15.232 Business Model Innovation for Global Health

A Preliminary Assessment of ColaLife

October 2013
**Executive Summary:**
How can ColaLife scale the distribution of diarrhea treatment kits?

ColaLife is a **nonprofit** that aims to leverage private sector **distribution networks** to deliver diarrhea treatment kits to remote areas in Africa

- **Situation:** Diarrhea accounts for 11% of deaths in children under five but only 39% of affected children have access to life-saving ORS treatment
- **Complication:** Infrastructure and health systems constraints make it challenging to reach the end-user
- **Question:** How can ColaLife scale its distribution?
- **Analysis:** Interview with Simon Berry, Founder and CEO; secondary research
- **Recommendations:** To increase utilization rates, ColaLife should a) **build consumer awareness**, and b) **increase incentives for retailers** in the short term; in the long term, ColaLife should c) **grow the number of distribution channels**, and d) **explore direct-sales models** to increase penetration rates in hard to reach areas

• 75% of diarrhea deaths can be prevented by ORS and zinc supplements
• Manufacturers cannot deliver ORS to remote areas, or assure safety due to counterfeit and altered medications

**Distribution Gap**

• Public and private health care facilities in severely-affected countries are often not able to provide consistent and affordable supply of ORS and zinc supplements

**Existing distribution is inadequate**

• **Distance** – remote areas lack access to medicines, especially during rainy season when treatment is most needed
• **High Cost** – Transportation accounts for ~40% of treatment costs
• **Stock-Outs** – Medicine availability is 38% at public facilities and 60% at private facilities.

• Mothers lack affordable and reliable access to ORS, and often do not know how to mix ORS for proper dose
• Children risk increased mortality from preventable diarrhea

Goal: Reduce child mortality through alliances

Mission

Build novel partnerships to alleviate poverty and improve health in the developing world through innovation

Goals & Activities

• Reduce child mortality from simple causes, such as dehydration from diarrhea
• Promote “unlikely alliances” to provide access to affordable, essential drugs
  - By opening up private sector supply chains for ‘social products’ such as oral rehydration salts and zinc supplements
  - Currently conducting pilot in Zambia, copying Coca-Cola’s business model
    ★“DESIGN a desirable product”: easy to use Anti-Diarrhea Kits (Kit Yamoyo)
    ★“MARKET like mad”: facilitate demand/use of kits through social marketing
    ★“DISTRIBUTE profitably”: same distribution channel as a bottle of Coke

Target consumers

• Mothers/care-givers of children with diarrhea in two remote districts in Zambia
  - Sold 24,565 kits during 12-month trial (90% of the kits have been purchased with vouchers and 10% with cash)

Images and components of The ColaLife Anti-Diarrhoea Kit removed due to copyright restrictions. See the ColaLife website for information.
Strategy: A New Distribution Channel

- ColaLife leverages Coca-Cola’s network to distribute ORS Kits to Remote Areas

Drug Manufacturer → Wholesaler → Distributor → Retailer → End User (mothers)

Unmet Need
- Inability to distribute ORS and zinc to rural areas
- Lack of incentives to participate in ORS and zinc distribution
- Lack of access and willingness to pay for life-saving ORS and zinc treatment

Value Proposition
- Third distribution channel (not via public or private clinics) improves access to ORS and zinc
- New distribution approach leverages existing infrastructure to generate additional revenue for wholesalers, distributors, and retailers
- Turn end user “need” into “demand” and cultivate willingness to pay through aggressive social marketing and initial subsidized biz model
- Reliable, convenient (with clear dosage instructions), and affordable ORS sold by local retailers
- Mobile verification assures safety
- Affordability
- Ease of access
- Ease of use
- Utilization
- Adherence
- Reduced diarrhea mortality

Value Measures*
- Number of diarrhea kits distributed in rural areas
- Revenue generated
  - Profit margins
- ColaLife tracks the number of AidPods assembled, distributed, and sold (vouchers or cash), as well as ORS/zinc utilization level (see next page)
Operations: Lean non-profit managing partners

Funders
- UK Aid
- COMESA
- Johnson & Johnson
- HONDA
- Grand Challenges Canada

Advisors
- unicef
- Zambia MoH

Designers
- PI Global

Packager
- MSL Medical Stores Limited

Wholesalers
- SAB Miller
- CocaCola

Social Marketers
- KZF

End User

Team of 3 and volunteers at ColaLife manage entire process

building unlikely alliance to save children’s lives

History: Idea conception to pilot

Idea conception (1998)
Simon Berry gets idea for innovative ORS distribution while working in Zambia

Facebook launch (April 2008)
Simon floats idea on Facebook, online movement builds to 10,000+ supporters

Pilot site visits (Summer 2010)
Choose Zambia as pilot site (Coca-Cola independently starts pilot in Tanzania)

Pilot design (Fall 2010 – 2011)
Choose Zambia as pilot site (Coca-Cola independently starts pilot in Tanzania)

Legal registration (June 2011)
Register as UK Charity. Simon and wife Jane quit day jobs to work on ColaLife full-time

Pilot starts (September 2012)
ColaLife Operational Trial Zambia (COTZ) launched (originally scheduled for late 2011)

Baseline starts (August 2012)
Baseline data collection in 2 intervention and 2 control districts

## Value Measures

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<th>Key Outputs and Outcomes</th>
<th>Associated Metric</th>
<th>Current ColaLife Measure?</th>
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<tr>
<td>Coverage</td>
<td>Number of anti-diarrhea kits delivered</td>
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<td>Utilization level</td>
<td>Proportion of children with diarrhea who used ORS and zinc</td>
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<td>Adherence</td>
<td>Proportion of children receiving the kit who have completed the 10 day course of drugs</td>
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<td>Child Mortality</td>
<td>In the areas where ColaLife operates, diarrhea-related deaths, per 100,000 children under 5 years of age</td>
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- Currently, ColaLife is conducting an evaluation in 4 districts (2 target and 2 control), covering 625 households and 45 retailers in each district.
- While the trial includes a baseline, midline (at 6 months), and final (at 12 months) survey, it is limited to tracking outputs and intermediate outcomes.
- To measure its real impact, ColaLife would need to track its progress on additional outcomes (in particular, child mortality rates attributable to diarrhea).

Core Strengths and Capabilities

Unique role in global health
- Ability to fill a strategic gap in the global public health arena, by bringing together multiple key stakeholders to tackle diarrhea-related child mortality
- Innovative approach to leverage market forces

Replicable, low-cost solution\(^1\)
- Lean organization, low overhead
- Leveraging existing infrastructure for distribution

Local ownership
- Local determination of what is needed and how it should be distributed (e.g., retailers decide whether to distribute free, at cost, or with positive profit margins)
- Grassroots empowerment

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\(^1\) We discuss issues of long-term sustainability further in this deck
# Key Challenges and Implications for Success

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<th>Implications</th>
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<td>• Operations require <strong>subsidies</strong> (revenue sources cannot cover fixed and portions of variable costs)</td>
<td>• ColaLife’s <strong>financial sustainability</strong> is unproven, which also means <strong>scaling</strong> will be a challenge</td>
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<td>• ColaLife <strong>no longer able to use Coke boxes</strong> for ORS distribution</td>
<td>• Distribution to retailers is <strong>harder than originally conceived</strong> → need new low-cost and easy ways of getting ORS to retailers</td>
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<td>• <strong>Low awareness</strong> about ColaLife’s services among target consumers</td>
<td>• Lack of “pull” from end consumers means that <strong>demand is low</strong>, which reduces quantity sold and has implications for revenues</td>
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<td>• ColaLife unable to guarantee that end consumers use products the way they are supposed to be used (e.g., duration, dosage)</td>
<td>• <strong>Product effectiveness is compromised</strong>, lowering outcomes and hurting ColaLife’s reputation</td>
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<td>• <strong>Demand is low</strong> (if customers reduce dosage to save money)</td>
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* We chose these three areas for recommendation focus because we felt that these are the areas where ColaLife can most realistically achieve results.*
# Recommendations and Expected Impact

**Recommendations**

1. **Increase revenues** to improve ColaLife’s profitability
   - Explore opportunities for *revenue-generation via advertising*
   - Analyze impact of vouchers on *end-user willingness to pay* to identify optimal pricing

2. **Expand distribution** and **reduce costs** to drive profitability
   - Identify *new potential distribution partners* (beyond Coca-Cola) and *consider no-cost/low-cost ways of leveraging their distribution networks directly* (e.g., similar to using space in Coke boxes)

3. **Improve consumer awareness of ColaLife’s products**
   - *Engage end-users* in sales process in 1 of 2 ways:
     - Direct sale (e.g., Avon model)
     - Info distribution (e.g., leaflets)
   - *Engage healthcare workers* in awareness-building

**Potential Next Steps**

- **Contact telecommunications, consumer product, & fin. services companies** to explore marketing opportunities to subsidize kit costs
- **Engage consumer insights firm to assess optimal price level** to maximize demand & profits for retailers
- **Research additional distribution channels** to augment product delivery (e.g., telecom booths, banks, schools)
- **Recruit volunteers to evaluate successful direct sales models** (e.g., Avon, L’Oreal Matrix, Natura) to identify lessons and distribution strategies
- **Convene roundtable for Zambian MoH, NGOs, and media** to develop strategies to build product awareness
Vision for the Future

Maintain
easy-to-use packaging and MNC
distribution partnerships

Expand
demand through education and
supply through micro-distribution

Achieve
scale to reduce child mortality from
diarrhea

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Vision for the Future

Maintain easy-to-use packaging and MNC distribution partnerships

- Maintain easy-to-use packaging that provides proper dose for one child and a container for mixing the ORS solution
- Maintain and expand distribution partnerships with MNCs, including SABMiller, Coca-Cola, and others

Expand demand through education and supply through micro-distribution

- Increase consumer awareness by partnering with media and mobile carriers
- Increase incentives for retailers by generating additional revenue from advertising in Yamoyo kits
- Expand number of distribution channels (e.g., retailers, clinics, telecommunications) to increase access to Kits Yamoyo
- Explore direct-sales models (e.g., Avon, Natura, L’Oreal Matrix), where possible, to increase penetration in hard-to-reach areas

Achieve scale to reduce child mortality from diarrhea

- Increase utilization rate in covered areas
  - Endline survey shows current utilization is 48%
- Contribute to reducing U5MR from diarrhea in covered areas
  - Diarrhoea accounts for 11% of global deaths among children under 5 years old (2010)¹
  - In Zambia, under five mortality rate is 83/1,000 (2011). MDG target is 64/1,000 by 2015²

Appendix: Sources


ColaLife Trial Plan. Executive Summary and Main sections, July 2011 version. Shared by Simon over email on September 17, 2013.


Berry, Simon. Interview by Kate Fedosova, Yuko Hirose, Darya Nachinkina, Sharon Lee-Quick, and Leeann To. Interview via Skype. October 7, 2013.


Appendix: ColaLife Business Model

Visual diagram of ColaLife business model removed due to copyright restrictions. See the ColaLife website for information.

Appendix: Diarrhea Care Delivery Value Chain

ColaLife focuses on the *Initiating Therapy* vertical of health care delivery chain, by:

1) Engaging and informing its supply chain partners and end users
2) Providing an end-to-end distribution solution for life-saving diarrhea drugs
Appendix: Under Five Mortality Rate

Under five mortality rate in Zambia is 83 deaths per 1,000 live births; this rate is 19 deaths higher than MDG target for 2015

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Appendix: Questions for Further Exploration

Partners

- What role is Coca-Cola playing now, since Kit Yamoyos* are no longer bundled with bottles? To what extent does ColaLife leverage Coca-Cola’s distribution network (vs. just the local relationships)?

- Is there room to expand other corporate or public partnerships?

Pricing and demand

- Pricing and Demand (with implications for sustainability):
  - Right now, the price of Kit Yamoyos ($1) is fully subsidized by vouchers provided to the end user (despite ColaLife’s end-user marketing efforts, it still appears to be a push model – not a pull model).
    - Without these vouchers, does the price of the Kit Yamoyo align with the customer’s willingness/ability to pay?
    - What level of education/marketing (of the end-user) is required to shift this into a pull model for the end-user?
    - Also, if prices have to be lowered, will ColaLife be able to provide profit for distributors at every level of the supply chain?

Sustainability

- Financial sustainability: How can ColaLife achieve financial sustainability with regard to its central operations (assuming prices cannot cover indirect operating costs)?

Product use

- Product Use – End-user compliance/adherence appears to be an issue (in order to be effective, drugs need to be taken daily for 10 days), how can ColaLife improve compliance?

* Kit Yamoyos are sachets with ORS and other materials. They used to be distributed via wedge-shaped AidPods that were put into Coke boxes.
Appendix: Cola Road Trailer

The Cola Road Trailer

http://vimeo.com/61315023
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