Replicating Garbage Clinical Insurance Manual

This manual is for those who want to learn more about replicating Garbage Clinical Insurance (GCI).

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1. Replicating Garbage Clinical Insurance Manual

Introduction

Garbage Clinical Micro-Insurance (GCI) is a micro-health insurance programme based in Indonesia. It solves the dual-challenges of low-levels of health insurance uptake and high costs of waste disposal by providing health insurance that is financed by household waste. GCI is an initiative delivered by Gamal Albinsaid.

18% of Indonesian’s live on below $1 a day, very few are able to pay for access to health care. In addition, many Indonesian cities lack robust waste management systems for household waste. In cities like Malang, where GCI was first developed, around 55,000 tonnes of household waste is produced every day, only 50 - 60% of this waste is ever collected. Households that are provided with government-run waste management services are required to pay a monthly collection fee. By providing waste processing at a reduced rate and using a range of mechanisms to extract value from it, GCI is able to improve access to healthcare. GCI does this by funding the building of new clinics or partnering with existing clinics to provide its members with primary health care funded by their household waste through GCI.

GCI has been recognised at the national level by the Indonesian MDG Awards and the AusAID Indonesian Social Innovator Awards. At the international level, Gamal Albinsaid, the founder of GCI, was awarded HRH The Prince of Wales Young Sustainability Entrepreneur Prize, the top accolade from the Unilever Sustainable Living Young Entrepreneurs Awards. As part of the prize he has received business mentoring from academics at the University of Cambridge and support from Unilever.

GCI has created a new model for delivering micro-health insurance. The model has the potential to be replicated at scale both inside Indonesia and internationally. With the support of government agencies and academic institutions, GCI hopes to support others to replicate its success. This manual details how GCI works in practice and includes a replication framework for those based outside of Indonesia.

Why GCI is important: Khaerunisa’s Story

When Supriono’s three year old son Khaerunisa died from a curable stomach infection he had $0.50 in his pocket, not enough to buy a shroud to wrap the body of his child properly, let alone to hire private transport to take him to be buried. Supriono, collects cardboard, glass and plastic bottles earning $0.84 a day to support his family. He lives under the Cikini railway crossings in Jakarta, with his one remaining son.

When Khaerunisa started vomiting Supriono had enough money to take him to local clinic once, but was unable to afford further treatment. He could only hope that Khaerunisawould get better on his own. When Khaerunisa died four days later he was lying on a filthy cart surrounded by cardboard waste. Supriono attempted to take his son to a village about an hour away to be buried. He took Khaerunisa to the train station, wrapping his body and leaving his head un-covered so that fellow passengers wouldn’t know the child was dead. Supriono was found out, he was forced from the train and taken to a police station. When Suprionotold police the child died from a stomach infection, they didn’t believe him and insisted on an autopsy. “There are still many others like Khaerunisawho need help”.

Context

Indonesia is classified by the World Bank as a lower-middle-income country which in 2013 was defined as a
country with an annual gross national income (GNI) per capita that is less than $4,125 but more than $1,045. Other lower-middle-income countries include India, Vietnam and Nigeria.

Although uptake of health insurance in Indonesia has increased in the last decade, nearly 60% of the population does not have access to health insurance. Recent data shows that 18% of the population continue to live on less than $1 a day, and about half the population on below $2 a day. Households spend an average 2.1% of their total income on healthcare, ranging from approximately 1.6% in poorer households to 3.5% in wealthier ones. This is low compared to other countries with similar income levels.

The Indonesian Ministry of Health is gradually shifting its emphasis from curative and rehabilitative medicine towards promoting preventive healthcare. Effective waste management is one way to improve health outcomes. Urban areas like Malang, the second largest city in East Java, produce more than 55,000 tonnes of solid waste every day but only 50 to 60% is collected, the rest goes to open dump sites, which have been linked to premature deaths, serious illness, and diminished quality of life.

Solid waste management in Indonesia usually involves both the formal and informal sectors. The informal sector is made up of individuals, groups and small businesses whose activities are not registered or formally regulated, this includes activities undertaken by ‘recycling scavengers’.

90% of the waste produced in Indonesia is not recycled. Along with the health benefits of improved waste management, the Ministry of the Environment recognises both the economic and environmental opportunities that would result from improving recycling rates.
2. How GCI works in practice

Households that are provided with government-run waste management services pay a monthly collection fee between $1.10 and $3.20 in Indonesia. GCI re-purposes or disposes of its members’ household waste for a monthly fee of 10,000 IDR ($0.83). The fees collected from members combined with the profits from selling or repurposing the waste collected is used by GCI to provide members with quality healthcare.

Waste management

GCI’s principal source of revenue is derived through the trading of waste, or ‘waste entrepreneurship’. There are three main revenue streams attached to the waste management programmes GCI runs. These are derived from the sale of:

- Fertilisers made from organic waste
- Products up-cycled by the community
- Recyclable waste

Members bring garbage to their local clinic on a regular basis, usually once a week. Here it is sorted into biodegradable and non-biodegradable waste.

Biodegradable waste includes kitchen waste, animal remains and agricultural waste, specifically cattle manure. This waste is either composted using the Takakura method, a process that purifies organic waste through fermentation introduced from Japan, or turned into liquid fertilizer and compost using a tube composter. The fertilisers are sold via a third party fetching prices of up to $0.41 per kilogram, with profits fed back into the community health insurance fund.

Non-biodegradable waste is separated into recyclable waste which includes plastic, paper and clothing, and non-recyclable waste. GCI works with the community to up-cycle some of this waste, turning it into new products to sell, including bags and clothes. The remainder of the recyclable waste is sold to formal waste management companies.

Providing healthcare

GCI has raised funds to start clinics in various ways, ranging from using private funds, cooperating with landowners and partnering with the owners of existing clinics.

GCI assumes that between 15 and 20% of its members will require curative treatment in any given month. The cost of treating each patient is estimated to be $2.54. At this ratio, more than 50% of the total fees collected from members can be used to provide programs focused on improving health and preventing illness, meaning that members who aren’t sick benefit.

For example:

a) 1000 members pay monthly premiums of $0.83 each to dispose of their waste  
   b) This produces monthly income of $830 for GCI  
   c) If 150 of those members require treatment, with each treatment costing $2.54, this costs $381  
   d) The remaining $449 every month is used for improving public health and developing preventative programmes.

The range of services provided to GCI members includes:

- Free medical consultations by phone  
- Access to ambulance facilities
- Cholesterol, blood sugar and urinetests
- Family health guidance
- Advice on nutrition
- Mentoring a child development
- Monitoring of chronic diseases
- Post-hospital rehabilitation and recovery

The benefits of GCI over traditional health insurance models

<table>
<thead>
<tr>
<th></th>
<th>GCI</th>
<th>Regular health insurance</th>
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</thead>
<tbody>
<tr>
<td><strong>Cost</strong></td>
<td>Lower fees for waste collection and zero charge for access to health services</td>
<td>Monthly health insurance premiums on top of monthly waste collection fees</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td>Should members not be ill or injured and so not require treatment, they still benefit from preventative services.</td>
<td>Members only receive treatment for illness or injury.</td>
</tr>
<tr>
<td><strong>Service level</strong></td>
<td>Full health service, members have access to preventative, curative and rehabilitative care.</td>
<td>Curative service only</td>
</tr>
<tr>
<td><strong>Social impact</strong></td>
<td>• Covers costs when ill or injured&lt;br&gt;• Improves the overall level of public health with preventative programmes&lt;br&gt;• Optimises waste management&lt;br&gt;• Sustainably financed</td>
<td>Covers costs when ill or injured</td>
</tr>
<tr>
<td><strong>Economic impact</strong></td>
<td>Provides employment for a wide range of skill-sets - health workers, garbage collectors, community organisations and students</td>
<td>Employment for health workers only</td>
</tr>
<tr>
<td><strong>Participation</strong></td>
<td>Access is open to all who create or source any kind of waste</td>
<td>Limited to those who have enough money to pay premiums</td>
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Success factors & risks

<table>
<thead>
<tr>
<th>Risk</th>
<th>Risk level</th>
<th>Mitigating options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependence on volunteers: the success of clinics in the GCI model depends on volunteers who are willing to provide their time and expertise for free</td>
<td>Medium</td>
<td>- Robust selection process for volunteers&lt;br&gt;• A strong and clear structure to the volunteering programme, so each volunteer fully understands their role&lt;br&gt;• Opportunities for volunteers to feed-back to programme leadership&lt;br&gt;• Regular volunteer engagement sessions to ensure volunteers understand and buy-in to GCI as it grows and develops</td>
</tr>
<tr>
<td>Risk</td>
<td>Risk level</td>
<td>Mitigating options</td>
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</tbody>
</table>
| Local community engagement: the community must be willing to participate and clearly see the need benefits of participation | Medium     | - Effective quantitative and qualitative research into community needs before launch  
- Participatory approach to planning and developing GCI in-line with local context  
- Long-term plan for community participation in the growth and development of the programme  
- Mutually beneficial partnerships with other local community organisations to drive engagement  
- Strong, locally relevant communications plan |
| Local waste management infrastructure: there need to be existing facilities in place that have a level of organisation and understanding to facilitate the model | Medium     | - Extensive background research into local waste management structures to establish the degree to which existing facilities can support the GCI model, before launch  
- Careful engagement with existing waste management providers to understand development plans and seek out opportunities for long-term cooperation |
| Ability to secure a good price for waste: members may be able to get a higher price for their waste by selling direct as opposed to through an intermediary, like GCI | High       | - Research, before launch, that investigates the opportunities for extracting the most value from the waste collected. Depending on the local context, up-cycling and recycling may deliver more value that collecting and selling, for example. |
| Managing organic waste: composting requires investment upfront, careful management and it takes some time before the products can be sold | Low        | - The level of investment and its pay back-period need to be understood and planned for upfront  
- Responsibility for the management of composting pre-determined and managed by someone who is able to focus on the delivery of high-quality products that can be sold |
| Local government engagement: the GCI model needs to complement centralised provision of two key services - healthcare and waste management | Medium     | - Support from central government ministries (GCI have the support of the Ministry of Health in Indonesia) can help drive local government support  
- Ability to demonstrate that the model will help meet local needs  
- Robust planning which demonstrates consideration of local context  
- Early engagement with local government to allow for their participation in the planning process |
| Widespread epidemic: should a significant health crisis (e.g. Ebola) affect a community where the GCI model, which relies on treating 15% of members per month, is in place, health clinics could be overwhelmed and GCI would not be able to deliver on its promise to members | Medium     | - This is an unlikely, yet high-impact risk.  
- Can be mitigated by carefully managing members expectations. Members should have a clear sense of the services which GCI can provide and those which are outside of its remit |
3. Replicating GCI

The success with which the GCI model can be replicated is entirely dependent on local context. Community needs have to be aligned with the ability to obtain sufficient revenue from waste to pay for the delivery of quality healthcare. It is the responsibility of the replicating organisation to understand each of these factors and, based on high-quality research, decide whether the GCI model is appropriate for replication in their specific context.

Organisations wishing to replicate GCI outside Indonesia that are interested in furthering the model as a whole are asked to sign a memorandum of understanding (MOU) with GCI. The MOU provides a values oriented framework around which the GCI model is replicated. It also enables the replicating organisation to be part of a GCI network where organisations working on the model both inside and outside Indonesia are able to share successes, failures and new ideas. The MOU also requests that data is provided on a regular basis to the central GCI team, which assists with monitoring and evaluation of the impact of the model globally.

Replication framework

<table>
<thead>
<tr>
<th>Sub-stages</th>
<th>Milestone</th>
<th>Deliverables</th>
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<tbody>
<tr>
<td><strong>PREPARATION PHASE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>Preliminary community research undertaken and results delivered</td>
<td>Demographic data which identifies the target community’s needs and informs the development of the GCI replica in a way that meets them</td>
</tr>
<tr>
<td>1.2</td>
<td>Waste disposal data relevant to the community where the GCI model is being replicated obtained</td>
<td>Data on the volume and composition of waste. Used to build the waste management revenue model</td>
</tr>
<tr>
<td>1.3</td>
<td>Potential waste management partners and waste management equipment researched</td>
<td>Data on prices paid for organic and non-organic waste and fertilisers. Information on costs associated with waste management equipment. Used to build the waste management revenue model</td>
</tr>
<tr>
<td>1.4</td>
<td>Public health data relevant to the community where the GCI model is being replicated obtained</td>
<td>Data on the diseases most prevalent in the target community. Used to support the planning of clinical priorities and inform financial modelling</td>
</tr>
<tr>
<td>1.5</td>
<td>Stakeholders engaged</td>
<td>All relevant local authorities and community groups approached, including youth organisations and health services as well as the target community. All invited to feed into the planning phase</td>
</tr>
<tr>
<td>1.6</td>
<td>All relevant legal approvals and licenses researched</td>
<td>Clear understanding of any legal or licensing requirements for both clinics and waste management</td>
</tr>
<tr>
<td>1.7</td>
<td>Locations for clinics researched and associated costs explored</td>
<td>Projection of costs associated with clinic set-up and sites for potential clinics identified</td>
</tr>
<tr>
<td>1.8</td>
<td>Business plan complete</td>
<td>3 year business plan projecting costs and revenue based on the research data and stakeholder engagement</td>
</tr>
<tr>
<td>1.9</td>
<td>Implementation phase planning complete</td>
<td>Structured project management plan in place for the implementation phase, including plans to recruit GCI volunteers and members</td>
</tr>
<tr>
<td>Sub-stages</td>
<td>Milestone</td>
<td>Deliverables</td>
</tr>
<tr>
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</tr>
<tr>
<td>1.10</td>
<td>MOU with central GCI team signed</td>
<td>Structures in place to ensure the commitments outlined in the MOU are met. Plans to collect data regularly and participate in the global GCI network in place.</td>
</tr>
</tbody>
</table>

**IMPLEMENTATION PHASE**

| 2.1 | Both the clinical and waste management teams in place | • Volunteers recruited with clear descriptions of their role  
• Clear management structure in place |
| 2.2 | Waste management centre established | • Procurement complete  
• Waste management processes in place  
• Waste centre is ready to operate |
| 2.3 | Clinics established | • Procurement complete  
• Clinic ready to accept patients |
| 2.4 | Communications campaign to raise awareness of GCI in the target community launched | High level of awareness and enthusiasm for GCI in the target community |
| 2.5 | Target number of members recruited | Following on from the awareness campaign, a membership recruitment plan is launched and the target number of members recruited |
| 2.6 | Media launch complete | High profile launch, featuring new members sorting their waste and accessing the clinics for the first time |

**DEVELOPMENT PHASE**

| 3.1 | Evaluation of GCI members' satisfaction levels complete | Data indicating satisfaction levels in-hand and used to determine further development of the GCI replica. |
| 3.2 | Participation in knowledge sharing | Implementing plans to participate in the Global GCI network and using knowledge gained from other GCI replications to further develop GCI in line with local context |
| 3.3 | Data collection | Regular data collection which monitors the social impact and evaluates the success of the programme, identifying ways to improve and develop the programme |