How do we make sure monitoring data is collected and analysed most efficiently?

Udo Wittmann
Biostatistician

The MER cycle

Untreated

Mapping
What is the spread of infection?
Collecting infection data

Treatment
Based on spread
Collecting treatment data

Coverage
How many did we reach?
Collecting treatment data

Impact
What was the effect of the treatment?
Collecting infection data

Training of the surveyors

• In-country surveyors
• Discussion of protocol
• Pilot surveys
• Supervision by SCI staff
• (Re-)training in use of equipment and procedures
• Capacity building with Ministry of Health staff

Training for mapping data collection

Training for coverage survey data collection

Simulating coverage survey interviews
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Data collection on smartphones

SurveyCTO app
Monitoring the data submissions during a survey

Coverage survey with smartphone, Malawi 2016

Data Quality Assessment (DQA)

In-country capacity building
Training in Cleaning and Analysis of Data in Excel, Niger 2017

Optimising analysis

```r
# Graph: months_school
ggplot(child_months_school.vil) +
  geom_point(aes(x = factor(District),
               y = Prop),
             col = District),
  position = position_jitter(w = 0.1, h=0.005),
  size = 3,
  alpha = 0.9) +
  geom_point(data = child_months_school.dis,
             aes(x = factor(District), y = Prop),
             colour = "black",
             shape = "+",
             size = 9) +
  labs(title = "Months of school attended in 2015-2016 school year \n       in District mean in black"),
  x = "District",
  y = "Percentage of children interviewed") +
  facet_wrap(~ months_school, ncol=2) +
  scale_y_continuous(labels = percent)
```

Refining code for data analysis, to increase efficiency

Improving Health,
Unlocking Potential

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