



# Elevating frontline epidemiology

OPEN-SOURCE ANALYTICS:  
TOOLS, TRAINING, AND SUPPORT

A NONPROFIT ORGANIZATION

[WWW.APPLIEDEPI.ORG](http://WWW.APPLIEDEPI.ORG)

[CONTACT@APPLIEDEPI.ORG](mailto:CONTACT@APPLIEDEPI.ORG)

# WHO WE ARE

## ELEVATING FRONTLINE EPIDEMIOLOGY

Applied Epi is a nonprofit organization helping the frontline public health workforce achieve advanced, versatile, and cost-effective analytics capabilities.

Our [Epidemiologist R Handbook](#) has helped 120,000 people learn R (25,000 in LMICs).

## FRONTLINE PRACTITIONERS AND R EXPERTS

Our team has 150 practitioner experts in 33 countries around the world. We know the challenges of ground-level public health practice, and can help you transition to R.

## HARNESSING THE POWER OF R

- Free to use
- Open-source and customizable
- Brilliant data visualization
- Reproducible analysis and collaboration
- Dashboards and automated reports
- Advances equity in public health

*"With R I can do anything. What took 10 hours in Excel, I do in less than 1 hour."*

- Haitian epidemiologist using our Epi R Handbook

*"Full workflow integration, including maps. I couldn't have done this in SAS."*

- US CDC epidemiologist

# WHAT WE OFFER

## A COMPREHENSIVE SUITE OF SERVICES



### R TRAINING

Live courses  
Online tutorials  
Train-the-trainer



### SUSTAINED SUPPORT

Online Q&A forum  
R help desk  
Mentorship program



### OPEN SOURCE TOOLS

The Epidemiologist R Handbook  
R packages for public health  
Situation report templates

# COURSE OFFERINGS

## INTRODUCTION TO R FOR APPLIED EPIDEMIOLOGY OVERVIEW

**Target audience:** Public health practitioners, applied and field epidemiologists, data managers, researchers, and healthcare workers

**Objectives:** Participants learn to use R with typical datasets for applied epidemiology using an outbreak investigation case study

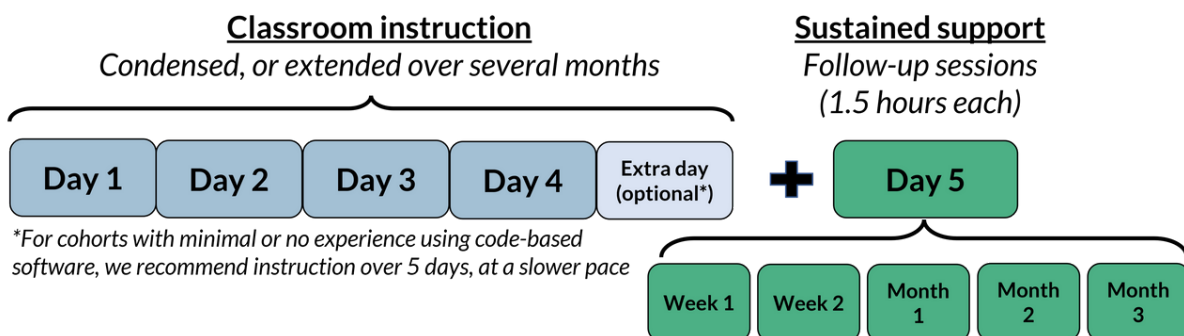


**Duration:**

- 35 hours (5 days) of synchronous content
- For cohorts with minimal or no experience using code-based software (e.g. SAS or Stata), we recommend a slower pace with one extra day of instruction time

**Format:** Remote and in-person options available

- Part 1. Classroom instruction: 8 x 3.5-hour modules, with format as either:
  - Condensed: 4 full consecutive days
  - Extended: Half-day modules across several months
- Part 2. Sustained support: 5 x 1.5-hour group support sessions, in the weeks and months following instruction, to help you apply R in your work context



**Activities:** Lecture, coding demonstration, case study, exercise tutorials, and break-outs

**Topics:** Data cleaning, transforming and joining data, data visualization and graphics, basic GIS mapping, basic statistics, descriptive summary tables, reproducible automated reports (see curriculum details)

**Online community:** Participants register on the Applied Epi Community website, which is a venue for Q&A during the course, and provides a supportive network afterwards.

# INTRODUCTION TO R FOR APPLIED EPIDEMIOLOGY

## GROUP PRICING

We are a nonprofit organization offering courses to benefit practitioners around the world.

If your organization is unable to afford the prices below, please contact us to discuss your eligibility for reduced prices.

We maintain a ratio of 1 instructor for every 6 participants. Prices listed are not inclusive of local applicable tax.

### Price by size of cohort (USD)

| Cohort size                                                                                         | 1-6               | 7-12               | 13-18              | 19-24              | 25-30              | 31-36              | 37-42              |
|-----------------------------------------------------------------------------------------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Total price for cohort</b><br><i>(per-participant cost if class is full, for reference only)</i> | \$5990<br>(\$998) | \$11700<br>(\$975) | \$17300<br>(\$961) | \$22900<br>(\$954) | \$28500<br>(\$950) | \$34100<br>(\$947) | \$39500<br>(\$940) |

### Optional Extras

|                                                                                    |        |        |        |        |        |        |        |
|------------------------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|
| <b>Extra day (slower pace) for cohorts new to coding*</b>                          | \$612  | \$1156 | \$1700 | \$2244 | \$2788 | \$3332 | \$3876 |
| <b>Extended (part-time) format</b><br><i>(instructors online between sessions)</i> | \$612  | \$1156 | \$1700 | \$2244 | \$2788 | \$3332 | \$3876 |
| <b>Course is adapted to your data</b>                                              | \$3060 | \$3060 | \$3060 | \$3060 | \$3060 | \$3060 | \$3060 |
| <b>Extra 1.5-hour group support session</b>                                        | \$153  | \$289  | \$425  | \$561  | \$697  | \$833  | \$969  |

\*Recommended for cohorts with minimal experience using code-based software (e.g. SAS or Stata)

### Price comparison

More affordable\*, taught by frontline practitioners, equipping participants for practice

|                                   | Applied Epi<br>(12 participants)                        | UCL      | LSHTM         | Jumping<br>Rivers (profit) | Imperial<br>Univ. | ThinkR<br>(profit) |
|-----------------------------------|---------------------------------------------------------|----------|---------------|----------------------------|-------------------|--------------------|
| <b>Daily cost per participant</b> | \$195                                                   | \$202    | \$325         | \$340                      | \$481             | \$681              |
| <b>Principal Audience</b>         | Public health practitioners and applied epidemiologists | Research | Public health | General audiences          | General audiences | General audiences  |

\*Prices sourced from institution websites as of 01/2022. Contact institutions directly for official quotes.

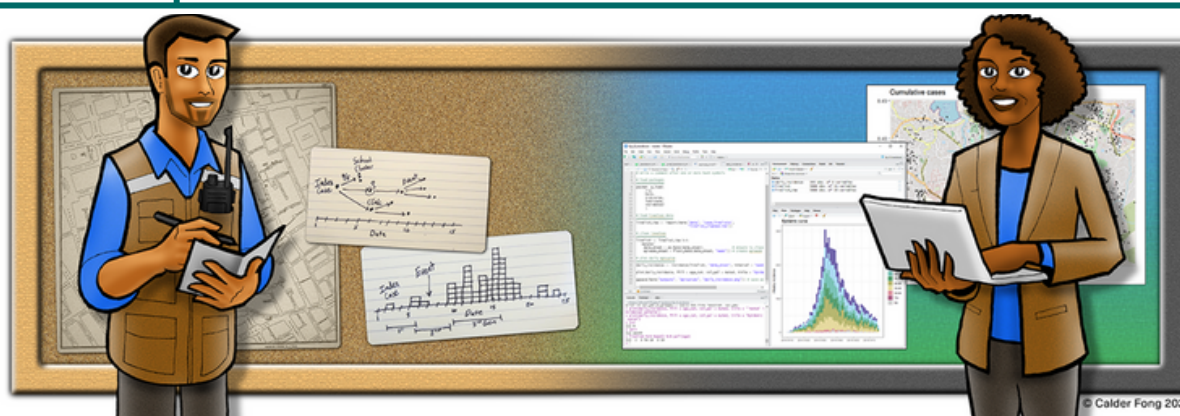
# INTRODUCTION TO R FOR APPLIED EPIDEMIOLOGY

## CURRICULUM DETAILS

Curriculum can be adjusted to customer needs and is subject to change.

Each module lasts approximately 3.5 hours. Two modules can be arranged in 1 day

|                               |                                                                                                                                                             |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pre-course preparation</b> | Installation of R, RStudio, and R packages; pre-course survey                                                                                               |
| <b>Module 1</b>               | About R, tidy data, R projects and scripts, R syntax, importing data                                                                                        |
| <b>Module 2</b>               | Core R functions in tidyverse/dplyr for data cleaning (e.g. deduplication, filtering rows, selecting and creating new columns), handling dates, piping data |
| <b>Module 3</b>               | Intro to data visualization with ggplot2 ("grammar of graphics" syntax, making epidemic curves, histograms, scatter/bar/line/box/heat plots)                |
| <b>Module 4</b>               | Transforming data with pivots, joins, and groups; ordinal variables/factors                                                                                 |
| <b>Module 5</b>               | More data visualization (e.g. basic GIS mapping, dual-axis plots)                                                                                           |
| <b>Module 6</b>               | Basic statistics, summary tables, and intro to R markdown automated reports                                                                                 |
| <b>Module 7</b>               | Automated reports with R markdown                                                                                                                           |
| <b>Module 8</b>               | Finalize outbreak case study, how to get help with R code, closing                                                                                          |
| <b>Sustained support</b>      | 5 group support sessions (1.5-hours each) in the weeks and months after instruction, to help participants apply new R skills to their work context.         |



# ADVANCED R WORKSHOPS

These 1-day workshops focus on advanced R techniques. An advanced beginner or intermediate competency in R is a prerequisite. Most students who successfully complete our “Introduction to R for Applied Epidemiology” course are prepared to enroll in these workshops.

The following topics are available, each topic can be covered in one 7-hour day. Other topics can be considered upon request:

- Advanced data visualization with R's ggplot2 package
- Advanced statistics and regression modeling in R
- Advanced automated reports with R Markdown
- Advanced GIS with R
- Advanced data management and task iteration with R
- Dashboards with R Markdown or with R Shiny
- R and databases
- Survey analysis with R
- Collaboration and version control with R, Git, and GitHub

## Price by size of cohort (USD)

| Cohort size                                                                                         | 1-6               | 7-12              | 13-18             | 19-24             | 25-30              | 31-36              | 37-42              |
|-----------------------------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|
| <b>Total price for cohort</b><br><i>(per-participant cost if class is full, for reference only)</i> | \$2800<br>(\$467) | \$4900<br>(\$408) | \$7200<br>(\$400) | \$9200<br>(\$383) | \$10900<br>(\$363) | \$12500<br>(\$347) | \$13900<br>(\$331) |

## Price comparison

More affordable,\* taught by frontline practitioners, equipping participants for practice

|                                    | Applied Epi<br>(12 participants) | LSHTM | Jumping Rivers<br>(profit) | RITME<br>(profit) |
|------------------------------------|----------------------------------|-------|----------------------------|-------------------|
| <b>Daily price per participant</b> | \$408                            | \$455 | \$455                      | \$625             |

\*Prices sourced from institution websites as of 01/2022. Contact institutions directly for official quotes.

## CONTACT US:

CONTACT@APPLIEDEPI.ORG

WWW.APPLIEDEPI.ORG

