

Case Studies for Hands-on Application

B. FETP NCD COVID-19 Case Studies

Overview

The following case studies developed in response to the growing need to examine comorbidities during the COVID-19 investigation are available online at the TEPHINET site. Faculty can use these to integrate NCDs in their core FETP training.

To download these materials, please:

1. Click this link [Field Epidemiology Training Program \(FETP\): Noncommunicable Disease COVID-19 Toolkit | TEPHINET](#)
2. Look under Files- top right-hand,
3. Choose a preferred language (Arabic, English, French, Portuguese, or Spanish)
4. Open the folder to download related files.

Level	Case Studies	Learning Objectives	Epidemiology Topics Covered
Intermediate	Investigating a Post-Pandemic Ischemic Stroke Surge at Capitol City Hospital—Collecting, Reviewing, Interpreting, and Summarizing Data on Stroke and Associated CVD Risk Factors Part A – Investigating Stroke Cases Part B – Investigating Risk Factors		
	Part A – Investigating Stroke Cases	<ul style="list-style-type: none"> • Describe and interpret public health surveillance and clinical data using core principles of descriptive epidemiology (for example, by clinical characteristics, time, place, person). • Identify the potential effects of pandemic-related health care service delivery interruptions on people living with noncommunicable diseases (NCDs) and NCD risk factors. • Apply the essential outbreak investigation steps to explore a potential increase in stroke, including reviewing a clinical case definition against medical records to confirm diagnosis. • Develop targeted public health messaging or informational resources based on hospital-based surveillance data, patient interviews, and other resources about cardiovascular disease (CVD) prevention and control. 	<ul style="list-style-type: none"> • NCD burden during an outbreak • Descriptive data analysis by person, place, and time • Summarize findings • Develop communication and public health messaging and dissemination strategies

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	Part B – Investigating Risk Factors	<ul style="list-style-type: none"> • Describe and interpret public health surveillance and clinical data using core principles of descriptive epidemiology (for example, clinical time, place, person). • Identify the potential effects of pandemic-related health care service delivery interruptions on people living with noncommunicable diseases (NCDs) and NCD risk factors. • Apply the essential outbreak investigation steps to explore a potential increase in stroke, including reviewing a clinical case definition against medical records to confirm the diagnosis. 	<ul style="list-style-type: none"> • NCD burden during an outbreak • Plan and conduct a study <ul style="list-style-type: none"> - Descriptive study - Data collection - Medical records - Questionnaire • Data analysis by NCD risk factors • Summarize findings and draw conclusions
Advanced	An Epidemiological Study to Examine Stroke Hospitalizations During the COVID-19 Pandemic: Planning and Conducting Analysis Part A – Study Design Part B – Performing Analyses		
	Part A – Study Design	<ul style="list-style-type: none"> • Examine reported findings of stroke in patients with SARS-CoV-2 infection. • Develop a research hypothesis guided by the PICOT (population, intervention, comparator, outcome, and time frame) format for a study that uses medical records of patients admitted to the hospital. • Construct a data analysis plan modeled on CDC FETP guidance documents. • Assess study limitations, alternative designs, and supporting data. 	<ul style="list-style-type: none"> • NCD burden during an outbreak • Plan and conduct an analytical epidemiological study <ul style="list-style-type: none"> - Case-control study - Data Analysis Plan - Research Question - Sample size - Study sample, case definition, inclusion/exclusion criteria - Data collection and variables for analysis • Study limitations and alternative designs
	Part B – Performing Analyses	<ul style="list-style-type: none"> • Examine reported findings of stroke in patients with SARS-CoV-2 infection. Compare the associations between two major stroke types and COVID-19. • Construct a data analysis plan modeled on CDC FETP guidance. • Select and perform relevant statistical tests to compare the 	<ul style="list-style-type: none"> • Analytic methods and statistical tests for a case-control study <ul style="list-style-type: none"> - Univariate and bivariate analysis • Calculating measures of association with odds ratios and 95% confidence interval

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		<p>case and control subjects, focusing on odd ratios, confidence intervals, and correlations. Formulate a plan for determining and handling confounding variables.</p> <ul style="list-style-type: none"> • Assess study limitations and supporting data. 	<ul style="list-style-type: none"> • Assess and interpret potential confounders • Examine and interpret potential effect modification • Study limitations and alternative designs

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