

Strengthening lay health worker surveillance by establishing mobile phone-based communication network in Laos

¹ 琉球大学 医学研究科 寄生虫学・国際保健学講座

○野中 大輔¹

We conducted a study to assess the usefulness mobile phone-based communication network established between village health volunteers (VHVs) and their supervisors in a rural district of Laos, between 2009 and 2010. Mobile phones with pre-paid cards were distributed to 154 VHVs and 11 health professionals who supervise VHVs. VHVs were told to feel free to use a phone for their work. During the six months after the phone distribution, VHVs made 364 calls to supervisors: most common purpose for the calls was regular reporting (54.1%), followed by seeking advice on case management, vitamin A distribution, and delivery (20.6%). Supervisors made 478 calls to VHVs mainly for requesting regular report (44.6%) and informing in advance the schedules of a meeting, training, and outreach activity such as immunization and health check-up (32.2%). Compared to one month before the phone distribution, submission of regular report for vital event surveillance significantly increased from 51.0% to 80.6% ($p=0.04$). The district-wide, mobile phone communication network facilitated regular reporting, seeking advice, and informing schedule of various activities. The improved communication had potential to translate into better health outcomes among community people.

ラオス人民民主共和国中部における乾燥ろ紙血を用いた HBs 抗原調査：多段階層化収束抽出法による小児及び母親の陽性率推定

¹ ラオス人民民主共和国 保健省 国家検査疫学センター、² ラオス人民民主共和国 保健省 予防接種課、³ 東北大学大学院医学系研究科 微生物学分野、⁴ 国立国際医療研究センター 国際医療協力局

○Vongphrachanh Phengta¹、Xeuatvongsa Anonh²、押谷 仁³、蜂矢 正彦⁴

Background: While Lao PDR is considered hyperendemic for hepatitis B, the prevalence of hepatitis B has not been well investigated. To better understand disease epidemiology, prevalence should be estimated.

Materials and methods: We conducted a stratified, multistage, cluster sampling survey of hepatitis B surface antigen (HBsAg) positivity among children aged 5-9 years old and their mothers aged 15-45 years old. Participants were randomly selected from the central region of Lao PDR via probability proportionate to size sampling. Blood samples were collected onto filter paper, and subsequently analyzed using a chemiluminescent microparticle immunoassay.

Results: A total of 911 Mother-and-child pairs were sampled from 40 villages. We estimated the seroprevalence of HBsAg to be 2.1% (95% CI=0.8-3.4%) among children and 4.1% (95% CI=2.6-5.5%) in their mothers after taking into account the sampling design and the weight of each sample. There was a positive association between HBsAg positivity and surgical operations in mothers, and between the HBsAg status of mothers and their children's infection status.

Conclusions and recommendations: The present multistage, cluster sampling survey was successfully conducted. The results demonstrated that Lao PDR has a relatively lower HBsAg prevalence in the general population compared to surrounding countries. To ensure the comparability of the prevalence survey to other countries and to data collected in the future, rapid field tests are recommended for nationwide surveys.

共同研究者：駒田謙一、木多村知美、清原知子、脇田隆字、杉山真也、溝上雅史