



# **R-HTA in LMICs**

Increasing accessibility to R for HTA in LMICs

# R-HTA: a brief background

- [R-HTA](#) is a consortium focused on popularising the use of R for health economics and health technology assessment (HTA)
- The main body of R-HTA includes members primarily from the Americas and UK, who have diverse experience in government (including [NICE](#) in the UK), academia, and industry
- The aims of R-HTA, in general, are to:
  - Provide discussion on the many R [packages](#) available to HTA analysts;
  - Assist users to get the most out of R for cost-effectiveness analysis; and
  - Host [presentations](#) and [public discussions](#) to facilitate the development of R for HTA
- **‘R-HTA in LMICs’ is the LMIC-focused chapter of this consortium that aims to introduce and showcase the strengths of R specifically to LMIC analysts and health care institutions**

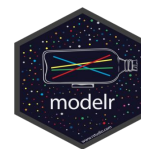
# The Problem: why an LMIC chapter?

- Microsoft Excel and TreeAge remain popular software for HTA modelling, especially in LMICs.
  - Many standard software used for HTA and health economics require costly subscriptions
    - [R is a free](#), open source software - an obvious benefit in LMICs
- Because LMICs are moving towards the principles of Universal Health Coverage (UHC) there will be an increased demand for complex HTA methodology, especially in oncology and other rare diseases
  - This will make the need for more efficient and comprehensive software for HTA within LMICs gradually more necessary
- Most LMIC institutions do not offer in-depth HTA tutorials in R
  - There is a need to provide accessible workshops that showcase the strengths of R while also providing online tutorial and coding resources for LMIC analysts

# But why R?



- ***R scales efficiently***
  - Especially true when an HTA model becomes increasingly complex compared to other [commonly used software](#)
- ***R has an established user-base***
  - There are several health economics packages which make coding in R more user-friendly:
    - [BCEA](#), [hesim](#), [heemod](#), and [dampack](#)
- ***R ensures reproducibility***
  - Models can easily and safely be hosted and shared via services such as [Github](#)
  - Using '[version control](#)', updates do not 'break' models
  - With [RMarkdown](#) and [Shiny](#), analysts can deliver transparent, reproducible reports and interactive models



# Our Vision and Value Proposition

The **aim** of the *LMIC chapter* is to bridge the gap in the use of R software among HTA analysts in LMICs

## ***How?***

- By hosting both presentation-focused and tutorial-focused R workshops

## ***Short term:***

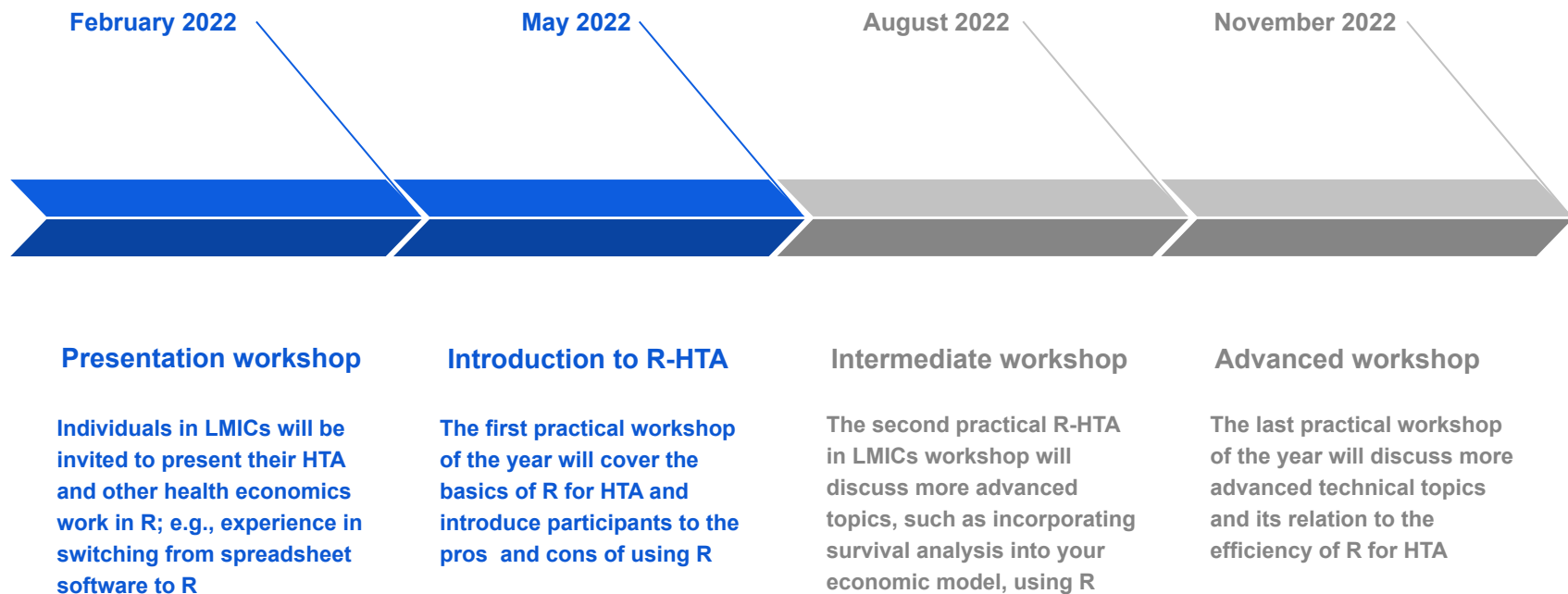
- Host R-HTA in LMICs events and encourage LMIC Masters and PhD students at universities and members of other partnership organisations to present their R related HTA work

## ***Long term:***

- Introductory, intermediate and advanced workshops, applied within an LMIC context, will focus on in-depth topics, for example: R-HTA models in interactive formats using Shiny (click [here](#) for details)

# Timeline

**4 workshops** will be held on an annual basis, split by a quarterly cycle



# Target Market

## ***Who do we want to reach?***

- HTA/Health Economics/Biostatistics students in LMICs
  - E.g., HTA analysts as well as Masters and PhD students in LMIC institutions
- Universal Healthcare Coverage committees
  - E.g., Health Technology Assessment units, National Health Insurance
- Healthcare insurers
  - E.g., Medscheme, Discovery Health Insurance (in South Africa); Government Employees Medical Scheme (GEMS)
- Pharmaceutical companies operating in LMICs
- Individuals from *The Professional Society for Health Economics and Outcomes Research* (ISPOR) LMIC chapters

# Topic areas for February

- ***Some suggested topics for the presentation segment:***

- Covid-19 related modelling using R
- Translation of model built in Excel into R
- First time experiences with R
- Useful [frameworks](#) for R-HTA modelling in LMICs
- Expected difficulties in making R more accessible to LMIC analysts (potential panel discussion)

- ***Some expected topics for the tutorial segments:***

- Integrating survival modelling and decision models in R
- Presenting interactive HTA models using Shiny
- Performing parameter sensitivity analysis in R
- Using R for reproducibility: Creating secure, online repositories for your models and reports



# The Team: R-HTA in LMICS

## Founding Members of R-HTA in LMICs



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