



Exploring Geo-Spatial Patterns of Private Sector FP Use and Child Health: Guinea

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Avenir Health



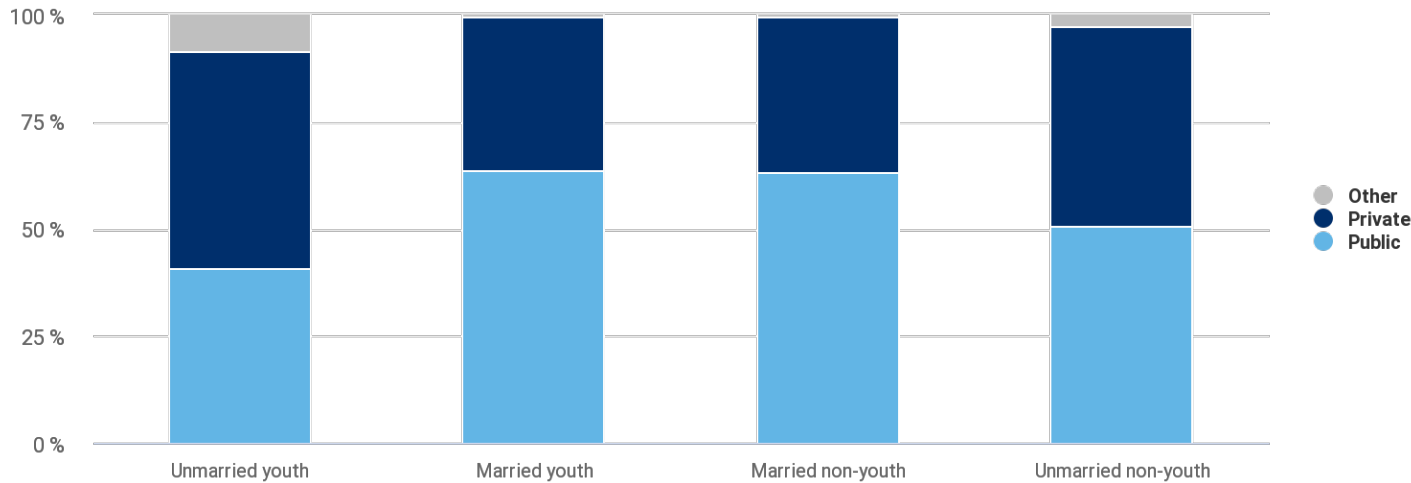
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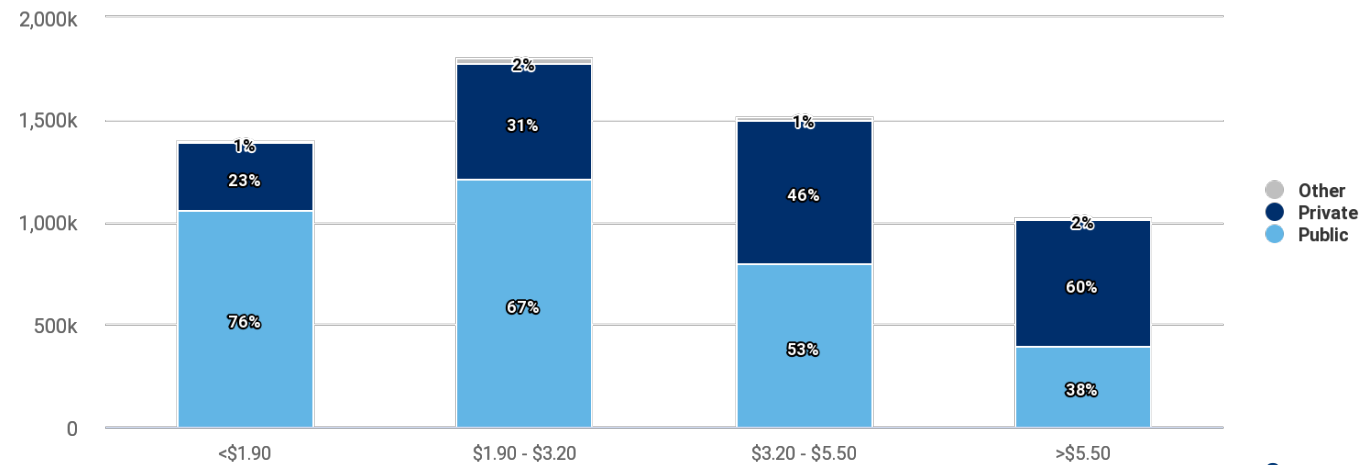


Private Sector use patterns often explored by socio-demographics

Source mix by age and marital status



Users by income and source (2020)



But what about geographic patterns of use across a county?



Addressing this gap: small area estimation

- Statistical techniques used to estimate the value of parameters over a small geographic area – smaller than sample size would allow using typical survey analysis methods
- Produces a **modeled surface** of spatial distribution of a given parameter
- Estimates here use prevR – package for R developed to estimate HIV prevalence from DHS cluster data
- Utilizes DHS geospatial resources

See Larmarange and Bendaud (2014) for more details on prevR: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4247267/>



Why develop small area estimates?

- Creates visual representation of how concentrated or disperse private sector use is within a country
- Explore variations in patterns across countries
 - Role of private sector in peri-urban areas?
 - Role of private sector in larger vs small cities & towns
- Inform advocacy and planning



Initial scoping

- Exploration of DHS subnational data to determine potential countries for small area estimation
- Considerations for analysis:
 - Recent DHS with GPS dataset available
 - Variation in method sourcing (i.e. not heavily public-sector dominated like Senegal and Rwanda)



Available maps: Guinea

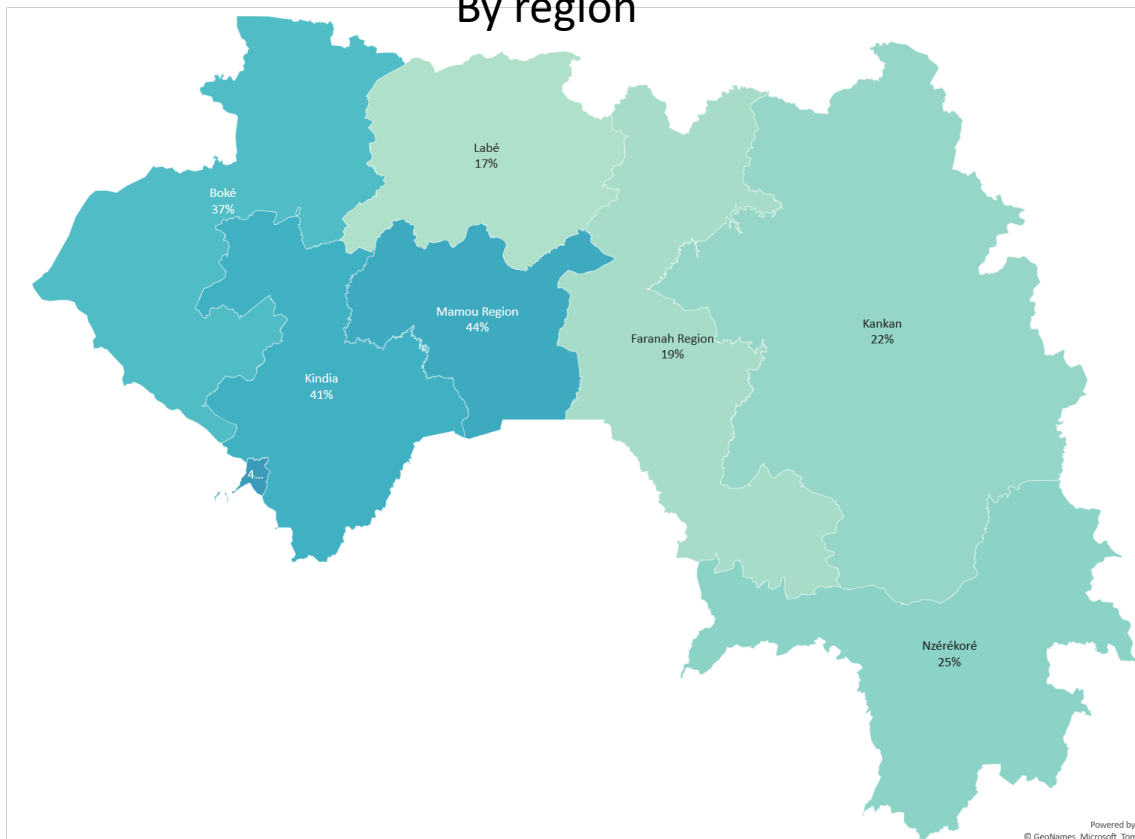
- **mCPR** = modern method users / all women
- **Private market share** = modern method users getting method from private sector / modern method users
- **Private prevalence** = modern method users getting method from private sector / all women
- **Unmet need**
- **Population of WRA**
- **Modern method users**
- **Private users**
- **Child health:**
 - **Prevalence of diarrhea/fever**
 - **Treatment seeking for diarrhea/fever**
 - **Private market share of diarrhea/fever treatment**
 - **Private prevalence of diarrhea/fever treatment**



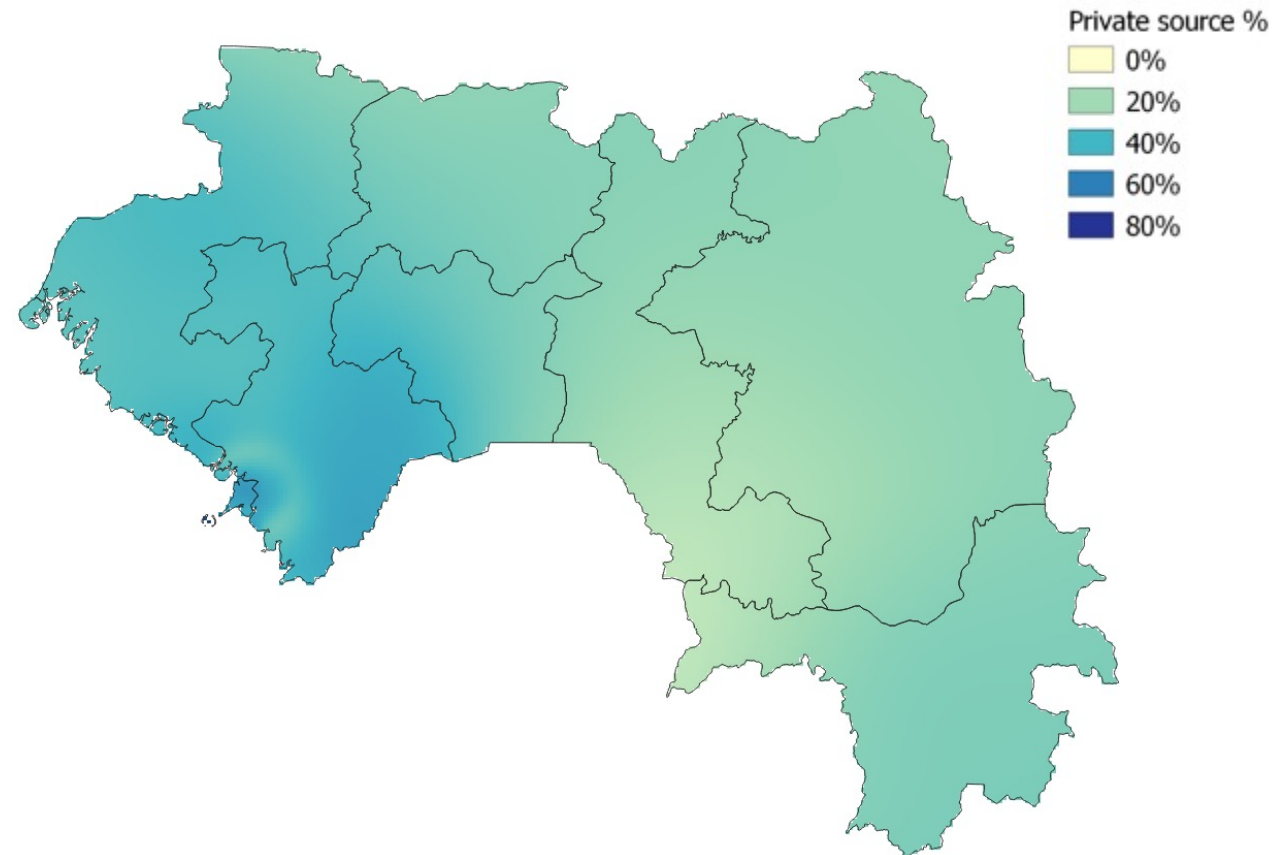
Guinea: sub-national variation in private sector use

Private market share: Percent of users getting their FP method from the private sector

By region



Small Area Estimate



Source: DHS 2018



Guinea: mCPR and private sector use

Private sector market share does not account for levels of mCPR; could have low mCPR but high private use or vice versa. Combining with mCPR gives a better sense of utilization of private services.

mCPR

Private market share

Private prevalence



Source: DHS 2018

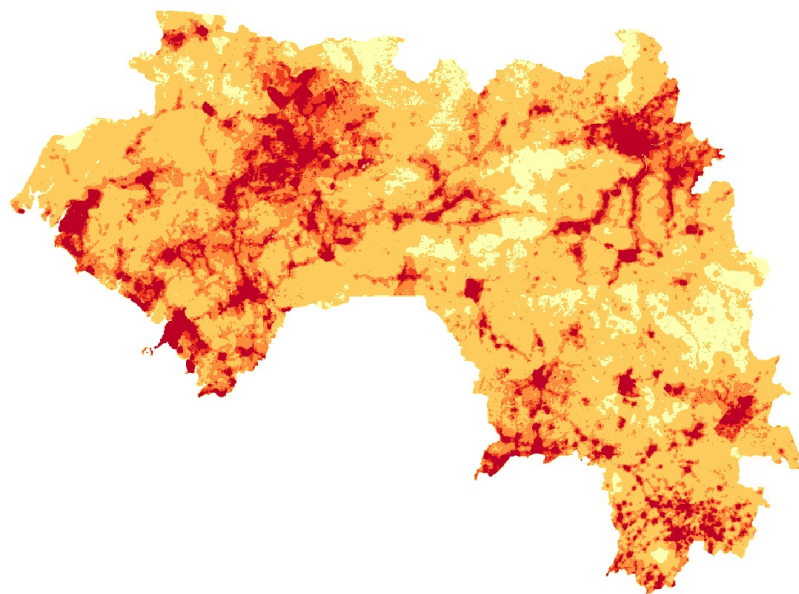




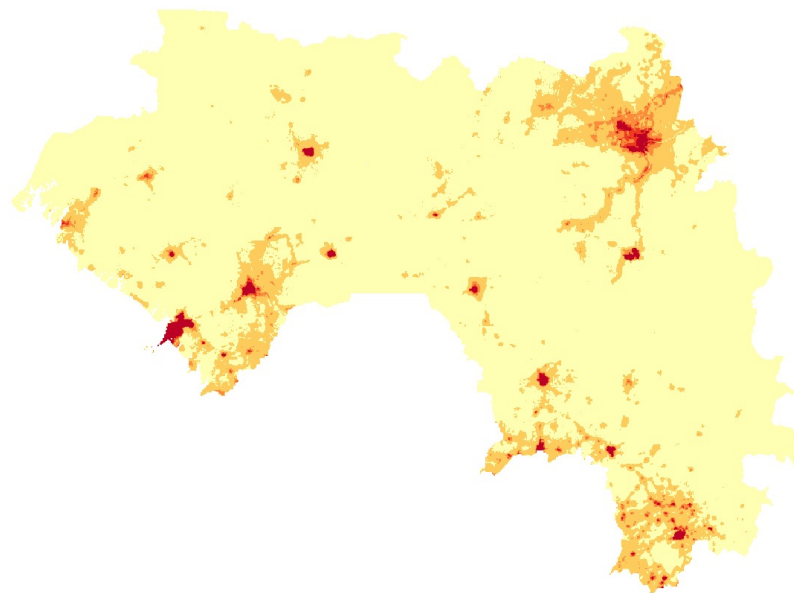
Guinea: women, users and private users

Absolute numbers useful to think about how to focus services and distribution of commodities

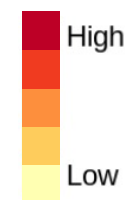
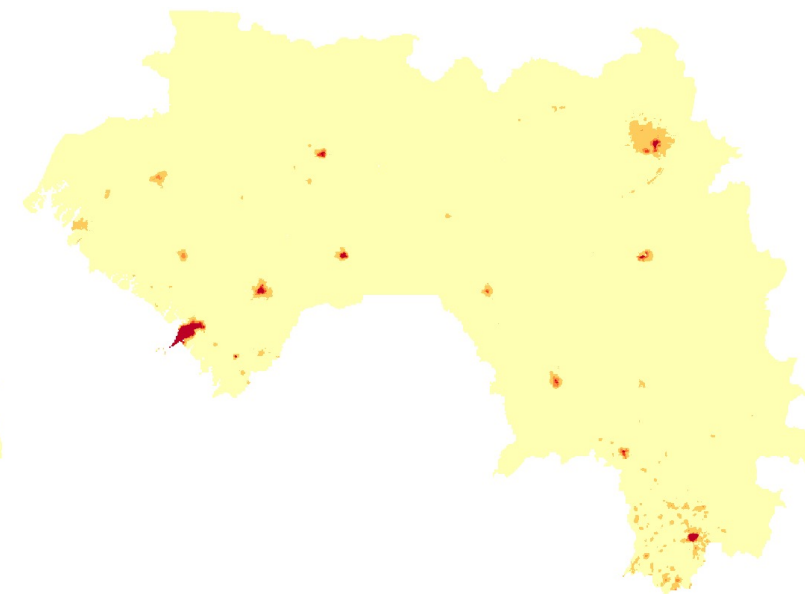
Population of women 15 - 49



Modern method users



Private users

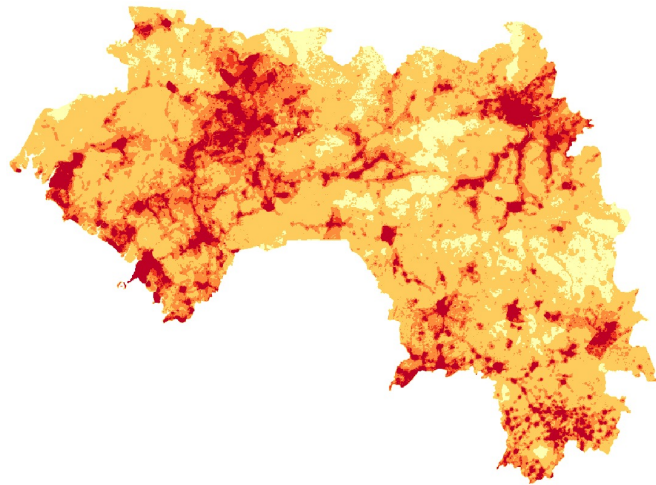


Source: DHS 2018, WorldPop

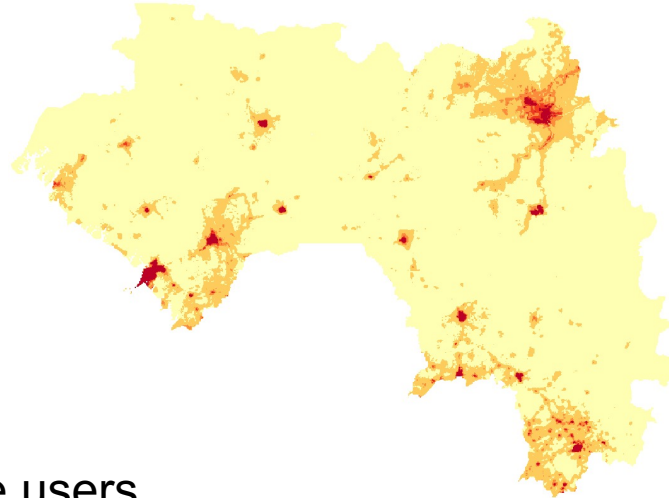


Guinea: women, users, unmet need, and public and private users

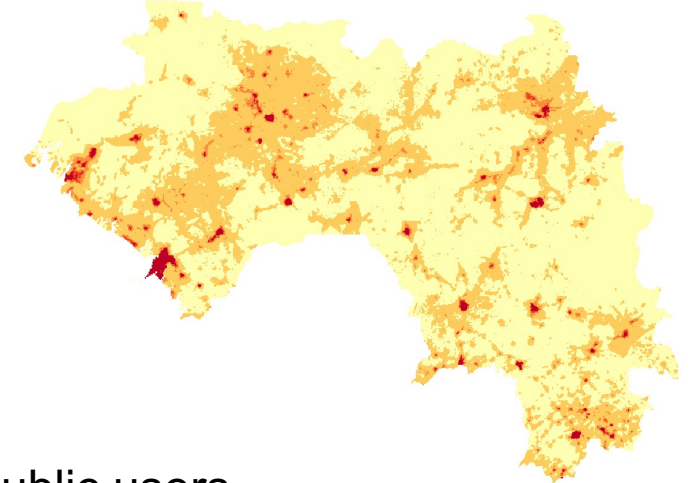
Population of women 15 - 49



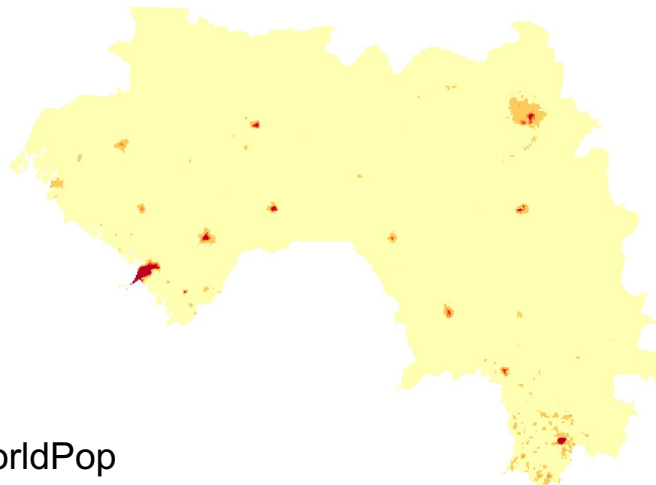
Modern method users



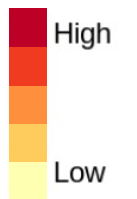
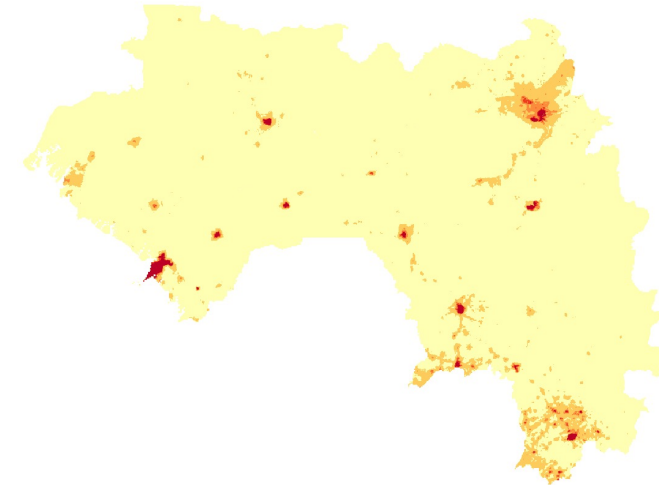
Unmet need



Private users



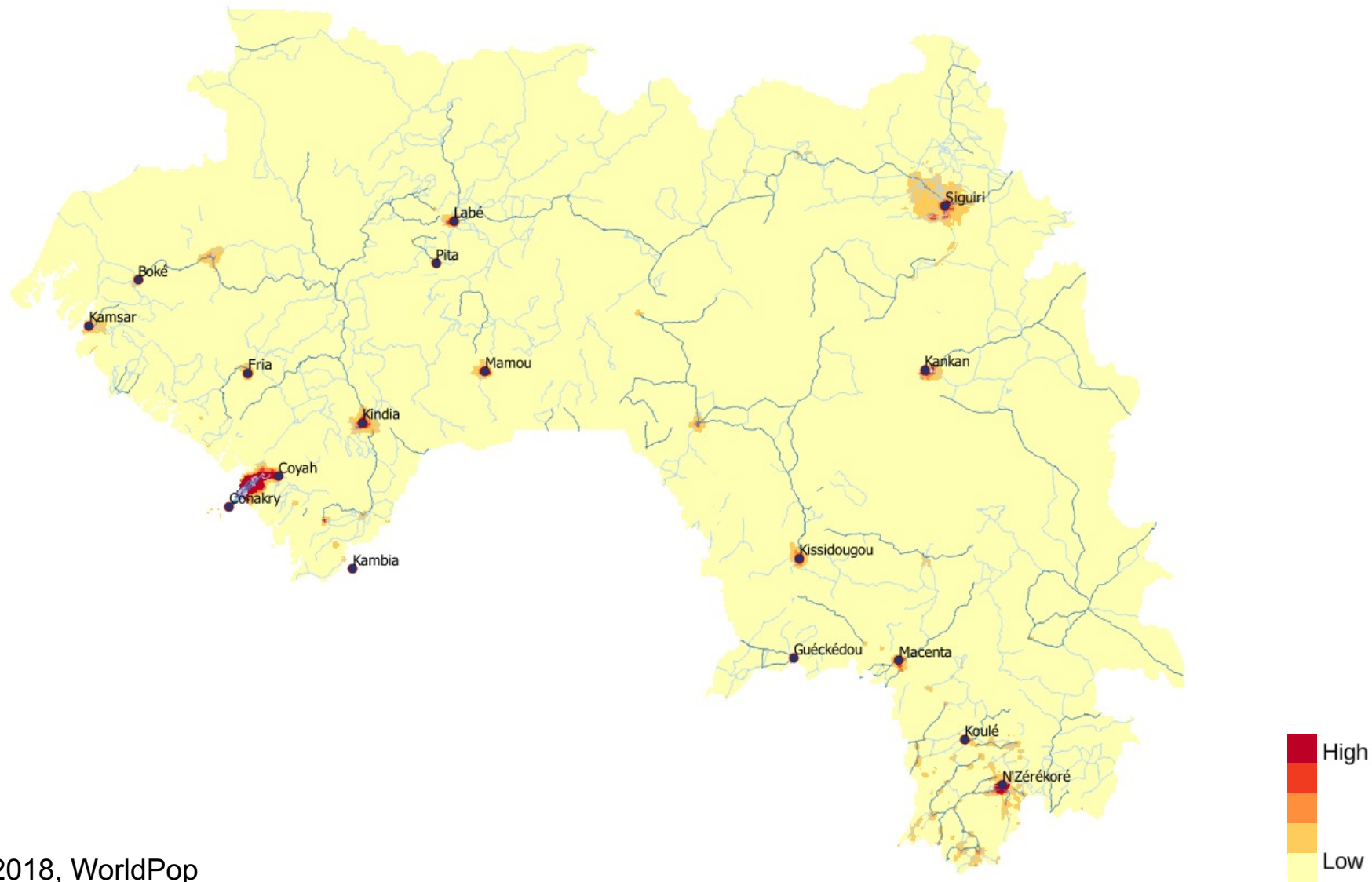
Public users



Source: DHS 2018, WorldPop



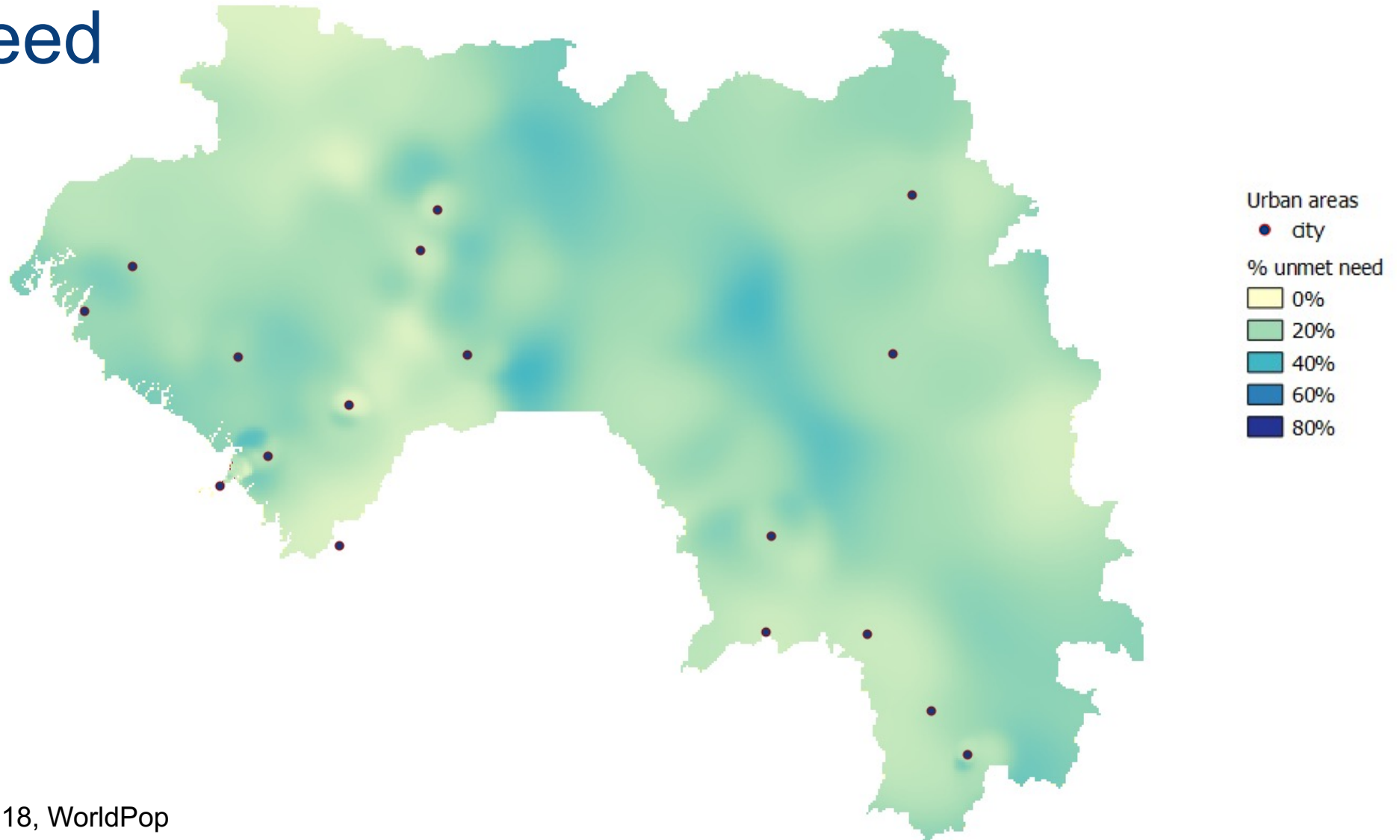
Guinea: Private users



Source: DHS 2018, WorldPop



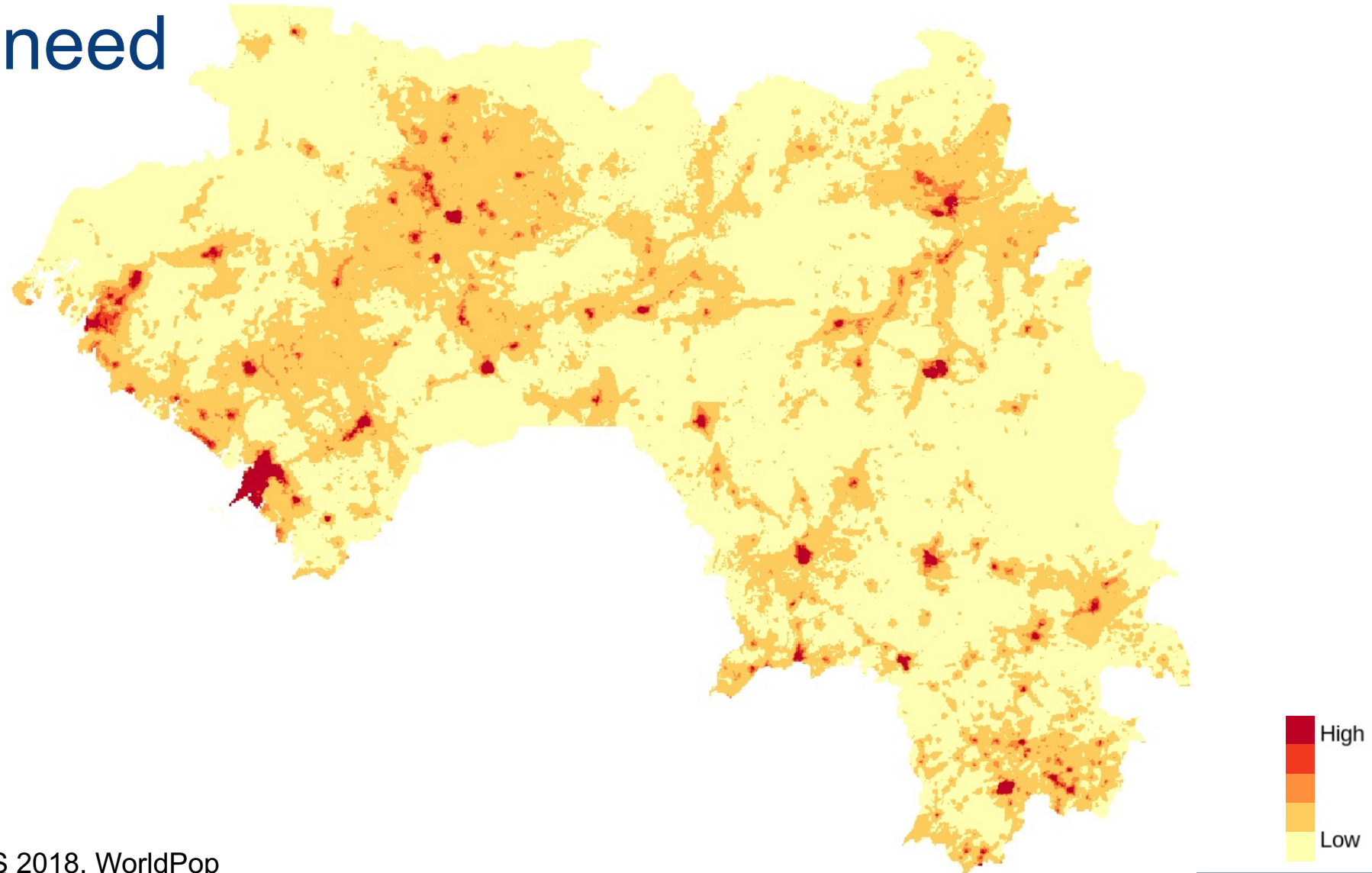
Guinea: Percent of women with unmet need



Source: DHS 2018, WorldPop



Guinea: Number of women with unmet need

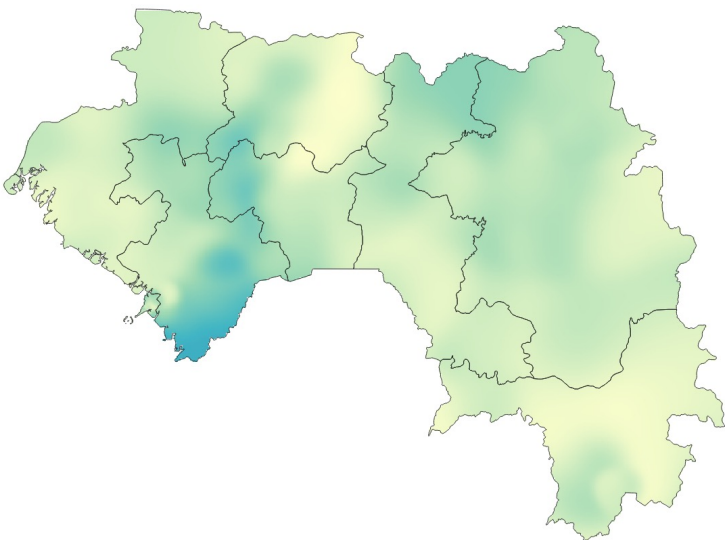


Source: DHS 2018, WorldPop



Guinea: Diarrhea treatment for children under 5 (last 2 weeks)

Diarrhea prevalence



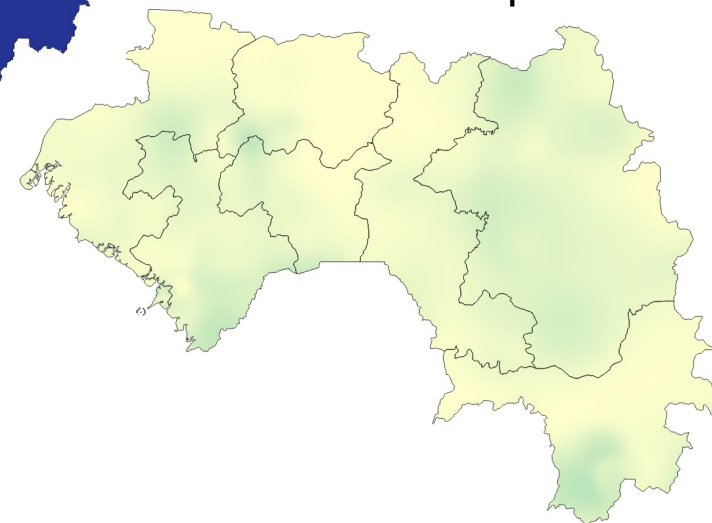
Treatment seeking



Private market share



Private treatment prevalence

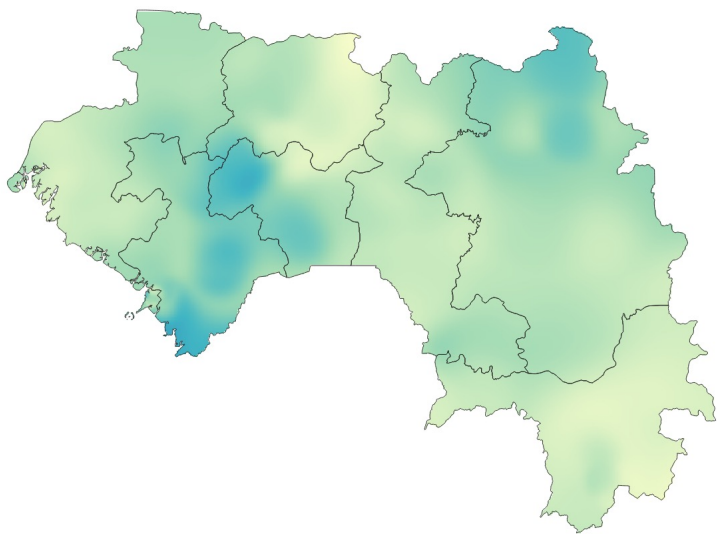


Source: DHS 2018

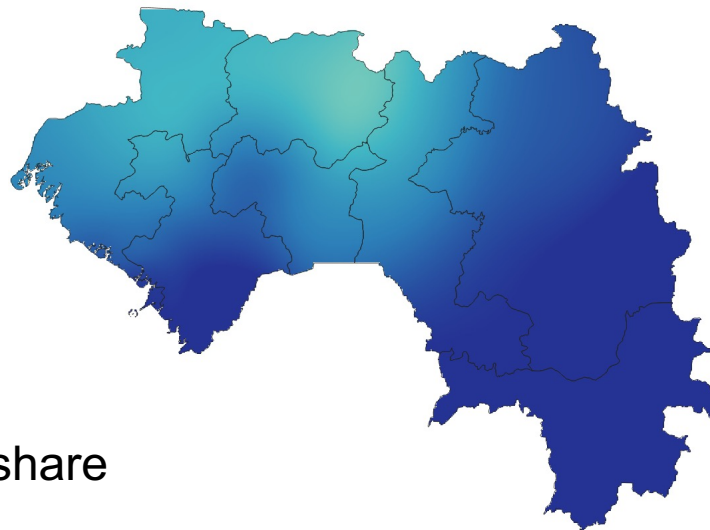


Guinea: Fever treatment for children under 5 (last 2 weeks)

Fever prevalence



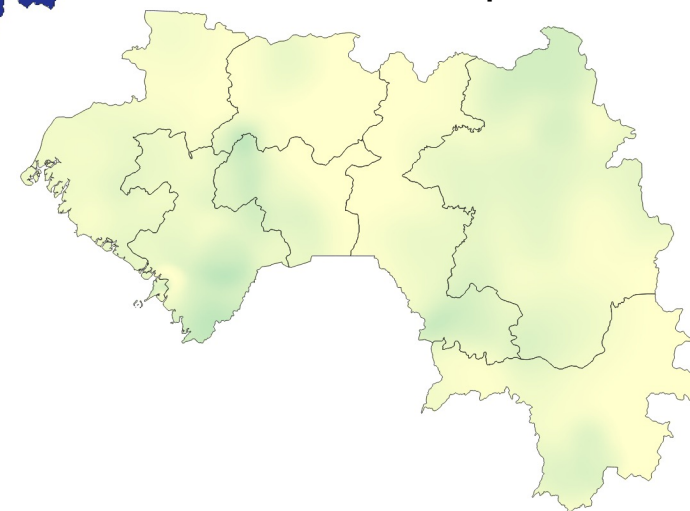
Treatment seeking



Private market share



Private treatment prevalence



Source: DHS 2018