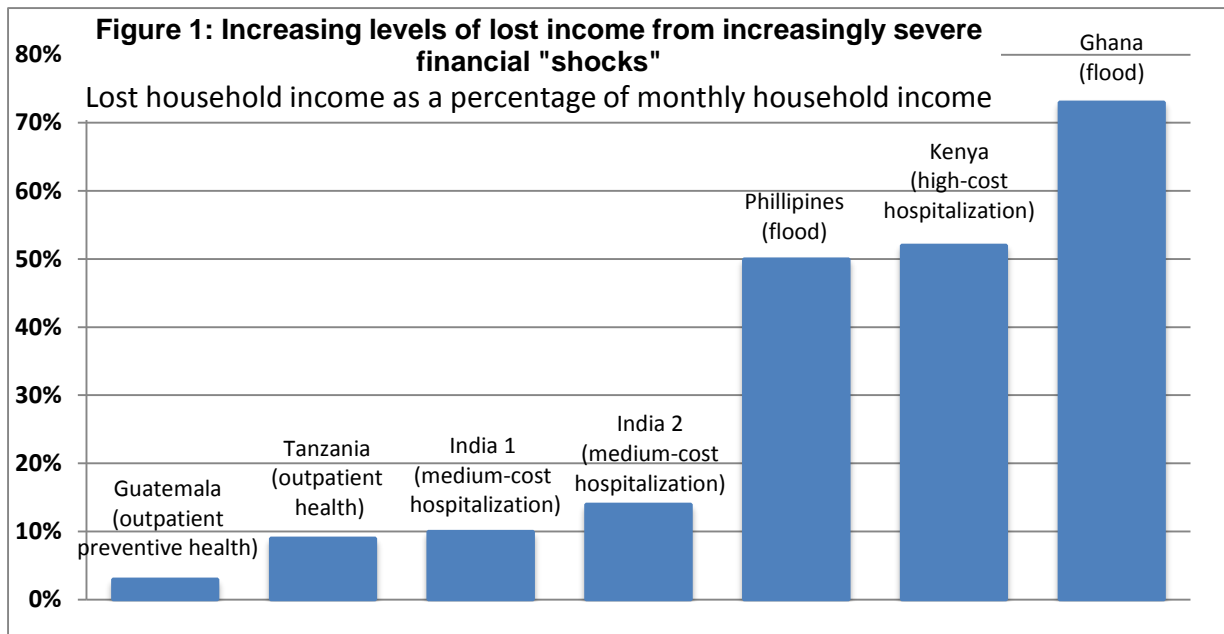




**MILK Brief #30:**

**Opportunity Costs of a Hospitalization: Implications for Men and Women<sup>1</sup>**

One of the most significant costs of an illness often comes not from the doctors’ fees or medicines used to treat it, but from the time the sick person and his or her family spend away from work or other normal activities. These “opportunity costs” of missed work can add up quickly, especially for serious or long-term illnesses. Similarly, other financial shocks, such as a flood causing property damage or the death of a family member, can lead to significant lost income. Figure 1 shows the lost income reported by people who experienced various health- and property-related financial “shocks” in seven Client Math studies conducted by the MicroInsurance Centre’s MILK project.<sup>2</sup> These costs increase with the severity and duration of the shock, ranging from only 3% of monthly household income for a routine outpatient visit to 73% of monthly household income for a serious market flood. In some cases, opportunity costs can comprise a substantial portion of the total cost of the shock, outweighing even direct costs (Segel, 2006).



In many cases, the full opportunity costs of a shock are difficult to measure. This is particularly true for work that does not earn a regular daily wage (such as tending crops on one’s own land) or work that is unpaid (such as housekeeping and caring for children). The opportunity costs faced by women are especially difficult to quantify. Women’s labor tends to be undervalued, both because much of it is often

<sup>1</sup> This MILK Brief was prepared by Danielle Sobol, Emily Zimmerman and Barbara Magnoni (April 2014).

<sup>2</sup> The studies cited in this brief were conducted by the MicroInsurance Centre’s MILK project using the Client Math methodology. The methodology uses in-depth interviews of low-income people who have recently experienced a shock (some with insurance and some without) in order to quantify the full cost of a shock, as well as the role that insurance plays in financing a shock. The opportunity cost of a shock is an important consideration when assessing the complete financial burden of an event, and Client Math considers work days that the respondent missed, work days that household members missed, and the costs of replacing the respondent at work when quantifying opportunity costs.



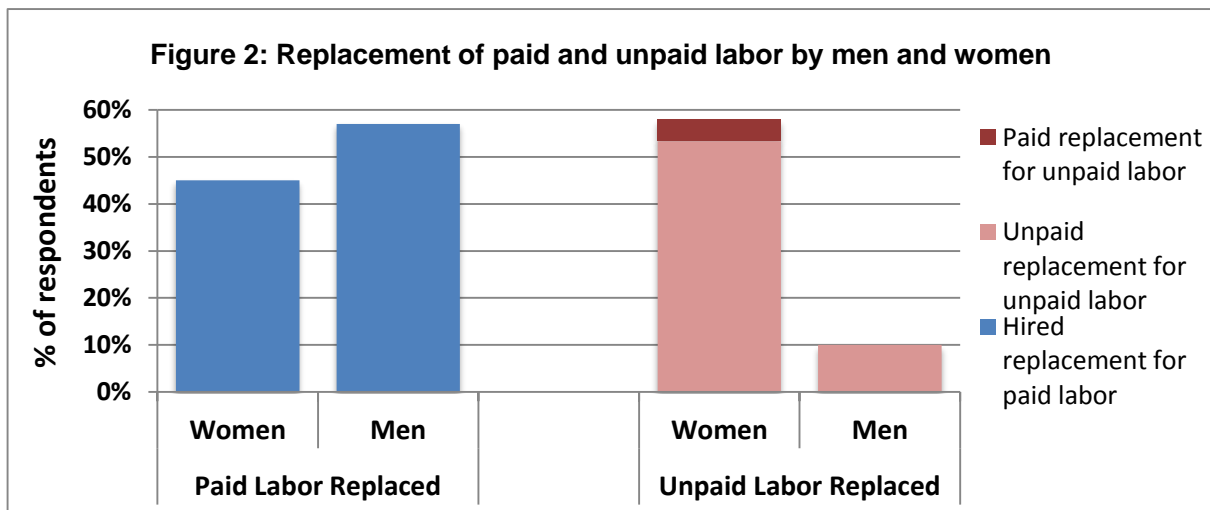
unpaid and because women’s paid labor is often comprised of multiple “secondary” activities such as craft-making rather than a single main occupation (Benería, 1999). In measuring the cost of an illness, these types of labor are often undervalued or missed entirely, as studies focus only on time lost by “economically active” individuals (Russell, 2003).

Despite the severity of opportunity costs in some situations, they are rarely directly covered by insurance. This brief explores the different types of opportunity costs that can arise from a particular type of shock (hospitalization). **By better understanding how these costs emerge and by whom they are borne, we can better understand the role that insurance plays and the gaps it leaves in ability to cope with risk.**

Through a Client Math study of health microinsurance covering high-cost hospitalization in Kenya (see Koven et al. (2014) for the main study findings), we aimed to better understand the consequences of an illness for both income-generating and non-income-generating activities. We use data collected in Kenya’s Central Province in July 2013 through interviews with 144 individuals who had recently undergone a high-cost hospitalization (hospitalizations that cost USD 92 or more to someone paying out of pocket). The surveys collected information about the full cost of this hospitalization and the financial responses used to cover that cost. We also aimed to understand the consequences of the illness for both paid and unpaid work usually performed by the patient and family members, focusing on the differences between men and women. There is no statistically significant difference between men and women in reasons for hospitalization, days hospitalized, or direct hospitalization costs. These similarities suggest that the opportunity costs are appropriate for comparison.

### Missing and Replacing Paid and Unpaid Work

Nearly all respondents in our sample spent some time unable to carry out their daily responsibilities during and after the time they were hospitalized. In some cases, their family members were also prevented from working during this time as they took time away to accompany or visit them in the hospital. In many cases, those missing work were replaced in their activities (see Figure 2) by friends, family, and other community members; in others, the work simply went undone. Replacements for paid work were usually paid, while replacements for unpaid work generally were not.



For paid work, lost income can be relatively easily quantified. Similarly, the cost of replacing someone’s work can be easily quantified if that person is paid. The consequences of missing unpaid work, and of using unpaid replacements are more subtle. These two types of missed work are explored in more depth in the following sections.

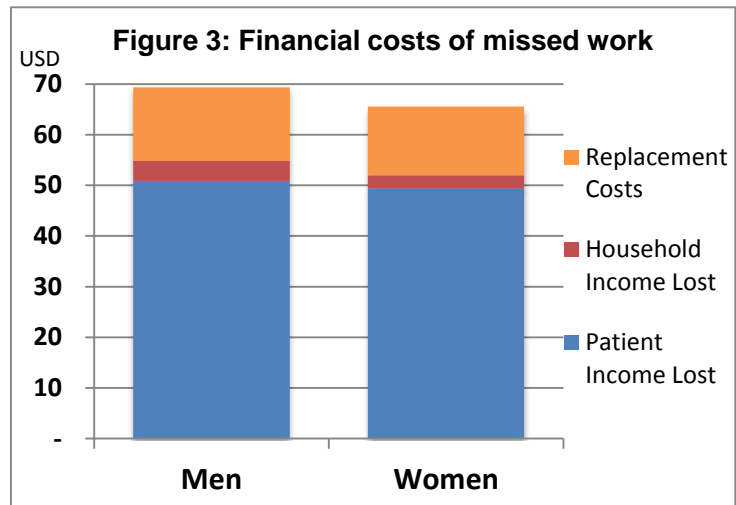
### Financial Costs of Missing Paid Work

We first calculated the financial costs of missing paid work, which were similarly high for both men and women. Men who were hospitalized lost on average USD 69 of their own income, while women lost on average USD 66 (see Figure 3), consistent with the small difference in the monthly personal income between our male (USD 104) and female (USD 89) respondents (not statistically significant). Men and



women were hospitalized for similar reasons and similar lengths of time, which, combined with their similar regular income, makes the similarity in lost income unsurprising.

Lost income by other household members who acted as caretakers for the patient was quite low. This suggests that families were in most cases able to avoid pulling an additional family member away from paid work. To do this, they may have relied on the support of members who were not income-earners to care for the patient during his or her convalescence, or they may have simply been able to perform this caretaking in addition to their paid work. Income lost by other household members was also comparable between men and women (USD 4 and USD 3, respectively).

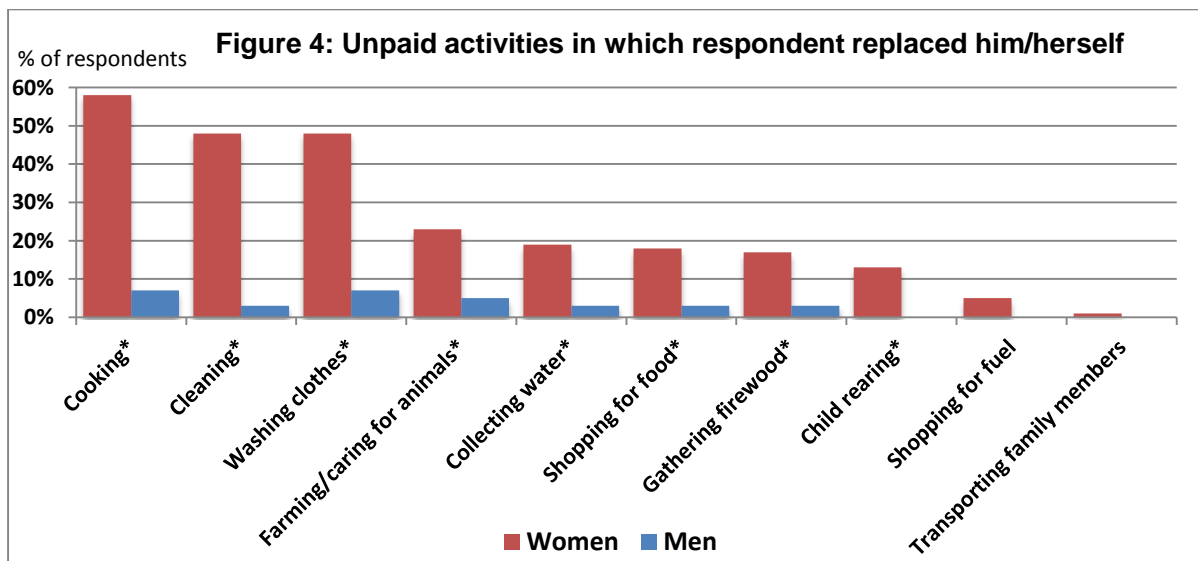


Finally, 57% of men and 45% of women hired someone to replace them in paid work activities. On average, these costs amounted to USD 15 and USD 14 for men and women, respectively.

One reason for the high overall opportunity costs related to missing paid work is the that nearly all of the respondents were tea farmers and these hospitalizations occurred during the busy harvest season. A hospitalization during a slower time of year may have led to lower lost income and lower replacement costs.

### Costs of Missing Unpaid Work

In addition to the substantial burden created by missing paid work, many families suffered from the patient's inability to perform unpaid household tasks. This burden was substantially higher when women were hospitalized, as they generally perform the bulk of families' unpaid household chores. Overall, 58% of women who were hospitalized had to find someone to replace them in their non-income generating activities, while only 10% of men had to do the same. Figure 4<sup>3</sup> breaks down the percentage of men and women who replaced themselves in unpaid activities by task. In most cases where unpaid household work was missed, families were able to replace this work with unpaid labor: other family members, friends, and neighbors chipped in to help with the cooking, washing, childcare, and other activities.



<sup>3</sup> "\*\*\*" indicates that the difference between men and women is statistically significant (p=0.05 or less).



Paid replacements for these household tasks were relatively uncommon, but more likely when a woman was hospitalized: 8% of women respondents had to pay replacements after being hospitalized, while no men did so. Of those who paid for a replacement, the average cost of this paid replacement was USD 32.<sup>4</sup> In a minority of cases, household tasks were simply left undone. Here too, the burden was greater when women were hospitalized (11% left household tasks undone) than when men were (only 3% left household tasks undone). Finally, women were more likely to have their children replace them in performing unpaid tasks (20% of women vs. 0% of men), while men were more likely to have another relative, a neighbor, or a friend replace them.

## Conclusions

MILK's work aims to understand the value of insurance to clients and their families. An important first step is to understand the full costs of a financial shock, such as hospitalization, and how this shock was financed. While insurance can be an important component of this financing, it appears to be most effective when helping to mitigate financial costs, including direct medical expenses or indirect expenses. In our study in Kenya, insured respondents were able to reduce their direct costs of health care as well as some of the indirect costs of missed labor with insurance. The women and men in our sample incurred similar financial burdens from missing paid work. Their lost income was similar, as was the lost income of other family members missing work to care for them. They also paid similar amounts to replacement workers who took their places in paid work during their hospitalization and recovery.

In addition to the substantial financial burden of missing paid work, hospitalizations led to a burden in the form of missed *unpaid* work. These latter costs were far higher for women than for men, in both financial and non-financial terms. Women bear the burden of a great deal of non-income generating work. When hospitalized, they sometimes incurred increased financial burden by paying someone to do the tasks when they could not. Where unpaid replacements were used, these were likely also disproportionately women, and in some cases minors. Neither insurance nor any other source of financing could help to reduce the burden of replacing unpaid work in the home, particularly to women. Ironically, while insurance may not be effective in covering this additional need directly, the larger non-financial burden of illness for women may drive them to have greater need for risk-coping tools than their male counterparts.

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Microinsurance Learning and Knowledge (MILK) is a project of the MicroInsurance Centre that is working collaboratively to understand client value and business case in microinsurance. Barbara Magnoni leads the client value effort and Rick Koven leads the effort on the business case. Contact Michael J. McCord ([mjmccord@microinsurancecentre.org](mailto:mjmccord@microinsurancecentre.org)), who directs the project, for more information.

<sup>4</sup> This cost was not included in Figure 3 above.