Which ACT delivery strategy works best, and for whom?

Increasing coverage of efficacious malaria treatment for people in underserved areas

Summary of Geneva dialogue – 30 April 2010 – Novartis Foundation for Sustainable Development and Medicines for Malaria Venture

This workshop was convened to present key findings on the availability and affordability of Artemisinin-based Combination Therapies (ACTs) delivered through public, private and community-based delivery channels. Participants explored the challenges in reaching patients linked to each delivery channel as well as shared and discussed innovative approaches to improving access to ACTs. Effective delivery is one of the key factors impacting access to medicines. If lives are to be saved, the existing distribution channels must be strengthened and better linked. In addition, new approaches must be scaled up.

Klaus M. Leisinger, President and Managing Director of the Novartis Foundation for Sustainable Development, opened the session by highlighting the complexity of the issue. Access to treatment is only one element among many that impact the state of health. Other dimensions include the poverty level of patients, their cultural values and health-seeking behavior or proper diagnosis and treatment by the provider. Therefore, creating synergies between different public and private actors at national and international level is crucial to tackle the manifold obstacles to access to healthcare and to ultimately break the vicious circle of poverty and ill-health.

Availability, accessibility and affordability are key to ACT coverage

Availability, geographical accessibility and financial affordability of ACTs are critical to improving access to malaria treatment. **Christian Lengeler** and **Sandra Alba**, Swiss Tropical and Public Health Institute, presented findings from the ACCESS project in Tanzania, touching on all three dimensions. Results show that availability of Artemether/Lumefantrine (ALu or Coartem) – the recommended ACT and first-line treatment in Tanzania – in public health facilities of the two observed rural districts is relatively high: in more than 80% of the months under observation, ALu was available. However, only 29% of private drug shops (mostly so-called “Accredited Drug Dispensing Outlets” (ADDOs)) stored ACTs in 2008. This is problematic given that up to 50% of patients seek malaria treatment in ADDOs due to a higher geographical accessibility compared to public health facilities.

Thanks to ADDOs, the average geographical distance from a household to a drug shop decreased from 2.2 km to 1.2 km (87% of people live within 5 km from a drug shop) while the number of health facilities per inhabitant remained stable (12 per 100,000 people). Yet, an estimated 10-15% of the population in the two districts is neither served by a health facility nor a drug shop in their village. While community-based channels for ACT delivery could be a solution for these underserved areas, they are non-existent in Tanzania due to strict regulations which only allow health professionals to provide treatment. In addition, despite subsidies provided by the ADDO program through the Presidential Malaria Initiative (PMI),

average ACT prices in private drug shops are much higher (USD 1.27 per adult dose) than in public health facilities (USD 0.25) which negatively impacts the affordability dimension. However, given the fact that fever rates in communities are decreasing and the attendance rates at health facilities remain stable in the study area, this suggests a higher percentage of people coming forward for treatment of fever cases and hence malaria.

Moreover, 95% of the fever cases analyzed received malaria treatment within the recommended 24 hours. Yet, only two thirds of fever cases treated in health facilities receive the recommended treatment (ALu). The correct dosage of the recommended drug (ALu) was only given in one third of the cases (although the quality of treatment advice in ADDOs increased from 30% to 80%).

Above all, the ACCESS study shows the need for better coverage of ACTs in drug shops and ADDOs as well as improvement of fever case management in health facilities. Last but not least, prices for ACTs in health facilities and private drug shops/ADDOs should be harmonized.

Leveraging the public and private partnership model for increased access

Jim Barrington, Program Director of SMS for Life, a Roll Back Malaria and Novartis initiative, and **Chuck Slaughter**, President and Founder of Living Goods, presented two innovative approaches that focus on strengthening public and private sector delivery channels to improve access to ACTs.

SMS for Life addresses the frequent drug stock-outs in public health facilities through a monitoring system that relies on mobile phone technology to ensure continued delivery of malaria drugs (four types of ALu and quinine). The pilot started in October 2009 in three districts in Tanzania covering 129 health facilities and a population of over 1.2 million people. Each week, health center managers are requested to send their current stock of ACTs as a text message which is then collected by a central server. An incentive of about USD 0.75 is credited on the health worker's cell phone if the data is submitted on time. The data captured through the SMS stock count messages is available through a website which can be accessed daily by District Medical Officers (DMOs) via the Internet on a computer or a smart phone mobile application. This system enables the DMOs to take action by redistributing antimalarials in health facilities or placing an emergency order, thereby reducing or even eliminating stock-outs.

An impressive 95% of health facility managers responded on time. Physical count checks of the stocks in health facilities revealed that 94% of the reported data were accurate. In all districts, a substantial reduction of stock-outs was reported after the 21-week pilot. In one district, the percentage of health facilities improved from 57% in the first week to nearly 0% stock-outs for ALu at the end of the pilot phase. The number of health facilities stocking all five antimalarials increased from 29 to 96 out of 129. By tackling the problem of stock-outs, SMS for life improves the public delivery channel of ACTs.

Living Goods is a non-profit organization, which works in the area of primary healthcare and micro-retailing in Uganda. It seeks to bring high-quality products to poor consumers at low costs. To do so, Living Goods recruits, trains and supports community health promoters (CHPs) which work in remote rural areas with low accessibility. CHPs sell products for prevention, hygiene, and healthcare – including antimalarials – door-to-door. Consumer- and health products are combined in order to allow CHPs to gain a sufficiently high profit. Living Goods links manufacturers/importers directly to CHPs, thus excluding middlemen from the delivery channel. CHPs also inform people in communities about health issues and make referrals to clinics if necessary. Hence, CHPs are community-based, but work on a for profit basis.

As a remuneration, CHPs receive a proportion of the sales they make. Living Goods reduced the price for ACTs in its intervention areas from USD 7-10 (pharmacy/drug shop price) to USD 3.50 in 2009. Today, Living Goods is active in more than 500 communities in Uganda. Living Goods provides an innovative approach to improving accessibility and affordability though a private sector initiative.

Harmonization of drug distribution and subsidies is critical to increase ACT coverage

Ikeoluwapo Ajayi from the Ibadan College of Medicine in Nigeria presented the rationale, possibilities and challenges of harmonizing public and private sector ACT delivery channels. She drew on experiences from Nigeria where so-called community medicine distributors (supplied by health facilities and provided with an incentive for each drug sold) as well as selected private outlets sold ACTs at a subsidized price. Not only did the irregular supply in both channels result in the providers reverting to other antimalarials or even antipyretics. This set-up also caused leakages into the private sector originally not offering ACTs where the subsidized ACTs were now sold at a higher price.

She pointed out that harmonization of drug distribution and subsidies for the two sectors would be particularly critical in order to increase ACT coverage. This would contribute to decreasing sales of monotherapies through the private sector as all suppliers would benefit from subsidies. Prices in both sectors should be controlled and eventually harmonized by Standard Retail Prices (SRP), taking into account the customer's ability to pay as well as necessary business profits. Ultimately, it would result in greater use of the recommended ACTs which reduces drug resistance in the end. Moreover, a universal monitoring system for both sectors (drug stocking and return of expired medicines) would facilitate a centralized procurement of ACTs for the different supply channels and ensure higher quality standards are enforced and bottlenecks reduced (i.e. low administrative capacities and logistical barriers for efficient delivery). Ajayi also argues for harmonization in terms of diagnosis (Rapid Diagnostic Test for malaria) to be offered in both sectors.

In terms of drug procurement, harmonization will, however, be more difficult due to the different nature of each channel (profit vs. service delivery orientation). As there is no universally applicable recipe for harmonizing the private and the public sector, each country must engage in an independent process to decide on how to involve the private sector into an efficient ACT delivery system by considering its local context.

The way forward: creating better synergies between public and private sector delivery channels

The presentations were followed by an **open discussion** on improving coverage of ACTs in underserved areas. Several participants pointed to the importance of giving recognition to community-based distributors. In the same context, the question of how to deal with traditional healers with regard to the supply of malaria treatments came up.

The audience also reaffirmed the need to find new models, paradigms and ideas for possible solutions. One approach lies in the ADDO model. It substantially improves access to antimalarials, but not necessarily the availability and affordability of the recommended first-line treatment. The "Affordable Medicines Facility – malaria" (AMFm) might provide some solutions to this issue.

Creating synergies between public and private sector delivery channels was also a topic. Instead of only concentrating on how to better link the existing channels, one proposal was to work with local NGOs who are well established in certain communities, to scale up ACT coverage.

In the end, one still has to recognize that there is no “one fits all” solution and that patients are best reached through a combination of delivery channels. This also reduces the risk of total supply break down if one delivery channel encounters stock-outs.

This workshop was part of a new series of Geneva dialogues launched by the Novartis Foundation for Sustainable Development to address global health issues. The theme of the next dialogue will be ICATT (IMCI Computerized Adaptation and Training Tool) and will take place later in 2010.