Mobile for Development
mHealth

The Importance of Partnerships in mHealth

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Executive summary

In a recent discussion paper published by World Vision on the Post-2015 Agenda a strong emphasis was placed on the need for cross-sector partnerships and the potential they hold to deliver on the innovation required to meet and go beyond the targets defined by the Millennium Development Goals.

There has been much talk about the need for partnerships within mHealth and the value that they bring, but the evidence has been largely qualitative. There is a general consensus that partnerships can and will aid sustainability of mHealth services and extend the current ability of mHealth to reach the underserved.

The GSMA recently conducted an mHealth Tracker survey, among 276 mHealth services across the 10 countries included in the mobile nutrition (mNutrition) initiative, to understand the emerging best practices in these markets. This report highlights some of the best practices and evidence regarding partnerships within mHealth services across the surveyed markets.

Three different types of partnerships are investigated in this report. The first of these is the partnership of mHealth services with Ministries of Health within the countries in which their services are being deployed, the second is cross-sector partnerships, and the third is partnerships with mobile operators. Analysis was carried out with the aim of understanding the impact that each type of partnership is having on the delivery of mHealth services.

A common trend emerged, which indicated that partnerships have a positive impact on the delivery of mHealth services. This impact is facilitated in three ways:

- Partnerships can strengthen the richness of offering of an mHealth service
- Partnerships can improve the ability to achieve greater geographical coverage
- Partnerships can improve the penetration of mHealth services to reach a larger audience
Introduction

The GSMA Mobile for Development mHealth programme connects the mobile and health industries, with the aim of developing commercially sustainable mHealth services that meet public health needs.

In September 2013 the mHealth programme launched the mobile nutrition (mNutrition) initiative. Funded by UK aid from the Department for International Development (DFID) and the Norwegian Agency for Development Cooperation (Norad), mNutrition aims to support the scale-up of mHealth services targeting nutrition and maternal and child health, in support of the Millennium Development Goals 4, 5, and 6. The mNutrition Initiative is closely aligned to the UN’s Every Woman Every Child Initiative, Scaling Up Nutrition (SUN) and The Global Nutrition for Growth Compact.

The mNutrition target countries are Côte d’Ivoire, Ghana, Kenya, Malawi, Mozambique, Nigeria, Rwanda, Tanzania, Uganda and Zambia.

The GSMA believes that partnerships are essential for the successful and continued implementation of mHealth services. In this paper we will present some of the evidence supporting this supposition.

A recent report published by World Vision stated that ‘Within cross-sector partnerships, partners will typically leverage their respective core knowledge, skills, resources and assets in such a way as to create solutions which none of the partners could have developed on its own,’


From the results of the mHealth Tracker survey it became clear that the involvement of so many different stakeholder groups within mHealth is a clear indicator of the complex nature of this industry. The results also motivate the need for each of these players to bring their expertise to the table to ensure best service for the end users.
The different stakeholder groups represented in mHealth partnerships across the GSMA mNutrition target countries included Ministries of Health (MoH), academic institutions, technology vendors, aggregators, mobile operators, donors, investors, banks, non-governmental organizations (NGOs) and regulators. The GSMA mHealth Tracker survey requested that mHealth services disclose partner organisations. 63% of the services surveyed disclosed their partnership information.

This report investigates a number of hypotheses concerning the value-add of these partnerships. Each of these hypotheses is centred on aspects of a service where improvements are expected to be evident if partnerships are having the intended effect:

- Improved capacity and richness of offering of mHealth services
- Improved geographical coverage
- Improved ability to reach more beneficiaries
Hypothesis 1: Does partnership diversity affect the capacity and richness of offering of an mHealth service?

mHealth services included in the mHealth Tracker survey were requested to indicate which health conditions they address as well as what type of mHealth applications they offer within their service. We were interested in understanding if there existed correlation between the types of the partnerships secured within the mHealth service and the ability / capacity that the service has to address a health condition or offer a mHealth application. Simply stated, were services that had more partnerships in place more likely to address a health condition? Additionally, within the context of this research, improved richness of offering refers to the ability of a service to address more health conditions or extend their service offering to include more mHealth applications.

Two types of partnerships were isolated for further investigation of this hypothesis:

1. Partnership with the MoH in the country in which the mHealth services is being implemented

2. Cross-sector partnerships, where a service has managed to secure partnership with a network of organisations representing 3 or more different mHealth stakeholder groups
Analysis was carried out on data from 4 sets of services:

1. Services that have secured both MoH partnership and cross-sector partnerships (labelled ‘Both’)
2. Services that have secured MoH partnership but not cross-sector partnerships (labelled ‘MoH’)
3. Services that have secured cross-sector partnerships but not MoH partnership (labelled ‘Cross-Sector’)
4. Services that have not secured MoH partnership or cross-sector partnerships (labelled ‘Neither’)

**Figure 1:** Health conditions addressed by mHealth services with different partnership networks
The first observation made is that for all mHealth services, regardless of which set they fall into, HIV/AIDS is the most addressed health condition.\(^1\)

When taking a closer look at diarrhoeal disease, it can be seen that 27% of services falling within the 1st set (services that have secured both MoH partnership and cross-sector partnerships) are currently addressing diarrhoeal disease in comparison to only 22% of services falling within the 2nd set, and 18.2% of services falling within the 3rd set. Only 12% of services falling within the 4th set are currently able to address diarrhoeal disease. Therefore, the 1st set of services has shown a better ability / capacity to address diarrhoeal disease than the rest of the sets of services.

This trend is consistent across most of the health conditions represented in Figure 1 (HIV / AIDS, tuberculosis, diarrhoeal diseases, and cardiovascular diseases), with a greater percentage of services from the 1st set currently able to address each of these health conditions. This demonstrates that if an mHealth service has a more extensive partnership network in place that it may also have a greater ability or capacity to address any given health condition.

The performance of services falling in the 2nd set compares well to that of services falling in the 1st set. For certain health conditions (malaria and perinatal conditions) services from set 1 and set 2 have a matched ability to address these conditions. Services falling within the 2nd set outperform the others in the ability to address nutritional deficiencies, and respiratory infections.

\(^1\) Figure 1 only includes the 8 most commonly addressed health conditions and is therefore not an exhaustive representation of health conditions that are tracked within the GSMA mHealth Tracker (33 health conditions in total). Cardiovascular disease is therefore not the least addressed condition, it is the 8th most addressed health condition by mHealth services.
This suggests that even services that have secured partnership with the MoH but not necessarily with cross-sector partners, may already have a greater ability or capacity to address any given health condition. This affirms the importance of the establishment of partnerships between Ministries of Health and mHealth services.

There are some seeming anomalies in the data, including the unexpectedly good performance of the 4th set of services in the ability to address HIV. This may be due to the fact that HIV/AIDS is such a pressing health burden in these countries and as such, irrelevant of whether or not partnerships have been secured, mHealth services will have sufficient mandate to address this particular health condition. These irregularities might appear to contradict the hypothesis.

However, when the data of each set of services is aggregated across all 8 health conditions, the results look quite different. On average, 26% of services falling within the 1st set have the ability or capacity to currently address any one of the health conditions defined in Figure 1. This is impressive when compared to the average of only 14% of those services falling within the 4th set. This indicates that there is a 12% increase in ability or capacity to address any particular health condition if a partnership with the MoH and cross-sector partnerships are established within these services. On average, 24% of services falling within the 2nd set have an ability to address any one of the health conditions which compares well with services falling in the 1st set.

Further analysis on the health condition data proves that securing a more extensive partnership network also improved the service’s ability to address more health conditions within their service offering. Services with both partnerships in place (MoH and cross-sector) were able to address an average of 3.9 health conditions (out of a possible 33) compared to an average 2.6 addressed by services with only MoH partnership, an average of 1.4 health conditions addressed by services with only cross-sector partnerships in place, and an average of only 1 health condition addressed by services with neither type of partnership in place. Services with both partnerships in place are able to address an average of 2.9 more health conditions than those that have not secured either of these partnerships.
Securing an extensive partnership network also means that services have an improved ability or capacity to offer any particular mHealth application and to include more mHealth applications within their service offering.

Figure 2: mHealth applications covered by mHealth services with different partnership networks
Services that have secured Ministry of Health and cross-sector partnerships show a better current ability / capacity to include almost all mHealth applications within their services.

The first observation that can be made from Figure 2 is that data collection and reporting is the mHealth application that is included in most mHealth services, whilst very few mHealth services appear to be including financial transactions and incentives as an application within their service.

For example, when looking at data collection and reporting, 50% of services falling within the 1st set reported to currently be including this mHealth application within their service offering. 45% of the 2nd set, 36% of the 3rd set, and only 27% of the 4th set reported to include this mHealth application within their service offering. Therefore, the 1st set of services has shown a better current ability / capacity to include this mHealth application within their service offering than the rest of the sets of services.

This outperformance of the 1st set of services against the other sets is consistent across almost all mHealth applications. Once again there are a few cases where the 1st set does not have the highest percentage of services covering a particular mHealth application. For example, registries and vital events tracking and electronic health records show a greater coverage by mHealth services falling in the 2nd set (partnership with MoH). This result reveals the need for partnership with MoH to ensure successful implementation of these types of mHealth applications. mHealth services offering these applications typically require approval from the MoH for implementation at health facilities and participation of government staff (healthcare workers).
When aggregating the data across all the mHealth applications, 23% of the services falling within the 1st set have the capacity to cover any of the mHealth applications, whilst only 10% of those falling in the 4th set have the capacity to cover any of the mHealth applications (a significant 13% difference). This indicates that securing a more extensive partnership network ensures that a service has a greater ability to include various mHealth applications within its service offering.

Further analysis on the data proves that securing a more extensive partnership network also improved the service’s ability to include more mHealth applications within their service offering. Services with both partnerships in place (MoH and cross-sector) were able to cover an average of 3.9 mHealth applications (out of a possible 13) compared to an average 2.6 offered by services with only MoH partnership, an average of 2 mHealth applications offered by services with only cross-sector partnerships in place, and an average of only 1.7 mHealth applications offered by services with neither type of partnership in place. Services with both partnerships in place are able to cover an average of 2.2 more mHealth applications than those that have not secured either of these partnerships.

This data strongly supports the assumption that partnerships have a key role to play in increasing the capacity of a mHealth service to address any given condition, to address more health conditions and to cover more mHealth applications.
Hypothesis 2: Does partnership influence the geographical coverage of a service?

GSMA mHealth Tracker survey respondents have reported the coverage of their mHealth services, by listing both the district and regional (states/provinces) distribution of their services.

Three types of geographical coverage of mHealth services were isolated for further analysis:

1. Services that are nationally deployed²

2. Services that are available across 2 or more states (or provinces)

3. Services that are available across 3 or more districts³

² Services that are nationally deployed are considered to be nationally available / accessible. For example, a behaviour change communication service being provided over SMS may be nationally available if beneficiaries are able to access the service from any location in the country.

³ Services that are available across 3 or more districts are not necessarily available across 2 or more states. If a service was available across 3 or more districts within one state, such a service would not satisfy the 2nd type of geographic coverage listed above.
For hypothesis 2 we considered data from the same 4 sets of services that were analysed in hypothesis 1.

**Figure 3:** Geographical reach by mHealth services with different partnership networks

A higher percentage of a set of services achieving any particular geographical coverage type was the favourable criteria for analysis of Figure 3.
Analysing the data illustrated in Figure 3, it is apparent that securing a partnership with the MoH and having a cross-sector partnership network is conducive to achieving greater geographical coverage. Whilst having both these partnerships in place is ideal, securing either cross-sector partnerships or partnership with the MoH will improve a service’s ability to achieve greater geographical presence. The GSMA’s assumption is that with MoH support and approval, roll-out of a mHealth service to different districts or states is made easier. Having multiple partners from different sectors increases the services capacity to expand the service offering beyond small scale implementation to fully scaled, nationally available services.

It may seem intuitive that partnerships create the potential for greater geographical coverage of a service, but more specifically the data shows that securing certain types of partnerships may be more valuable in the attempt to achieve greater coverage. For example if we look at nationally deployed services, 15% of services that have cross-sector partnerships were able to achieve national coverage, whilst 23% of services that have partnership with the MoH were able to achieve the same result. This could imply that securing a partnership with the MoH, as opposed to just securing cross-sector partnerships, will improve the ability to achieve national coverage by 8%.

The ideal would be to secure both MoH and cross-sector partnerships, as the data shows that 29% of services falling in this set were able to achieve national coverage. Only 2% of services falling in the 4th set were able to achieve national coverage.
Hypothesis 3:
Does partnership with a mobile operator improve mHealth service penetration and the potential to reach a broader audience?

According to the GSMA mHealth Tracker, 30.6% of mHealth services across the mNutrition markets have a partnership with at least one mobile operator.

Of this group, 28.6% have managed to secure partnership with 2 or more mobile operators, and a total of 11 mHealth services have secured partnership with all the mobile operators active in the country their service is being deployed in. Only 27.6% of mHealth services that were included in this survey disclosed the number of beneficiaries they reached.

Initial analysis suggests that reach (number of beneficiaries reached by a mHealth service) is greatly influenced by the introduction of a mobile operator partnership.
Analysis was carried out on data from 3 sets of services:

1. Services that have commitment and partnership with all the mobile operators in the country in which the service is deployed

2. Services that have a partnership with only one mobile operator in the country in which the service is deployed

3. Services that do not have a partnership with any mobile operator
The results indicate that mHealth services falling within the 1st set (have commitment and partnership with all the mobile operators in the country) are able to reach impressively large numbers of beneficiaries.

The performance of services that have a partnership with one mobile operator is far less than those partnered with all of the mobile operators, but still better than those services with no mobile operator partnership. Services with only 1 mobile operator partner are reporting to be reaching an average of 35,862 more beneficiaries than services without any mobile operator partners. There may be other factors influencing numbers of health beneficiaries reached, but the initial results strongly support the case for mobile operator partnerships to increase health service access.

Furthermore, when isolating services that report reaching large numbers of beneficiaries (in excess of 10,000) roughly a third of these have secured a partnership with one or more mobile operators.

Figure 4: Average number of beneficiaries reached by services

- mHealth services with secured partnership with all mobile operators in country: 213,352
- mHealth services with secured partnership with only 1 mobile operator: 76,600
- mHealth services with no partnership with any mobile operator: 40,738
Case study: Wazazi Nipendeni (Tanzania)

Wazazi Nipendeni is a prime example of the value that partners can add to a mHealth service. The service has achieved success on a number of different fronts, all of which can be attributed to the extensive partnership network secured, with each partner bringing its own expertise and resources to the service.

Use case

The Wazazi Nipendeni (Healthy Pregnancy, Healthy Baby) messaging service is a client education & behaviour change communication (BCC) service, offering free maternal and early childcare health information to subscribers of all mobile networks on their mobile phones.
## Partner coverage

<table>
<thead>
<tr>
<th>Partner</th>
<th>Role</th>
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<tbody>
<tr>
<td>Ministry of Health and Social Welfare:</td>
<td>Project lead</td>
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<tr>
<td></td>
<td>Validation of approach</td>
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<tr>
<td></td>
<td>Approval and support</td>
</tr>
<tr>
<td></td>
<td>Content partner</td>
</tr>
<tr>
<td>mHealth Tanzania Public Private Partnership:</td>
<td>Implementation management</td>
</tr>
<tr>
<td></td>
<td>Partnership management</td>
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<td>US Government Centers for Disease Control and Prevention (CDC) Foundation:</td>
<td>Content partner (financially supported by the CDC)</td>
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<tr>
<td>mHealth Tanzania Public Private Partnership:</td>
<td>Funding for multi-media campaign</td>
</tr>
<tr>
<td>Johns Hopkins Bloomberg School of Public Health Center for Communication Programs (JHU-CCP):</td>
<td>Implementation partner</td>
</tr>
<tr>
<td>Elizabeth Glaser Paediatric AIDS Foundation (EGPAF):</td>
<td>Implementation partner</td>
</tr>
</tbody>
</table>
## Mobile operator partners

![Airtel](image1.png)  ![Tigo](image2.png)  ![Vodacom Foundation](image3.png)  ![Zantel](image4.png)

Wazazi Nipendeni is one of the few mHealth services that has managed to secure partnerships with all of the mobile operators in the country in which the service is being implemented.

Airtel Tanzania has supported Wazazi Nipendeni, through zero rating text messages for its subscribers, since the launch of the service in November 2012. Tigo Tanzania and Zantel have partnered with Wazazi Nipendeni since mid-2014 and are also zero rating text messages, whilst Vodacom Foundation is providing funding to cover all Vodacom subscriber’s messages. Securing these mobile operator partners means that the expansion of the service will be well supported and all beneficiaries can continue to receive the free messages regardless of which network they subscribe through.
Geographical focus

Wazazi Nipendeni is nationally available through self-registration, but there is a parallel effort through on-the-ground implementation at health facilities. This is achieved through partnerships with multiple organisations to drive community mobilization of the Wazazi Nipendeni service.

Almost 1,300 health workers are actively registering mothers during antenatal care visits in over 1,000 health facilities in 35 districts across 10 regions. Together, these partners on the ground have registered over 14,000 pregnant women since November 2013.

It is expected that health workers in at least an additional 400 facilities will be added to this service in 2015.

Continual expansion of the partnership network and a simplification of the registration process will increase the ability to reach more mothers through facilities.


Scale

Registration numbers have been impressive from the start. The CDC Foundation’s mHealth Tanzania Partnership benchmarked the concept against the mHealth Alliance MAMA initiatives which, at the start of the Wazazi Nipendeni service, were also at a first implementation phase.

The service reached its first 100,000th registrant within 11 weeks.

The team expected a similar adoption rate of about a 150,000 registrants within its first year. Thanks to the successful collaboration with partners and the enthusiastic reactions of the general public the service reached its first 100,000th registrant within 11 weeks. A large contingency of these registrants ‘self-registered’ to the service. The awareness of this service amongst these users is promoted by a multi-media campaign driven by Johns Hopkins Bloomberg School of Public Health Center for Communication Programs. The average monthly rate is 21,250 registrants, but this rate has been as low as 6,000 registrants when the media campaign burst is low. This is the motivation behind driving registration at facilities - to ensure that there are multiple channels to increase exposure of the service to the end beneficiaries. The target set out was to reach 500,000 beneficiaries by December 2015 and to enlist the 1,000,000th registrant by October 2016. Wazazi Nipendeni has already reported to be reaching its 500,000 target and so the 1,000,000th registrant should be reached sooner than expected.

“The success story of Wazazi Nipendeni lies in the heart of its partnerships. Building partnerships within the mHealth PPP has been all about leveraging synergies - understanding, pitching to, and delivering on value drivers for all the stakeholders. We are building a spider web of connections, where the links are important for the achievement of the common goals. The commitment from each partner moves beyond CSR and it becomes hard to remove a tool such as the Healthy Pregnancy, Healthy Baby Text Messaging Service because it adds value to and receives value from all links. It’s important to sell the heart and the vision to each partner - you need an ambassador within each partner organisation. Partnerships take time, patience, and championing - There needs to be someone who gently knocks on all the doors, over and over again until the value proposition is defined, understood and adopted by all. Someone who is solely responsible for developing and maintaining these relationships. We were lucky that our funders realised and understood the value and the need for this.”

- Janita Ferentinos, mHealth Tanzania PPP
Conclusion and recommendations

Within the context of this research, the introduction of partnerships appears to influence mHealth service delivery on three main fronts. Partnerships can:

Strengthen the capacity and richness of offering of mHealth services

- Evidence indicates that partnerships have a key role to play in improving the ability and increasing the capacity of a mHealth service to extend its breadth of service to address more health conditions and cover more mHealth applications. Services with extensive partnership networks were proven to have an better ability (12% more likely) to address any given health condition than those without such partnerships in place.
- Services with both partnerships in place are able to address an average of 2.9 more health conditions and cover an average of 2.2 more mHealth applications than those that have not secured either of these partnerships.

Improve the ability to achieve greater geographical coverage

- Data shows that a quarter more services would have an improved geographical reach if both types of partnerships (MoH and cross-sector) were secured.

Improve penetration of mHealth services to reach a larger audience

- Services with at least 1 mobile operator partner are reporting to be reaching an average of 35,862 more beneficiaries than services without any mobile operator partners. Services that have secured partnership with all mobile operators in the country are reported to be reaching an average of 213,352 beneficiaries (136,752 more than services with only 1 mobile operator partner).
In addition to the impressive penetration results through partnership with mobile operators, Figure 5 demonstrates how mHealth service penetration and access to end beneficiaries is increased through the contribution of different partnerships. These convincing results demonstrate that services that have secured either MoH partnership or cross-sector partnerships (but not both), are able to reach significantly more beneficiaries than services with neither of these partnerships in place. Most impressively, services that have secured both types of partnership are reaching an average of 603,443 beneficiaries, equivalent to 522,938 more beneficiaries than services with neither partnership in place.

**Figure 5:** Average number of beneficiaries reached by mHealth services with different partnership networks

Analysis supports the need for multi-stakeholder partnerships, which are encouraged in the Post-2015 Agenda for UN Development Goals (World Vision, 2014). This agenda promotes the idea that partnerships can increase the capacity of an mHealth service by leveraging the respective core knowledge, skills, resources and assets for the benefit of the service. It is expected that an improved service would demonstrate effectiveness in the areas investigated in this report – coverage of health conditions, coverage of mHealth applications, geographical coverage and ability to reach more beneficiaries. The positive impact of partnerships on all four of these fronts has been clearly demonstrated in this report.
Abbreviations

ANC  Antenatal Care
BCC  Client Education & Behaviour Change Communication
CDC  US Government Centers for Disease Control and Prevention
JHU-CCP  Johns Hopkins Bloomberg School of Public Health Center for Communication Programs
MAMA  Mobile Alliance for Maternal Action
mHealth  Mobile Health
mNutrition  Mobile Nutrition
MoH  Ministry of Health
NGO  Non-Governmental Organization
UN  United Nations
USAID  The United States Agency for International Development

Glossary of Terms

Beneficiaries:  The people who are intended to benefit from a mHealth service
Cross-sector partnership:  Within the context of this report, cross-sector partnership refers to a service that has secured partnership with a varied network of organisations representing 3 or more different stakeholder groups
GSMA mHealth Tracker:  A customised tool which collates mHealth products and services around the globe. It tracks solutions in both planning phase and those which have been commercially deployed.
Market:  Country
mHealth applications:  Frequent ways (e.g. client education & behaviour change communication (BCC), data collection and reporting, registries and vital events tracking etc.) in which mHealth has been applied to address health needs
mNutrition Markets:  Côte d’Ivoire, Ghana, Kenya, Malawi, Mozambique, Nigeria, Rwanda, Tanzania, Uganda, Zambia
Sets of data:  Within the context of this research a data set refers to data from a group of services fulfilling certain partnership criteria as defined on page 3

References
