Risks are a central part of life for households in low-income countries and health shocks in particular are associated with poverty. Formal mechanisms protecting households against the financial consequences of shocks are largely absent, especially among poor rural households.

**What is the issue?**
Our aim is to identify the relative importance of health shocks compared to other types of shocks faced by agricultural households and to explore factors associated with coping behaviour and foregone care.

**How did we address the issue?**
This study was performed before the implementation of the Tanykina Community Healthcare Plan, a health insurance program initially targeted at dairy farmers in Kenya. We use a cross-sectional survey among 1226 agricultural households in Kenya in 2011. Households were randomly selected for an interview from a list of all households supplying milk to either of the two dairy farming cooperatives operating in the study area (Tanykina Dairies Ltd. and Lelbren Dairies Ltd). Respondents were asked about household characteristics such as age, education, employment, consumption, assets, livestock, shocks, coping strategies, and health care seeking behaviour. We determined the relative importance of health shocks compared to other shocks and how often each type of shock occurred. More specifically, using a regression based approach we identified the main coping strategies associated with facing a health shock. We further analysed out-of-pocket and catastrophic health expenditures* to identify why people did not seek needed health care and how households coped with health shocks.

**What did we find?**
- Health shocks occur more frequently than other types of shocks among dairy farmers in Kenya.
- The households studied were often confronted with a range of other shocks, including crop or livestock diseases, drops in the sale prices of agricultural products, natural disasters, and increases in the prices of agricultural inputs.
- Almost one out of every fifty households experienced catastrophic health care expenditures in the previous year.
- The main coping strategies when faced with a health shock are:
  - use savings;
  - sell assets;
  - ask for gifts or loans.
- One in five households did not seek necessary health care in the previous year. Mostly because they could not afford medical fees or medication.

**What are the implications and the lessons learned for PharmAccess and its partners?**
Health shocks pose a significant risk to the welfare of agricultural households. Implementing pre-payment or saving mechanisms might help protect households against the financial consequences of shocks.

* Catastrophic health expenditure occurs when out-of-pocket payments for health services consume such a large portion of a household’s available income that the household may be pushed into poverty as a result.

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**Figure 1. Proportion of households affected by different types of shocks either once, twice or more than twice**

<table>
<thead>
<tr>
<th>Shock Category</th>
<th>Affected once</th>
<th>Affected twice</th>
<th>Affected &gt; than twice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drop in sale prices of agricultural products</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage, crop or livestock disease</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural disaster</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase in agricultural input prices</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illness or injury in the household</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theft (crops, livestock, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Death in the household</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job loss, no salary</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Political, religious, tribal conflict</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**KEY COUNTRY FACTS**

- **44.4 M** population (75% is rural)
- **43.4%** of people live on less than USD 1.25 /day
- **44.6%** of people’s spending on healthcare is out-of-pocket

Based on 2012 and 2013 World Bank and World Health Organization data.
Health shocks occur more frequently than other types of shocks among dairy farmers in Kenya, some households are even affected twice or more than twice.

About one fifth of the households surveyed did not seek necessary health care in the previous year.

Further research is necessary to establish what mechanism would be the most effective in protecting agricultural households against the consequences of illness.

Health insurance

Following this household survey, the Tanykina Community Healthcare Plan was introduced to members of the Tanykina dairy cooperative. While 89% of the respondents in the study area claimed to know what health insurance is, and confirmed that health insurance would be useful for their family, the enrolment rate among dairy farmers in this area three years after introduction of the health insurance scheme remained at 11.5%. One of the potential explanations for the limited health insurance enrolment lies in the multitude of shocks that these agricultural households face. Even though illness and injury proved to be on average the most prevalent shock, households were also frequently confronted with a range of other shocks. For a household with limited resources it might therefore be impossible to reserve a share of their resources to the protection of health shocks through premium payments for a health insurance. When the health insurance premium is relatively high, paying these costs implies that these resources can no longer be used to protect consumption in case of occurrence of other shocks like crop diseases or increases in agricultural input prices. In other words households might need more flexible risk management devices that can work for several types of risk simultaneously. Further research is necessary to establish what mechanism would be the most effective in protecting agricultural households against the consequences of ill health and how these can best be implemented.

TAKE HOME MESSAGES

- Health shocks occur more frequently than other types of shocks among dairy farmers in Kenya, some households are even affected twice or more than twice.

- About one fifth of the households surveyed did not seek necessary health care in the previous year.

- Further research is necessary to establish what mechanism would be the most effective in protecting agricultural households against the consequences of illness.

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