FACILITATOR GUIDE

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Program Planning Case Study: Prevention of Lung Cancer in Uruguay

DEPARTMENT OF HEALTH & HUMAN SERVICES·USA

CDC
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CONTROL AND PREVENTION

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OVERVIEW

In this case study, participants will assess and analyze public health needs, and develop a program to address the high-priority health issue identified by their analysis. The total amount of work time for this case study is estimated at 3 hours. The time allotment per section varies, and is listed at the beginning of each step. Please allow additional time for discussion of each step.

Please keep in mind that certain components of this assessment may need to be modified for specific country needs.

INSTRUCTIONS

Instruct participants to read the background information below, and to complete the case study one section at a time in small groups. Then, take time to review the answers at the end of each section:

- Part 1, Assess and Analyze Public Health Needs – 40 minutes
- Part 2, Plan a Program – 90 minutes.

This exercise was designed as a teaching tool, based on common and scientifically proven methods from the United States, to teach effective program evaluation and its application across health topics.

Please note: While this case study was inspired by real data, the people and events described in this case study are fictitious. This exercise is intended for educational purposes only.

PART 1: ASSESS AND ANALYZE PUBLIC HEALTH NEEDS

Estimated Time: 40 minutes

Background Information

According to the World Health Organization[1] (WHO), chronic noncommunicable diseases account for 70% of deaths in Uruguay and 60% of the country's total healthcare expenditures. Cancer is the second-leading cause of death (23.5%), and lung cancer is the most common type of cancer.

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[1] World Health Organization. (2009). Country Cooperation Strategy, at a Glance. http://www.who.int/countryfocus/cooperation_strategy/ccsbrief_ury_en.pdf

The scientific literature[2] indicates that risk factors for lung cancer include non-modifiable factors such as genetic susceptibility, family history of cancer, sex, race, and age. Modifiable risk factors include tobacco use, diet, occupation, and environmental pollution.

In speaking with health officials and other stakeholders in the capital city of Montevideo, you learn the following about the problem of lung cancer in Uruguay:

- Smoking is the leading risk factor for lung cancer, being implicated in 85-90% of cases. Adults aged 15 and older, 24.7% smoke cigarettes.
- Secondhand smoke exposure is also considered a risk factor, but the population attributable risk is relatively low; active smoking is associated with a far greater percentage of lung cancer cases. A nationwide 100% smoke-free policy was enacted in 2006 for all enclosed public places, workplaces, and public transportation.
- Air quality is somewhat worse in the capital city of Montevideo than more rural areas due to traffic congestion, manufacturing plants and other pollutants; however, among Latin American countries, Uruguay is ranked among the least-polluted, so public officials do not believe pollution to be a high-priority issue.
- Two dietary risk factors, low fruit and vegetable consumption and high fat intake, have been linked to lung cancer, although studies have concluded this risk factor is a minor contributing factor to the burden of lung cancer in Uruguay[3]. Due to the high prevalence of obesity in urban areas, there is a growing network of organizations promoting healthy eating.
- Occupational exposure to cancer-causing chemicals does occur, but this risk factor plays a limited role in the burden of lung cancer in Uruguay[4].
- Of all these risk factors, stakeholders believe the prevention and control of smoking has the greatest amount of public interest and political support; a national tobacco control program has been operating since 2005, and the National Alliance for Tobacco Control is also well-established.

Because such a large proportion of lung cancer cases in Uruguay has been linked to smoking, you decide to do more research to learn more about who is at risk and what is already being done to address the problem of smoking.

Data from the 2009 Global Adult Tobacco Survey indicate that 25% of Uruguayan adults smoke cigarettes. Twenty-three percent of youths aged 13-15 smoke cigarettes, according to the 2007 Global Youth Tobacco Survey. The prevalence of smoking is

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[2] Ruano-Ravinaa, Figueirasa, and Barros-Dios. (2003). Lung cancer and related risk factors: an update of the literature. *Public Health*, 117: 149-156.

[3] De Stefani, E., Brennan, P., Boffetta, P., Mendilaharsu, M., Deneo-Pellegrini, H., Ronco, A., et al. (2002). Diet and adenocarcinoma of the lung: a case-control study in Uruguay. *Lung Cancer, 35*(1), 43-51.

[4] De Stefani, E., Boffetta, P., Brennan, P., Deneo-Pellegrini, H., Ronco, A., & Gutierrez, L. P. (2005). Occupational exposures and risk of adenocarcinoma of the lung in Uruguay. *Cancer Causes Control, 16*(7), 851-856.

highest among individuals aged 20-29 years, and smoking initiation most frequently occurs between the ages of 10 and 19[5].

Case Study Worksheet #1

Complete the questions below. *(Please note that answers are provided in italics.)*

1. **Summarize the health issue based on the health data.**

   In Uruguay, chronic noncommunicable diseases account for 70% of deaths and 60% of the country's total healthcare expenditures. Cancer is the second leading cause of death, and lung cancer is the most common form of cancer.

2. **Summarize the health issue based on information from the community and stakeholders.**

   Risk factors include smoking, secondhand smoke exposure, poor air quality, diet, and occupational exposure to carcinogens. Smoking is the leading risk factor for lung cancer, being linked to 85-90% of cases. Stakeholders believe tobacco control has the greatest support, and there is growing support for healthy eating initiatives.

3. **Identify risk factors and if necessary, rank by their importance and the potential change that you can make on them.**

   1. ***Smoking*** *– most important risk factor; very changeable because of the large amount of political will and popular support.*
   2. ***Secondhand smoke exposure*** *– although the importance is relatively low, SHS exposure goes hand in hand with smoking and could also be easily changeable.*
   3. ***Diet*** *– lower importance than smoking; moderately changeable because a growing network is in place to address the issue.*
   4. ***Air quality*** *- known to be a problem in the capital city, but less changeable because of the lack of political will.*
   5. ***Occupational exposure*** *– plays a limited role; exposure is changeable through education about precautionary measures.*
   6. ***Genetic susceptibility, family history of cancer, sex, race, age, and other individual attributes*** *– varying importance; not changeable.*

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[5] Menezes, A., Lopez, M., Hallal, P., Muino, A., Perez-Padilla, R., Jardim, J., et al. (2009). Prevalence of smoking and incidence of initiation in the Latin American adult population: the PLATINO study. *BMC Public Health, 9*(1), 151.

	More Important	**Less Important**
More Changeable	• *Smoking*	• *Secondhand smoke exposure* • *Diet* • *Occupational exposure*
Less Changeable	• *Air quality* • *Genetic susceptibility* • *Family history of cancer*	• *Sex* • *Race* • *Age*

4. **Identify subgroups at risk and if necessary, rank by using factors such as impact, influence and accessibility.**

   1. *Youths (10-19 years) – smoking initiation is highest in this age group; can access this population in schools*
   2. *Young adults (20-29 years) – smoking prevalence is highest in this age group*
   3. *Adults (30+ years) – can access this population through worksites*

5. **Write a health problem statement (include the what, who, where, when, and how much).**

When	*How much*	*Who*	*Where*	*What*
As of 2009,	*25% of*	*adults*	*in Uruguay*	*smoke cigarettes.*
As of 2007,	*23% of*	*youths aged 13-15*	*in Uruguay*	*smoke cigarettes.*

PART 2: PLAN A PROGRAM

Estimated Time: 90 minutes

Background Information

The WHO created the MPOWER package[6] in 2008 to help countries comply with the Framework Convention on Tobacco Control (FCTC), which requires nations to implement tobacco control measures. The MPOWER package consists of the six most effective tobacco control strategies for reducing tobacco consumption, and in turn, easing the burden of tobacco-related disease and death. In your research of existing evidence-based programs and policies within the MPOWER framework, you find the following:

Table 1: MPOWER Progress in Uruguay

MPOWER component	Progress in Uruguay
Monitor tobacco use	- Uruguay has a strong infrastructure for conducting ongoing monitoring of tobacco use. - The Global Adult Tobacco Survey (GATS) was implemented in 2009[7], and the Global Youth Tobacco Survey (GYTS) was implemented in 2000 and 2007[8].
Protect people from tobacco smoke	- A 100% smoke-free policy was enacted in 2006 for all enclosed public places, workplaces, and public transportation. In addition, outdoor areas of healthcare and educational facilities are smoke-free. - Data suggests that while secondhand smoke exposure in the workplace is rare, a large proportion of adults and youths are exposed to secondhand smoke in their homes.
Offer help to quit tobacco use	49% of Uruguayan adult smokers made an attempt to quit smoking during the past year; however, only 8% who attempted to quit were able to remain smoke-free. 46% of teenage smokers want to quit smoking, and 56% tried to stop smoking during the past year. - Increasing access to tobacco cessation support has been identified as a priority by the national tobacco control program. - Studies show that receiving a physician's advice can increase the odds that a smoker will succeed in quitting smoking. One medical school pilot-tested a medical training program on tobacco cessation counseling. Physicians that received the training reported having greater knowledge of evidence-based tobacco cessation treatments, and increased intentions to

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[6] World Health Organization. (2009). MPOWER Brochure. http://www.who.int/tobacco/mpower/flyer/en/index.html

[7] World Health Organization. Global Adult Tobacco Survey (GATS), 2009.

[8] World Health Organization. Global Youth Tobacco Survey (GYTS), 2007

MPOWER component	Progress in Uruguay
	provide tobacco use treatment to their patients.
	• Noticing the rising use of mobile phones among young adults, a community center in Montevideo has created an automated text message program to help smokers through the process of quitting smoking. The program has been inexpensive to implement and well-liked by participants, and 28% of participants are smoke-free after eight weeks.
Warn about the dangers of tobacco	• Uruguayan law requires warning labels with graphic images of tobacco-related health problems to cover 80% of the surface of cigarette packages. • A national anti-smoking media campaign is ongoing, and surveillance data indicate that the majority of adults and youths have seen the campaign's health messages. • 67% of youths report having learned about the dangers of smoking in school during the past year. • 98% of adults are aware that smoking causes serious illness.
Enforce bans on tobacco advertising, promotion, and sponsorship	• Uruguay's federal law bans all forms of tobacco advertising, promotion, and sponsorship, except for advertising and displays of tobacco products in stores.
Raise taxes on tobacco products	• Uruguay's tobacco taxes have increased in recent years, but several other countries in the Americas have considerably higher taxes (Chile, Cuba and Venezuela). • Many Uruguayan politicians have publicly voiced their opposition to raising taxes of any type, including tobacco taxes.

Case Study Worksheet #2

Complete the questions below. *(Please note that answers are provided in italics.)*

1. **Create a program goal.**

   Examples:
   - *Reduce adult smoking prevalence.*
   - *Reduce youth smoking prevalence.*
   - *Reduce the prevalence of exposure to secondhand smoke among all Uruguayans.*
   - *Increase access to smoking cessation services.*

2. **Develop long-term objective(s) to achieve the program goal.**

   - *In 7 years, 80% of homes in Montevideo will have a household no-smoking policy.*
   - *In 7 years, 100% of the workplaces will be in compliance with the national smoke-free policy.*

3. **Identify and rank contributing factors.**

	More Important	**Less Important**
More Changeable	• *Lack of access to tobacco cessation support* • *Low success rate for those who attempt to quit smoking*	• *Lack of education / awareness of the dangers of tobacco* • *(Lack of) exposure to anti-smoking media messages*
Less Changeable	• *Low cost of cigarettes / need to raise tobacco taxes* • *Accessibility*	• *Exposure to tobacco marketing* • *Socially acceptable and desirable to smoke* • *Secondhand smoke exposure in homes*

4. **Develop an intervention.**

   a. **Determine a health strategy or strategies (behavioral/educational, environmental and/or policy).**

   Behavioral/educational (e.g. provide training to healthcare providers on tobacco cessation to improve their skills in counseling their patients, campaigns to raise awareness of smoking cessation options among smokers and/or physicians)

OR
Policy (e.g. a policy requiring insurance plans to pay for tobacco cessation counseling and medications)

b. Summarize existing programs focusing on your highest-priority contributing factors.

- *A pilot program in Montevideo has trained healthcare providers on tobacco cessation.*
- *An anti-smoking media campaigns has been effective in raising awareness of the dangers of tobacco use among adults and youths.*
- *A community center developed a text messaging program to help smokers quit.*

c. Compare and critique interventions. (Use criteria such as culture, target audience, organizational capacity, program goals, objectives, and delivery methods). Describe your conclusions below.

Criteria	*Intervention: Training healthcare providers on tobacco cessation*	*Intervention: Text-messaging support for quitting smoking*	*Intervention: Anti-smoking media campaign*
Target Audience	*-: Indirect effect on target population*	*+: Potential to reach young adults – a key population*	*+: Ability to reach entire population or specific high-risk groups*
Program goals/ objectives	*+: Promotes cessation*	*+: Promotes cessation*	*+: Promotes cessation*
Culture	*+: Pilot was successful; many smokers want to quit*	*+: Mobile phone usage has grown in Uruguay; text messaging is popular among youths*	*+: Similar intervention already working in Uruguay*
Cost	*-: Initial investment in training could be significant; however, the intervention will lead to a lasting effect on healthcare delivery*	*+: Limited financial resources required, aside from training and staff time for setup*	*+: Inexpensive to reach large audience*

Criteria	Intervention: Training healthcare providers on tobacco cessation	Intervention: Text-messaging support for quitting smoking	Intervention: Anti-smoking media campaign
Organizational Capacity	-: Need outside clinical expertise	-: Requires training of staff	+: Capacity already exists

d. **Adapt or create an intervention. (Describe the intervention you have selected, including the rationale.)**

Examples:
- *The national tobacco control program already has the expertise to carry out a successful media campaign – the existing campaign has been effective in raising awareness about the dangers of tobacco use among youths and adults. The next step could be expanding the media campaign to raise awareness about the benefits of quitting smoking, and encourage Uruguayans to talk to their healthcare providers about quitting smoking.*
- *In light of the success of the text-messaging campaign in Montevideo, the program could be expanded to a larger audience. Text messaging would provide smoking cessation support whenever a smoker is ready to quit, and could support those in rural areas, or those who do not see a doctor regularly. However, mobile phones may not be available to lower-income smokers. The text-messaging technology could be difficult to learn and burdensome for the tobacco control program to administer.*
- *Although the physician education program does not directly affect the target audience of youth and young adults, the program will increase all Uruguayan smokers' access to smoking cessation support. Outside expertise from medical may be needed for curriculum development or delivery, which could require a heavy investment of time and money.*

5. **Develop at least one medium-term and one short-term objective(s) that describe what the program will accomplish.**

- *In the coming year, the six-month quit rate among Uruguayan adults attempting to quit smoking will increase from 8% to 16%.*
- *Over the next two years, a medical education program will increase physicians' awareness of smoking cessation treatment options.*
- *By 2015, a medical training program will educate at least 75% of Uruguay's graduating medical students on smoking cessation treatment*

6. **Develop an implementation plan.**

a. **Describe potential barriers for implementation and how to address them.**

- **Quit-smoking media campaign:**

- o ***Resistance to changing the existing campaign:*** *Use surveillance data to illustrate the need to support smokers in quitting and increase the proportion of smokers that are able to quit successfully.*
        - o ***Limited resources:*** *focus on media channels that will have the highest impact with the most viewers; use less expensive forms of media; reduce the intensity (# of messages) or duration (# of months) of campaign.*
    - **Text to Quit program:**
        - o ***Staff concerns about learning the text messaging technology****: collaborate with leaders from the successful community center program to develop an effective protocol, and to train staff involved with implementation.*
        - o ***Limited resources:*** *provide data from the community center on the small amount of resources required, OR provide services at a lower intensity (fewer messages) or for a shorter duration.*
    - **Medical training program:**
        - o ***Lack of medical expertise to develop a training curriculum:*** *create partnerships with organizations that can assist with curriculum development and program implementation*
        - o ***School administrators are concerned that there is no time within the existing medical training program to address smoking cessation:*** *Provide data on the large impact of smoking on lung cancer. Cite studies that illustrate the importance of healthcare providers' advice in encouraging smokers to quit.*

b. **Develop a Work Plan (refer to attached worksheet; answers will vary).**

c. **Develop a Communication Plan (refer to attached worksheet; answers will vary).**

7. **Plan for evaluation: List how you should begin planning for evaluation while you are planning and designing your program.**

    Answers will vary; participants should consider:
    - *Do you have the resources to do an evaluation?*
    - *What component of the program will you evaluate?*
    - *What do you want to know about your program? For example, do you want to learn whether all the activities were implemented as planned?*
    - *When will you evaluate the program? For example, will you evaluate the program one year after implementation, several years after implementation?*
    - *What type of data will you need to address the evaluation questions?*
    - *Do you have a system or tools for collecting the data? Where, how and when will you collect the data?*
    - *Do you have a system or tools for organizing and interpreting the data?*

Work Plan

Long-term Objective(s):

_____

Medium-term Objective(s):

_____

Short-term Objective(s):

_____

Project Manager: _____   **Today's Date:** _____

Task	Person Responsible	Resources	Time Estimate	Due Date	Date Completed

Communication Plan

What needs to be communicated?	Who is the target of the communication?	What is the purpose of the communication?	How often is the communication needed?	What is the method or location of communication?	Who is responsible for creating/ delivering the communication?	When should the communication take place?