

Publication**A malaria risk map of Kinshasa, Democratic Republic of Congo****JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 3433272**Author(s)** Ferrari, Giovanfrancesco; Ntuku, Henry M.; Schmidlin, Sandro; Diboulo, Eric; Tshefu, Antoinette K.; Lengeler, Christian**Author(s) at UniBasel** [Lengeler, Christian](#) ;**Year** 2016**Title** A malaria risk map of Kinshasa, Democratic Republic of Congo**Journal** Malaria journal**Volume** 15**Pages / Article-Number** 27

In Kinshasa, malaria remains a major public health problem but its spatial epidemiology has not been assessed for decades now. The city's growth and transformation, as well as recent control measures, call for an update. To identify highly exposed communities and areas where control measures are less critically needed, detailed risk maps are required to target control and optimize resource allocation.; In 2009 (end of the dry season) and 2011 (end of the rainy season), two cross-sectional surveys were conducted in Kinshasa to determine malaria prevalence, anaemia, history of fever, bed net ownership and use among children 6-59 months. Geo-referenced data for key parameters were mapped at the level of the health area (HA) by means of a geographic information system (GIS).; Among 7517 children aged 6-59 months from 33 health zones (HZs), 6661 (3319 in 2009 and 3342 in 2011) were tested for both malaria (by Rapid Diagnostic Tests) and anaemia, and 856 (845 in 2009 and 11 in 2011) were tested for anaemia only. Fifteen HZs were sampled in 2009, 25 in 2011, with seven HZs sampled in both surveys. Mean prevalence for malaria and anaemia was 6.4% (5.6-7.4) and 65.1% (63.7-66.6) in 2009, and 17.0% (15.7-18.3) and 64.2% (62.6-65.9) in 2011. In two HZs sampled in both surveys, malaria prevalence was 14.1 % and 26.8% in Selembao (peri-urban), in the 2009 dry season and 2011 rainy season respectively, and it was 1.0 % and 0.8% in Ngiri Ngiri (urban). History of fever during the preceding two weeks was 13.2% (12.5-14.3) and 22.3% (20.8-23.4) in 2009 and 2011. Household ownership of at least one insecticide-treated net (ITN) was 78.7% (77.4-80.0) and 65.0% (63.7-66.3) at both time points, while use was 57.7% (56.0-59.9) and 45.0% (43.6-46.8), respectively.; This study presents the first malaria risk map of Kinshasa, a mega city of roughly 10 million inhabitants and located in a highly endemic malaria zone. Prevalence of malaria, anaemia and reported fever was lower in urban areas, whereas low coverage of ITN and sub-optimal net use were frequent in peri-urban areas.

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