

Strengthening Field Epidemiology Training Programs' Noncommunicable Disease Capacity:

A. Hypertension Case Studies for Hands-on Application

Overview

The CDC Office of Global Noncommunicable Diseases, in collaboration with the CDC Foundation and partners, has developed case studies designed for field epidemiologists to practice public health problem-solving by applying epidemiologic skills to field scenarios. They are ideal for reinforcing the principles and skills already covered in lectures or background reading. These case studies have gone through the CDC clearance and are available upon request via globalncds@cdc.gov

No.	Case Studies	Learning Objectives	Topics Covered
1	Effectiveness of a Clinic-based Intervention Designed to Reduce Undiagnosed Hypertension	<ul style="list-style-type: none"> • Describe the importance of diagnosing suspected hypertension • Describe why clinic visits provide an opportunity for ruling out or making a hypertension diagnosis • Understand the causes of under-diagnosis and formulate an intervention for improvement • Evaluate the effectiveness of an intervention to address under-diagnosis • Interpret the results from the study and identify implementation successes and challenges • Develop public health recommendations based on study findings 	<ul style="list-style-type: none"> • Noncommunicable disease (NCD) burden • Selecting interventions • Evaluate the effectiveness of the intervention <ul style="list-style-type: none"> - Effect size calculation - Multivariable regression • Interpretation of findings • Making use of study findings
2	Missed Opportunities for Hypertension Control	<ul style="list-style-type: none"> • List modifiable risk factors for cardiovascular diseases • Outline the practical steps in planning and conducting a population-based survey • Compare methods that might be used to select the sample for a population-based survey • Calculate the sample size for a population-based survey • Discuss the need to apply weights to a population-based survey • Interpret and share survey findings with others who might use the data to improve the health of the community 	<ul style="list-style-type: none"> • NCD burden • Descriptive Studies <ul style="list-style-type: none"> - Planning a survey - Sampling - Sample size calculation - Taking the survey - Weighting survey data - Summarize and interpret the findings - Dissemination of findings
3	Hypertension Screening and Treatment: Getting Started	<ul style="list-style-type: none"> • Describe the recommended treatment for hypertension • List criteria that can be used to guide the selection of health conditions (such as hypertension) for screening • Describe the system used to monitor a clinic-based hypertension screening and treatment program, including the 	<ul style="list-style-type: none"> • NCD burden • Describe a surveillance system • Descriptive analysis • Summarize findings • Implications of the findings <ul style="list-style-type: none"> - Intervention - Monitoring the intervention

No.	Case Studies	Learning Objectives	Topics Covered
		<p>flow of information, data collection tools, and people involved</p> <ul style="list-style-type: none"> • Calculate performance measures that can be used to monitor a clinic-based hypertension screening and treatment program • Assess the system used to monitor a clinic-based hypertension screening and treatment program and discuss ways to improve it 	
4	Evaluation of Hypertension Screening and Treatment Efforts: Information for Improvement	<ul style="list-style-type: none"> • Create graphs of epidemiologic data that convey the intended message to the viewer • Describe the cascade of hypertension control (including hypertension awareness, treatment, and control) in a community • List common steps in the evaluation of a public health program • List stakeholders for the evaluation of a clinic-based hypertension screening and treatment program • List sources of information and activities that might inform the evaluation of a clinic-based hypertension screening and treatment program • Discuss ways to improve clinic-based hypertension screening and treatment efforts (and associated program monitoring) 	<ul style="list-style-type: none"> • NCD burden • Evaluation of a clinic-based hypertension management system

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