Learning with Older People about their Transport and Mobility Problems in Rural Tanzania

Godfrey Mulongo
University of the Witwatersrand
1 Jan Smuts Avenue
Braamfontein 2000
Johannesburg, South Africa
mulongoe@gmail.com

Gina Porter
Durham University
The Old Vicarage North Stainley Ripon
North Yorkshire HG4 3HT, UK.
r.e.porter@durham.ac.uk

Amleset Tewodros
HelpAge International -Tanzania
PO Box 9846 Dar es Salaam, Tanzania
Amleset.tewodros@helpage.org

Barton Willilo
STET International LTD
PO Box 76135 Dar es Salaam, Tanzania
Wililobm21@gmail.com

Agnes Mwangoka
HelpAge International -Tanzania
PO Box 9846 Dar es Salaam, Tanzania

ABSTRACT

This paper presents the findings of a study conducted by HelpAge International through a co-investigation method involving older men and women in rural Tanzania to build baseline data to promote and monitor mobility-focused interventions for rural older people. The study sites were in Kidabaga, Mwatasi and Mhanga villages, Kilolo District, in Iringa region. The study used three approaches: older people as co-researchers were consulted to shape the survey tools, household surveys with 358 older people to collect quantitative data; and key informant interviews with health professionals, village leaders and transport providers (mainly motorcycle operators). The findings show that current access of older people to health services is substantially constrained by their poor access to transport services (affected both by cost and availability). Only Kidabaga, the village characterized by relative accessibility has a clinic, while Mwatasi has a small dispensary. Mhanga village had no health facilities. Walking is the most common means of reaching health facilities by older people in all villages, with trip durations ranging from 15 minutes to over 4 hours. For 64% and 30% older people surveyed in Mhanga, and Mwatasi respectively, travel is the key barrier to accessing healthcare, where by contrast, in Kidabaga the user fee was found to be the main constraint. Due to lack of transport, older farmers have limited livelihood opportunities and depend on traders who come to the villages. Nevertheless, the influx of boda-bodas (motor cycles), particularly in Kidabaga and Mwatasi, has significantly improved the mobility of older people, especially in the provision of emergency transport, despite the high fares. The paper identifies policy and gaps to improve rural transport services for vulnerable people with poor mobility and physical disability in sub-Saharan Africa.

KEYWORDS: Mobility, Health, Ageing, Disability, Older People, Rural Transport
1 INTRODUCTION

Mobility, or lack of it, is likely to be implicated in many facets of older people’s lives (Schwanen and Paez, 2010). Income poverty, in particular, is a common characteristic of Africa’s older people, especially in countries like Tanzania where governments do not provide social security in old age and where family support for them is assumed (Apt, 1997; van der Geest, 1998; Heslop and Gorman, 2002; Barrientos, Gorman and Heslop, 2003; Aboderin, 2004). In a context of lack of old age social security, continuing access to livelihoods is vital, not just for the elderly to support themselves, but also to support young orphans and others in their care (Clacherty, 2008). Access to a secure livelihood is often particularly difficult for older people: in rural areas income from farming is frequently insecure, and is likely to become more insecure with climate change. Multiplex livelihoods and off-farm income are widely recognised to provide a route out of rural poverty (Bryceson, 1999; 2002; Gladwin et al, 2001; Canagarajah et al, 2001; Yaro, 2006) but livelihood diversification, especially in rural areas, often requires travel to the nearest market or service location. In West Africa this has been found to cause particular difficulties for elderly women traders (Apt et al, 1995; Grieco et al, 1996; Ipingbemi, 2010; Porter, 2011). Lack of reliable low cost transport and restricted mobility may severely affect older people’s access to clinics, pension points (where pensions are provided), paid work, livelihood opportunities, churches, participation in social networks, and other facilities and services important to their lives, with negative impacts on their health and well-being. Long walks to access a transport route or to services are likely to present a serious hurdle, particularly to less fit or older people with disabilities, and especially where the route crosses difficult terrain, and in the rains. Even in larger rural service-centres, distances to required services – health services in particular - may be so long and transport so infrequent that access is low (Grieco et al, 1996; Ipingbemi, 2010). Where regular transport is available, low incomes and poverty may still limit access. Older people, especially women carers, often appear to be among the poorest, thus probably those least able to afford transport fares (Kakwani and Subbarao, 2007).

In 2012 with support from the Africa Community Access Partnership (AFCAP) and in collaboration with the University of Durham and the Good Samaritan Social Services Trust (a local organisation of older people), HelpAge International conducted a study: **Learning with older people about their transport and mobility problems in rural Tanzania: focus on improving access to health services and livelihoods, in Kibaha District, Pwani Region.** Full findings based on research in 10 settlements were presented in a report to AFCAP in 2012, and in a journal paper (Porter et al, 2013). However, in order to overcome the limitations mobility evidence base coming from just one district, given the size and diversity of the population of Tanzania a second mobility study was constituted in Kilolo district to complement the earlier findings from the Kibaha study by bringing new insights from a very different location and context.

2 RESEARCH OBJECTIVES

The study in Kilolo district aimed to complement the Kibaha study by providing further empirical evidence for older people’s health and well-being related mobility needs. Focusing on three villages: Kidabaga, Mwatasi and Mhanga, which are remote and isolated areas with poor infrastructure and limited motorised transport. The specific objectives of the study were:

i. To identify and promote mobility focused interventions that will enable rural older people and those in their care to achieve better health and well-being

ii. To provide an extended evidence base on how older people’s access to rural transport impacts on their health and livelihoods

iii. To ensure the findings reach key policy makers and practitioners locally, nationally and internationally, who then act on them
3 BRIEF REVIEW OF LITERATURE

3.1. Our ageing world – embracing opportunities and challenges

People are growing older in a world which is increasingly unequal, but also one where the demand for participation in decision-making and accountability is ever stronger. A world of longer lives presents both opportunities and challenges, calling on society at large to rethink its views of ageing and how it responds to their needs. Individuals, economies and societies will need to make far-reaching changes to address population ageing.

Even Africa, considered the ‘‘young’’ continent is experiencing the demographic transition as it is home to 60 million older men and women (over 60 years old). Tanzania as part of the global community is also reaping the benefits of economic prosperity and longevity with widening levels of inequality due to age, gender, location, disability and other factors, threatening the cohesiveness of society. As an organisation working to promote the wellbeing and inclusion of older women and men, and reduce poverty and discrimination in later life, the long term change (our theory of change) that HelpAge International is working towards is:

- Equity for older people in development planning and programmes
- The adoption and implementation of policies that address the opportunities and challenges of ageing societies and support older men and women
- Changed attitudes, practices and behaviours – by authorities in local and central government and societies at large towards older people and those of individuals towards their own and others’ ageing

3.1.1 Ageing, mobility and livelihoods

Our research was built not only on the Kibaha study but also on concepts and issues arising from the literature on older people in Africa and on an earlier research study focused on child mobility (www.dur.ac.uk/child.mobility). The transport-focused findings for Kibaha district (Porter et al, 2013) contribute to a broader understanding of how changing inter-generational relationships (Vanderbeck, 2007) affect mobility and poverty transmission issues. There is also a growing literature on this role of older people as carers (Ingstad, 2004; Schatz, 2007; HAI, 2007; Kamya and Poindexter, 2009; Ipingbemi, 2010; Pettersson and Schmokker, 2010), the mobility constraints older people face, which impact strongly on their ability to act effectively in this role.

Mobility, or lack of it, is likely to be implicated in many facets of older people’s lives (Schwanen and Paez, 2010). Income poverty, in particular, is a common characteristic of Africa’s older people, especially in societies like Tanzania where governments do not provide social security in old age and where family support for them is assumed (Apt, 1997; van der Geest, 1998; Heslop and Gorman, 2002; Barrientos, Gorman and Heslop, 2003; Aboderin, 2004). The Non-contributory pension feasibility study undertaken in Tanzania by HelpAge (2010), in collaboration with the Ministry of Labour, Youth Employment and Development, demonstrated the levels of poverty within older person headed households and suggests that, should a non-contributory pension be paid, the levels of poverty nationally would decrease significantly.

In the context of lack of old age social security, continuing access to livelihoods is vital, not just for the elderly to support themselves, but also to support young orphans and others in their care (Clacherty, 2008). Access to a secure livelihood is often particularly difficult for older people: in rural areas income from farming is frequently insecure, and is likely to become more insecure with climate change. Multiplex livelihoods and off-farm income are
widely recognised to provide a route out of rural poverty (Bryceson, 1999; 2002; Gladwin et al, 2001; Canagarajah et al, 2001; Yaro, 2006) but livelihood diversification, especially in rural areas, often requires travel to the nearest market or service location. In West Africa this has been found to cause particular difficulties for elderly women traders (Apt et al, 1995; Grieco et al, 1996; Ipingbemi, 2010; Porter, 2011). Lack of reliable low cost transport and restricted mobility may severely affect older people’s access to clinics, pension points (where pensions exist), paid work, livelihood opportunities, churches, participation in social networks, and other facilities and services important to their lives, with negative impacts on their health and well-being. Long walks to access a transport route or to services are likely to present a serious hurdle, particularly to less fit or older people with disabilities, and especially where the route crosses difficult terrain, and in the rains. Even in larger rural service-centres, distances to required services – health services in particular - may be so long and transport so infrequent that access is low (Grieco et al, 1996; Ipingbemi, 2010). Where regular transport is available, low incomes and poverty may still limit access. Older people, especially women carers, often appear to be among the poorest, thus probably those least able to afford transport fares (Kakwani and Subbarao, 2007).

4 METHODOLOGY

4.1 Research Areas

The identified research areas and their characteristics are summarised as follows, and shown on the map in Figure 1:

- Mhanga Village, Idete Ward – representing remote rural villages with no all-season road and no rural transport or other social services
- Mwatasi Village, Boma la Ng’ombe – representing villages with an all-season road but only minimal services, including dispensaries stocking drugs and only motorised once a day by one bus.
- Kidabaga Village, Kidabaga Ward – representing rural villages with a health centre and accessible by public transport
4.2 Study site characteristics

Kilolo district is located at the north eastern end of Iringa Region; with the district council office located about 37 km from the regional headquarters. It lies adjacent to the eastern borders of Iringa Rural and Iringa Municipal Council, sharing borders with Mpwapwa District (Dodoma Region) in the North, Kilosa district (Morogoro Region) in the North East, Kilombero District (Morogoro Region) in the East, and Mufindi District in the south. The district, is mountainous with steep hills, ridges, valleys and escarpments. The characteristics are significant for the study because of the direct relationship between the landscape and the nature of the roads and the overall topography. The study site lies within the Highlands Zone, which is a continuation of the Udzungwa Mountain Ranges with an altitude ranging from 1,600 – 2,700 meters above sea level, temperatures below 15°C, and heavy rainfall per annum. Administratively, the study sites is within Mahenge division. The district has a total road network of 884.1 km with about 211 km maintained by the Ministry of Works through the
Tanzania National Roads Agency (TANROAD), about 455 km district roads and 218.1 km feeder roads maintained by the Prime Minister’s Office Regional Administration and Local Government (PMO - RALG) through the district council. The majority of the district roads are maintained by the District Authority and are mostly unpaved.

4.3 Survey Design

A mixed methods approach was adopted in the study, comprising both quantitative and qualitative data collection. For the former, a household survey targeting older people (60 years and above) residing in the study villages was conducted. Qualitative data were also collected, to triangulate the information from the household survey.

The study tools used in the Kibaha study were adapted for use in Kilolo. The older people co-researchers assisted to moderate and contextualize the Kibaha tools for use in this study. Although the older people co-investigators helped shape the content of the survey questions, our preliminary investigations suggested that the issues were likely to be similar to those discussed in Kibaha.

The quantitative survey instrument was sub-divided into the following four main sections:

i. Demographic profile of the respondents
ii. Means of transport used and spatial autonomy
iii. Use of and travel to health facilities
iv. Journeys and livelihoods

Qualitative data was collected using the key informant checklists. The following were interviewed in each village:

i. Health professionals (one in each village)
ii. Village leaders (at least one per village)
iii. Transport providers (at least 3 boda boda and owners of public vehicles per village)
iv. Older people opinion leaders focusing on health and transport movement (6 in each village)

Thirty-one key informant interviews were conducted: 11 in Mwatasi, 11 in Kidabaga and 9 in Mhanga.

Both the quantitative survey and the key informant (qualitative checklists) instruments were piloted by the older people co-researchers (OCR) before the commencement of data collection.

The ten older peer researchers attended three days of training to familiarise themselves with the subject of the study, and the various tools that were used in the Kibaha study to ensure they were able to review and customise them for use in the Kilolo study. Following their input, the tools were modified and they were piloted prior to their application in the field. Four of the older peer researchers identified from among the 10 OCR were then used to support the field interviews with the thirteen research assistants that worked in the three villages.

4.3.1 Sampling

Cross-sectional simple stratified random sampling was followed to select the older people to participate in the survey. Given the 2012 Census figures, the following sample size was proposed.

<table>
<thead>
<tr>
<th>Study site</th>
<th>Total OP Population</th>
<th>Total sample (at 95% confidence and 5% interval)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kidabaga</td>
<td>274</td>
<td>160</td>
</tr>
<tr>
<td>Mwatasi</td>
<td>116</td>
<td>89</td>
</tr>
<tr>
<td>Mhanga</td>
<td>137</td>
<td>101</td>
</tr>
<tr>
<td>Total</td>
<td>527</td>
<td>350</td>
</tr>
</tbody>
</table>

At a confidence interval of ±5% given a confidence level of 95%, plans were made to select a sample of 350 households to participate in the study. In each household, only one older person was selected for interview. Moreover, learning from the sampling used in Kibaha, the same transects approach used in Kibaha villages i.e. sampling across the settlement, roughly N-S, then E-W, then S-
W to N-E etc. was used to achieve the quota. This ensured coverage extended beyond the heart of the settlement and into different neighbourhoods and especially that it reached remoter compounds on the edge of each settlement.

5 FINDINGS

A total of 358 questionnaires were completed and statistical analyses conducted (principally cross-tabulations) on key themes. The study cohort exhibited the following characteristics.

*Sex distribution of surveyed population:* 64% female; 36% male - this is probably a fair representation of population distribution by sex for the 60+ age group in the survey settlements.

*Age distribution of surveyed population:*

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>60-65</td>
<td>30.9%</td>
</tr>
<tr>
<td>66-70</td>
<td>19.3%</td>
</tr>
<tr>
<td>71-75</td>
<td>19.0%</td>
</tr>
<tr>
<td>76-80</td>
<td>12.7%</td>
</tr>
<tr>
<td>81-85</td>
<td>9.3%</td>
</tr>
<tr>
<td>86-90</td>
<td>4.0%</td>
</tr>
<tr>
<td>91+</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

*Marital status:* under 4% single, 42% married, 49% widowed, 2% divorced.

5.1 Road access, transport and local service availability

Table 2 has been compiled by triangulation of information from both the survey and the qualitative research interviews. In the survey, we used 15 minutes’ walk as the manageable distance for assessing older people’s access to public transport. Earlier discussions with older people indicating that beyond 15 minutes, the effort required of older people was considered excessive. Regular transport type could be either by bus or motorcycle taxi; the key point was that the transport [whatever its type], should be within 15 minutes’ walk of the person’s home base.

**Table 2: Road access, transport and local service availability**

<table>
<thead>
<tr>
<th>Settlement</th>
<th>Road access</th>
<th>Households located over 15 mins walk from regular transport</th>
<th>Provision of motorcycle taxi services</th>
<th>Availability of other motorised transport</th>
<th>Access to markets</th>
<th>Access to grinding mills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kidabaga</td>
<td>All season access</td>
<td>48% Numerous, always available</td>
<td>Bus daily to and from Iringa. Lorries are frequent and also transport passengers sometimes</td>
<td>Major markets accessible by regular transport</td>
<td>In the settlement</td>
<td></td>
</tr>
<tr>
<td>Mwatsi</td>
<td>Accessible in the dry season but difficult by car during wet season.</td>
<td>52% Uncertain, operate informally</td>
<td>Daily bus to and from Iringa. Private motorcycles operate for hire if needed</td>
<td>Monthly market</td>
<td>A mill in each hamlet: 7 in total</td>
<td></td>
</tr>
<tr>
<td>Mhanga</td>
<td>Very poor access – the</td>
<td>99% Uncertain, rare.</td>
<td>Virtually none – lorries</td>
<td>Mai n markets</td>
<td>4 mills: 1 in</td>
<td></td>
</tr>
</tbody>
</table>
villagers are building paths locally to connect the hamlets and farms. Had a grant to improve the Kimala – Idunda road and have completed 12 km – Idete to Itonya

occasionally visit in the dry season to collect produce. Otherwise, necessary to walk to Idete (19 km) to catch a bus.

are Iringa and Morogoro each hamlet

5.2 Transportation Constraints and Access to Health Services

The findings show that current access of older people to health services is substantially constrained by their poor access to transport services (affected both by cost and availability issues). Only Kidabaga currently has a clinic, while Mwatasi has a small dispensary. Mhanga has no health facilities. Even in the case of older people who reside in Kidabaga, many will have poor access due to their residential location at a distance from the clinic and/or other factors such as infirmity and associated limited mobility.

The questionnaire survey captured many aspects of older people’s use of health services in the 3 settlements:

- Older people accessing health services in the last month: F=19%; M= 23%
- Older people accessing health services in the last 12 months but not in the last month: F=50%; M=40%
- Older people only accessing health services over a year ago: F=24%, M=24%

Substantially more people in Kilolo than in Kibaha district had not accessed health services in the last year, which may well be a factor of poorer physical access in Kilolo district study settlements, associated with limited transport.

In the month prior to the survey, figures for use of health services were highest in Kidabaga (25%), lower in Mwatasi (22%) and lower still in the village without any health service, Mhanga (13%) i.e. roughly mirroring transport and access conditions and the availability of health services in these settlements.

“I would rather stay home than endure the pains of having to walk all the way to Itonya. Alternatively, I resort to traditional herbs” (A respondent in Mhanga)

Time taken to reach the health facility varied substantially between villages, as shown in Table 3. The pattern emphasizes the relative remoteness of Mhanga from health services. Time taken relates to the journey, irrespective of mode of transport employed [i.e. whether walking, using a motor cycle taxi etc.]

<table>
<thead>
<tr>
<th></th>
<th>Up to 15min (%)</th>
<th>16 to 45 min (%)</th>
<th>46 min to 1h 30 (%)</th>
<th>1h 31 to 2h 30 (%)</th>
<th>2h 30 to 4h (%)</th>
<th>Over 4h (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kidabaga</td>
<td>13</td>
<td>39</td>
<td>19</td>
<td>8</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Mwatasi</td>
<td>8</td>
<td>41</td>
<td>18</td>
<td>16</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Mhanga</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>41</td>
<td>20</td>
</tr>
</tbody>
</table>

There was no discernible pattern by gender but a tendency for travel time to increase with age was observed, as might be expected since increasing age is often accompanied by increasing infirmity.

The cost of the journey to the health centre varied considerably, but 69% of both women and men (that had accessed health services) said they had walked to obtain medical treatment, and thus
incurred no direct cost for travel. Bus and motorcycle otherwise dominated travel: 10% of women and 14% of men travelled by boda-boda; and another 3% of women and 1% of men by private motorcycle. Twelve percent of women and 10% of men travelled by bus. Just one woman and one man travelled by bicycle, and just one woman by bicycle taxi. Again, however, it is useful to look at the variation in pattern across the villages (see Table 4).

Table 4: Main mode of travel to health centre (N=264)

<table>
<thead>
<tr>
<th>Main mode of transport for health services</th>
<th>Walking</th>
<th>carried by pedestrian on stretcher</th>
<th>motor taxi (hire / charter / shuttle)</th>
<th>motorbike (private)</th>
<th>motorbike taxi (boda boda)</th>
<th>bicycle (private)</th>
<th>bicycle taxi</th>
<th>ambulance</th>
<th>public bus / minibus</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIDABAGA</td>
<td>Count</td>
<td>70</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>% within village</td>
<td></td>
<td>71%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>10%</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
<td>16%</td>
</tr>
<tr>
<td>MWATASI</td>
<td>Count</td>
<td>40</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>18</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>% within village</td>
<td></td>
<td>49%</td>
<td>0%</td>
<td>0%</td>
<td>3%</td>
<td>7%</td>
<td>22%</td>
<td>1%</td>
<td>1%</td>
<td>16%</td>
</tr>
<tr>
<td>MHANGA</td>
<td>Count</td>
<td>71</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>% within village</td>
<td></td>
<td>85%</td>
<td>2%</td>
<td>4.80%</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>6%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>181</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>6</td>
<td>29</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>% of Total</td>
<td></td>
<td>67%</td>
<td>1%</td>
<td>1.50%</td>
<td>1%</td>
<td>2%</td>
<td>11%</td>
<td>1%</td>
<td>1%</td>
<td>13%</td>
</tr>
</tbody>
</table>

Respondents were then asked in the survey what was their principal difficulty in accessing health services (main reasons shown in Table 5) (N=338):

Table 5: Difficulty in accessing health services

<table>
<thead>
<tr>
<th>PRINCIPAL DIFFICULTY</th>
<th>None</th>
<th>Travel difficulty</th>
<th>Travel cost</th>
<th>No one to accompany</th>
<th>User fees/medicine cost</th>
<th>Quality of service</th>
<th>Preference for traditional healers etc.</th>
<th>Too busy</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>28%</td>
<td>31%</td>
<td>13%</td>
<td>7%</td>
<td>13%</td>
<td>0%</td>
<td>&lt;1%</td>
<td>5%</td>
</tr>
<tr>
<td>M</td>
<td>29%</td>
<td>31%</td>
<td>10%</td>
<td>2.5%</td>
<td>17%</td>
<td>2%</td>
<td>0%</td>
<td>4%</td>
</tr>
</tbody>
</table>

*Any perceived physical constraint on travel

Clearly, the journey to the health centre is the most important issue in accessing health services both for women and men in Kilolo district study settlements and is, above all, a matter of logistics (more than cost). An analysis of the data by village, however, shows that the principal difficulty of accessing health services in Kidabaga (the village with best physical access to health services), actually was heath treatment fees. However, by contrast, in both Mwatasi and Mhanga it is travel which dominates as the largest problem (for 64% of respondents in Mhanga, and for 30% in Mwatasi) and thus dominates when we consider responses for the three settlements as a whole.
5.3 Transportation for domestic and subsistence activities

Transport is also needed for domestic tasks such as carrying water, firewood, refuse and farm produce within the settlement. This usually requires pedestrians to carry the loads, unless there are wheelbarrows, carts or bicycles available for the task. No older people in the survey referred to owning or using any form of cart (whether a hand cart or an animal drawn cart), or wheelbarrow, although in qualitative interviews the village chairman in Kidabaga said he owns a wheelbarrow and uses it for carrying building blocks and for other general purposes. In Mhanga respondents alluded to the difficult terrain which is too steep for use of either carts or wheelbarrows. Consequently, domestic loads are a major burden to older people as shown in Table 6.

<table>
<thead>
<tr>
<th>Village</th>
<th>Piped water (%)</th>
<th>Standpipe (%)</th>
<th>Borehole (%)</th>
<th>Rivers, lakes etc (%)</th>
<th>Distance walked for water (dry season only) (%)</th>
<th>Firewood</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;10 mins</td>
<td>10-30 mins</td>
</tr>
<tr>
<td>Kidabaga</td>
<td>1</td>
<td>23</td>
<td>19</td>
<td>42</td>
<td>14</td>
<td>55</td>
</tr>
<tr>
<td>Mwatasi</td>
<td>2</td>
<td>13</td>
<td>77</td>
<td>6</td>
<td>28</td>
<td>43</td>
</tr>
<tr>
<td>Mhanga</td>
<td>0</td>
<td>0</td>
<td>53</td>
<td>29</td>
<td>38</td>
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**Water:** In the dry season water transport is a particular problem, in the absence of piped water in most settlements (see above): Even a short journey can be difficult for an older person, given the (20kg) weight of the standard 20 litre container used to carry water. In Mwatasi a woman of 75 years with an injured leg complained about the distance of her home from a water source: ‘There is no water here. We have to go down to the river. I can’t go to fetch water, my grandchildren do. When my grandchildren are not here, I have to wait till they get back’.

**Firewood:** Since virtually every older person households depend on firewood for fuel, this is clearly an important item for consideration in assessing domestic loads. Firewood in Africa is normally carried home just a few times each week, because it has to be brought over long distances from the farm or bush. It is often the heaviest load carried and in many regions is seen as a woman’s load, unless it is being collected for sale. In the survey, 41% of women and 33% of men said they carry their firewood entirely by themselves (a much lower proportion than in Kibaha), usually just one journey every few days. Overall 81% of respondents travel over 30 minutes to find firewood.

**Farm produce:** As with water and firewood, in Kilolo district much farm produce after harvest is carried by other family members, rather than by older people themselves. Only 26% of women and 21% of men said they carried their own farm produce, and only 8% of women and 9% of men said they had travelled every day in the previous week to cultivate their fields, with respondents mostly going to the farm a few days each week. This may be because fields tend to be far from the house (much further than in Kibaha district, probably due to the dissected topography characteristics of Kilolo district). Over three quarters of respondents’ fields are located over 30 minutes’ walk from home (84% in Kidabaga, 71% in Mwatasi and 77% in Mhanga). A large proportion of older people estimated that a single journey to their fields takes over 2 hours to walk: 24% in Kidabaga, 18% in Mwatasi and 37% in Mhanga.

A woman of 78 years in Mhanga who suffers from backache after carrying loads described walking home (using a stick) from her farm, about 30 minutes from the homestead, with 10kg of maize:

‘I went with my grandson Thomas (10 years old), each of us carried. Although it is not far, my body is not very strong to carry heavy loads…carrying heavy loads affects my health’.

A majority of older people in the survey said they had experienced problems of tiredness or pain (principally waist and back pain) which they associated with load carrying. Women tend to carry on their head, but some men reported carrying on their shoulder in this district, which might perhaps explain why fewer men get headaches from carrying but neck pain is equal among women and men.
A man of 80 years old in Mhanga talked about the loads of maize he carries home on his shoulder from the farm: ‘I can feel (it) for two or three days and then I get better after resting’. A middle-aged woman health worker in Kidabaga also noted accidents and health problems associated with carrying heavy loads:

‘backache, and when you probe they say they have been carrying heavy loads like firewood, carrying water from the river, also chest pains’.

The topography in this district makes load carrying particularly difficult:

‘There are steep slopes. They can cause chest ache climbing them every day while you have load on your head’ (man 61 years old who still carries 20kg sacks of maize for about 90 minutes when walking home from his farm).

Limited livelihood opportunities are in large part due to poor market access:

‘Due to poor infrastructure, I am forced to sell my farm produce to Idete because lorries won’t access the village. However, due to age I can’t carry the farm produce and therefore rely on younger people to ferry on my behalf. This costs me more – carrying the loads – as it eats into my profits.’

(man aged 75 years, looking after a 10 year old step daughter whose father has died).

Land ownership and cultivation: although farming is the major livelihood source for most older people, and 84% overall own land (81% of women and 89% of men), the scale of land ownership and cultivation is relatively modest.

5.4 Transport beyond the village

We asked respondents in the survey about their attitude to the means of transport that they use – what features they like and dislike about each mode and any associated dangers. This drew attention particularly to older people’s experiences of using transport beyond the village area, and has important implications both for their livelihoods and well-being.

Pedestrian travel dominates journeys both inside and outside the village. The main advantage of walking is reported as being the fact that it saves money, and the biggest disadvantage is the fact that it is so tiring. Moreover, in Kilolo district the poor availability of transport and limited access by vehicle to markets means that pedestrian transport may include carrying heavy loads.

Cycling is a rare activity in Kilolo district according to the survey data. No survey respondent, male or female, reported owning a bicycle and usage is extremely low, probably because of the topography of the district. However, according to the Kidabaga village chairman, c. 80% of households in Kidabaga own a bicycle but they are not used much now that boda-boda are available. One man of 74 years who was interviewed said he has a bicycle but it’s in poor condition and he cannot ride it because of an operation, but also ‘because of the hilly nature of the village’.

Only a quarter of men and less than 2% of women surveyed said they know how to ride a bicycle. They cited a lack of bicycle and the lack of time to learn as reasons for this.

Bicycle taxis: In the survey, not one respondent referred to having ever used a bicycle-taxi. However, one 60 year old woman reported in a qualitative interview that she had used one the previous year to go to the farm, but it seems to have belonged to a family member.

Motorcycles/motorcycle taxis: Only one male respondent said he owns a motorcycle-taxi (with one woman and one man owning a motorcycle not used as a taxi). A small proportion of respondents in the Kilolo study settlements regularly use motorcycle-taxis which are becoming increasingly common in the region (though by no means to the extent that was observed in Kibaha district, where only 12% of men and 12% of women had never used one).

We also asked in the survey whether people had used a boda-boda in the specific week prior to the survey –only 4 women and 4 men had done so. Of these 8 people, 5 lived in Kidabaga, 2 in Mwatasi and just one in Mhanga. Motorcycle taxis are liked particularly because of their speed in terms of getting to places quickly, but are disliked for the risk of accidents.

The village chairman at Kidabaga said that boda-boda are available ‘all the time’ in this settlement and are now widely used in preference to bicycles. A 60 year old widow who was interviewed, used boda boda to go to funerals and to the health center when her daughter was sick. It is her favourite means of transport: ‘it is fast, you don’t have to wait for long, you can get it anytime
Unlike buses that you have to wait until they come from town and sometime you may miss them.’ She has no fear of using the boda-boda, but notes that the costs rise in the wet season and she generally walks because of the cost. Another (married) woman of 72 years in Kidabaga is less happy with boda-boda and much prefers the bus:

‘boda-boda gives me a chill down my spine. They ride recklessly and very fast.... I fear getting an accident... I normally have arguments when travelling with boda-boda, telling them to slow down. They sometime listen, sometime they don’t.’

Two young boda boda drivers, interviewed in Kidabaga, both observed that they find it easier to transport older men than older women:

‘men can balance and adjust easily... men are confident. It is easy to communicate with them when something goes wrong; men can help in case of accident.... Women do not have good balance and sometimes can cause accidents. Women (are) fearful as passengers. (and) not as helpful in certain situations, for example the motorbike can get stuck in a place that is not very safe, and a woman will just be there watching’ (driver, 24 years).

This man, who owns his own motorcycle also observed that boda boda drivers are ‘careless and drive roughly’ and that older people are at particular risk because they cross the road slowly. He also noted the dangers of driving in the wet season when road accidents are more likely to occur on the rough, slippery terrain. He had personally had a minor accident in the rain when transporting a passenger.

One man in Kidabaga (c. 66 years) owns a bajaj (three-wheel motor tricycle) which he hires out (with a driver) for carrying loads and, occasionally passengers, but he observed that it is not safe as a passenger vehicle because it is small and the back is open like a pick-up.

In Mwataki there are reportedly no formal boda-boda services but many private motor cycle owners will loan them out: if you are in need you can ask them and they will take you to your destination (middle-aged Pastor). This man subsequently observed that he was the first person to own a motorcycle here and drove it for 15 years, and had carried people around on it, including a very sick old man whom he had had to tie on with a khanga (a piece of cloth). However, ‘our young drivers here are reckless. We have people who have died due to boda-boda accidents’.

Another respondent here noted that ‘many riders do not have licence’ (man aged 60 years). Further discussion with a young man indicated that there are boda-boda operating in the village but they are wary of identifying themselves as such because of the licensing issue: ‘if you want him to take you some where you just talk and negotiate’. Another young man of 25 years who rents a motorbike from his brother is clearly operating a boda-boda business, alongside his work as a farmer. He charges c. Tsh 5000 for a journey of 10 km, but observed that ‘you can go a week without a customer. This is not like town, very few boda bodas due to less demand... due to poverty people prefer walking.’ A woman of 60y in Mwataki observed that she sometimes hires a motorbike but, mostly she walks, not because I like it but because of lack of money. It seems that older people use oda-boda when they are sick, however, and the young 25 year old driver above noted having carried three sick older people in the previous six months (in each case with a third person holding them on behind). Thus, motorcycles are used to take sick people about 20 km to Kihesa where they can catch a bus to town. The assistant doctor observed that boda-boda are not only very costly here but are mostly only available in the evening (presumably when motorcycle owners return from town).

In Mhanga, where the survey indicates hardly any use of boda-boda by older people, references to boda-boda are also very sparse in the qualitative transcripts. The ward councilor observed that it costs Tsh 15,000 ($7) to hire a boda-boda to Idete – Tsh 30,000 ($14) for a return trip. One man (c. 95 years) reported that he had taken a boda-boda, spending Tsh 30,000 to get to Lukosi where he caught a bus to town for medical treatment.

Buses are more commonly used than motorcycle-taxis where they are available, in Kidabaga and Mwataki. They are popular with respondents because of their speed in getting to places, but they are viewed as expensive and accidents are considered as a major danger.

Bus use predominates in Kidabaga where many use the bus to go to Iringa and only 14% have never used the bus, compared to Mwataki where 85% have never taken the bus, and Mhanga where 86% have never taken one. The village chair in Kidabaga noted, however, that in the wet season the
bus is less frequently available. One 72 year old woman in Kidabaga observed that she much prefers the bus to boda-boda: ‘Bus is more comfortable and not as speedy’.

In Mwataki, the one bus goes daily to Iringa and comes back in the evening but ‘if it breaks down we all get stuck’ (man 69 years). This man, a village councilor, noted that a meeting had taken place with a local Member of Parliament to try to get additional buses; this had not as yet been successful. Another respondent said that as the bus leaves at 4 a.m., it is still dark and potentially dangerous walking and ‘if you have luggage you can be mugged’ (woman, c. 90 years).

In Mhanga, there is no bus transport available and people have to walk to Idete (19 km through shorter route that goes through forest, 24 km by the designated road) to board the bus for Iringa. One 95 year old man who had taken a motorcycle to Idete, then a bus to town, observed that he didn’t like overcrowding and ‘there’s a very bad smell in the bus’.

Traffic accidents: Because of growing concerns about road safety we asked about traffic and travel accidents. 93% of women and 89% of men surveyed had never experienced a traffic accident of any type. Just one woman and one man had had a motorcycle accident as a passenger, one man had had a bicycle accident and 5 women and 4 men had had accidents as passengers in vehicles. Additionally, four women and five men had been injured as pedestrians. The village chairman at Kidabaga reported a recent accident in which an older woman was recently knocked down by a boda-boda driver and broke her leg, ‘However, we have held a meeting with boda boda drivers about safety’ he added.

5.5 Livelihood implications for older people

Transport and livelihoods are interconnected in many respects. For instance, access to good health services is likely to bring improved well-being enabling many older people to work well into and beyond their 70s, an important factor in communities where the caring role of older people, particularly women is so significant.

For many older people, health problems bring substantial associated livelihood challenges. In particular, these problems are associated with the domestic load carrying which is necessary in order to maintain the household and thus enable people to go about their daily business of making a living. Unless children or grandchildren are available to assist on a regular basis, these tasks – carrying water, firewood, food from the farm etc. - are a major hurdle.

Income sources among older people are limited. Farming is the major occupation of older people surveyed in all settlements. The survey found that an average of 81% of respondents were farmers (80% of women and 82% of men surveyed), with just 13% reporting that they were unemployed. However, due to transportation constraints, access to markets is quite limited. For instance in Mhanga, most of the older people said they sold their crops locally (in the village). Selling of their products outside the village is limited to the dry season (July - October) as it is the only season when trucks can manage to get through. Nevertheless, during this season, prices are not competitive, and thus not favourable to these farmers. The main markets are in Iringa and Morogoro, however, access to these markets is a major issue. According to respondents in the qualitative interviews, to reach Iringa market for instance, goods have to be head-loaded to Idete (about 5 hours walk) to catch a bus to Kilolo or Iringa market which departs the following day as there is only one travel opportunity in a day. Farmers have to sleep at Idete and proceed home (to Mhanga) by foot the following day as the bus arrives at around 1730hrs. Morogoro market is relatively good compared to Iringa market, however access is only by foot which takes about 2 - 2.5 days in each direction according to respondents. Consequently, older people sell their produce to visiting traders at very low prices. In the dry season conditions are better and lorries take beans and timber out to markets, but the area is impassable in the wet season.
‘Due to poor infrastructure, I am forced to sell my farm produce to Idete because lorries won’t access the village. However, due to age I can’t carry the farm produce and therefore rely on younger people to ferry on my behalf. This costs me more – carrying the loads - as it eats into my profits.’ (man aged 75 years, looking after a 10 year old step daughter whose father has died).

A widow aged 73 years who lives with her son and granddaughter spoke about assisting with voluntary community work on road and path improvements by carrying and packing timber (they are building a road to Morogoro and according to the village officer are within 7 km of completing it).

Limited livelihood opportunities are in large part due to poor market access, but they can also be related, in some part, to educational levels, which are low in all the study settlements:
- 70% reported that they had had no education whatsoever (F=80%, M= 51%)
- 9% had completed primary education (F=3%, M=18%)
- <1% had completed secondary education

Educational levels widely varied by village and by gender. Mwatasi has a high rate of illiteracy among women (64%) while Mhanga has the highest rate of illiteracy among men (25%) with almost none for both genders secondary level education.

6.0 Key observations

Drawing on existing literature and our prior experience, some specific points related to transport constraints were identified for consideration in the context of current research in Kilolo district:

1. Older people may face numerous difficulties when they are unable to access public transport. Some of these difficulties are probably similar to those reported by children in the child mobility study, such as harassment, being cheated on fares by operators, having to stand up and keep balance in an unstable vehicle when all the seats are taken etc. www.dur.zck.uk/child/mobility/.  
   We found no evidence of harassment or cheating on fares in Kilolo district study villages, but the bus services are sparse and the difficulties and cost of travel by the main alternative available transport mode in this area—the boda-boda- are substantial for older people.

2. The mobility and access constraints experienced by older people may impact negatively not only on themselves but also on the educational, health and livelihood opportunities of children and young people in their care and thus reduce overall long-term potential for poverty eradication (Willilo and Starkey, 2012; Willilo and Starkey, 2013). For instance, mobility and access constraints are likely to impact strongly on older people’s ability to earn income, with consequent impact on their ability to feed, clothe and educate children. Access to livelihoods has been inadequately considered in an older people’s context (they are often treated by government, academics and others as if they are outside the working population but they need livelihoods to survive).
Older people’s livelihoods in the survey area are principally built around farming, but they are clearly restricted in this work by distance to farms, limited resources and (with the exception of Kidabaga) by a lack of transport to local markets. Arguably, older people experience diminished strength and energy because of the effort required to collect domestic water and firewood, as well as the care of grandchildren. This in turn reduces their farm productivity, despite having grand children in their care who often help before or after school.

3. In some regions the demands of load-carrying on women from childhood and onwards appear to impact severely on health and quality of life as they enter and experience old age (though we are unaware of any published evidence base to support this hypothesis). The implications of Africa’s transport gap and consequent dependence on pedestrian head-loading (often designated a female activity), has received remarkably little attention. The particular plight of older women in accessing fuel wood, water and markets needs further investigation (Porter, 2010).

Load carrying is widely prevalent not only among women but also among older men in the study settlements. Water and fuel loads present a major transport burden for the younger cohort of older people (those in their 60s and 70s) and carrying is associated particularly with waist and back pain.

4. Road traffic accidents are a major cause of injury and death across Africa. Older people are likely to be at disproportionate risk because of age-related physical and cognitive changes (Amosun et al, 2007; Mabunda et al, 2008).

Road traffic accidents were only rarely reported in our study settlements and few involved older people: nonetheless, given the short period within which the boda-bodas have been in operation, this is potentially a very significant issue. The boda-boda drivers who are the main transport operators are mostly young men and the group most susceptible to accidents. Older people say they insist on the driver travelling slowly, and the young drivers seem to take care when carrying older passengers, but accidents have already occurred and older women, in particular, do not seem to be welcomed as passengers.

5. We can expect considerable diversity of experience amongst older people, according to age, gender, ethnicity, socio-economic status, family composition (dependents etc.), occupational history, infirmity/health, personal mobility status, density of service provision, etc. It is important to assess how this diversity impacts on transport usage, suppressed journeys, mobility, access to services and other elements important to older people’s well-being.

The diversity of older people’s experience has some impact on transport usage, most notably perhaps in terms of socio-economic status (most are relatively poor compared to the community average, but there also appear to be a few with above average wealth, especially in Kidabaga). Older people living in the more accessible settlement (Kidabaga) and those living in remote settlements, especially Mhanga which has virtually no road access as yet and virtually no transport services, have reported very different experiences. Gender seems to be a less significant factor shaping transport access than in many West African contexts. The impact of age is difficult to assess from
the survey data, in part because numbers in the higher age groups are very low. The qualitative work suggests that while the very old are mostly highly immobile, they commonly receive substantial mobility support from family and – where family are absent – neighbours and the wider community.

6. Potential routes to improving mobility among older men and women are likely to differ from those open to younger people in their communities. Bicycle usage, for instance, may be impossible for older women who have never had time/opportunity to learn to cycle. Older people with disabilities are particularly disadvantaged, such that even mobile service provision to settlement centres may not serve them adequately: adapted wheelbarrows with invalid seats might assist in some contexts (Grieco, 2001).

   Boda-boda are clearly already changing lives in Kidabaga and Mwatasi (especially in conjunction with mobile phone use). In the absence of alternatives it has brought improved mobility – at least in emergency contexts – even for very old people, despite the high fares. It is important to explore how boda-boda might be adapted to make it safer and more comfortable to older people in the study settlements, and to examine feasible alternatives that enable sick older people to reach health centres. Descriptions of sick older people’s travel to clinics and hospital by motorcycle taxi, sandwiched between the driver and a relative at the back to keep them from falling off, have to be of concern to transport and health professionals. Attention also needs to be given to domestic water and fuel transport and the means by which this can be improved, so that older people are able to reduce their carrying burden and, should they wish, devote more effort to their farms. Market access appears to be a massive issue in the study settlements and here boda-boda are unlikely to be of much value, given that only small loads can be carried by motorcycle.

7. Ill-health and infirmity may introduce further problems for older people, in a walking world where pedestrian transport dominates among all ages (Porter, 1988; 1997; 2002a; Porter, et al, 2013). Reduced pedestrian mobility due to infirmity and the unaffordable cost of motorised transport may help to limit older people’s access to work and vital health care, thus reinforcing their poverty: a vicious circle in which mobility restrictions form a key component. At the same time, care-giving responsibilities of older people (especially women), who have adult children affected by HIV/AIDS may require prolonged travel to care for the sick (Ssengonzi, 2009).
7. RELEVANCE TO RURAL TRANSPORT POLICY

The findings from this small study may have important implications for national rural transport services. The following points are particularly relevant:

7.1. The significance of older people’s transport needs

Many older people’s lives and mobility patterns in the Kilolo district study settlements are intimately bound up with the lives and mobility patterns of other adults and children: this is likely to be the case across much of rural Tanzania. HelpAge’s experience of work in other rural areas in Tanzania suggests that many older people live in similar contexts of limited resources and substantial caring responsibilities. There is often a symbiotic relationship between generations which allows people to cope in difficult situations (the need for young adults— the parents—to migrate to the city for work, plus a high incidence of HIV/AIDS). Attention to older people’s transport needs is thus important, not only for assisting that age-group, but for assisting the grandchildren and other young people in their care and for the lives of their children living elsewhere: it thus has very wide implications for national development.

7.2. The importance of recognising the diversity of user transport needs

The diversity of older people in the survey area in terms of gender, age and socio-economic status substantially affects their ability to access transport services. This point has wider application to other rural areas and other groups of transport users: it is important not to assume homogeneity in user needs even by age and gender.

In terms of socio-economic status, most older people we interviewed are relatively poor compared to the community average, but there also appear to be a few with above average wealth: this obviously affects their ability to pay fares. There were also important differences associated with residential location, especially between Kidabaga which is relatively accessible, compared to Mhanga where there is an almost total absence of motorised transport. Gender seems to be a less significant factor shaping older people’s access to transport than might have been predicted. The impact of age within the wider older people age category is difficult to assess from the survey data, in part because numbers in the higher age groups are very low. The qualitative work suggests that while the very old are mostly highly immobile, they commonly receive substantial mobility support from family and—where family are absent—neighbours and the wider community. However, differential access to transport and mobility, across age groups, requires emphasis.

7.3. Transport interventions needed to reduce domestic transport burdens

Older people’s livelihoods in the survey area and elsewhere in rural Tanzania are principally built around farming. It is likely that in many regions a similar situation pertains to that in Kilolo and Kibaha whereby many older people probably do not cultivate all their land because of limited resources and diminishing strength. Arguably, their energy/strength available for farming is much reduced by the transport needs associated with obtaining domestic water and fuel supplies (and, in many cases, the care of grandchildren, whether they belong to children now living in town, or are orphaned). Grand children in their care often help before or after school, load carrying is still surprisingly prevalent not only among older women but also among older men in the study settlements: again, observation suggests this is
also a widespread phenomenon. Load-carrying presents a major transport burden for the younger cohort of older people (those in their 60s and 70s) and is associated particularly with waist/back pain which reduces capacity for farm work and other occupations.

It is important to explore the potential to make interventions that can aid load carrying for domestic purposes (notably water and fuel wood carrying) or which substitute load carrying with improved accessibility to water and firewood. Such interventions could substantially improve the lives of rural older people and their families, not only through freeing time for more productive activities including farming but also by reducing the pain and exhaustion associated with carrying heavy loads. Moreover, it is important to point out that the domestic load-carrying burden also affects younger age groups, with potentially damaging effects: interventions focused on older people are also likely to help other age groups. Efforts to reduce people’s pedestrian transport burden so that they have to do less transporting of water and wood themselves and are thus less likely to fall ill as a result of the carrying burden could normally be focused on IMT (Intermediate Means of Transport) interventions (possibly including adaptation of motorcycle taxis) for carrying intra-village water and firewood. Given the dissected topography of the Kilolo district, it would probably make far more sense to increase the number of boreholes (as has already been occurring in Mwatasi) and to plant more local firewood plantations close to village settlements, so that older people do not need to travel long distances to collect wood at their farms.

7.4. Inter-village and regional transport services: the role of motorcycle taxis

Motorcycle taxis have effected a transport revolution over the last few years, not only in our study settlements in Kilolo district and in Kibaha (2012 study district) (especially where they operate in conjunction with mobile phones) but also, from observation, in many other parts of rural Tanzania. In the absence of alternative modes of transport in off-road areas in particular, older people – along with other age groups- are increasingly taking advantage of this development, despite the relatively high fares charged. They are proving particularly beneficial in emergency health contexts when a patient needs urgent transport to health services. However, these services do not cater well for the specific needs of older people; and our study points to wider issues associated with the expansion of motorcycles taxis. It is important considering the fast growing expansion of this mode of transport, to explore if/how boda-boda might be adapted to make it safer and more comfortable to older people, and to examine feasible alternatives, especially in the context of travel of sick older people to health centres. Descriptions of sick old people’s widespread travel to clinics and hospital by motorcycle taxi, sandwiched between the driver and a relative at the back to keep them from falling off, will be of concern to transport and health professionals from a safety point of view. Modified seats, harnesses and/or use of trailers attached to motorcycles in which sick people can be transported should be explored.
8. CONCLUSIONS

Transport is clearly a major hurdle for many older people in the study settlements, and particularly in Mhanga, especially for access to health services. Transport, health, livelihoods and well-being are interconnected in many respects. The long distance to water points is of particular concern, given older people’s limited capacity to carry much water, since insufficient water access will contribute to water borne diseases including digestive problems, while limited awareness of hygiene associated with prevailing low education levels is likely to increase exposure to infection.

Meanwhile, the prevailing poverty which results from low agricultural production and poor access to good markets (also closely associated with transport constraints) is likely to reduce nutritional status. However, relationships between older people and their children and grandchildren (which has important implications in a mobility context), is a key redeeming feature for many households. Many older people are caring for grandchildren; at the same time, their locally resident children and grandchildren assist them too in very many ways - older people often gain access to goods and services, including medicines, domestic needs etc., indirectly through both adults and children in the community. However, for older people without immediate resident family, living conditions can be severe, as was observed by respondents.

Although our principal focus in this field work has been to pursue the research agenda of building a baseline data set, it is important that we use the information collected, in collaboration with key stakeholders at national and local level, to develop an agenda for action. Concerted policy and practice changes in transport, health, social welfare and the overall development agenda will be required to ensure older men and women’s constraints due to mobility and physical inability are understood and addressed.

9. ACKNOWLEDGEMENTS

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