

ORS Case Study

Malawi

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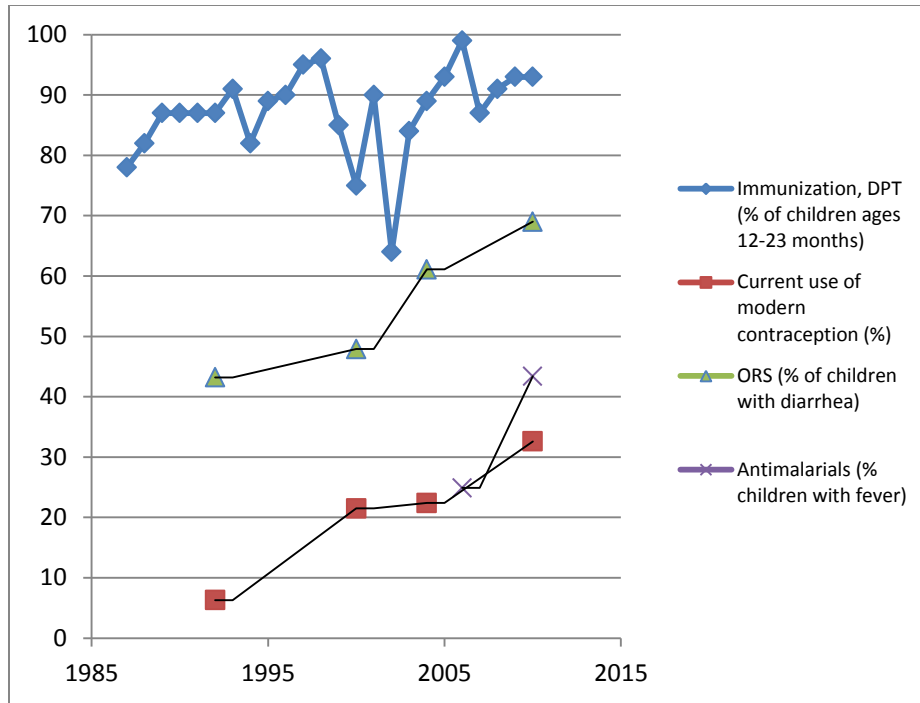
1. Context

With an estimated 16.3M inhabitants, Malawi has one of the highest population densities in Africa. In spite of rapid urbanization, it is still overwhelmingly rural, with 80% of the population currently living in rural areas. The population is also very young, with 45% below the age of 15. While 92% of the urban population and 77% of the rural population have access to improved water supplies, access to improved sanitation is much lower (22% and 7% in urban and rural areas respectively). Malawi is one of the poorest countries in the world, with a purchasing power adjusted GDP of just \$860 per capita: ten times lower than Ecuador, and a nearly 100 times lower than Luxembourg.

Under five mortality in Malawi has been falling steadily since the mid 1950s (when it was 366 per thousand live births). This progress accelerated around 1996-7, so that the rate is probably now below 100/1000; it is thus anticipated that Malawi will meet MDG4. This is in spite of the fact that the country has a high rate of HIV infection (currently around 11% of adults aged 15-49), high climatic susceptibility to malaria, and high rates of maternal and child undernutrition relating—in part—to chronic food insecurity.

Malawi has a district-based health system: each of the 28 districts in the country has a district hospital and multiple health centers. In spite of a dramatic shortage of qualified personnel (a deficit which greatly exceeds that in many other African countries), the population distribution is such that the majority of the population live at least within 5 km of a formal health facility. One third of health centers in the country are run by the Christian Health Association of Malawi (CHAM). The Ministry of Health does not charge for basic services, and CHAM recently also adopted a policy of free care.

2. Health system successes and failures



Malawi’s health system is considered to be relatively high performing. This is very visible in the immunization data, with DPT3 coverage hovering around 90% or over almost every year since the late 1980s. For other key child survival interventions, nationally representative survey data begin in 1992, and show a steady increase for almost every critical intervention over the following two decades. Malawi has been extraordinarily stable over all of this time, and has enjoyed uninterrupted support from donors such as USAID (present in the country since the early 1960s) and, more recently, DFID, CIDA, and the European Union. Indeed, from 2004 to about 2008, Malawi was considered a clear ‘donor darling’. The country has also had a strong presence of WHO for many years. The progress being made since the early 1990s in extending the gains made early on in immunization is readily seen by comparing the uptake of ORS and modern contraceptives. The percentage point change in the use rates for these two products have been similar, but ORS acceptance took off much earlier (as early as the mid-1980s), so current use rates are much higher. Antimalarials have not achieved use rates comparable to ORS, in spite of heavy investment in prevention and treatment of malaria in recent years. Zinc has only just been introduced into national programs and has limited availability as yet.

3. Approach to scale-up

a. Marketing campaign (incl. approach of major manufacturers and wholesalers)

Already by 1992, 90% of mothers who had given birth in the last five years in Malawi new about ORS. According to informants, this would have resulted from promotion at health centers, as well as IEC activities using newspapers, a Ministry of Health circular called ‘*Moyo Magazine*’, and radio jingles.

In 1999, PSI, also with funding from USAID, launched a nationwide marketing campaign to promote its ORS brand *Thanzi*. A 2004 evaluation of PSI’s social marketing work reported that *Thanzi* was “advertised and promoted through branded and generic radio spots, posters, mobile video shows, and

drama shows”.¹ A survey conducted just two years after the launch of *Thanzi* found that 79% of respondents had heard of the product and 85% of these correctly identified its purpose. “When asked to state where they saw or heard advice or message about diarrhea, 66.8% of responses referred to hearing advice from health workers or clinics. A further 28% of responses referred to hearing messages on the radio”.²

Interviewed by Munthali (2005) in 2000-2, “young women said that whenever their children suffer from diarrhea, they either go to the hospital for treatment where they are given Oral Rehydration Solution (ORS) or they purchase these ORS packets from the nearby shops. These women said that they heard about ORS mostly from the Malawi Broadcasting Corporation and the community health workers”.³

From 2005 onwards, PSI continued to market its *Thanzi* brand using mass media and interpersonal communications. It used national tracking surveys in 2005 and 2008 to continually refine its approach. By 2010, 96% of mothers in Malawi were familiar with the *Thanzi* brand (Demographic and Health Survey).

b. Regulatory change

Over-the-counter status (‘General Sales List’) has been granted for ORS in Malawi, at least for the *Thanzi* brand. **Unknown date.**

c. Development of improved product

No innovative product has been used in the Malawi program, although the *Thanzi* does have an informational insert (see below). Recently, 500mL ORS packs manufactured in Kenya have become available on the market, with high levels of market penetration.


¹ Danart A et al. *Midterm evaluation of Population Sciences International...* 2004.

² Thindwa W & Brueton V. *PSI/Malawi: social marketing...* 2001.

³ Munthali AC. *Malawi Med J*, 2005.


Thanzi

Oral Rehydration Salts
Amapatsa Mwana Wanu Mphamvu Pamene Akutsegula M'mimba




1

Sambani manja. Gwiritsani ntchito ziwiya zotsukidwa bwino.




2

Yezani madzi okwana mabotolo atatu a koka-kola otzadzza.




3

Sungunulani mankhwaia onse a m'paketi m'madziwa.




4

Mwetsani mwana wanu madziwa ndi kapu pang'ono-pang'ono, pafupi-pafupi.



5

Pitilizani kuyamwitsa mwana, mwamasiku onse ngati ali woyamwa.



6

Ngati ndi wamkulu, m'patseni zakudya zokwanira kuti asanyentchere.

Tayani madzi otsala ngati alipobe pakutha kwa tsiku




Each pack contains:
Anhydrous Glucose BP 13.5g, Sodium Chloride BP 2.6g, Trisodium citrate, dihydrate BP 2.9g, Potassium Chloride BP 1.5g. **Net wt: 20.5g**

Code No: MH/DRUGS/NKD/42

Lot No:

Mfg Date:

Expiry Date:

Distributed by: PSI / Malawi
P.O. Box 529, Blantyre, Malawi

KCH 04/0010

d. Improving public provider knowledge

“In 1981, the National Control of Diarrheal Diseases Programme (CDD) was established in the Ministry of Health and Population to reduce morbidity and mortality due to diarrhoea through... the use of ORT”.³ “Kamuzu Central Hospital (KCH) in Lilongwe, the capital, was one of the first hospitals to begin ORT activities. In 1984, before an outpatient ORT unit was set up at KCH, pediatric staff received refresher training in ORT that emphasized assessment of dehydration as well as the use of intravenous fluids and ORS according to WHO recommendations”.⁴ 1985 saw the launch of the first five-year implementation plan for the National Control of Diarrhoeal Disease Programme, and at the end of this first five-year period, in 1989, Malawi stopped recommending home-made sugar-salt solution and started promoting commercially produced ORS packets instead.

In 1998, Malawi adopted the IMCI strategy with technical support from the WHO and UNICEF, and very early in this period ‘ORT corners’ were established in health centers. “By the end of 2005, the Ministry of Health (MOH) had implemented IMCI in 18 out of 28 districts. Ten districts were implementing all three elements of IMCI; eight were implementing Elements 1 and 2 (improving health worker skills and facility services); and one district was implementing only Element 3 (improving household and community health practices). An Accelerated Child Survival and Development Strategic Plan... [was]... developed to promote IMCI scale-up by providing 60 percent of health workers with improved case management skills and 40 percent of households with the promotion of key health practices.”⁵ By 2009, IMCI coverage had expanded to all 28 districts, and the total number of facilities with at least one trained staff had reached

⁴ Heyman DL et al. Bull WHO, 1990.

⁵ *Community approaches to child health in Malawi*, 2009.

954; however, even in these facilities, nearly 30% of staff had *not* been trained.⁶ Furthermore, only 24% of these facilities had received a supervisory visit with observation of clinical management.

Since as early as 1960, Malawi has had a cadre of short-trained health staff resident in rural areas. Originally recruited as “smallpox vaccinators”, they rapidly evolved into “Cholera Assistants”, only to have their scope widened in the early 1980s. The position was regularized, with the name of “Health Surveillance Assistant” in 1995, and around 5000 were deployed nationwide. As of 2001, most HSAs had treatment of minor illnesses included in their terms of reference,⁷ but this task had not been systematized and perhaps only ¼ of HSAs actually stocked ORS.⁵ Over the next five years, various USAID-funded international NGOs focused on the establishment of “community IMCI” in various parts of the country, and in 2007 the number of HSAs deployed doubled to around 10,000. Around the same time, a very deliberate policy was implemented to identify “hard-to-reach areas” (at least 8km from a health center) and deploying in them a trained and stocked HAS, in a model known as “village clinics”. As of the end of 2011, 97% of all hard-to-reach areas in the country have a trained HSA. A 2009 quality of care survey conducted by Johns Hopkins University found that 58% of children with diarrhea presenting to an HSA were prescribed ORS correctly.⁸

e. Increasing availability of supply in the public and private sector (incl. procurement)

“In Malawi, ORT was introduced to pediatric inpatient services in 1977, with daily supplies of ORS to each pediatric ward, and to outpatient services in 1984, when outpatient oral rehydration units were established at major hospitals throughout the country.”²

Over the years, ORS has not been blighted by the supply problems that have affected, for example, ACTs for malaria, and the 2009 Health Facility Survey found 88% availability of the entire category ‘essential oral treatments’. Two years later, the JSI “Supply Chains for Community Case Management” project found that 76% of surveyed health centers had ORS the day of the visit, and the same was true for 65% of Health Surveillance Assistants.

During the last decade, PSI used traditional social marketing methods to increase the penetration of its *Thanzi* product. According to a 2003 National Distribution Survey, *Thanzi* was available in 80% of pharmacies, 74% of wholesalers, 68% of supermarkets, 56% of groceries, and 32% of kiosks.¹ Following decentralization, *Thanzi* has even been purchased by the public sector (at all levels: national government, districts, and individual health centers) at times of stock-out.

f. Improving private provider knowledge

PSI used traditional social marketing methods to reach private providers. The 2004 mid-term evaluation of PSI’s social marketing program reports that PSI had “an integrated sales force of five salesman, five vehicles, five drivers, and two merchandisers”.¹ The *Thanzi* package has a well-designed insert with user information, which may well contribute to better use.

⁶ IMCI health facility survey, 2009.

⁷ Kadzandira JM & Chilowa WR. *The role of Health Surveillance Assistants (HSAs) in the delivery of services... 2001.*

⁸ *Quality of care assessment in the community by HSAs in Malawi.* 2009.

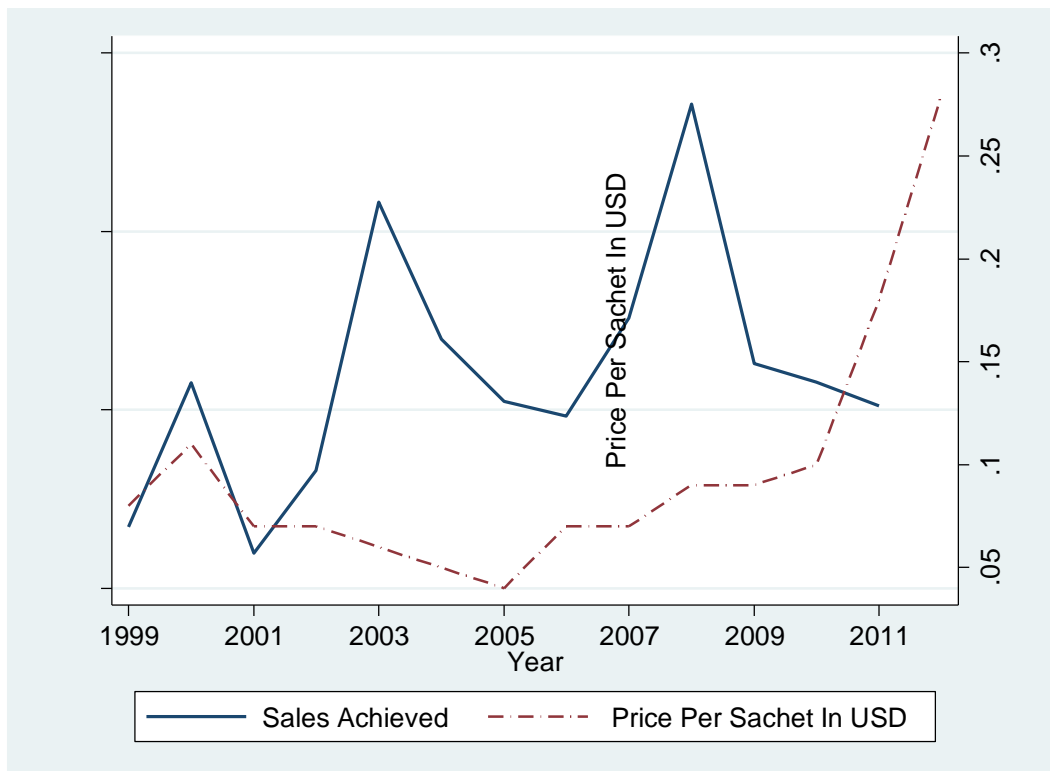
g. Financing- source and mechanisms

USAID has been a significant presence in the health sector for many years (official aid databases document contributions for 'Basic Health Care' going back to 1999), and has always prioritized diarrheal disease. The establishment of 'village clinics' using the HSA platform has been co-funded by CIDA, the Bill & Melinda Gates Foundation, and USAID.

h. Pricing

ORS is distributed free in health facilities, and HSAs also do not charge.

In the private sector, wholesale prices of *Thanzi* remained in 4-10 U.S. cent range from 1999 to 2010, due to massive subsidization from USAID. The subsidy was partially lifted in 2011, and wholly lifted in 2012. Up to last year, there was little evidence that the product was particularly price sensitive within the narrow range of variation observed:



Mark-ups in the private sector appear to have been modest: in 2001, the mean price paid in the private sector was MKw 7.6 (\$0.096), a 44% mark-up. In 2012, the mark-up is proportionally the same.

4. Impact

a. How efforts change usage

ORS usage has increased steadily over the thirty years that the intervention has been promoted in Malawi, with no evidence of back-sliding at any point. Both private and public sectors have contributed to this progress: in 2004, care-seeking for childhood diarrhea was split almost exactly evenly between the two. This marked a major evolution from the situation in 1996, when hospitals/health centers comprised two thirds of all care sought outside the home.

In the private sector, PSI's social marketing activities clearly paid handsome dividends. By 2001, *Thanzi* had achieved a 40% market share, with the majority sourced in grocery stores. By 2005, the market share had reached 75%, and by 2008, 83.7%. Field managers report that during these years, the limiting factor was commodity supply. However, since the removal of the USAID subsidy this year, it is reported that *Thanzi* has lost most of its market share to cheaper 500mL packets imported from Kenya.

b. Whether change was sustained

For six years (from 2004 to 2010) ORS usage rates were sustained at over 60%--in fact, they continued to rise to an exceptionally high rate of nearly 70%. It remains unknown whether the recent complete removal of price subsidy in the private market will undermine this success.

c. Cost of scale-up effort

PSI began its social marketing support from USAID in 1994, and KfW began co-funding in 1995. In 2002, USAID/Malawi gave PSI a new five-year award budgeted at \$11M over five years, and several other bilateral are funding complementary activities. Figures are not available for the *marginal* cost of adding ORS to the bundle of socially marketed products. In order to achieve high coverage, PSI was subsidizing 60% of the cost of the product (2004).

Similarly, the cost of ORS provision cannot be disentangled from the bundled cost of providing IMCI facility services or integrated community case management of childhood illness.

5. Conclusions

a. What about context and approach was predictive of impact

- Malawi is a relatively small and densely populated country.
- Very strong relationship between Malawi and WHO (persisting to this day), such that WHO policies were rapidly transferred into national policy and implemented.
- Strong and continued presence of USAID, funding multiple PVOs, all of whom focused on ORT
- Focused national policy "Health Essentials Package" that did not try and do everything
- Wild success of HSAs
- Competent marketing in the private sector
- Huge price subsidy in the private sector, and free distribution in the public sector
- Early abandonment of sugar-salt solution in favor of commercial ORS

b. Whether it was a ‘good buy’ or not

ORS scale-up in Malawi did not come cheap, as the international community invested heavily in scaling up HSA “village clinics” and in subsidizing PSI’s *Thanzi* product. The incremental cost of ORS within this package cannot be known, because it capitalized on two critical ‘platforms’: the Health Surveillance Assistants extending the reach of the public sector, and PSI’s social marketing platform. The very lean sales team employed by PSI suggests that their platform cost was a ‘good buy’, but, on the other hand, the subsidy costs were substantial; because ORS is used to treat a lot of low-risk illness episode for every potentially dangerous episode, this could impact the overall cost-effectiveness of the program. The fragmentation of support for the ‘village clinic’ approach suggests the likely presence of numerous inefficiencies, but this has not been studied.

c. What could have been done differently

Much more emphasis could have been devoted to quality of care in the public sector. Having less than one half of health facility staff correctly manage a child with dehydration is unacceptable after so many years of investment in the health system in Malawi.

Summary

Component	Degree of success	Drivers of success/failure
Development of improved product (including pricing)	High	<ul style="list-style-type: none"> • Competent social marketing partner • Massive subsidy
Marketing campaign	High	<ul style="list-style-type: none"> • Promotion of ORS through formal health services • Excellent reach of Malawi Broadcasting Corporation • No promotion of sugar-salt solution since late 1980s
Regulatory change	High	<ul style="list-style-type: none"> • No opposition to having product on General Sales List
Improving private provider knowledge	High	<ul style="list-style-type: none"> • Very energetic PSI sales team
Improving public provider knowledge and increasing supportive supervision	Medium	<ul style="list-style-type: none"> • Early start to training health professionals, including HSAs • Training reinforced through introduction of IMCI across the country, <i>but</i> weak supervision/follow-up • All Health Surveillance Assistants in hard-to-reach areas trained, <i>but</i> insufficient supervision/follow-up resulting in disappointing technical quality
Increasing availability of supply in the public and private sector	High	<ul style="list-style-type: none"> • Extensive deployment of extenders (HSAs) • Decentralization allows districts and individual health facilities to purchase from local market when national stock-outs occur • Competent promotion and placement of subsidized product in private sector • Frequent tracking studies in both private and public sectors
Financing of scale-up	High	<ul style="list-style-type: none"> • Lots of donor support for “community IMCI” • Donor “darling”