# Abstract of Master's Dissertation

No.1

| Course | International Health Development | Name | Takumi Sakamoto |
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| Thesis Title | Effectiveness of Free Child Healthcare policy in reducing catastrophic health expenditure: a facility-based prospective study in Kwale County, Kenya | | |


**Background:** In the paradigm shift from Primary Health Care (PHC) to Universal Health Coverage (UHC), financial protection has been widely recognized its importance. Financial protection is often measured by incidence of catastrophic health expenditure (CHE). While indirect costs, such as transportation costs and income loss, are merely considered health expenditures, those costs exacerbate financial hardship. Especially, childhood hospitalization inflates indirect costs since it usually involves accompanying person(s). In Kwale County, Kenya, although Free Child Healthcare Policy is implemented, the Policy covers only direct costs. Thus, this study aims to assess the effectiveness of the Policy in reducing CHE considering the costs that are not covered by the Policy.

**Objectives:** The objective of this study is to assess the effectiveness of the Policy in reducing CHE by (i) comparing the difference in prevalence of CHE between factual (the current situation under the Policy) and counterfactual (the situation as if the Policy had not existed); (ii) exploring the determinants of CHE due to childhood hospitalization; and (iii) estimating the magnitude of indirect costs in health expenditure.

**Methods:** A facility-based prospective study was conducted in Kwale Sub-County hospital, Kenya. Sample size was calculated in terms of prevalence of households suffering CHE, considering non-response rates of 0.2 and withdrawal rate of 0.2 (n=72). All inpatients under five years of age were targeted. Newborns without any disease were excluded from the target. The question about household expenditures and health expenditures were asked in structured interviews with their family. To calculate the direct costs that were covered by the Policy, medical records were referred to. McNemar's test was conducted to compare the difference in prevalence of CHE between factual and counterfactual. To explore the factors associated with whether households undergo CHE, logistic regression was conducted. Descriptive analyses were conducted to assess the magnitude of indirect costs in health expenditure.

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**Results:** A total of 59 households having child inpatients participated in this study. The prevalence of CHE in counterfactual (72.9%) was significantly higher than that of CHE in factual (50.9%) (P<0.001). The results of logistic regression showed that lower wealth quintile of households and longer duration of hospitalization were significantly associated with undergoing CHE. Overall, indirect costs accounted for 46.9% of total health expenditures. To accompany child inpatients, 55 households (93.2%) paid for transportation, and 48 households (81.4%) paid for extra foods for accompanying person. Moreover, 42 households (71.2%) underwent income loss because of a child's hospitalization.

**Conclusion:** The Free Child Healthcare Policy was effective in reducing CHE due to childhood hospitalization (22% = 72.9% - 50.9%). However, financial support covering only direct costs is not enough to achieve UHC since indirect costs were large enough to incur CHE. Especially, indirect costs that are incurred by an accompanying person should be paid attention to when child inpatients require healthcare services. Transportation vouchers or an insurance system that covers income loss might be a feasible approach. (478 words)