment
  - Purpose to “protect the public health by reducing the exposure to secondhand smoke in public places and places of employment”
  - Prime example of capacity building phase; grantees influencing lawmakers
Tobacco Prevention and Cessation

• Final Stage: “Sustainability and Maintenance”
  • Focuses on reducing current tobacco use and using cessation programs
  • Keep previous users from relapsing
  • Sustain tobacco-free communities
Successful Programs

- Adding tobacco cessation programs to insurance benefits
  - Grantees educated business owners on the benefits of adding tobacco cessation programs
- Physician participation
- Kansas Quitline
  - Many grantees used this approach to reach many individuals
- Walgreens “Take Care” Program
  - Promoted cessation and referred to Quitline
  - Reached individuals who might not have insurance
Kansas Tobacco Quitline Gross Calls and Registration by Month, Jan. 2010- Oct. 2011
Concluding Thoughts

- Overall, a very successful grant
- Advantageous to allow each grantee to propose their own initiatives
- Imperative to continue tobacco-free education of young people
- Need to continue to reduce secondhand smoke
- Emphasize quitting programs
- Tobacco is a major issue in the state; initiatives need to continue
Tobacco Prevention and Cessation

• My Contribution
  • Contact grantees that had yet to submit final outcomes
  • Compile all grantee reports
  • Consult with state epidemiologists on outcomes
  • Compose final report for KDHE
Sodium Reduction

- Introduction
  - Sodium Chloride
    - Commonly known as table salt

- Can be used as a:
  - Preservative,
  - Flavor enhancer,
  - Additive to medications
Sodium Reduction

- **Statistics**
  - The Institute of Medicine advises that the maximum intake of a healthy individual should not exceed 2,300 mg
    - The minimum amount needed is between 180-500 mg
  - **Recommended daily intake is 1,500 mg**
    - Half of all Americans should adhere to this recommendation
  - Up to 75% of sodium intake can be attributed to processed foods
  - Directly related to heart disease
Sodium Reduction

- **Current Sodium Amounts in Diets**
  - Due to versatility, sodium can be found in many products
  - Average sodium consumption is well above the maximum amount of 2,300 mg
  - Individuals with a suppressed immune system should be cautious of high levels
  - The following groups should adamantly adhere to lowered intake levels:
    - African Americans
    - Diabetics
    - Individuals over the age of 51
    - Chronic kidney disease sufferers
Sodium Reduction

“While nearly everyone benefits from reducing their sodium intake, the blood pressure of individuals, most at risk, tends to be even more responsive to the blood pressure-raising effects of sodium than others; therefore, they should reduce their intake to 1,500 mg per day.”

Sodium Reduction

• Steps Towards Reduction
  • National Milk Producers Federation (NMPF)
  • School cafeteria lunches
  • “2011 Sodium Reduction in Communities – Shawnee County Survey”
Sodium Reduction

• NMPF
  • Started in New York
  • Began with reduction of salt in cheese and cheese products
  • Researching ways to reduce salt levels in dairy without compromising taste

• School Cafeterias
  • Sodium reduction at a young age can produce a drastic reduction in future use
  • Vermont and Alabama have enacted initiatives regarding sodium reduction in lunch meals and vending machines
    • Both states are requiring less than 350 mg in school meals
  • More states should follow suit
Sodium Reduction

- “2011 Sodium Reduction in Communities – Shawnee County Survey”
  - CDC funded program
  - Health risk study to better understand individual consumption of sodium of 800 participants
  - Provided a snapshot of sodium consumption in county
  - Program sought to achieve:
    1. Sodium intake calculations within the county
    2. Education of participants regarding the hazards of high sodium consumption
    3. Lifestyle change recommendations
Sodium Reduction

- “2011 Sodium Reduction in Communities – Shawnee County Survey”
  - Consisted of three steps:
    1. Dietary and health questionnaire,
    2. Minor physical,
    3. And a 24-hour dietary recall
- Dietary recall program automatically calculated sodium intake of each participant
  - Program did not account for added table salt
- Participants were then given information of the health risks of high sodium intake and information on reducing it
Sodium Reduction

• Health Risks Due to High Sodium Consumption
  • High blood pressure
    • Nation’s leading cause of death
  • Hypertension
    • Effects 1 in 3 Americans
  • Diabetes
  • Obesity
  • Kidney Issues
Sodium Reduction

- Dose-Dependent Relationship
  - Reduce the average amount to sodium, prevent 16 million cases of high blood pressure in the country
  - Save $26 million in healthcare costs
Sodium Reduction

• **Concluding Thoughts**
  • Necessary evil
    • Not looking to extinguish sodium from diets
  • Education is key
    • Consumers need to be aware of its presence
  • Producers need to make major steps in reducing amounts in prepackaged foods
  • A gradual cut back of sodium is needed
  • Health risks due to sodium are devastating
  • Public health officials need to acknowledge this threat
Sodium Reduction

• My Contributions
  • Researched similar programs
  • Contacted and interviewed participants
  • Performed dietary recalls
  • Taught others to use program
Conclusion and Summary

- Reducing Illness of Any Kind is the Main Goal
  - Tobacco and sodium initiatives are two examples of ways to encourage a healthy way of life
  - Education is key for both initiatives
- Tobacco Prevention and Cessation
  - Great strides have been made in the past 50 years to reduce tobacco use
  - Public bans on smoking are leading to a reduction of tobacco related illnesses
  - Continued education on secondhand smoke and smokeless tobacco needs to be provided
  - Kansas is one of the leading states in tobacco awareness and should continue to be an example
Conclusion and Summary

- **Sodium Reduction**
  - A conscious reduction of sodium needs to be made
  - Initial steps towards reduction need to be continued
  - Local and state governments should influence producers to reduce sodium levels in food
  - More surveys similar to Shawnee County’s need to be performed
Conclusion and Summary

- Field Experience
  - Real world experience
  - Experience with CDC funded grants
  - Taught by state health epidemiologists
  - Learned how to propose both prevention and reduction programs
  - Able to experience the chronic disease aspect of public health
Questions?

- Thank you for your time.
References


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- Praveen, G et al., “2011 Sodium Reduction in Communities—Shawnee County Survey,” Centers for Disease Control Health Risk Survey. 2011
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- **DOI:** http://dx.doi.org/10.1888/pclig.110080
Percent of Adult Kansans Who Currently Smoke Cigarettes

Source: BRFSS, 2007-2008