

### **Anita Roddick, Founder Body Shop**

Imagine in the United Kingdom we have one doctor for every 600 people but in Tanzania it's about one per 25,000. And even if you reach one they may cost you much or lack the drugs and equipment to treat you. Watch Hands On to see how different ideas are saving lives and improving health in countries where governments are just too stretched to provide decent medical care.

### **NARRATOR**

When this mobile clinic first hit Nairobi's streets in 2002, its target was the 60,000 kids living rough.

Since then thanks to government action, the numbers have dropped dramatically but the need for health care is still overwhelming especially for children living in the slums.

### **Margaret Gwanda, GOAL**

The drugs are not available and because of the nature because of which they are - you find that the children sometimes go to the hospital and will demand it because that's their life anyway. And when they go to hospital access is quite tricky, so one they can't afford to, they can't afford buying the medicine that is allocated that is given to them, they can't afford buying the cards that is a mandate and then the medical staff in the clinics that they go to are not friendly and hence you know they cannot access the medical care.

### **NARRATOR**

Every day the mobile clinic picks its way through potholes and shacks to places where the need is greatest.

### **Margaret Gwanda, GOAL**

We have issues of chest infections, ulcers, dental problems, eye problems because of the dust where they living.

### **NARRATOR**

Today first stop is Mutumba. Jane and Joan ask the teacher if any of the children are unwell. They check the records and then call out to the children, Evans is the first patient.

### **Jane Wangui Munge, GOAL**

In this area there is a problem of health care. Actually we move around here, there is no clinic, no hospital within reach. If they have to go to a hospital they have to use bus fare, and so then looking at the economy they just can't. The mothers are not able to take them to hospital as they should because the cost sharing and also the issue of women around the mother may not take the child to hospital. So at least they do come here and give them their medication but at times we also call the parents in after some time and we educate them on the need to take children to hospital.

### **NARRATOR**

After the diagnosis they give the medicine to the teacher to make sure it's taken properly. So what's in this movable clinic?

### **Jane Wangui Munge**

We have this cabinet where we put our tropical ointments, where we stock our oral tablets: here we have a fridge to be stocked with immunisation drugs.

Here we put our equipments for examination. It's made for taking blood sugar, we have a BP machine here, here we've got a stretcher.

This is where we keep the syrups.

Wrappings.

We have a generator. These can be used as a back up for the fridges.

### **NARRATOR**

And how did GOAL, an impoverished NGO, finance the van?

### **Les Baillie, Safaricom Ltd**

It was a three way partnership between Safari Com, the Vodafone Group Foundation and also Toyota East Africa and between us we all came together.

Vodafone and Safari Com provided cash and Toyota actually provided the fit-out of the vehicle as part of their significant contribution.

### **NARRATOR**

The greatest testament to the mobile clinic and its staff is Nairobi's rubbish tip.

### **Jane Wangui Munge**

Most of the conditions that we are having are skin conditions related to the environment, just almost the same picture we had on the other side. Most of them have been cut by things you see around.

### **NARRATOR**

While the van is packed with patients GOAL gives lessons in health education. It's part of a long-term plan to encourage children to join training centres to learn skills like carpentry and hair dressing.

### **Jane Wangui Munge**

I'm happy to see them managing their lives on their own. You know the majority of them are orphans and once we help them and they will then be on their own at the end of the day you have achieved something.

### **NARRATOR**

The success of the training programmes is hard to measure but one group of boys prove it's possible to change direction. Just twelve months ago they lived on the dump.

### **Antony Miriuki, Ebony Wood Works**

The dream is to enable us, to enable me and my fellows to have a good future

### **NARRATOR**

While the boys get back to work, the clinic makes its way to another area. So what's the verdict?

### **Les Baillie**

Before the mobile clinic there was no health care for any of the street children in Nairobi or in Kenya. Hospitals would not treat them, doctors would not treat them and so therefore there just was no treatment.

### **Margaret Gwanda**

One small mobile van, the GOAL van, does the best it can.

### **NARRATOR**

According to the UN 40% of the world's population lacks proper sanitation, nearly 6,000 children - the equivalent of a dozen jumbo jets crashes - die every day from diseases such as diarrhoea.

Lots of these deaths could easily be prevented simply by washing hands with soap before eating.

Now the advertising trade is grabbing attention where previous messages fell on deaf ears.

### **NARRATOR**

Rural Ghana. Though many villages now have access to clean water, diarrhoea is still a major killer.

Nana-Garbrah-Aidoo, Community Water & Sanitation Programme CWSA

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Diarrhoeal diseases account for 25% of all deaths in children under five.

Ghana's staple foods like fu-fu and banku are always eaten with the hands, so hygiene is vital.

### **Nana-Garbrah-Aidoo**

People wash their hands. We are not saying Ghanaians don't wash their hands. They wash their hands, they wash their hands but they wash their hands with water before they eat and then after eating they wash their hands with soap and we want to reverse that.

### **NARRATOR**

The government's community water and sanitation agency based in Accra is tackling the problem. Advertising by companies has managed to reach most people, however remote. In a move supported by the UK Department for International Development, the government has teamed up with soap producers to make sure their message gets across.

The team has come to the village of Avenui in Upper Volta to spread the word through posters and songs while a troop of local actors spell out the dangers of poor hygiene.

### **Emanuel Nyavor**

I can say positively that it is working because hereto before this inception of this campaign various beliefs are there or this is the party's alfalfa, this has been doing, nothing happened to them why lead no washing before eating and so on but we can say that that mentality is gradually changing among our target groups.

### **NARRATOR**

Every weapon in the advertiser's arsenal is being used in this battle against disease including the most powerful of all, the TV commercial.

## **TV Commercial**

Whenever you use the toilet and do not wash your hands with soap, your hands pick up things you can't see.

Washing your hands with just water can't make them truly clean. Remember to wash your hands with soap.

You never know what you are feeding to your family.

For truly clean hands always with soap.

## **NARRATOR**

Business partners in the project include giant multinationals and Ghana's fair trade company Getrade.

The campaign is boosting sales of traditional Ghanaian soap, made in the villages and sold by Getrade.

## **Ankrah Aryee, GETRADE**

If you look at what the campaign has done so far, it's been fantastic. I mean everybody is talking about wash your hands, it wasn't like that before. I mean all the children now are talking about washing their hands you know so it's going to encourage people to buy soap and then to, and for people to use soap to wash your hands.

## **NARRATOR**

The project is part of a global public private partnership to promote hand washing with soap. Winning the support of private industry wasn't easy but the campaign's results are now making waves in the business community.

## **Nana-Garbrah-Aidoo**

So suddenly the private sector has seen the impact that we are making, so now they are coming back. That's what we can do to help.

## **NARRATOR**

In Britain and across the world diabetes is spreading fast.

## **Dr Farmer**

Over the next ten years there's going to be a huge increase, up to about 300 million people in the world with diabetes.

## **NARRATOR**

Caused by a mix of genetic and lifestyle factors, the condition if untreated can lead to death or crippling complications.

A team in Oxford has come up with a way for diabetics to manage their condition more easily themselves using a tool that many people carry at all times, the mobile phone.

## **NARRATOR**

Diabetes occurs when the body cannot regulate the amount of glucose in the blood. Sufferers can test their own blood sugar level and control it by injecting insulin and watching their diet. This usually means checking blood sugar levels four times a day and noting them down.

### **Dr Farmer**

But one of the problems with all of these things is having to record all the information and then to go back and to look at what you're doing, so there's a lot of, a lot of thinking work needs to go into that and it can again dominate your life.

### **NARRATOR**

A new idea could ring the changes for diabetics simply by using a mobile phone to record and organise information.

### **Prof Lionel Tarassenko, e-San**

The most common tool that anybody uses in their daily life is the mobile phone. Could we do anything to help people manage their diabetes better through using their mobile phone?

### **NARRATOR**

Mobile power goes far beyond just recording the readings. The latest mobiles allow high speed data transmission so information can be sent directly to the patient's hospital.

Here powerful software can look for patterns in the patient's blood sugar levels giving doctors an accurate picture of those levels over time.

Hannah Boschen was one of the first diabetics on a trial of the new system funded by the Vodafone Group Foundation.

### **Hannah Boschen**

I now feel as though I am in control of the diabetes and what we know and managing my insulin doses and getting blood sugar levels right.

### **NARRATOR**

She checks her blood sugar level the same way as before. An electronic meter tests a drop of blood but instead of writing it down, special software on her phone takes the reading via a cable and sends it to a central server.

Within seconds, she can see a graph that shows whether the level has gone up or down since the last test. The new system has made Hannah an expert on her condition.

### **Hannah Boschen**

By the end of the trial I was having quite limited sort of contact with the nurse. But it was more a case of me picking up the phone saying, I've decided to do this with my insulin cos I think this might help and she was saying, yeah that's absolutely fine.

It was you know, which was perfect you know, instead of her saying have you thought about doing this or have you thought about doing that, or have you noticed that your blood sugars have been doing this, it was the other way round. It was me saying, this is what I am going to do, is that alright? If it doesn't work I'll give you a call, which you know, which was great and that's, that's continued as well. I mean I can't actually remember the last time I had to pick up the phone and say, I don't know what to do with this now.

## **NARRATOR**

Other details collected by phone using simple questions are used by doctors to analyze each case.

## **Dr Farmer**

What size meal are you going to have? Or is it related to a meal, how much activity are you going to do, so it just helps to get people to think about the things that they are going to be doing and so all of these things which one needs to know if one is going to start helping people are all automatically captured at that point.

## **NARRATOR**

The trail of this system in Oxford could pave the way for mobile phone-based management of other chronic diseases.

## **Prof Lionel Tarassenko**

If we take our mobile phones to get a message or to pick up some information, nobody is going to look at us. Everybody's doing it on the train, in the city when you're walking about so it's integrated with today's lifestyle for people at the beginning of the 21st century.

## **NARRATOR**

Decades of dictatorship turned Malawi in southern Africa into one of the poorest countries in the world.

Tuberculosis is so common here, it's earned the nickname the big cough.

Most at risk are people living in crowded squatter settlements where health care facilities are in short supply. An innovative scheme funded by the UK Department for International Development is now using local storekeepers to try and stop the spread of this killer disease.

## **Dr Felix Salaniponi, National TB Control Programme**

The major and the cardinal sign of tuberculosis is coughing because tuberculosis primarily attacks the lungs.

## **NARRATOR**

Tuberculosis is easily transmitted through breathing or coughing on other people. Most vulnerable are those infected with HIV.

Their immune systems are already depleted and leave them susceptible to opportunistic infections like TB. In Malawi treatment is available but it's not reaching those most in need. People can't afford to travel to places where free treatment is on offer and often buy cough medicines and pain killers from local grocery stores instead.

They only visit a clinic when they're seriously ill, when it may be too late to treat the disease effectively.

In 1999 the Malawi National Tuberculosis Programme teamed up with researchers from the Liverpool School of Tropical Medicine and devised a novel approach for getting treatment to the people who really need it.

The extending services to communities project trains grocery storekeepers to recognise TB symptoms and refer suspected cases to public health centres.

### **Bertha Simwaka**

This training is very important because it will enable the storekeepers to be able to identify their customers that are coming to the shops to buy cough syrup asking them questions, how long they have been suffering from the cough, and if it's more than three weeks they will be asking them if they can be referred to a health centre where diagnosis for TB is being carried out.

We are sending a spy and this person is going to pretend that he's suffering from a cough. Why we are sending her is because we want to find out if the storekeeper is following the instructions, if he's able to ask appropriate questions to find out if the person has been coughing for more than three weeks.

Then after that we find out from the lady what the person, what the storekeeper told her and then if he was able to ask appropriate questions we are going to give him a certificate.

### **Lose Nyinenda (dubbed)**

One thing I've noticed is that the storekeeper has given me a referral letter which I think is very important because with this letter the hospital and health workers can help you quickly and it also helps the community identify you as a person who needs help.

### **NARRATOR**

Jabesi Chinyama has correctly identified his customer as a TB victim and has referred her to the health centre. He's passed the test and has been awarded a certificate of merit.

### **Jabesi Chinyama:(dubbed)**

Referring the customers to the hospital is not a loss to my business because the more I send the customers, the more I'll have friends. If they go to the hospital and get the appropriate help then they will always refer to me as the source of their health.

### **Bertha Simwaka**

Equipping storekeepers with such skills it has never happened in this country and we feel like it will have a very positive impact within the communities.

### **Dr Felix Salaniponi**

TB is a treatable condition in Malawi, it can be beaten and we will beat it.

### **NARRATOR**

For some of us, getting out of the house without someone to help is an impossible dream. For the elderly and for the chronically sick, stepping out of the front door is a risky business. A pilot project in Spain set up by the Red Cross and the Vodafone Group Foundation is enabling housebound patients to get out and about.

In an emergency a touch of a button connects users to a Red Cross control centre.

### **Adrian Rica, Vodafone Spain Foundation**

We try to enhance the personal autonomy of the user by providing them social care services on the move.

**NARRATOR**

350 people were selected to test the mobile scheme out of 75,000 who already use the Spanish Red Cross as landline based home tele-assistance service.

**Adrian Rica**

What we are doing is to, to make a service more accessible and with more coverage.

**NARRATOR**

Participants were provided with a terminal either just a single button alarm, easier for elderly users or an adapted mobile phone.

When activated a text message is sent via the internet quicker than using a mobile network. The message is automatically routed through the least busy server and processed as quickly and securely as possible, an innovation for health care services.

**Red Cross Telephonist**

Hola Buenos dias, good morning Nora, this is the Red Cross, how are you?

**NARRATOR**

The screen on their left shows operators the callers' medical records and relatives' contact details, the screen on the right shows the user's location. Using two complementary systems: the GSM phone network shows the location to the nearest phone mast and GPS satellites pinpoint the user to within metres but this uses more battery power.

**Adrian Rica**

Especially in rural areas we need to use both technologies to complement one each other.

**Red Cross Telephonist**

Vale, tranquila, Nora, OK Nora don't worry we know where you are, and we're sending an ambulance.

**NARRATOR**

Positive feedback at the end of the pilot scheme means that mobile tele-assistance may now be extended nationwide and even beyond.

**Adrian Rica**

To transfer the technology to other countries we don't find obstacles. The main obstacle is to find the perfect partner with a call centre that can manage new social care protocols on the move.

**NARRATOR**

This user-friendly system gives people much greater mobility as well as saving lives.

**Adrian Rica**

The best result of this programme has been that we have found a highly motivated team working to improve the quality of life of people in our society.

**NARRATOR**

Uganda was once described as the pearl of Africa but even by African standards it's poor with average annual income per head of just \$240.



Poor health is a major brake on development. Vitamin A deficiency long since eradicated elsewhere in the so-called developing world is still a major cause of deaths.

Dr Robert Mwangi, National Agricultural Research Organisation

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Worldwide we have three million children dying due to vitamin A deficiency.

In Uganda alone in a body as high as 60,000 children die and yet there is a solution.

But an inventive new partnership with the Consultative Group of International Agricultural Research is sowing the seeds of change by boosting food production, improving health levels and making sure a new generation of Ugandans is never short of vitamin A.

### **Berga Lemaga, PRAPACE**

Orange-fleshed potatoes do contain better keratin which is a precursor to vitamin A.

So giving the people vitamin A through a food product is the best approach. Using orange flesh potatoes is a very good way of alleviating vitamin A deficiency.

### **NARRATOR**

Orange fleshed sweet potatoes are easy to grow in Uganda's fertile soils but in spite of their high nutritional value they were seen as a low status foodstuff and rarely eaten, and when farmers did grow them the crops were often devastated by sweet potato virus disease which thrives in Uganda's warm tropical climate.

### **Dr Robert Mwangi**

These two plants are the same variety of sweet potato. One, the small plant has, is severe infected by sweet potato virus disease. The big plant that has big, bigger roots is virus free. It's actually, it actually looks healthy and that's the difference. The, even the diseased material, the roots can be eaten. They have no problem with humans, it's just that the disease affects the plant.

### **NARRATOR**

Dr Mwangi and his team set out to develop a hybrid variety with all the desired characteristics, virus free, high yielding, nutritious, rich in beta keratin and of course tasty too.

### **Dr Robert Mwangi**

Your material is ready and you can take it to your primary ....site.

This is SPK 004.

### **NARRATOR**

Farmers get healthy vines to plant and are also given training by the local NGO BOCADEF which teaches them about the most effective growing techniques and the health benefits of eating them.

**Arthur Musoke, BOCADEF**

We believe that about two million people are now taking orange flesh sweet potato.

Research stations have actually made a breakthrough because they have put those characteristics that are desired by the people.

**NARRATOR**

The county's agricultural research institute is developing new processing techniques showing farming families how to replace wheat flour with sweet potato and how to make some welcome extra cash by turning their new crop into various food products.

**Constance Owori, Kawanda Research Institute**

When the farmers sell one bundle fresh roots they earn something like one dollar, but when they process that back into dried chips and sell it, they make an equivalent of something like four dollars so they earn four times, much more by processing.

**NARRATOR**

With bigger yields, farmers are reaping the benefits. Now local people have more to eat, are better nourished and have a crop surplus they can sell.

**Arthur Musoke:**

I advise all people really in this part of Africa that it's the time to start to grow orange fleshed potato, not to grow only but to eat it as it has the highest level of vitamin A.

**Berga Lemaga**

This project made it easier for farmers to access new varieties, it made it easier for farmers to have access to quality planting material, it has improved household food security income and it has also solved some malnutrition problems.

**Dr Robert Mwangi**

It's a cheap solution which is sustainable to use orange sweet potato and to solve the problem of vitamin A deficiency