Elevating frontline epidemiology

Training, tools, and support: Analytics with R

A nonprofit organization

www.appliedepi.org
contact@appliedepi.org
A COMPLETE ECOSYSTEM OF R TRAINING AND SUPPORT

Practical training courses with epidemiologist instructors

Synchronous (virtual) with 1-on-1 tutoring and follow-up support
1,500 epis at 350 agencies have taken our 40-hour intro course, including at US CDC, WHO, MSF, national & local agencies, & FETPs

"I've taken several R trainings - this is the BEST!"  - US CDC, Epidemic Intelligence Service (EIS) officer

In English, French, Portuguese, Spanish, Swahili, Ukrainian & more...

Enroll in private or public cohorts; or try our free online tutorials

The gold standard reference book

For 750,000 users, our FREE Epi R Handbook is the “go-to” with 4,000 daily views

“A one-stop shop. The epidemiologist’s greatest companion.”  - Epidemiologist, Nigeria CDC

Available in 8 languages!

24/7 multilingual R Support Desk

Timely calls with epidemiologist R technicians - used by WHO, MSF, Uganda Ministry of Health for Ebola response, and hundreds more.

"Help that was fast and high quality - this was a life saver!"  - Epidemiologist, Doctors without Borders (MSF)

Contact us for details. Also, join thousands in our FREE Q&A forum!

The grassroots movement leading public health’s transition to R

Meet our team of 175 applied epidemiologists with R expertise in 50 countries worldwide. See our job postings, join our forum, or email us to get involved!

“By epis, for epis” - we built this ecosystem so that R adoption is led by ground-level users.

"Applied Epi addresses those day-to-day challenges."  - Mentor, Liberia Field Epidemiology Training Program (FETP)

We deliver training every day: High-impact, high-quality, and at-scale.

"I feel that I got a new superpower!"  - Field Epidemiologist, Nigeria CDC


**COURSE: INTRODUCTION TO R FOR APPLIED EPIDEMIOLOGY**

Practical R for **day-to-day tasks**, and **1-on-1 meetings** with epidemiologist instructors

"The best online training I have ever had"  
- UK health agency epidemiologist

"Having an epidemiologist who has **experience in the field**, who has **passed through those challenges**, sit down with you ...it makes learning R simple."

- Epidemiologist, African Field Epidemiology Network (AFENET)

**CURRICULUM DETAILS**

**Duration**: 40 hours  
(21-hour version available with Modules 1-6)

**Format**: Synchronous, virtual or in-person  
10 modules of 3.5 hours each

**Languages**: English, French, Spanish, Swahili, Ukrainian, Russian & others

**Activities**: Live lecture and coding demos, exercises using outbreak case studies, immediate feedback with 1-on-1 meetings

**Post-course**: 24/7 R Support Desk

**Data used**: Case linelists, lab, & hospital data

**Eligibility**: Comfort using Excel and exposure to software like SPSS or EpilInfo; coding experience helpful but not required

<table>
<thead>
<tr>
<th><strong>Pre-course - Installation support</strong></th>
<th>1-on-1 calls to troubleshoot installation of R, RStudio, and R packages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Module 1 - Basic R syntax</strong> (3.5 hours)</td>
<td>R coding basics, use of RStudio projects, importing datasets</td>
</tr>
<tr>
<td><strong>Module 2 - Data cleaning</strong> (3.5 hours)</td>
<td>Clean a case linelist with &quot;tidyverse&quot; functions using &quot;pipes&quot; to handle rows, columns, dates, duplicates, and to recode values</td>
</tr>
<tr>
<td><strong>Module 3 - Data cleaning part 2</strong> (3.5 hours)</td>
<td>More complex data cleaning: handle missing values, logical recoding, age categories, and applying changes across columns</td>
</tr>
<tr>
<td><strong>Module 4 - Summary tables</strong> (3.5 hours)</td>
<td>Group and summarise with the janitor, dplyr, and gtsummary packages; add appealing formatting with flextable package.</td>
</tr>
<tr>
<td><strong>Module 5 - Data visualisation</strong> (3.5 hours)</td>
<td>Use the ggplot2 package to make plots of all types; adjust colors, scales, themes, highlights, dynamic labels and captions</td>
</tr>
<tr>
<td><strong>Module 6 - Troubleshooting errors &amp; getting help</strong> (3.5 hours)</td>
<td>Identify common mistakes and solutions; learn to get help from a community forum by posting a “reproducible example”</td>
</tr>
<tr>
<td><strong>Module 7 - Automated reports</strong> (3.5 hours)</td>
<td>Learn R markdown to generate Word, PDF, and HTML reports with figures and plots that update automatically</td>
</tr>
<tr>
<td><strong>Module 8 - Transforming data</strong> (3.5 hours)</td>
<td>Join datasets together; pivot data structure; ordinal factors</td>
</tr>
<tr>
<td><strong>Module 9 - Public health plots</strong> (3.5 hours)</td>
<td>The nuances of epi week calculations and producing epidemic curves, heat plots, demographic pyramids; a GIS demo</td>
</tr>
<tr>
<td><strong>Module 10 - COVID-19 case study</strong> (3.5 hours)</td>
<td>Make an outbreak automated report on a new dataset</td>
</tr>
</tbody>
</table>

**1-on-1 tutoring**  
Unlimited coaching on course material

**ENROLL**

Book a **private cohort** for your team
- You decide the schedule  
- 10 seat minimum  
- US $1175 per seat*
- Email contact@appliedepi.org to book

Join a **public cohort**
- See our schedule to book a seat  
- Scholarships available  
- US $975 per seat*

*Contact us for discount eligibility. Fees apply if paying by card.

"It’s made a big impact... now R was adopted as the tool of choice by the Ministry... and all epidemiological reports are automated."

- Uganda Ministry of Health, data analytics & emergencies coordinator

**Applied Epi** is an independent, nonprofit organization dedicated to increasing access to world-class instruction.  
100% of fees sustain our operations and provide discounts for lower-income epidemiologists.
“A few years back we did a training from a software company - this is an order of magnitude more useful because you're teaching what we actually do.”
- Epidemiology Program Manager, UK

“The methodology is top notch and I learned more with this online course than with other face-to-face courses.”
- Epidemiologist, Philippines Ministry of Health

“100 times better than what was offered during my MSc at a top-tier university!”
- Epidemiologist, US local public health agency

“In a world so inequitable, R is a great equaliser. I feel empowered by this training.”
- Epidemiologist, NCDRC, Country of Georgia

“Full workflow integration, including maps. I couldn’t have done this in SAS!”
- Epidemiologist & GIS specialist, US CDC

“One of the most applicable, intense trainings I've done. I can use this!”
- Epidemiologist, Tribal Epidemiology Center - Southern Plains/Oklahoma Area

**COLLABORATIONS**

**TEPHINET**
Training Programs in Epidemiology and Public Health Interventions and Applied Epi deliver R training and support to dozens of Field Epidemiology Training Programs (FETPs) and their alumni.

**MSF**
Doctors without Borders / Médecins Sans Frontières
Applied Epi has trained epidemiologists across all of MSF’s operational centres, and has provided emergency R Support Desk for outbreak response support.

**WHO**
The World Health Organization and Applied Epi train dozens of country and regional offices, and support emergencies in Ukraine, DRC, Somalia, and Uganda

**CSTE**
The Council of State and Territorial Epidemiologists (USA) and Applied Epi work together to train public health epidemiologists in R at the thousands of US state, local, tribal, and territorial public health agencies.

**GOARN**
The Global Outbreak Alert and Response Network is a WHO-affiliated network of institutions which respond to acute public health emergencies around the world. Applied Epi has been a member since July 2022.

**Github**
Github Social Impact empowers nonprofits and the greater social sector, and has supported Applied Epi’s efforts to promote open-source software.

**R Consortium**
The R Consortium promotes the R language and develops the technical and social infrastructure required for the R ecosystem. They support Applied Epi’s programs to build a community of public health R users.

---

**TESTIMONIALS**

---

**WE HAVE TRAINED OVER 1,500 EPIDEMIOLOGISTS AT 350 AGENCIES**

**Multinational:** The World Health Organization (WHO), Doctors without Borders (MSF), European CDC (ECDC), International Federation of the Red Cross (IFRC), Resolve to Save Lives (RSL), Vital Strategies, Children US CDC Central Asia Office, The CDC Foundation

**National agencies:** Albania, Algeria, Angola, Armenia, Austria, Belgium, Belize, Benin, Bermuda, Burundi, Cambodia, Cameroon, Canada, Cayman Islands, Congo, Democratic Republic, Croatia, Denmark, Djibouti, Dominican Republic, Ireland, Egypt, Ethiopia, Fiji, Finland, France, Georgia, Ghana, Gambia, Germany, Ghana, Guadalupe, Guatemala, Guyana, Honduras, Indonesia, Ireland, Italy, Kazakhstan, Kenya, Kosovo, Kyrgyzstan, Latvia, Lebanon, Liberia, Libya, Luxembourg, Macedonia, Malaysia, Malta, Mexico, Moldova, Montenegro, Mozambique, Myanmar, Namibia, Netherlands, Nigeria, North Macedonia, Norway, Pakistan, Palestine, Panama, Peru, Philippines, Poland, Portugal, Romania, Rwanda, Saint Helena, Ascension, and Tristan da Cunha, Saudi Arabia, Serbia, Slovenia, South Africa, Spain, Sweden, Tajikistan, Thailand, Togo, Tunisia, Turkey, Turks and Caicos Islands, Uganda, Ukraine, United Kingdom, United States (CDC), Uzbekistan, Viet Nam, Virgin Islands, British, Zambia

**North America Subnational:** California DPH, New York DOH, Colorado DPH, Arizona DOH, Oregon Health Authority, Kentucky DPH, Maryland DOH, Alaska DHSS, Hawaii DOH, Illinois DPH, Indiana DPH, Kansas DHE, Massachusetts DPH, Michigan DDHS, New Jersey DOH, Pennsylvania DOH, Tennessee DOH, Virginia DOH, Wisconsin DHS, District of Columbia (D.C.) DOH, US Virgin Islands DOH, Fraser Health (BC), New York City DOHMH (NY), Los Angeles County (CA), Alameda County (CA), San Diego County (CA), Sonoma County (CA), Santa Cruz County (CA), Riverside County (CA), Calaveras County (CA), San Mateo County (CA), Merced County (CA), Pasadena County (CA), Solano County (CA), Long Beach (CA), Trinity County (CA), Salt Lake County (UT), Maricopa County (AZ), Seattle & King County (WA), Spokane Region (R Health District (WA), Southern Nevada Health District (NV), St. Louis County (MO), Madison & Dane County (WI), Quin County (MT), Travis County (TX), Tarrant County (TX), Washington County (OR), East Shore District (MD), El Dorado County (CO), Genesee County (MI), Grand Traverse County (MI), Ottawa County (MI), Ingham County (MI), Barry-Eaton District (MI), Jackson County (MI), Fairfield County (CT), Jefferson County (OR), Johnson County (KS), Mexico City Public Health Services (Mexico), Island Health Services, Canada, Navajo Area Indian Health Service, Southern Plains Tribal Epi Center (SPTECHB)

**Other Subnational:** Including District Hospitals in Gisenyi, Nyamwezi, and Gihundwe (Rwanda), Kampala Capital Authority (Uganda), Greater Accra (Ghana), Liberia counties of Lofa, Rivercess, and Nimba (Liberia), Ukrainian Oblasts of Kyiv, Zhytomyr, Khmelnytskyi, Odesa, Vinnytsia, Chernihiv, Ivano-Frankivsk, Ternopol, Chernivhiiv (Ukraine), Northern Territories (Australia), Department of Health (Karakalpakstan, Uzbekistan), Andijan AIDS Center (Uzbekistan), Almaty City AIDS Center (Kazakhstan), Dushanbe City (Tajikistan), Osh (Kyrgyzstan), Bishkek (Kyrgyzstan), Sird (Kashmir, Balochistan (Pakistan), Kala Azar MRC (Pakistan), Muzaffarpur (Pakistan), Bihar (Pakistan), Punjab (Pakistan), Rawalpindi (Pakistan), Lahore (Pakistan), Karachi (Pakistan), Faisalabad, Peshawar (Pakistan), Muzaffarabad (Pakistan), Hyderabad (Pakistan), Bais City (Philippines), Santa Maria (Philippines), Metro Manila (Philippines), Bakan District (Pursat, Cambodia), Banteng Regency (Indonesia), Samarinda Health District (Indonesia), Yogyakarta City (Indonesia), Public Health Scotland (UK), Public Health Wales (UK), Ustekcyj kraj (Czechia), Bavaria (Germany), Stuttgart (Germany), Baden-Wuerttemberg (Germany), Hessian State (Germany), Bocum (Germany), Cuxhaven (Germany)

---

**We Have Trained Over 1,500 Epidemiologists at 350 Agencies**

---

**Field Epidemiology Training Programs (FETPs):** The African Field Epidemiology Training Network (AFENET), United States Epidemic Intelligence Service (EIS), European CDC Fellowship Programme (EPIET/EUPHEM), The Mediterranean and Black Sea Programme for Intervention Epidemiology Training (MedPRIET), Central Asia Field Epidemiology Training Program (FETP), Central America FETP, United Kingdom, Nigeria, Liberia, The Gambia, Zambia, Rwanda, Namibia, Peru, Philippines, Saudi Arabia

---

**WHO**
The World Health Organization and Applied Epi train dozens of country and regional offices, and support emergencies in Ukraine, DRC, Somalia, and Uganda

**CSTE**
The Council of State and Territorial Epidemiologists (USA) and Applied Epi work together to train public health epidemiologists in R at the thousands of US state, local, tribal, and territorial public health agencies.

**GOARN**
The Global Outbreak Alert and Response Network is a WHO-affiliated network of institutions which respond to acute public health emergencies around the world. Applied Epi has been a member since July 2022.

**Github**
Github Social Impact empowers nonprofits and the greater social sector, and has supported Applied Epi’s efforts to promote open-source software.

**R Consortium**
The R Consortium promotes the R language and develops the technical and social infrastructure required for the R ecosystem. They support Applied Epi’s programs to build a community of public health R users.
ADVANCED R COURSES

Contact us for the availability of these courses:

- Introduction to GIS with R
- Statistics and regression with R
- Advanced R Markdown: Looping reports and making dashboards and slides
- Task iteration and functional programming
- Git and GitHub with R: Collaboration and version control
- Relational database interactions with R
- Survey analysis
- Introduction to Shiny dashboards
- Time series analysis with R

Duration: Each workshop consists of 7 hours of instruction (two half-day sessions)

Format: Remote or in-person

Eligibility: Participants must have R skills at least equivalent to our intro course

“This course is superly structured, focused, and delivered by experienced epidemiologists to provide context to the code.”
- Epidemiologist, Public Health Wales

Bookings: Available for private cohorts (minimum 10 participants)
Cohorts for the general public are posted on our website.

Price per seat: US $450 - Contact us for discount eligibility*

Compare us to others
Our advanced courses are more affordable and are taught by frontline practitioners.

<table>
<thead>
<tr>
<th></th>
<th>Applied Epi</th>
<th>LSHTM</th>
<th>Jumping Rivers (for profit)</th>
<th>RITME (for profit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily price per person*</td>
<td>$450</td>
<td>$485</td>
<td>$530</td>
<td>$625</td>
</tr>
</tbody>
</table>

*7 hour day. Prices sourced from institution websites as of 11/2023. Contact institutions directly for official quotes.

CONTACT US:

www.appliedepi.org
@appliedepi
contact@appliedepi.org
newsletter