Prompt treatment with an effective antimalarial drug remains essential both to save lives and for effective malaria control. In July 2008, two years after changing first-line malaria treatment policy to artemeter lumefantrine (AL), the Kenyan Ministry of Health reported nationwide stock outs of the drug at public health facilities. Understanding the factors contributing to district level stock-outs and health worker coping mechanisms is critical in assessing the consequences of such stock-outs for effective case management. In August 2008, to investigate reported treatment practices at time of AL stock-out, semi-structured interviews were conducted with every health worker performing out-patient consultations in all public health facilities in Bondo district, Kenya (n=49). Four interviews were undertaken with key members of the District Health Management Team to explore factors underlying district level drug stock-outs. Health workers reported four main coping strategies for uncomplicated malaria: 1. prescription and dispensing of alternative ineffective antimalarials such as amodiaquine and sulfadoxine pyrethamine; 2. prescription and dispensing of second-line antimalarial drug (quinine); 3. prescription of antimalarials for purchase, particularly amodiaquine as it was affordable in the private chemists; 4. Purchase of AL in instalments from the private sector. The majority of coping strategies reported by health workers at a time of AL stock-outs severely compromises effective case management of malaria. The broader repercussions of these findings in terms of patient trust and use of the public health system, as well as implications for malaria control in light of the drive towards malaria elimination, are discussed.