Transforming Maduka ya Dawa Baridi into Accredited Drug Dispensing Outlets

Designing a Behavior Change Communications Strategy

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Acronyms

ADDO	Accredited Drug Dispensing Outlet
CHF	Community Health Fund
CHMT	Council Health Management Team
CPM	Center for Pharmaceutical Management
DC	District Commissioner
DED	District Executive Director
DHS	Demographic and Health Survey
DHSB	District Health Services Board
DLDB	Duka la Dawa Baridi (Part II drugs dispensing store)
DMO	District Medical Officer
FGD	Focus Group Discussions
HC	Health Center
HP	Health Post
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
IDI	In depth Interviews
ITN	Insecticide Treated Nets
KI	Key Informant
MOH	Ministry of Health
MSD	Medical Stores Department
MSH	Management Sciences for Health
MYDB	Maduka ya Dawa Baridi (plural of DLDB)
NHIF	National Health Insurance Fund
PB	Pharmacy Board
RAS	Regional Administrative Secretary
RC	Regional Commissioner
RMO	Regional Medical Officer
RP	Regional Pharmacist
SEAM	Strategies to Enhance Access to Medicines
SP	Sulfadoxine-Pyrimethamine
STIs	Sexually Transmitted Infections
TB	Tuberculosis
TFDA	Tanzania Food and Drug Authority
TRA	Tanzania Revenue Authority
TRCHS	Tanzania Reproductive and Child Health Survey
TSAS	Tanzania Services Availability Survey
VEO	Village Executive Officer
WC	Ward Councilor
WEO	Ward Executive Officer

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I. Executive Summary

A. Objectives of the Study

The goal of the Accredited Drug Dispensing Outlet program is:

To improve access to affordable, quality drugs and pharmaceutical services in retail drug outlets in rural or peri-urban areas where there are few or no registered pharmacies.

Maduka ya dawa baridi (MYDB) are formally licensed businesses that are intended to sell drugs and other commercial products. The challenge is to change the behavior of consumers, shop owners and dispensers, local government and community leaders so that quality drugs and services are delivered – without having direct organizational control over stakeholders or actors. To transform MYDB into ADDOs, a marketing approach is being used to change the behavior of target groups through communications, training, and support. Therefore the goal of the baseline studies was to understand:

- **The behaviors and preferences of consumers or clients, shop owners, dispensers, local government and community leaders regarding maduka ya dawa baridi services.**

- **Consumer, owner, dispenser, and leader opinions and recommendations for how the ADDO program should function.**

B. Study Methods and Execution

The qualitative study of behaviours was conducted from April to June 2002 and covered the three intervention districts of Songea Urban, Songea Rural, and Mbinga. During this study, qualitative data were collected by conducting focus group discussions (FGDs) and in-depth interviews (IDIs). FGDs were conducted with consumers, duka la dawa baridi owners, duka la dawa baridi dispensers, and community leaders, and IDIs were conducted with key governmental informants. A total of 28 focus groups were conducted in the districts and a total of 15 interviews were conducted in the districts and at regional level.

C. Key Findings

1. Context

Ruvuma Region is located in the southern part of Tanzania and is approximately one to two days travel from Dar es Salaam by road. Three districts of Ruvuma Region were selected to participate in the ADDO program. Pertinent data are summarized below.

Summary of Intervention District Background Data

Characteristic	Songea Urban	Songea Rural	Mbinga	Total
Population	179,105	300,394	451,229	930,728
Hospitals	1	1	4	6
Health Centres	1	7	7	15
Dispensaries	14	55	55	124
Part I Pharmacies	1	0	0	1
Duka la dawa baridi[1]	38	26	17	81
CHF participation[2]	< 2%	7%	6.6%	-

2. Common Illnesses

The most common illness which required treatment was malaria, followed by STIs, diarrhea and/or vomiting, measles and loosely defined respiratory infections. Respondents from Mbinga also identified malnutrition and infertility, while in urban areas of Mbinga and Songea Urban, TB and typhoid were mentioned. Older men and women added chronic problems of aging including heartburn, heart problems, and paralysis. Young men were the only group to emphasize HIV/AIDS.

3. Care seeking

Consumers seek care from hospitals, health centers, dispensaries, MYDB, and traditional healers. They prefer hospitals, health centers, and dispensaries for serious illness because there is consultation, diagnostic tests (lab, x-ray) and more sophisticated treatment such as injections and drips. However, this preference is often outweighed by long queues, lack of availability of drugs, consultation fees, and distance from the consumer's home. It is common for health system providers to refer patients for drugs to maduka ya dawa baridi. In some cases these maduka ya dawa baridi are owned or operated by the referring providers. Consumers choose to go to MYDB because they are usually nearby, and they always provide drugs quickly and at prices or with payment mechanisms that consumers can afford (credit, daily dose/daily payment, in-kind payment). In some cases, they go because the expertise and attitudes of dispensers in the duka la dawa baridi are respected and there is more privacy than in health facilities.

4. Consumers

Consumer perceptions of the quality of services and drugs at MYDB are variable. They like the fact that drugs are nearly always in stock and are obtained easily. They are usually treated nicely and respectfully by dispensers, and their transactions are kept private. MYDB are conveniently located close to home and operate at hours when they are needed. If consumers have cash flow problems, dispensers and/or owners are flexible about credit and alternative arrangements. Consumers are pleased that MYDB also provide services such as

[1] Estimated number of MYDB from regional records. Numbers vary considerably from source to source.
[2] Estimated from Shirima RM. Community Health Fund (CHF) Districts in Tanzania. Dar es Salaam: MSH, 2001.

injections and drips which are needed for more serious illness. They report that drugs at MYDB are not only more available but are cheaper than at health facilities.

Consumers also believe that there are significant quality problems at MYDB especially concerning drugs and the competence of dispensers. They are certain that MYDB are dispensing "expired" and substandard drugs that either do not cure or are causing adverse events. They may also be dispensing expired drugs that have "leaked" from the public sector.

Consumer Expectations of ADDOs
1. Polite, respectful, caring welcome when they enter the shop
2. Diagnoses the illness using tests and scales
3. Educated, competent dispensers
4. Drugs work and they are cured
5. Unexpired, better quality drugs
6. Wide variety of drugs (antibiotics)
7. Good, clear explanations and education to use the drug
8. Payment options remain (credit, in kind, daily dose-daily pay)
9. Shops adhere to rules, inspections, and sanctions
10. Premises are clean, organized
11. Dispensers are identified by uniform and badge

5. Dispensers

Dispensers usually have medical background and view themselves as health education professionals. They report becoming dispensers because of the income, interest in providing services and drugs that meet people's needs, peacefulness and lack of crowding in the workplace, and family obligations.

Dispensers are well aware of consumer judgments of DLDB quality and can accurately describe their expectations. They have problems with consumers that include those that stubbornly demand particular doses and amounts, self-prescriptions for antibiotics, and complaints about side effects and/or lack of cure. Dispensers report that owners expect them to generate a profit, build a positive reputation for the duka la dawa, and provide caring services. In Mbinga town, relationships between dispensers and owners appear strained.

Dispenser Expectations of ADDOs
1. Maintain current qualification requirements to become a dispenser (nursing assistant)
2. Training welcomed
3. Regular updates and seminars needed
4. Uniforms and badges welcomed
5. Inspect regularly but on a known time table
6. Allow loans to owners (do not want them to lower salaries because costs increase)
7. Help deal with difficult clients
8. Provide understandable information on drugs
9. Raise salaries

6. Owners

Many owners established maduka ya dawa baridi because they had a medical background, could meet an obvious community need, and to supplement their income. Maduka ya dawa baridi provide health consultations, drugs, and education to consumers. Owners have difficulties obtaining high quality drug supplies. Often they must travel to Dar es Salaam which is costly and unreliable. One reason given for the purchase and stocking of Part I drugs, is that a business based solely on Part II drugs would not be viable with the high costs of supply.

Owner experience with licensing and inspection systems has been difficult. Licensing processes are long, expensive, and inconsistent. In some cases inspection has been carried out in ways that harass and embarrass owners, particularly when police are involved.

Owner Expectations for ADDOs
1. Allow Part I drugs, especially antibiotics
2. Support the development of a local wholesaler, agent
3. Provide loans or credit arrangements for needed upgrades
4. Decrease licensing fees and taxes, simplify the process
5. Provide training on new medications to dispensers and owners
6. Follow rules and provide a timetable for inspections
7. Provide explanations during inspection
8. Remove competition of unlicensed shops
9. Allow injections in remote areas
10. Explain ADDOs to the public; promote them
11. Link CHF/NHIF to ADDOs

7. Community Leaders

Community leader and consumer impressions of the quality of DLDB drugs and services are the same. Community leaders noted problems with expired drugs, untrained dispensers, partial dosing, poorly stored drugs, and owner concern with profit rather than service. Good quality drugs and services mean unexpired drugs from respected sources, proper storage, correct dispensing, clear explanations of how to use drugs, payment options, and polite interactions.

Leaders are ready, willing, and able to participate in an improved duka la dawa baridi system, much as they have participated in the introduction of other new programs and health sector reform. They will sensitize communities through meetings, and small, less formal group discussions. They will participate in the inspection system although they believe it should be done as a team with government officials. They caution that the purposes and the procedures of the system must be explained carefully, especially at the ward and village levels.

Community Leader Expectations for ADDOs
1. Provide Part I drugs, especially antibiotics and antimalarials
2. Maintain affordability of drugs
3. Support the development of a local depot or supplier of good quality drugs
4. Train and develop dispensers as professionals
5. Provide uniforms and identification badges for dispensers
6. Dispensers communicate politely with consumers and explain drugs thoroughly
7. Ensure ADDOs meet standards before they are allowed to open
8. Inspect ADDOs strictly using honest inspectors that are rotated
9. Provide injection services in more remote areas
10. Have clean, organized premises where drugs are stored properly
11. Link CHF/NHIF to ADDOs

8. Medical Leaders

Medical leaders question the quality of drugs and services in the MYDB. They believe that many dispensers lack essential skills, and are incompetent because of poor training. This is compounded by a lack of understanding and commitment to medical ethics. Owners reinforce these problems by focusing on maximizing profits, causing dispensers to sell expired and questionable drugs. The quality of drugs in MYDB is poor because of their source and origin, the fact that they are stored improperly, and are likely to be expired.

These leaders participate actively in the licensing and inspection processes. Both are important, however limitations in transportation and per diem facilities, as well as unclear roles make it difficult to effect real change in DLDB practices.

Medical leader roles will be central to implementing ADDOs with a focus on the district level. They will be involved in introducing the program to district residents, in licensing, in training, in supervision and inspection, and in reporting. They will form the link with the health service delivery system.

Medical Leader Expectations for ADDOs
1. Attractive, spacious, clean premises
2. Local supply of registered drugs that maintain affordability
3. Store drugs properly
4. Train dispensers to provide drugs and explanations
5. Advocate with owners to invest in ADDOs
6. Provide capital/loans to owners
7. Owners and dispensers apply medical ethics in practice
8. Contracts or protections for dispensers
9. Regular supervision by community-district-regional group
10. Support provided to supervisors (transport, communication, per diem)
11. Link CHF/NHIF to ADDOs
12. Owner and dispenser networks for continuing education

9. Political and Civic Leaders

Leaders believe that the program should enable supplies of high quality, unexpired drugs and require dispensers with higher qualifications and additional training. Ensuring that ADDO requirements are met should be devolved to the district, supported by a district level pharmacist. In order for this to work, directives which clarify roles and responsibilities will need to come through proper channels from the Pharmacy Board. Leaders at the regional level see their role as sensitizing owners, dispensers, inspectors and district leaders to the purposes and implementation of the ADDO program. District level leaders do not see themselves being directly involved but interacting with the needs of the program through formal district structures. Ward Councilors believe they will have a much more active role in sensitizing communities, educating consumers about better drug use, advising on licensing, supervising, and participating in inspections of ADDOs

D. Conclusions

The purpose of this study was to provide an understanding of consumer, owner, dispenser, and local leaders experiences with maduka ya dawa baridi and recommendations for achieving a successful ADDO system. The current situation in Songea Urban, Songea Rural, and Mbinga has been expressed from all viewpoints and behavioral determinants described. Barriers and motivators to changing behavior to choose to use an ADDO, to provide high quality drugs and services, and to support the needed shifts in systems have been analyzed and are in the process of being linked to marketing and program plans. The outputs of the study can be put into four categories: ideas for further study; marketing strategy and tactics; operational issues for programs; and direct input into design of specific activities.

Information about product, place, price, and promotion has been informed by the behaviors and preferences of the target groups as described in the findings. The success of the ADDO program rides on its ability to rapidly change the behaviors through an integrated communications campaign linked to training and service delivery interventions. The communications campaign is embedded in the marketing strategy and plans.

Study findings also contributed and may continue to contribute detailed information to specific tasks. The significant need of dispensers for client education skills can be incorporated at the outset into training curricula centered on drug dispensing. The problem with SP can be addressed as an example of ongoing transfer of information to dispensers and owners to better serve consumers and achieve expected health outcomes. Details on how the licensing process actually works provides information on what authority must be granted through directives.

Analysis and interpretation of the focus groups and interviews have also lead to the identification of operational program issues that are now informed by different points of view. Decisions can be made based on a better understanding of how things actually work in communities and districts. The three main areas requiring attention now are inspections, injections, and incentives. These will be resolved as standards are defined and finalized, new systems are outlined, and resources allocated. As major program components are designed the findings can be reviewed to deepen understanding of possibilities and problems.

II. Background

An assessment of the Tanzanian pharmaceutical sector, co-sponsored by the Ministry of Health and Management Sciences for Health (MSH), was carried out in April-May 2001. The assessment resulted in a proposal to establish a network of accredited drug dispensing outlets to provide selected essential medicines and other health supplies in two to three rural and peri-urban districts. Dr. Gabriel Upunda, Chief Medical Officer, and Ms. Margaret Ndomondo-Sigonda, Pharmacy Board Registrar, presented this proposal at a Conference on Targeting Improved Access to Medicines, in Washington, D.C. On the basis of this work, MSH/CPM through its Strategies for Enhancing Access to Medicines (SEAM) program, funded by the Bill and Melinda Gates Foundation, is offering technical support to implement the accreditation program over the next three years.

Accredited Drug Dispensing Outlets (ADDOs)

The population of Tanzania is served by 339 Part I drug outlets (Pharmacy Board registered pharmacies) and more than 4,000 Part II drug shops (maduka ya dawa baridi). Most if not all Part I shops are located in urban areas and 76% of the total are concentrated in the Regions of Dar-es-Salaam, Arusha and Mwanza. The vast majority of Tanzania's population lives outside of urban areas and it is estimated that only 17% of the population has access to a registered private pharmacy.

A comparison of the per capita distribution of drug outlets by type is summarized in Table 1. Even without taking clustering of outlets in urban areas into account, it is clear that maduka ya dawa baridi (MYDB) are the most available to people. This is true not only vis a vis Part I pharmacies but also vis a vis public and voluntary health facilities that supply both primary health care services and drugs.

Table 1: Per Capita Distribution of Drug Outlets in Tanzania

Duka la Dawa Baridi**	Public facilities*	Voluntary or Religious*	Private*	Parastatal*	Private Pharmacies***
7343	11,687	44,009	36,375	161,017	102,026

**Estimates from SEAM survey in 13 districts, 2002
*MOH Health Statistics Abstract 1999, Volume 1
***Pharmacy Board, 2002

The 1999 Tanzania Services Availability Survey (TSAS) study and the recently completed SEAM survey revealed that for a similar group of essential drugs and medical supplies in public health facilities, out of stock rates of 20-30% were common in health centres and dispensaries. When public health facilities do not have stock, patients turn to other drug outlets to obtain needed medications and supplies. Patients also utilize private outlets to obtain drugs and supplies for self-medication. Since pharmacies are located exclusively in urban areas, patients living in rural and peri-urban communities have little choice but to rely on the extensive network of maduka ya dawa baridi and other unregulated outlets.

However, MYDB frequently operate outside of Pharmacy Board (PB) regulation. The SEAM survey documented that 72% of MYDB surveyed, were dispensing prescription drugs despite regulation that only permits the sale of non-prescription drugs. Other SEAM survey data revealed 41% were utilizing personnel without any medical training to provide dispensing services, and that drug quality could not be assured given that 50% of drugs lacked PB registration or notification. If the PB can develop a system of accredited drug

dispensing outlets (ADDOs) building on the MYDB, the potential improvement in pharmaceutical services and ultimately health outcomes could be great. The challenge for the PB is to implement a system which ensures services are provided at an acceptable professional level through the private sector.

III. Conceptual Approach to an ADDO System

The goal of the ADDO program is:

To improve access to affordable, quality drugs and pharmaceutical services in retail drug outlets in rural or peri-urban areas where there are few or no registered pharmacies.

Affordable means that the price of drugs and services are within the means and values of the rural population that is served whether that be through direct payment or through local health financing schemes. Quality drugs are those that are registered with the PB and are therefore subject to national quality assurance programs and regulation. Quality pharmaceutical services are provided by certified, trained personnel according to national standards.

If this goal is to be attained, the microsystem of the DLDB/ADDO - which includes the shop and stock maintained by the owner, consumer choice of outlets, interactions with dispensers, and treatments - must be improved. In addition, the larger systems in which MYDB/ADDOs are embedded such as those for licensing, supply, training, inspection and problem solving which involve ward, district, regional and national authorities must be changed and strengthened.

The figure on the following page depicts the general components of the micro and larger systems for ADDOs based on what is known about the functioning of MYDB in communities as well as the regulatory and support systems that are part of the Pharmacy Board and regional/district authorities. The core of the microsystem begins with consumers with illness who make decisions to seek or access care. These decisions are based on cultural beliefs about what type of treatment is needed for a particular illness or condition (traditional, spiritual, modern, etc.), distance to care providers, seriousness of the illness, wealth or availability of cash, failure of treatments, drug availability in public facilities, the perceived quality of local care providers, and provider referrals.[3],[4],[5],[6]

Once consumers have chosen to go to a drug shop, then an interaction with the Dispenser begins which results in some form of treatment. "Treatment" might include providing a drug or drugs and advice, advice for home care if a drug is not warranted, promotion of an associated product or service connected to the consumer's complaint (such as an ITN for those with presumptive malaria), or referral to an alternate provider for care beyond the scope of shop services.

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[3] SEAM. SEAM Pharmaceutical Sector Assessment. Washington DC and Dar es Salaam: Management Sciences for Health. April-May 2002.

[4] Robles A, Shirima RM, Kimary RT, Mapunda M, Masimba, D, Mlay NH, Mongo LM, Mpingirwa I, Mushi M, Sadalah M. Community Acceptability of the CHF and its Potential for Improving the Health Services and Health Situation in Madamigha Village, Singida District, Tanzania. Dar es Salaam, Tanzania: Ministry of Health. August 1998.

[5] Bureau of Statistics Tanzania, Macro International Inc. Tanzania Demographic and Health Survey 1996. Calverton, Maryland: Bureau of Statistics and Macro International. 1997.

[6] Green M. Too Sick Too Long: Why People Avoid the Hospital in Southern Tanzania. Dar es Salaam: Tanzanian Journal of Population Studies and Development, Vol 5, Nos 1&2,1998, 1- 21.

FIGURE ONE version 2

These interactions will occur in the context of an ADDO shop which may also provide other products and services, and which is generally owned by a different individual. Owners of shops are business people who earn a living from the sale of drugs and services. They depend on the supply of adequate quality drugs at affordable cost. In an improved ADDO system, dispensing employees of owners will require training to upgrade and sustain skills. Systems of inspection and improvement that currently rely on regional and district medical leaders will be shifted to also engage ward level leaders and other local government bodies. The inspection system will contribute to the overall accreditation, licensing, and operation of ADDOs in communities.

Since the ADDO program requires a significant change from the current system of duka la dawa baridi licensing, a program of promotion within districts will be done to inform and educate consumers as well as political and government leaders. For the system to function well, Ward leadership (WEOs, WCs, Councilors) must be willing to advocate for ADDOs as a new concept, and working through ward committees, to inspect for problems, help improve shops and report to higher levels. Similarly, the District Medical Officer (DMO) as the leading health authority in the district must be willing to advocate with district leaders to work with the new system, to monitor ADDO operations and drug lists, to help solve problems, and report to regional and national levels.

With assistance from SEAM, the PB has begun to design a system of accredited drug dispensing outlets (ADDO's) as pictured that will provide essential drugs, including a limited formulary of Part I poisons and services based upon those authorized for public dispensaries. The PB will pilot the ADDO program in the three districts of Songea Urban, Songea Rural[7], and Mbinga in Ruvuma Region. In order to finalize program design and to develop long term strategic and short term workplans, more information was needed. This report documents the findings from baseline qualitative studies performed in the three districts in the spring and summer of 2002.

IV. Study Objectives

A. Purpose of the Study

Duka la dawa baridi are formally licensed businesses that are intended to sell drugs and other commercial products. The challenge is to change the behavior of consumers, shop owners and dispensers, local government and community leaders so that quality drugs and services are delivered – without having direct organizational control over stakeholders or actors. To transform MYDB into ADDOs, it is important to approach the program from a marketing perspective and to design the program to change behavior through communications, training, and support. Therefore the goal of the baseline studies was to understand:

- **The behaviors and preferences of consumers or clients, shop owners, dispensers, local government and community leaders regarding duka la dawa baridi services.**

- **Consumer, owner, dispenser, and leader opinions and recommendations for how the ADDO program should function.**

[7] Songea Rural district is in the process of being split into two districts named Songea Rural and Namtumbo. For the purposes of this report Songea Rural includes both of the newly designated districts.

B. Desired Behaviors

Ultimately, if the ADDO program is to succeed each of these stakeholder groups would change their behaviors in particular ways. Based on the problems with the DLDB system and the proposed new ADDO system, a series of desired behaviors for the key stakeholder audiences was generated. These "desired behaviors" represent the behavioral objectives that would be achieved through communications, training and support by the ADDO program. The primary focus behaviors are the most important key behaviors sought in the initial stages of the program, while the secondary focus behaviors would become more important as progress is made. All desired behaviors are summarized by target audience in Table 2 below.

Table 2: Desired Behaviors of Target Audiences

Target Audience	Primary Focus Behaviors	Secondary Focus Behaviors
Consumers	Choose to visit an ADDO (rather than any DLDB) Explain "illness" including symptoms, progression of illness, etc.(rather than demand a specific drug) Listen and act on advice of dispenser (alternatively - referral, purchasing + taking drug appropriately, home care) Purchase full course of drug	
Owners	Accept and are willing to use standards -Physical attributes -Source/supply of drugs -Qualification/training of dispensers -Ethics (relationship with patients, providers, well being of patient) Make required upgrades in MYDB Support training of dispensers Seek accreditation	Monitor operations in context of standards Ensure standards are maintained (take corrective actions, reinforce practices) Maintain accredited status
Dispensers	Provide and maintain service to ADDO standards including: -communicate with clients to assess problem -dispense appropriately -inform, educate clients -refer if needed -maintain ethics (confidentiality, patient well being, relationships with providers, patients, keep up to date)	

Target Audience	Primary Focus Behaviors	Secondary Focus Behaviors
Community Leaders	Disseminate accurate information about ADDOs to villagers (in all useful venues) Mobilize villagers to use ADDOs Inspect ADDOs quarterly	Monitor complaints Help solve quality problems at the local level Refer to higher authority when necessary
Medical Leaders	Communicate accurate information to district leaders (council, local government officers, DC), health providers, CHMT Persuade district leaders to promote ADDO program Monitor ADDO quality including oversight of drug list/supply	Report problems to appropriate levels Help solve quality problems locally
Regional Pharmacist	Communicate accurate information to regional and district leaders Persuade regional leaders to promote and ADDO program Make licensing recommendations to district Monitor ADDO/inspection reporting and help resolve quality problems	
Political and Civic Leaders	Promote ADDO program with regional or district influentials Support recommendations and decisions of PB and district authorities (licensing, inspection requirements)	

C. Detailed Study Objectives

To design the behavior change communications strategy and associated program activities, detailed information about each target group was required. The specific objectives used to guide the design of the study and data collection tools are noted below.

Consumers or Clients:

- Understand how consumers choose where they obtain drugs and what underlies these choices.
- Understand how consumers perceive the quality of the drugs and associated services they obtain and what drives these perceptions.
- Understand how consumers interact with drug dispensers and what actions they take for the illness and drugs afterward.

- Understand what expectations consumers have for ADDOs.

Duka la Dawa Baridi Owners:

- Understand owner perceptions of the quality of services and products they provide now in the context of the marketplace for drugs.
- Understand the value of services and products to the owner and what could be value-added.
- Understand owner willingness to participate and invest in accreditation requirements and what they believe will be needed to make it work.

Duka la Dawa Dispensers:

- Understand how dispensers perceive their job in the duka la dawa and what owners expect of them.
- Understand dispenser's perceptions of what services and drugs consumers expect and the quality of what they are able to provide.
- Understand how dispensers interact with consumers and what issues arise.
- Understand dispenser willingness to improve quality and what they believe will be needed to make it work.

Community Leaders:

- Understand issues of drug availability and quality in communities and how leaders and committees have addressed them. (Include CHF)
- Understand leader perceptions of the quality of local duka la dawa' products and services and the potential for improving them.
- Understand leader willingness to participate in inspection and reporting, and what they believe will be needed to make it work.

Medical Leaders:

- Understand medical leader perceptions of how consumers choose where they obtain drugs and what underlies these choices.
- Understand medical leader perceptions of the availability and quality of drugs and associated services in duka la dawas and what must be improved.
- Understand medical leader perceptions of how ADDOs could fit into the district health system and what would be needed to make this work.
- Understand medical leader perceptions of their roles and responsibilities in relation to duka la dawas now and if there were an ADDO program.
- Understand what medical leaders would be willing to do to launch and monitor accreditation.

Regional Pharmacists:

- Understand Regional Pharmacist perceptions of the availability and quality of drugs and associated services in duka la dawas and what must be improved.
- Understand Regional Pharmacist perceptions of how ADDOs could fit into the regional/district health system and what would be needed to make this work.

- Understand Regional pharmacist perceptions of his/her role and responsibilities in relation to duka la dawas now and if there were an ADDO program
- Understand what would be needed to make a different system of licensing, inspection, and improvement work.

Political and Civic Leaders

- Understand issues of drug availability and quality in communities and what is needed to improve them.
- Understand leader perceptions of the quality of local duka la dawa' products and services and the potential for changing to ADDOs.
- Understand leader willingness to support a changed licensing and inspection system and what would be needed to make it work.

IV. Methodology

A. Qualitative Methods

Background information was gathered from the intitial SEAM survey[8], a literature search review of consumer use of drug outlets in Tanzania[9], discussions with groups concerned with primary health care and essential drugs, and exploratory visits to several regions that might benefit from an ADDO program.[10] There was little documented information specific to the study objectives, but data collection instruments and methods were informed by these activities.

Three methods for collecting and generating information were utilized: Focus Group Discussions (FGDs), Indepth Interviews (IDIs), and a concluding workshop of national, regional, and district experts. FGDs were homogeneous and were conducted with consumers, duka la dawa baridi owners, duka la dawa baridi dispensers, and ward and village or community leaders. Standard approaches to design, sampling, implementation, and analysis were used.[11] FGDs were conducted in Kiswahili by experienced moderators and notetakers with supervisory support in locations close to participants.

Indepth interviews were conducted with a few political and government leaders who play key roles in local health and social sectors. These interviews included District Medical Officers (DMOs), the Ruvuma Regional Pharmacist and the Regional Medical Officer (RMO). Shorter, informational interviews were conducted with the Regional Commisioner (RC), the Regional Administrative Secretary (RAS), District Commissioners (DCs), District Executive Directors (DEDs), and Ward Councilors. All interviews employed open ended questions and allowed for exploration of respondent generated ideas and concerns.

A concluding workshop was conducted with Pharmacy Board, SEAM, and regional and district leader participation to transform the findings into strategic directions for the ADDO

[8] SEAM. SEAM Pharmaceutical Sector Assessment. Washington DC and Dar es Salaam: Management Sciences for Health. April-May 2002.
[9] See Annex A: References
[10] Clark M, Mbwasi R, Helzer N, Mfuko W, Alphonse E, Hebron Y. Selection of ADDO Program Districts. SEAM Project: Dar es Salaam, April 2002.
[11] Krueger RA. Focus Groups: A Practical Guide for Applied Research. Thousand Oaks: SAGE Publications. 1994.

program. The workshop served several purposes including developing a common understanding of the observations and findings derived from the FGDs and IDIs, laying the foundation for a marketing approach to changing behaviors, and developing the outlines of a marketing workplan that includes communications, training, and program activities. Participatory techniques including small work group development of ADDO program elements and messages, and large group discussions to identify and resolve issues were used.

B. Sample Selection

A pilot program for ADDOs will be established in the three districts of Songea Urban, Songea Rural, and Mbinga all of Ruvuma Region.[12] The qualitative study of behaviors was conducted in these three districts from April to June 2002. Basic data for each district is summarized in Table 3.

Table 3: Intervention District Background Data[13]

Characteristic	Songea Urban	Songea Rural	Mbinga	Total
Area (square km)	394	33,925	11,396	45,715
Population	179,105	300,394	451,229	930,728
Number of wards	13	26	37	76
Villages/ Streets	183	131	184	498
Hospitals	1	1	4	6
Health Centres	1	7	7	15
Dispensaries	14	55	55	124
Village health posts	28	-	100	128
Part I Pharmacies	1	0	0	1
Duka la dawa baridi[14]	38	26	17	81
CHF participation[15]	< 2%	7%	6.6%	-
Other projects or donors active in the district	UMATI/FP, SMI (USAID), RO, CSPD (UNICEF), GSM, KIWOHEDE (ILO/IPEC/ UNICEF), EJAWASO, SOUWASA (DANIDA), ONCHO (WHO), HIV/AIDS (NACP), TBANDLP (GRA), NAEP (IDA/ WB), HPI(CRITAS/ WB), SACCOS, AMCOS, WLAC (USAID/ NORAD/ GDS/FES), IGN (TGNP), UWABIMASO	DRP (SNV), CSP (UNICEF), CDTF (NOVIB), WINO (SVS), MWATRAS, CODE, SEDTF, PEHOLE(HABIT AT) WACCA, KIHATA, Good Samaritans (NACP, UNICEF)	CARITAS, UNICEF, LIULI ANGLICAN, CODE, PHC, IFAD, IDA, JICA, USAID-ATAP, STABEX	

[12] Clark M, Mbwasi R, Helzer N, Mfuko W, Alphonse E, Hebron Y. Selection of ADDO Program Districts. SEAM Project: Dar es Salaam, April 2002.
[13] NIMRI. Situation Analysis of Songea Urban, Situational Analysis of Songea Rural, Situational Analysis of Mbinga, 1999-2000. Confirmed with District offices.
[14] Estimated number of MYDB from regional records. Numbers vary considerably from source to source.
[15] Estimated from Shirima RM. Community Health Fund (CHF) Districts in Tanzania. Dar es Salaam: MSH, 2001.

A total of 28 focus groups were conducted; 7 each in Songea Urban and Rural, and 14 in Mbinga. In Mbinga, wards were designated urban and rural by population density and distance from the district center and samples selected from each stratum (Mbinga Urban, Mbinga Rural). One focus group for community leaders, one focus group for duka la dawa baridi owners, and one focus group for duka la dawa baridi dispensers was conducted in each of Songea Urban and Rural. Two focus groups for community leaders, two for duka la dawa baridi owners and two for dispensers were conducted in Mbinga. Four FGDs with different groups of consumers were conducted in each rural and urban district or partial district.

Fifteen indepth interviews were conducted in the districts and at regional level. The DMO of each district was interviewed but only two DCs were interviewed because Songea Urban and Rural share one. During fieldwork two of the target informants (DED Mbinga, DED Songea Rural) were on official trips outside the region, and officials appointed to act on their behalf were interviewed. The Regional Commissioner (RC), the Regional Medical Officer (RMO), and the Regional Pharmacist (RP) were interviewed. Five additional informants were added to fill information gaps identified during the data collection. The additional interviewees included the RAS and four ward councilors. Ward councilors were excluded from the community leaders FGDs to minimize dominance given their political position. The target groups or audiences are summarized in Table 4 and the number of groups and interviews per district are shown in Table 5.

Table 4: Participation in Focus Group Discussions

16 FGDs with Consumers	**4 FGDS with Duka la dawa baridi owners**	**4 FGDs with Duka la dawa baridi dispensers**	**4 FGDs with Community leaders**	**15 Interviews with Medical or Political leaders**
Young women Older women Young men Older men	Urban shops Rural shops	Urban shops Rural shops	Ward Executive Officer Village/Street Chairperson Village Executive Officer Village/ward health committee member CHF committee member Religious leaders (Christian/ Moslem) Womens group leader "Influentials" (teachers, clinician etc)	(Indepth Interviews) DMO (2) RP (1) RMO (1) (Informational interviews) RC (1) RAS (1) DC (2) DED (3) Ward Councillors (4)

Table 5: Distribution of FGDs and IDIs by District and Urban/Rural Residence

Target Group		Songea Urban district		Songea Rural district		Mbinga district				Total Groups or Informants
		Young (15-29)	Older (30-59)	Young (15-29)	Older (30-59)	Young (15-29)		Older (30-59)		
Consumers*	Men	1	1	1	1	1 Urban	1 Rural	1 Urban	1 Rural	8
	Women	1	1	1	1	1 Urban	1 Rural	1 Urban	1 Rural	8
Owners		1		1		1 Urban		1 Rural		4
Dispensers		1		1		1 Urban		1 Rural		4
Community Leaders		1		1		1 Urban		1 Rural		4
Total Focus Groups		7		7		14				28
Medical Leaders		0		1		1				2
Political Leaders		2		1		2				5
Regional Leaders		4								4
Ward Councilors		1		1		2				4
Total Interviews										15

Selection of participants for focus group discussions was based on maintaining a representative sample from the urban and rural areas within each district. The number of participants invited to any one FGD was based on the goal of 10 participants, with a range of 8 to 12 participants. This was achieved for all consumer and community leader groups. For DLDB owners and DLDB dispensers, selection was based on the number and location of shops proportional to the the number of shops in each ward. Given the limited number of shops in some districts and the fact that some owners owned more than one shop, there were less than 8 participants in some groups. Owners and dispensers came from the same shops.

Selection of owners, dispensers, and community leaders was done by listing all accessible wards with MYDB that have been in business for greater than two years, and randomly selecting from among them. Accessibility was defined as the likelihood of invited participants willing and able to travel to the focus group site given transport conditions. All wards in Songea Urban and the Mbinga Urban were categorized accessible. In Songea Rural and the rural section of Mbinga, several wards were excluded due to impassable roads or a greater than four-hour drive. In the case of Mbinga where fewer MYDB existed, some with less than two years in business were allowed in the sampling frame.

For each district, 4 to 8 consumer focus groups were conducted. All accessible wards with MYDB formed the sampling frame and one ward was randomly selected using a random number table. In rural wards, all the villages in the ward were listed. From this list one village was randomly selected. If the village was found to be substantially large, then six hamlets were randomly selected. For small villages, three hamlets were randomly selected

and a neighboring village selected in alphabetical order contributed the additional three hamlets. From each hamlet all ten-cells were listed and four ten-cells were randomly selected. Each ten-cell leader in collaboration with the village and hamlet chairpersons were requested to select 2 young women, 2 young men, 2 old women and 2 old men. This yielded 48 FGD participants, approximately 12 in each of the age-gender groups per district.

In urban areas, all the streets in the selected ward were listed and six streets were randomly selected. From each street all ten-cells were listed and four ten-cells were randomly selected. Each ten cell leader in collaboration with the street chairperson was requested to select 2 young women, 2 young men, 2 old women and 2 old men giving a maximum total of 48 villagers to participate in the four FGD sessions.

In each district and Mbinga Urban and Mbinga rural, community leaders from two randomly selected wards were invited to meet at a convenient central location. The list of prospective community leaders to be invited to the FGDs was developed in consultation with the regional and district authorities, and the 10 participants were invited from a list that included the Ward Executive Officer, Village Executive Officers, Religious Leaders, Teachers, Women's group leaders, Village Chairpersons, Clinicians, Ward/Village Health Committee members, and CHF committee members. Actual numbers of participants are shown in Table 6.

Table 6: Level of Participation in Focus Groups by District and Type

	Mbinga rural	**Mbinga urban**	**Songea rural**	**Songea urban**	**Total**
Young Women	9	10	10	10	39
Old women	10	8	9	10	37
Young Men	10	10	10	10	40
Old Men	10	10	10	10	40
DLDB owners	4	7	9	10	30
DLDB dispensers	5	8	10	9	32
Community leaders	10	9	10	11	40

C. Data Collection

Focus group and interview guides were designed and developed based on the study objectives and targeted the seven types of respondents noted earlier. These tools were developed in English and translated into Kiswahili. Focus group guides were pretested in one site by moderators and notetakers, then refined based on group feedback and discussion. Back translation of Kiswahili guides into English was done to clarify and confirm question content.

Three team leaders and twelve data collectors with college education, qualitative research experience, experience working in rural areas of Tanzania, and availability in the time frame required were recruited to participate in this study. Training was divided into three phases, beginning with introduction to the study and data collection tools, focus group discussions and in-depth interviews methods, and the pretest of instruments in a community near Dar es Salaam. The second phase focused on strengthening of interview technique, moderating and notetaking roles and transcription protocols. The last phase of training which was conducted in Ruvuma region, involved sampling techniques, orientation to regional and district staff, and implementation procedures.

Implementation of the study began by fielding an advance team of researchers who held preliminary meetings with officials to explain the process and obtain input to sampling frames, participant lists, and other logistics. The research team completed the sampling, developed a timetable that was shared with District Development Directors and appropriate letters of invitation were issued. During this logistics week team leaders conducted most indepth interviews. All data collectors returned to the field and conducted FGDs and remaining interviews over the course of one week in all three districts.

All FGDs and IDIs were recorded and transcribed in Kiswahili. First level analysis was conducted on these Kiswahili transcripts and any questions on content were checked with this version. Transcripts were translated into English for the use of non-Kiswahili speaking members of the research team. All data are stored securely without identifying information.

D. Limitations of the Study

While efforts were made to ensure the representativeness of the FGDs, it was not possible to obtain input equally especially from the rural districts. It was necessary to exclude some areas with lower accessibility as well as to limit the number of FGDs and participants. The mainstream situation of the districts has probably been captured, but the DLDB situation in extremely remote areas may have been missed. In some cases the number of participants in the FGDs was low, particulary for owners and dispensers in Mbinga making participation in discussions more difficult. However, findings from these groups appear to be comparable to the better attended sessions.

Many FGDs appeared to have open and indepth participation. However, given that some topics concerned illegal practices such as clinical service provision and distribution of Part I drugs without prescription, there may have been some reluctance to report current practices. Given this situation and that qualitative methods of data collection were used, it is not possible to say how widespread or common these practices are. There may have been greater discretion exercised in the IDIs, although this was amelioriated by participation of key individuals in sensitive discussions during the concluding workshop.

Questions concerning consumer careseeking for illness were asked during the FGDs. However, these questions were asked in relation to use of the MYDB and did not explore choices and utilization of public sector facilities such as dispensaries or hospitals in depth. This information might have contributed to a better understanding of differential selection of places to obtain drugs as well as prescribing practices. A greater depth of understanding of consumer satisfaction and dissatisfaction with the whole primary health care system was ultimately requested by program planners.

In some cases it would have been helpful to have a more clear understanding of participant responses. For example, consumers were concerned with being provided “expired” drugs, but it its not clear whether this meant expiration dates or drugs that “don’t work” and are therefore perceived to be expired. In these instances, questions for further study are noted in the findings section.

In general, the FGDs generated more indepth information than the IDIs. This may be a result of how the interviews were conducted and/or a result of more limited trust or expectations related to the formal roles of the respondents. Certainly it is probably not possible to maintain anonymity for IDIs of a handful of officials. In retrospect, it may have been better

to treat these individuals as key informants and to interview them several times over an extended period. Participation in the concluding workshop did help to expand and explain interview-initiated questions and issues.

This study employed qualitative research techniques tht provided a picture of current behaviors related to MYDB and recommendations for ADDOs. The findings do not provide a quantitative picture of the existence of MYDB or of the prevalence of reported behaviors which would require survey and observational techniques.

VI. Analysis of Findings

A. Focus Groups, Interviews, and Workshops

Transcripts were read all at once and any patterns, reluctance or strongly held opinions noted. They were then marked for question answers and illustrative quotes. Each question was reviewed and weighted for descriptions of personal experience and considered with others for internal consistency. When questions of meaning arose, the Kiswahili transcripts were consulted for clarification.

Focus groups and interviews were aggregated by target audience and detailed objectives, and then by theme looking for differences and similarities by client age and gender groups, and urban or rural districts. Themes included: careseeking for drugs and services, information sources, quality perceptions of MYDB, incentives, response to the idea of ADDOs, enabling actions for ADDOs, and participation in ADDO program development.

These findings were then presented and explored through discussions and roleplay situations with national and local experts in a workshop setting. (See Annex B) Descriptive findings about MYDB and ADDOs and current behaviors of target audiences were clarified. Those factors that motivate or hinder practice of desired behaviors with regard to accessing drugs were considered, and areas for further study generated. Most importantly, the key issues important to ADDO program design and functioning were identified, and after considerable discussion, program parameters and next steps were developed.

B. Link to a Marketing Approach

The behavioral findings were then used as a basis for introducing marketing concepts and developing elements of the initial communications strategy for consumers, owners, dispensers, and community leaders. Potential incentives for behavior change and messages to encourage and reinforce behaviors were generated. Consensus on the next steps for creating the overall marketing strategy and workplan was developed.

VII. Findings

A. Context

The macrosystem context for the ADDO program involves national, regional, and district level programs and is illustrated in Figure 2. From the national level, the Pharmacy Board and the Ministry of Health (MOH) are the primary organizational actors. The Pharmacy Board and its legal and regulatory processes are undergoing change with the introduction of a new bill in Parliament that will establish a Tanzania Food and Drug Authority (TFDA).

Figure 2 .

However, for the purposes of this study important components of the PB include registration/notification/testing of drugs to assure quality, establishing and maintaining standards for licensing, inspection, and practices in drug outlets, and communication for improved use of drugs by providers and consumers. The MOH also plays an important role in the use of drugs throughout public and private health systems. Leadership and input is provided across many disease-specific (malaria, TB, STIs, etc.) and functional programs (health sector reform, decentralization, logistics, clinical training, etc.). MOH personnel play especially key roles at local levels as representation of the Pharmacy Board ends at the regional level with one pharmacist. The Medical Stores Department (MSD), a fully autonomous section of the MOH, currently procures and distributes most essential drugs for public sector health centres and dispensaries through a kit system.

Ruvuma Region is located in the southern part of Tanzania and is approximately one to two days travel from Dar es Salaam by road. Three districts of Ruvuma Region were selected to participate in the ADDO program based on a series of criteria, PB support, and local willingness to engage in a new program. This process is described in earlier reports. The region has been involved with health sector reform since the beginning and approximately two thirds of expectations for decentralization of planning and management have been met. Most districts have received training and new systems, and some districts have begun to include community levels. There has been a major change in regional roles and funding including shifting from direct authority to technical support and supervision to the districts, and introduction of basket funding.

The three districts vary by population and geographic size, urban and rural neighborhoods or villages, livelihood, and length of experience with health sector reform. Songea Urban is a densely populated urban environment with many small businesses, wide choice of nearby health facilities, and is in the Phase 1 group of districts for health sector reform. There appear to be many MYDB. Participation in the CHF is very low in this district reportedly because most people are workers with required contributions to the NHIF and many alternatives for services and drugs exist.

Songea Rural is a geographically widespread district that is undergoing further division into two districts (Namtumbo and Songea Rural) because of size and population. Songea Rural and Urban share a District Commissioner and a long time resident District Medical Officer, and health sector reform is being implemented in both simultaneously. Songea is currently receiving block grants and basket funding for health, with the associated bottom up planning and financial management processes. Community participation is still evolving and the formation of the District Health Services Board (DHSB) has not yet taken place. However, medical and civic leaders, and communities have extensive experience with implementation of significant systems change, and approached consideration of ADDOs from this perspective.

Songea Rural has one mission hospital (Peramiho) with a strong reputation for quality and service, as well as 7 health centers and 55 dispensaries. The level of participation in the CHF is 8 percent which is low but comparable to the experience of other rural districts. The CHF is intended to supplement what is provided by the government and funds have been used to install solar energy supplies in six health centres. CHF funds have also been used to purchase drugs that are not in the kits supplied by the MSD. Fewer MYDB legally exist in Songea Rural and it is not clear where they are located with respect to population clusters. Songea Rural is economically mixed with seasonal agriculture and some mines.

Mbinga is the biggest district by population and more remote with less developed roads. Travel time to Mbinga from Songea is long for the distance involved. The southern part of the district is seasonally inaccessible due to rains and mountains. Fishing and coffee growing are seasonal activities that cause large fluctuations in cash availability in villages. Mbinga has not started implementing health sector reform, although plans for training district personnel and initating basket funding are set for 2003. Equipment and drugs for hospitals are obtained through the MSD which manages purchase and distribution from the central level as needed. Mbinga has 4 hospitals, one a busy mission hospital with a good reputation. There are also 7 health centers some of which are respected and considered hospitals by surrounding communities.

The DMO in Mbinga has been at post for twenty years. Mbinga has received fewer external inputs as in new health programs than the more accessible Songea. The CHF is reported to be helpful and has enabled the purchase of drugs and equipment, and the construction of Health Centres. The CHF has community support because expenditures have been tangible and visible, and supplementation of the MSD supplied kits has prevented common mid month stockouts. There are approximately 17 MYDB in Mbinga. Some of these are owned by people residing in Songea and they are clustered in the urban district center and other road accessible locations.

One of the key but difficult to answer questions in all districts was: "How many maduka ya dawa baridi are there and where are they?" First, while regional and district authorities legally recognize those shops that have obtained both business and pharmacy licenses, records at the different levels varied. Medical and political leaders are aware of and listed more shops than have completed all licensing and recording requirements. In addition, some drugs are available from a wider variety of sources including "suitcase" salesmen, other small commercial stores, and individual health worker private practices. No one is certain about the scope and intensity of drug distribution outside health care facilities and MYDB.

There are also clear connections between MYDB and health care services, where MYDB fulfill the need for additional types and amounts of essential drugs. Both public and voluntary facilities refer to MYDB, often by name. Definitive information about the existence, ownership, and staffing of MYDB will only come from targeted mapping and documentation activities done village by village.

B. Stakeholders and Actors

The primary stakeholders or actors in the DLDB system are consumers, owners, dispensers, community, medical and political/civic leaders as shown in Figure 3.

Consumers

"Consumers" refers to all individuals who choose to seek drugs and care for illness, symptoms, or well being at MYDB. These consumers may be men or women, of any age or ethnic group. In some cases consumers may be caretakers of an ill individual who cannot or does not communicate with the dispenser. Caretakers might be mothers of children, spouses, children of the elderly, neighbors, or friends. Sometimes health workers prefer to refer to consumers as "clients" or "patients". For the purposes of this study which looks at the behavior of individuals purchasing drugs and services from a retail outlet, consumers is the

Figure 3

most accurate descriptor. Consumers make choices to obtain drugs from various alternatives. They then act upon taking drugs or advice (adherence) which, along with other factors, contributes to a better, worse, or equal health situation (outcomes). Consumers who provided information for this study were all adults (> 15 years), were stratified into men and women and then into younger and older individuals (< or > 30 years).

Owners of Record

Owners are those individuals who invest resources in the establishment and licensing of a DLDB as part of Part II shop requirements. According to PB standards an owner can be anyone of good standing in the community who has the requisite resources and follows the appropriate licensing procedures for one shop in a district. In Ruvuma Region, an additional requirement of having medical background ranging from nursing assistant to physician was established for ownership. These rules had several unintended consequences. The first was to create a group of "owners of record" or those whose names are listed in licensing documents, as well as actual owners or those who provided the investment funds to establish the businesses. Also, some owners maintain more than one DLDB but place second and third establishments in the names of relatives or spouses. Decision makers are the actual owners but owners of record are usually sent to official meetings and group discussions.

Table 7 shows the number of owners of record who participated in FGDs by district of shop location, including those who actually owned more than one DLDB in the FGD sample. The medical qualifications of all owners of record are in Table 8, and age, gender, and educational qualifications of those owners participating in FGDs are summarized in Table 9.

Table 7: Number of Owners of Record, Participation in FGDs, and Multiple Shop Ownership

District	Number of DLDB Owners of Record	Number of Owners of Record participating in FGDs	Number of FGD Sample Owners who own > 1 DLDB
Songea Urban	38	10	6
Songea Rural	27*	9	2
Mbinga	19**	11	1
Total	84	30	9

*2 shops owned jointly by the same two owners; 2 shops owned by the same owner
**2 shops owned jointly; 1 jointly owned shop and 1 single shop owned by the same owner

Table 8: Owner of Record Qualifications

Qualification	Songea Urban	Songea Rural	Mbinga	Total
Asst Clinical Officer	2	3	2	6
Nursing Officer	9	8	8	24
Clinical Officer	14	9	4	26
Asst Medical Officer	3	3	1	7
Medical Officer	2	0	0	2
Nurse Midwife	5	2	3	10
Physical Therapist	2	0	0	4
Pharmacist	1	2	0	1
Dental Assistant	0	0	0	1
Nursing Assistant	0	0	1	1

Table 9: Age group, Gender, Educational Qualification of Owner Participants in FGDs

Characteristic	Songea Urban	Songea Rural	Mbinga
Primary education	2	7	2
Secondary education	8	2	9
Male	5	8	8
Female	5	1	3
20-29 years	1	0	0
30-39 years	3	3	4
40-49 years	4	2	6
50-59 years	2	2	1
60+	0	2	0

If the FGD participants are considered representative, the "typical" owner in Songea Urban is about 40 years old, either male or female, with secondary education. In Songea Rural and Mbinga, the typical owner is around 40 years, male, with primary education.

Dispensers of Record

The national and regional requirements for dispensers are the same and include recognized medical training and qualification ranging from nursing assistant to physician. It was noted that while all MYDB had qualified dispensers, actual dispensing was sometimes done by other DLDB employees or relatives who may or may not have had any qualification. The role of the dispenser is to provide drugs and pharmaceutical services to consumers when they come to the DLDB.

As shown in Table 10, over half the dispensers in the three districts are nursing assistants and a third of dispensers are also shop owners. If the FGDs were representative of all dispensers of record, then Table 11 describes the "typical" dispenser in Songea as a young woman with primary education. In Mbinga, the dispenser is more likely to be an approximately 30 year old man with primary education.

Table 10: Dispenser Qualifications by Records and Owner/Dispenser Overlap

District	Number of Dispensers	Number of Nursing Assistants	Number of Dispensers Who are also Owners
Songea Urban	78	49	25
Songea Rural	46	27	15
Mbinga Rural	17	6	7
Mbinga Urban	10	1	4
Total	151	83	53

Table 11: Age group, Gender, and Education Levels of Dispensers in FGDs

Characteristic	Songea Urban	Songea Rural	Mbinga urban	Mbinga rural
Primary education	8	6	6	0
Secondary education	1	4	2	5
Male	0	0	6	2
Female	9	10	2	3
20-29 years	7	7	0	4
30-39 years	2	2	4	0
40-49 years	0	0	3	1
50-59 years	0	1	0	0
60+	0	0	1	0

Community, Medical, and Politicial/Civic Leaders

The final group of actors in the local system are those elected and appointed leaders who participate in the licensing, inspection, and reporting support systems for MYDB. At present the community leader role appears limited to advocating/recommending for DLDB licensure or informally participating in inspection tours and consequences. The nature of the latter activities vary tremendously by locality, inspection procedures, supply of drugs in the community, and personal relationships.

The role of medical leaders is established by PB requirements, regional licensing and inspection rules, and district public health responsibilities. The Regional Pharmacist has direct responsibility for the pharmacy and MYDB in the region. Pharmacy licensing applications must proceed with his recommendation, he conducts inspections and investigations involving drug issues, communicates drug information to health care providers, and reports to the national PB. The RMO is responsible for the public health of the region and most core health programs require adequate supplies and appropriate use of quality drugs. While the RMO is primarily concerned with the public sector, he/she participates in the licensing process (in the context of the Regional Technical Advisory Committee (RTAC)), in resolving problems that come to the regional level, and in reporting.

The DMO is the core medical practitioner concerned with drug supply throughout each district, with prescribing and treatment practices, and with the health financing schemes such as the CHF to meet unmet needs. All DLDB licensing applications come through the DMO, he carries out inspections and investigations under the authority of the RP, and maintains the links between public health practice and drug distribution. The DMO communicates about drugs with both the public and private sectors such as with the recent introduction of S/P for first line malaria treatment. The DMO reports to the district, and to regional and national levels of the MOH. During the course of this study, the DMOs were found to be the most knowledgable about the place of MYDB in communities, as well as current practices. This knowledge was also historical as both DMOs have long tenure in their respective districts.

Political and civic leaders at the regional level such as the RC participate in the licensing process and in problem solving as it is brought through those channels. MYDB must also obtain a business license from the district in addition to the Part II license which currently comes from the region. This process involves the DMO and district administrative offices.

C. Common Illnesses or Symptoms Requiring Care

All target audiences were asked what symptoms or illnesses were the basis for seeking care, where care and drugs were generally sought, and why they was sought at a particular type of facility/provider. There was agreement about the most common illnesses or symptoms for careseeking among all groups of respondents, and small variations in some problems by age, gender, and district.

By far, the most common illness which required treatment was malaria, followed by STIs, diarrhea and/or vomiting, measles and loosely defined respiratory infections. Respondents from Mbinga also identified malnutrition and infertility, while in urban areas of Mbinga and Songea Urban, TB and typhoid were mentioned. Older men and women added chronic problems of aging including heartburn, heart problems, and paralysis. Young men were the

only group to emphasize HIV/AIDS. The complete list of conditions mentioned are noted in Table 12.

Table 12: Common Illnesses or Symptoms for Care Seeking in Ruvuma

Most Frequently Reported Illnesses	Illnesses of Importance to Specific Groups of Participants	Other Illnesses Mentioned
Malaria	Mbinga: Malnutrition	Bilharzias
STIs	Infertility	Meningitis
Diarrhea and/or vomiting	Older People: Heartburn	Blood cancer
Measles	: Heart problems	Diabetes
Respiratory infections	: Paralysis	Cholera
	Young Men: HIV/AIDS	Flu
	Urban Areas: TB	Asthma
	: Typhoid	Eye diseases
		Worms
		Dental problems
		Skin diseases (scabies)

D. Careseeking Choices and Duka la Dawa Baridi

Where do consumers go for care and drugs when they are ill? Consumers reported going to public and mission hospitals, health centers, dispensaries, pharmacies, MYDB, traditional healers (herbalists, spiritualists), and home or self care. Most respondents including medical leaders, agreed that care at home was usually tried first. Home care could include many things such as herbs, drugs, food, spiritual healing, and rest. If the illness or symptoms persisted or were perceived as needing more care, consumers would then make a choice about where to go for help.

The most common choices were MYDB, hospitals, and in some places health centers.[16] Maduka ya dawa baridi were heavily preferred by all age, gender, and district groups of consumers. They were exclusively preferred by young men from the two urban areas to any other health care facility. Consumers also choose to visit hospitals, particularly when the condition is perceived as serious and requiring higher level diagnostics and treatment. The two mission hospitals, Peramiho and Litembo, were mentioned by name. Surprisingly, in Mbinga older women respondents reported that they would not go to the hospital because of how they were treated by doctors and nurses. In the rural areas of Mbinga, health centers were preferred. Almost no group preferred dispensaries, although some respondents may have confused dispensaries with hospitals or health centers. While much of the careseeking information comes directly from consumer focus groups, these preferences were confirmed in interviews with owners, and community and medical leaders. Careseeking options are illustrated in Figure 4.

[16] There is some indication that consumers may have labeled some health centers as hospitals, making it difficult to ascertain preference between the two.

Figure 4

Consumers do recognize variation in the type of services available from the different service delivery points. They expect services such as drugs, examinations, laboratory tests, injections, counselling, X-rays, drips, surgical procedures, health education, and blood transfusion. Many of the diagnostic services such as lab and x ray are only available at hospitals and well equipped health centers. However, in most cases the services offered at hospitals, health centres and dispensaries must be supplemented by those available at the MYDB, particularly drugs.

I think the most trustworthy place for treatment is the hospital where you get examined and a doctor provides a professional diagnosis and prescription. The problem (with hospitals) is that drugs are in short supply, they (staff) then direct you to go and purchase drugs from a duka la dawa…. Young Man, Songea Urban.

Consulting MYDB first is often perceived of as less costly and just as effective, especially for more common illnesses such as malaria. Hospitals and health centers charge fees for consultation and then are unable to provide the drugs for treatment, usually because of stockouts. Consumers are then advised to purchase the drugs from a DLDB anyway. Some health workers recommend specific MYDB and are believed by consumers to benefit from the business.

The cost of drugs in the duka la dawa is lower. Young woman, Mbinga Urban.

The problem is that due to life hardship, one decides to go to a duka la dawa instead of hospitals and dispensaries, as he/she will have to pay seeing the doctor and after again has to buy the drugs. That is why these people decide to go direct to the duka la dawa instead of wasting money. Old Man, Songea Urban.

When receiving services at the government hospital, it is surprising to note that a doctor attending you directs you to a certain duka la dawa to buy the drugs (he prescribes) as if he is connected to that duka la dawa. Old Woman, Songea Urban.

The "cost" of seeking care from hospitals and health centers may also be higher than for a DLDB because of distance and transport, and because of the time required to actually have a consultation. In some cases, villages are several hours and bus rides from the facilities. When consumers arrive there, they find the health facilities crowded with long queues and must endure inefficient, repetitive processes to obtain care.

The dispensary is 10 to 20 km away from here so you need fare and money for treatment, it is thus cheaper to buy from a duka la dawa nearby. Old Man, Songea Rural.

Overcrowding in hospitals is a factor - that is the patient wants quick services whereas at hospitals there are big crowds and long queues, then one decides to go to a duka la dawa. Male DLDB owner, Songea Rural.

The availability of cash in the household to purchase drugs and services also contributed to consumer choices. Hospitals and health centers require out of pocket cash payments especially for drugs and insist on purchase of complete drug courses. By contrast, MYDB were reported to offer credit and in kind payment arrangements as well as allowing "pay as you go" or providing daily doses for daily payments until the consumer feels better. In some

communities the CHF has helped to address out of pocket payment issues in the public sector, but with participation from 2 to 8%, large portions of the population remain uncovered.

Being familiar to the sellers sometimes helps because clients can buy drugs on credit and give money to the seller later at the sellers residence whereas in the hospital you have to pay cash. Male DLDB owner, Songea Urban.

Maduka ya dawa baridi are sometimes chosen because of the privacy and confidentiality of services. This was especially true for young urban men which may be related to the practice of partner tracing for STI treatment in public and mission facilities. While consumers prefer to consult doctors and nurses because of their education and skills, they have experienced poor interactions and treatment in hospitals and health centers.

People are also concerned with confidentiality, they are not sure if their health problems will remain secret if they visit hospitals. Then these coupled with the politeness and good language of (DLDB) sellers, clients decide to go to a duka la dawa. Female DLDB owner, Mbinga Rural.

Sometimes we villagers here get scared of the way doctors talk to us. They use very strict language. That's why we go to the duka la dawa. Old Woman, Mbinga Urban.

Sometimes a patient may be admitted - the first day you are given drugs but on the second and third days no treatment. When you report that to the doctor, the nurses threaten you, "we will never give you drugs". Old Woman, Mbinga Urban.

Some consumer groups reported that they go to MYDB because dispensers provide good advice and communicate politely and with respect. Some dispensers were described as being kind and generous. However, experience with dispensers could also be negative and there was skepticism about their qualifications and professional knowledge.

At duka la dawa we get good advice on how to use the drugs. Young Woman, Mbinga Rural.

It is their generosity, the way they welcome you, they're charming to consumers. They are never harsh, rude or arrogant to their consumers. They use sweet language to consumers as they know the client is bringing cash to them for buying drugs. Old Woman, Songea Urban.

The sellers don't have any knowledge. They mainly base on guesswork rather than proper examination, for example Aspirin and Chloroquine are for malaria. Old Man, Mbinga Rural.

In sum, consumers choose among several alternative sources of care when they are ill and these decisions are influenced by cost, distance to a facility, the type of illness, and previous experiences. If the illness is thought to be serious, if drugs are believed to be available, and if time and money allow, consumers go to hospitals and health centers for consultation and laboratory and diagnostic services. If money is a problem and health facilities are distant, consumers will go to a DLDB and avail themselves of the convenience and flexible payment options. If the illness is common or the consumer has had experience with it before he/she is more likely to visit a DLDB. Previous good and bad interactions with providers or dispensers can tip the balance of decisions in either direction. However, reports of interaction problems were greater for hospitals and health centers, ranging from the inconvenience of long lines and multiple stations to threatening treatment.

Figure 5

D. Consumers

Figure 5 illustrates what happens when a consumer visits a duka la dawa baridi under the current system. When the consumer arrives, the dispenser usually welcomes them and asks what problems there may be. The consumer explains his or her symptoms or disease to the dispenser, but sometimes may just request a particular dose and drug. This is particularly true for common diseases that the consumer has had treated successfully at an earlier time, or for drugs that have gained local recognition. In a few MYDB, the dispenser asks for a prescription and if the consumer does not have one, suggests that he or she consult a doctor first. This is more likely to happen in an urban than a rural area.

Consumers noted that dispensers do not usually examine them nor perform diagnostic tests. There were some reports of taking temperatures using a thermometer and examination of the eyes for anemia. The dispenser then diagnoses and treats the consumer. This treatment nearly always includes drugs, but may also involve injections, drips, and minor procedures. For drugs, the dispenser recommends a drug or drugs that are in stock, and payment options are worked out. Consumers report that if payment cannot be worked out, cheaper drugs are sometimes offered. Some dispensers provide information and education about the drug, how to take it, and what to expect. The consumer then leaves the shop and is either cured, seeks care elsewhere, or remains ill.

Quality Perceptions

Consumer perceptions of the quality of services and drugs at MYDB are variable. They like the fact that drugs are nearly always in stock and are obtained easily. They are usually treated nicely and respectfully by dispensers, and their transactions are kept private. MYDB are conveniently located close to home and operate at hours when they are needed. If consumers have cash flow problems, dispensers and/or owners are flexible about credit and alternative arrangements. Consumers are pleased that MYDB also provide services such as injections and drips which are needed for more serious illness. They report that drugs at MYDB are not only more available but are cheaper than at health facilities.[17]

These maduka ya dawa are very essential in our society, they really help us especially us with low income, we get drugs at a cheap price. Young Woman, Mbinga Urban.

Consumers also believe that there are significant quality problems at MYDB especially concerning drugs and the competence of dispensers. They are certain that MYDB are dispensing "expired" and substandard drugs that either do not cure or are causing adverse events. They may also be dispensing expired drugs that have "leaked" from the public sector. The consumer concept of "expired" may encompass many issues. It is not common for people to look for expiration dates on packaging and there may be confusion over truly expired drugs and lack of cure based on inappropriate prescribing and use.

Once I bought drugs and I was suspicious and I took them to another duka la dawa where they told me that the drugs were expired so I must throw them and buy replacement somewhere else. That means they sold expired drugs to me because they only wanted money. Young Woman, Songea Rural.

[17] The SEAM survey and other studies document higher unit prices for specific drugs at MYDB. Consumers may perceive that drugs are cheaper because of lack of consultation fees, transportation costs, other opportunity costs, and/or the sale of incomplete doses/courses.

They sell us expired drugs and when we use them the disease never gets cured and hence forces us to go to private hospitals or regional hospital. Young Woman, Mbinga Urban.

The ability and willingness of dispensers to diagnose and treat consumers properly is also in question. Consumers believe that many dispensers do not have adequate medical training and that they do not use proper diagnostic or treatment techniques. They may dispense the wrong drug even when they are given a doctor's prescription to fill. Consumers are wary that dispensers and owners must earn a profit and that they may be treating them improperly to do so. The subject of injections raised a great deal of consumer comment. It was clear that injections were desired but that consumers had experienced or heard about adverse events such as boils, fainting spells, and systemic reactions.

In maduka ya dawa they don't have proper instruments for measuring, they just guess. Young Woman, Songea Rural.

Most duka la dawa sellers are not educated. You can be advised (by a doctor) to take a certain drug, but the seller can give you a totally different drug. Young Man, Songea Rural.

Maduka ya dawa owners and sellers pretend to be doctors, at times they do inject patients due to lack of knowledge and this increases problems to patients. Old Man, Mbinga Rural.

Consumers also commented on DLDB premises and how drugs were stored and handled by dispensers. They noted problems when MYDB stored animal and human drugs together, when tins or packages were not closed, dusty, or exposed to heat, and when dispensers had poor hygiene.

At a duka la dawa they use a spoon to serve drugs but this is different from other dispensaries where they use their bare hands. Young Woman, Mbinga Urban.

The box below summarizes the key quality characteristics of a good DLDB from the perspective of consumers in Ruvuma Region.

Consumer Perceptions: Key Quality Characteristics of Duka la Dawa Baridi
1. Medically competent dispensers
2. Correct diagnoses with standard lab tests and examinations
3. Dispensers are polite, kind, generous, and caring
4. Consumers are educated clearly about how to take drugs
5. Clean premises
6. Quick service
7. "Unexpired" drugs
8. Properly stored drugs
9. Low price for drugs and services
10. Consumers are cured by whatever is done

One particular quality issue that was raised repeatedly that goes beyond the purpose of questioning during the FGDs, was the implementation of the new malaria treatment guideline which specifies S/P and the withdrawal of chloroquine from circulation. Consumers, sellers, and owners alike reported instances of severe side effects, lack of cure, and strong demands for chloroquine. It is likely that this issue arose because of the timing of S/P introduction and

the content of the focus groups, however the strength of the response merits further investigation outside the scope of this study.

Suggested Improvements in MYDB

To alleviate the quality problems noted, consumers suggested a number of remedial measures focused mainly on the dispenser and assuring proper practice in the MYDB. Dispensers must be generous, welcoming, polite, and ask consumers about their health problems. They need to be trained so they are conversant with dispensing drugs, should follow doctors' prescriptions, and sell only unexpired drugs at standardized prices. DLDB premises need to be clean and organized. Consumers want MYDB to be inspected frequently and violators punished in order to maintain these standards.

Recommendations for ADDOs

Consumers were asked a series of questions about what a high quality, effective ADDO would be like from their perspective. They were also asked what would encourage them to use ADDOs rather than MYDB. The ideal consumer-designed ADDO is shown in Figure 6. When consumers visit an ADDO they would like to see a clean, well organized shop where drugs are stored separately under hygienic conditions. The dispenser will be smartly dressed in a uniform with identifying credentials, and will offer a warm welcome. Dispensers will have had medical training and be competent to diagnose and dispense drugs. They will follow prescriptions that are brought to them from doctors.

Unless the sellers are trained, this plan of improved duka la dawa will not work. Young Man, Songea Urban.

Generally the improved duka la dawa will look different - cleanliness and professionalism are major features to be seen. Young Woman, Songea Urban.

Consumers think that ADDOs need to offer more diagnostic tests to adequately assess their health problems and prescribe correctly. These tests include blood pressure checks, weighing scales, stool and blood tests. After welcoming consumers into the shop, dispensers would ask about symptoms, perform tests, and prescribe treatment. Treatments should include drugs, injections, and drips depending on what is needed. Consumers want ADDOs to sell only unexpired, potent drugs and to increase the variety of drugs that they stock legally, especially antibiotics. When drugs are given, dispensers will educate consumers about how to take them. The outcome will be that consumers are cured.

Equip improved maduka ya dawa with testing units which will help checking peoples' problems before giving drugs. Young Woman, Songea Urban.

They will give good advice and quality, valid drugs which will help to treat people who get ill and hence create confidence for one to revisit. Young Man, Songea Rural.

For the ADDO system to work as expected, the inspection system must be instituted and applied with sanctions. Consumers believe that government authorities need to enforce the new standards to protect them against poor quality drugs and substandard practice driven by profit rather than care. Supplies of good quality drugs need to be improved.

Figure 6

Maduka ya dawa inspections should be carried out according to ethics and not according to what the owner would prefer. Old Man, Mbinga Rural.

I think all drugs supplied should bear a special mark which will identify that the drugs have been checked, they are safe. Young Man, Songea Urban.

Consumers are concerned that the requirements for ADDOs will increase expenses for owners and result in higher costs of drugs to them. They suggest that the program ensure reasonable costs by providing inputs to the districts. They also insist that current payment flexibility including credit and daily purchasing needs to be maintained as there is nothing in the proposed program that will address cash availability.

My only worry is that when they improve one duka la dawa, its operation will be very expensive and hence people will fail to get services from the improved maduka ya dawa. Young Man, Mbinga Urban.

I think that even if a customer or patient does not have enough money for drugs, he should just be treated, then pay when he gets money. Old Man, Mbinga Urban.

Consumer expectations for ADDOs are summarized in the box below in descending order of importance.

Consumer Expectations of ADDOs
1. Polite, respectful, caring welcome when they enter the shop
2. Diagnoses the illness using tests and scales
3. Educated, competent dispensers
4. Drugs work and they are cured
5. Unexpired, better quality drugs
6. Wide variety of drugs (antibiotics)
7. Good, clear explanations and education to use the drug
8. Payment options remain (credit, in kind, daily dose-daily pay)
9. Shops adhere to rules, inspections, and sanctions
10. Premises are clean, organized
11. Dispensers are identified by uniform and badge

E. Dispensers

Dispensers are either DLDB owners or employees of owners who staff the shops on a daily basis and dispense drugs and advice to consumers. Dispensers view themselves as health education professionals whose goal is to help consumers get well. Most want the opportunity to use their medical training to serve people while earning a living or supplementing their income. Some have experience in the public health sector while others are waiting to obtain full time jobs in that sector. They have knowledge about drugs but have learned more in the MYDB because there is a greater variety of drugs available than in other facilities. Some dispensers work in shops because of family obligations and relationships with owners.

What prompted me is that I was very interested in educating people about drugs, so I went for a course and then came here to work and people come to thank me for the help and advice I give them. Female Dispenser, Songea Urban.

I decided to give services in a legalized place, recognized by the Ministry of Health and the government. Secondly, I wanted an employment to earn some money, thirdly to improve my knowledge by working and participating in different discussions on how to serve the community better; and fourthly to be nearer to my fellow community members to increase my knowledge on issues concerning drugs. Male Dispenser, Mbinga Urban.

Motivation for Working in a DLDB

Dispensers expect to earn a good income by working in a DLDB, but they also like working because they want to render services to their communities, specifically to dispense drugs and explain how to use them properly. Some prefer the peaceful and uncrowded environment of the shop compared with health facilities. The process of educating consumers, having their advice followed, and seeing them cured was described as the most fulfilling. Relationships of trust are built and consumers return to thank them for their help.

Since I started working as a seller at a duka la dawa, I have made some good achievements. Many people come with their problems, perhaps more than when I was working in the hospital, or who could not see, but now they come and I was able to give them my advice which actually helped them. They then come back at least to say thank you. This is a sign of success. Now they always come back to seek advice when they have problems. Female Dispenser, Mbinga Urban.

Dispensers like to be knowledgeable about drugs and to keep learning about new drugs as they are introduced into the MYDB. Some use the DLDB to build clinical experience for further study or work. They also like to learn about communicating with consumers and how to be more persuasive so that their advice is followed.

What I have really achieved by working in a duka la dawa is to have a chance to read books about medicines, how to welcome clients when they come, how to talk to clients when attending them, since (at the duka la dawa) I have time to talk to them. Female Dispenser, Songea Rural.

Drugs in MYDB

Dispensers state that the drugs that are provided in their MYDB are not expired and are safe. They express frustration about changes in names, colors, sizes, and weights of drugs because it is difficult to explain to consumers who insist on what they have used in the past. Some consumers refuse some brands of drugs because they do not trust the source and origin. Dispensers have had difficulty handling some drugs because they come from foreign sources with foreign language instructions.

All drugs are good and they are not expired. Female Dispenser, Mbinga Rural.

My drugs are safe and I provide them at the proper time and according to doctor's explanations. Female Dispenser, Songea Rural.

Dispenser Experience with Owners

Dispensers work for DLDB owners and are expected to generate a profit, create a good reputation for the shop, and give good services. Relationships between dispensers and

owners vary in terms of support, trust, and pay. In some shops, dispensers are paid a salary while in others they work on commission. They are usually expected to generate a target level of revenue which is frequently checked. Some dispensers feel their relationships with owners are satisfactory and that they are respected for the work they do. Many feel that what they earn is too low. In contrast to the other districts, dispensers and owners in Mbinga Urban seem to have difficult working relationships. These dispensers called for recognition of their contributions, ignoring of rumours and increasing trust.

The Owner expects me to perform my job faithfully, the profit should be realized according to his/her expectation, there should be respect to him/her and customers, I should treat patients with love, to be transparent and never to sell drugs which do not belong to him. Male Dispenser, Mbinga Rural.

So if I don't fulfill what he expects, he may end up saying I am stealing his money. Female Dispenser, Songea Rural.

Dispenser Experience with Consumers

Dispensers describe the current process of consumer use of MYDB in much the same way as the consumers describe it. (Figure 5) Dispensers perceptions of what consumers think about their DLDB experiences match consumer perceptions closely. Dispensers know their customers' expectations. When asked to discuss what consumers request when they enter the DLDB, dispensers said they either ask for the specific drugs they want or they ask for drugs that will address their symptoms. They may ask how effective the drugs are and for explanations about how to take them to be cured. Dispensers say that consumers expect to be welcomed nicely, to have them listen closely, and to be served quickly. They want payment arrangements if they do not have the cash to purchase the drugs.

They ask you to give them the medicine they want. If you don't have it, they get angry. They also ask you for good advice. Female Dispenser, Songea Urban.

Another point here in Namtumbo is that, most of the people do not have enough money therefore he may not have enough money for a full dose, so it becomes so difficult for us to help such a patient. Female Dispenser, Songea Rural.

Dispensers also described common consumer complaints and problems they have experienced with them. Some consumers are very demanding and stubborn, asking for specific drugs by brand name and for antibiotics. Often they are self diagnosed and may go so far as to specify doses and amounts.

Some clients are stubborn, you tell them don't use that medicine/drug for what you are suffering from but he may not listen to you and will just insist on the drug that he wants. Female Dispenser, Songea Urban.

Consumers often complain about side effects of drugs especially for SP used for malaria. Dispensers do explain about side effects when they are aware of them but they do not know how to cope with the current SP problem. Dispensers say that above all, consumers expect to be cured whether they have followed instructions or not.

I am talking about complaints on drugs, especially SP. A lot of people say SP affects them very much and I had a complaint after two days from a person I sold SP. Also I sold SP to

two people who ended up getting drips in the hospital, and they came to ask me what kind of drugs I sold to them. Male Dispenser, Mbinga Urban.

The big problem that we face is that a patient may buy medicine, after 3 days if he sees no changes he will come back complaining that the medicine does not work but the truth is he/she has not finished the dose. Female Dispenser, Mbinga Rural.

Dispensers reported that stockouts and resupply difficulties have caused problems with consumers. This is especially true when they have been referred from a health facility for a specific drug.

Sometimes there are patients who need the drug - for example Ampicillin syrup for children - and its nowhere to be found. The problem is no drugs then community members cannot be served. We have low supply of drugs and patients are many. Sometimes we are not allowed to sell antibiotics and patients in need of antibiotics are many. I think for this problem it will be better if the MOH will get involved. Male Dispenser, Mbinga Urban.

Suggested Improvements in MYDB

Dispensers had several recommendations to improve MYDB. They would like to see services expanded in MYDB to include laboratory capability, dispensing of antibiotics, and preventive/promotive services. Drugs should come in blister packs for easy storage, dispensing, and explaining to consumers. The government needs to find ways to finance drugs for poor consumers who cannot pay and to underwrite owners to expand in what they perceive as a stagnant economic environment.

What we are asking of government is to allow us to expand our possibilities in selling those antibiotics. Male Dispenser, Mbinga Urban.

There should be funds from the government to help children and also there should be a fund or money be given to those lowly earners so that they can afford treatment. And duka la dawa owners whose capital is low need to be given funds to help running the business. Female Dispenser, Songea Rural.

Dispensers also identified activities or benefits that would enable them to do better work in the MYDB. These included increasing salaries or paying bonuses as well as sending them to training seminars for updating. Owners that have medical background should orient dispensers to drugs and drug issues and provide more hands on supervision.

Recommendations for ADDOs

As with consumers, dispensers were asked a series of questions about what a high quality, effective ADDO would be like from their perspective. They were also asked what would be needed for them to be able to provide services to ADDO standards.

Dispensers view the functioning of an ADDO similarly to consumers as shown in Figure 6. First, ADDOs will have attractive premises on the inside and outside, perhaps including wall mirrors, clocks, carpets and fans. The ADDO will be identifiable by a PB emblem that will improve its visibility and will thus attract consumers.

If the duka la dawa is improved, every service that a customer wants should be available. Female Dispenser, Songea Rural.

Shelves will be well stocked with a regular supply of registered drugs in blister packs, including antibiotics and drug information will be available in Kiswahili. Dispensers will require not more than nursing assistant qualifications and continuing training in drugs (dosage, side effects, adverse effects) will be made available in local venues. Reference books on regulations and diseases and their treatments should be made available. Dispensers who complete training and work in an ADDO will be provided with a uniform and badge to identify them properly to consumers.

Dispensers want to provide more services including diagnostic tests, blood pressure checks, and injections. They would like private areas for counseling that are more attractive. They are willing to sell additional products such as veterinary drugs, those for personal hygiene, and medical supplies such as syringes.

I will feel as if I have gone one step ahead, it will be different to have a uniforms I will feel good and up to standard. I would be willing to do different things. Female Dispenser, Songea Urban.

Since dispensers will be expected to improve their knowledge and skills, and provide more services, salaries must increase accordingly. Salaries should be guaranteed and dispensers must be allowed to practice without interference from the owner. If dispensers exceed targets, they should be provided with bonus payments. Dispensers recognize that this may burden the owner, but they think this can be amelioriated by the provision of loans to owners for upgrading premises and purchasing drugs as well as more convenient and stable drug supply arrangements. Dispensers also believe that tax liabilities could be decreased and harassment by collectors stopped.

Dispensers believe the ADDO system will require inspection to work but they prefer to be notified a month ahead of time and for inspectors to be free of conflict of interest. (They should not own an ADDO themselves). Inspectors can conduct the inspection but with a known checklist and dispensers should be treated with respect during the process. Dispensers suggested that recognition and display certificates for good performance also be provided. Dispensers believe that ongoing supervision, especially by medically qualified owners would be advisable.

Dispenser Expectations of ADDOs
1. Maintain current qualification requirements to become a dispenser (nursing assistant) 2. Training welcomed 3. Regular updates and seminars needed 4. Uniforms and badges welcomed 5. Inspect regularly but on a known time table 6. Allow loans to owners (do not want them to lower salaries because costs increase) 7. Help deal with difficult clients 8. Provide understandable information on drugs 9. Raise salaries

F. Owners

Owners invest in establishing MYDB often because they have some medical background and knowledge and because they can earn a good living. The MYDB meet an obvious need and demand in communities.

There are two things. First of all, I like the people in my community to be healthy. Then when I saw that they don't have a place to get treated and that there was an idle site, I decided to establish a duka la dawa. I opened a duka la dawa to make services available. Secondly I established this business to earn a living" - Male Owner, Mbinga Rural.

The demands of products from the duka la dawa are many as compared with the supplies we sell. Thus demand exceeds our given capacity. Male Owner, Songea Urban.

The services provided by the DLDB are advising consumers, selling drugs and providing health education. Among these services, consultations and health education were said to be the most important. Owners appear to be less involved in day to day operations than the dispensers and this is reflected in the finding that their impressions of consumer expectations while accurate, are not complete. Owners believe that consumers want owners who are educated with health background, good drugs that are in stock, prompt and polite service, clean and smartly dressed dispensers, and the prices of drugs must be affordable.

They like the cheap prices of our drugs as compared to those offered in dispensaries, coupled with a warm welcome and good explanations on the drugs. Male Owner, Mbinga Rural.

Drugs for the MYDB

Procuring drugs is a major obstacle for owners in Ruvuma Region as they must travel to Dar es Salaam because there is no big medical store in Songea. This incurs the expense of travel, stock loss due to breakage in transit and loss due to confiscation of Part I poisons. Owners state that profits on Part II supplies alone would not be sufficient to cover the costs of procurement and transportation.

For sure there is a problem of supplies in our district and the region in general. Going to Dar es Salaam takes time and you must have big capital. Moreover it is not easy to get your supplies from a single pharmacy. Male Owner, Mbinga Urban.

Other DLDB Products

MYDB do carry products other than drugs that consumers buy. The owners stated that they sell cosmetics, fruit juice, medicated soap, glucose, lotions, petroleum jelly, tooth brushes, toothpaste, plasters and bandages. Cosmetics are particularly good for attracting customers. Some owners sell mineral water along with medicines so that consumers can buy their drugs and take them right away.

Licensing of MYDB

The licensing process for MYDB was reported to be costly, lengthy, unclear, and inconsistently applied in the region. Two types of licenses are required to operate a DLDB. The first is the pharmacy license which is obtained through an application process that passes through the district to the region, ending with the RTAC. This license must be renewed annually and is how the Pharmacy Board ensures its requirements such as qualified sellers are met. The 10,000 TSH fee is felt to be fair but there is a lack of transparency for processing that forces prospective owners to return frequently to track progress. The second type of license is a business license which is required by district authorities and appears to be quicker to obtain. However, the ~150,000-300,000 fee and taxes are felt to be an excessive burden, especially when a number of unlicensed retail stores sell Part II supplies as a sideline.

Inspections

Owners were asked to comment on the current inspection system for MYDB. Some owners see the inspection system as a way of raising the credibility of the DLDB among consumers. The majority felt that inspections were humiliating, harrassing on the part of the police, and they were always focused on one thing – confiscating Part I drugs, especially antibiotics. It was equally clear from these and other interviews that everyone knows that selling of these drugs is uniformly practiced and that the opportunities for bribery and favoritism are many.

The inspections are actually good and important, however when we hear that the inspectors are coming, we collect all the medicines we are not allowed to sell and run from the duka la dawa in the presence of our clients. This is an embarrassment. Male Owner, Songea Urban.

When pressed to elaborate on inspections, owners noted that in addition to looking for Part I drugs, there has been checking for expired drugs, for dispensers' training and qualifications, and if the drugs were obtained legally. Sometimes other medical supplies such as gloves and disposable syringes were confiscated. There were a few reports of inspection visits by medical leaders where regulations and drug issues were explained. These were considered to be helpful though irregular at best.

Suggestions for Improving MYDB

The owners had several clear suggestions for improving the MYDB including developing a regular supply mechanism, streamlining and decreasing the cost of licensing procedures, and expanding allowable drugs to include some Part I poisons, especially antibiotics. Establishing a reliable supply mechanism with good quality drugs in the region would eliminate the risks and costs of travel to Dar es Salaam as well as possibly lowering wholesale prices.

We should have one wholesale company where we can buy all our drugs/medicine. Currently we buy a tin of capsules for Tshs. 10,000 from one supplier and Tshs. 15,000 from another. We should have one price to better our services. Male Owner, Songea Rural.

The costs of the DLDB business licenses and associated taxes should be lowered, especially for those in remote areas. Owners feel that the assumptions being made about how much profit they earn, especially if they are not allowed to sell Part I drugs, are unrealistic. In addition, fees and taxes for comparable small businesses are much lower despite the fact that they can also sell Part II products. The pharmacy licensing process should be changed to be clear and move more quickly so that when investment opportunities are there, they can be acted on.

I have one request - if it could be possible to lower the costs on the side of the licence and the taxes, I see that we are paying a lot of money compared with the income we get, so on that I ask for some consideration. Female Owner, Songea Urban.

The most strongly supported suggestion for improving MYDB from the owners was to allow them to sell Part I drugs, especially antibiotics. First, there are dispensers with medical background similar to dispensaries in MYDB and some are equivalent to those Part I pharmacy dispensers who are allowed to sell antibiotics. Second, consumer demand for antibiotics is very high and stockouts in the health facilities are common. Owners believe that selling these drugs will meet legitimate health needs in the community.

The government should allow all kinds of medicines to be sold in maduka ya dawa. Female Owner, Songea Urban.

If we are allowed to sell antibiotics this will push up our profits since the profit we realize from aspirin is very minimal. Female Owner, Mbinga Urban.

On the subject of inspections, owners suggested that inspectors not be accompanied by police, that favoritism not be a factor in sanctioning MYDB, that cosmetics shops be included since most of them also sell drugs, and that an inspection timetable be applied, leaving surprise visits to supervision. Owners want inspections to focus on services to consumers and not just drugs or license papers, and suggested that communications from the PB would be helpful.

If expired drugs are found it is only the pharmacist as a professional who can categorically conclude they are expired, not the police. Coming with the police draws a lot of attention of all nearby people and these may think we are operating illegally. Moreover, the police now take these inspections as their business. They ask the pharmacist about the next inspection as if it is their duty!! Male Owner, Songea Urban.

I suggest a committee to supervise maduka ya dawa be established to make sure that regulations are followed, and the Pharmacy Board should give seminars to owners to keep them up to date. Male Owner, Mbinga Rural.

Recommendations for ADDOs

DLDB owners observed that the purpose of developing ADDOs appeared to be to meet the drugs needs of low income earners and people living in remote areas while still enabling a

profit. They expressed support for the framework but have some concerns about costs, suppliers, dispenser costs, and inspection. Figure 7 summarizes the issues and responses that owners propose to implement the ADDO program. Of note is that owners see themselves as central to its success.

If you look at the environment in which we operate, serving people in the rural areas, our maduka ya dawa are not up to standard. The problem will be then to improve them to the required standard. Renovations of the premises alone will leave us being unable to buy even panadol, and we have to know that there is corruption around" - Male Owner, Songea Rural.

Figure 7

1. Licensing

Owners require a new licensing procedure that is quick, simpler than it is now, localized at least to district level and cheap. Reducing the out of pocket and effort costs for licensing will allow businesses to survive in marginal areas and will allow allocation of owner resources to other areas.

They must review the amount we pay for a licence. Patients are seasonal. At times you get many and at times just a few. This may result into us closing the business. I suggest that the licence fee amount be decreased. Male Owner, Mbinga Rural.

2. Supplies

The key supplies for ADDOs are drugs and they need to be unexpired, effective, and consistent. One of the most important recommendations owners have is to expand the approved list to include antibiotics and other Part I drugs. Developing new wholesale supplier mechanisms in the region is also very important. Owners must have reliable access to good quality drugs at affordable prices somewhere in the region.

The varieties of medicines we can sell should be increased. We want to be allowed to sell both part I and part II drugs and then it should be stressed that owners should be professionals. Female Owner, Songea Urban.

I suggest that there should be more than one drug distribution agency. This will help us to get good supplies and good prices, and our clients will be happy. Male Owner, Mbinga Urban.

Owners also proposed that some services such as injections be allowed, especially in remote areas. These MYDB are perceived as expanding access to drugs and services.

I am asking that maduka ya dawa serving people in areas very far from a dispensary or health centre should be allowed to give injections. Male Owner, Songea Rural.

3. Taxes

One way to free up resources for investments in upgrading current premises is to reduce the taxes that owners must now pay to district authorities. Taxes for ADDOs should be fair, lower, and fewer in type.

4. Trained Staff

Requirements for trained staff were felt to be useful for improving the practice of dispensers in ADDOs but owners point out that this will increase costs as they will surely demand increased salaries. Current commission arrangements are unlikely to work when dispensers need to be certified. In addition, owners believe that training certificates will allow and perhaps encourage dispensers to take jobs elsewhere, nullifying the investment they make. Similarly, owners support the idea of uniforms and identification badges, but ask who will pay for these? If owners must provide them, then they should be the property of the owner. Some owners suggested that there be mechanisms to hold dispensers to longer term commitments. Owners feel the program must support the costs of training and retraining at the outset as they will be supporting other improvements.

I am convinced that those who sell drugs in the ADDO should have basic education in drug dispensing. Male Owner, Mbinga Urban.

The income is low and thus if we employ trained nurses or medical assistants it will be difficult. Currently we don't pay salaries to our sellers (nurse assistants). They are paid according to sales. Female Owner, Songea Urban.

5. Provision of Services to CHF/NHIF/Hospitals

Owners are enthusiastic about arranging the use of CHF and NHIF benefits for obtaining drugs in ADDOs, especially in remote areas. However, there were few practical suggestions for how to make this work.

I suggest that the improved maduka ya dawa must serve members of the community health fund (CHF) who live very far from hospitals. Male Owner, Mbinga Rural.

6. Promotion of ADDOs

Program promotion of ADDOs to communities, political and civic leaders is supported by the owners because it is beneficial to their business. However, support for promotion needs to come from the program.

7. Inspection and Supervision

Owners are skeptical about inspection systems that involve local leaders and suggest that they be carried out on a regular time table or with advance notification. Inspectors should be professionals, have clear requirements and should limit what they review. For example drugs found at an ADDO irrespective of their sources should be allowable, provided they are of quality and not expired. For ADDOs, the nature of inspections should be in line with what owners recommended to improve MYDB – fair, respectful and without police enforcement.

Village leaders especially the chairperson and the village executive officer should not be given any mandate for inspection. In the village setting a small conflict can flare up into a big problem. Male Owner, Mbinga Urban.

The government should give directions to inspectors not to bother the ADDO as long as drugs meet the standards and are safe for human consumption. Male Owner, Mbinga Urban.

In contrast with inspections, owners support supervision and technical input. They would like the program to provide drug information and seminars to assist them to improve.

8. Loans

In order to develop ADDOs, owners will need to invest more in upgrading facilities, salaries for dispensers, and drug stocks. They strongly stated the need for soft or low interest loans to participate in the program.

Concerning the loans we are suggesting, there are those with tough conditions and these soft loans. We are asking for soft loans with conditions we can meet. We will pay in installments, otherwise the government should supplies us with drugs on credit. Female Owner, Songea Urban.

9. Competition

If the ADDOs are to be able to compete in the current market, the PB or government must do something to control the sale of drugs from unregulated shops other than ADDOs. In this way the value of accreditation is supported.

I am asking that retail shops selling drugs like panadol, aspirin, etc. should be restricted to sell them. This is our (maduka ya dawa) business. We should be given a chance. Female Owner, Mbinga Urban.

Owner expectations for ADDOs are summarized in the box below. In addition to these recommendations owners spoke about the need to phase the program in gradually so that they have the time to improve their operations, and so that consumers learn the new system.

My recommendations are that these changes should be conducted gradually in order to avoid misunderstandings. Male Owner, Mbinga Urban.

Owner Expectations for ADDOs
1. Allow Part I drugs, especially antibiotics
2. Support the development of a local wholesaler, agent
3. Provide loans or credit arrangements for needed upgrades
4. Decrease licensing fees and taxes, simplify the process
5. Provide training on new medications to dispensers and owners
6. Follow rules and provide a timetable for inspections
7. Provide explanations during inspection
8. Remove competition of unlicensed shops
9. Allow injections in remote areas
10. Explain ADDOs to the public; promote them
11. Link CHF/NHIF to ADDOs

G. Community Leaders

In addition to basic information about MYDB, community leader focus group discussions included what leaders have done to address drug availability issues and what they are willing to do in their formal capacities in an ADDO program. Community leaders are consumers of DLDB services and describe the drugs, services, and process of care in MYDB as noted earlier. (See Figure 5) However, community leader discussions more clearly differentiated between experiences in Songea and Mbinga, and rural and urban areas.

In urban areas people have learned that they must pay something for health care even at public or mission hospitals, and MYDB are utilized in that context. In urban areas, leaders reported that people obtain prescriptions but are referred frequently to MYDB to purchase drugs. In Mbinga Rural, drugs are reported to be available through two health centers although one DLDB owner was singled out as helping people. Some drugs are only available

at hospitals, especially those for chronic diseases. In Songea Rural where distances to dispensaries are greater people will consult traditional healers or MYDB, especially those that have diagnostic tools. In some of the FGDs, community leaders referred to dispensers as "doctors".

Drugs for some diseases like diabetes, cancer, etc. are not available in maduka ya dawa or dispensaries. All patients have to go to the regional hospital to get them. This is a big problem. However nowadays we can get typhoid drugs from maduka ya dawa or dispensaries. Female Community Leader, Mbinga Rural.

Community leader and consumer impressions of the quality of DLDB drugs and services are the same. Community leaders noted problems with expired drugs, untrained dispensers, partial dosing, poorly stored drugs, and owner concern with profit rather than service. Good quality drugs and services mean unexpired drugs from respected sources, proper storage, correct dispensing, clear explanations of how to use drugs, payment options, and polite interactions.

Availability of Drugs in the Community

Community leaders in Mbinga and Songea Rural applauded the CHF and stated that it has increased the availability of essential drugs. The CHF has not functioned well in Songea Urban even though leaders have tried to persuade people to join. This is believed to be because the 10,000 TSH annual fee is high and does not cover many charges for diagnostic tests and because those who pay out of pocket at the time of illness get better services.

The CHF has no achievements in Songea Town Council. It is difficult for one to pay 10,000 shillings and yet when you are supposed to be admitted or to take an X-ray, you are told to bring more money. If the procedures were good and improved it would have been easier (for us) to persuade people to join the CHF. Female Community Leader, Songea Urban.

Mbinga Urban leaders reported that they have been able to go to MSD six times to get drugs with CHF funds. The CHF has built maternity and childrens' wards at the district hospital, and purchased motorcycles and bicycles for doctors and nurses. In Songea Rural, the CHF has been used to resupply drugs in dispensaries and to extend free services to children through them. This has increased utilization of the dispensaries.

The community health fund is really providing drugs where before our dispensary was not used. Female Community Leader, Songea Rural.

Mbinga Rural has had success with the CHF because it helps to serve people throughout the year rather than seasonally when they have cash. It has not worked well where distances to public health facilities are great and where mission hospitals charge additional fees.

Suggested Improvements in MYDB

The most important change to improve MYDB is to expand the list of allowable drugs to include Part I drugs including antibiotics and those for chronic diseases such as diabetes. Then educate or recruit qualified dispensers who are respected by the community.

I suggest a seller should be a professional, educated and known. It is not good to keep anybody who is not a professional in a business. Female Community Leader, Songea Rural.

Leaders, especially those from rural areas emphasized the need for supervision and government oversight of shops so that people were protected from expired drugs.

These people are there to maximize profit and if the government is not careful they may as well sell expired drugs. Male Community Leader, Mbinga Rural.

Recommendations for ADDOs

Leaders strongly support the introduction of an ADDO program because they believe that it will bring services closer to the people. They emphasized that for these services to be effective, dispensers must be trained to enhance their service delivery skills. They liked the idea of uniforms and badges to clearly identify qualified dispensers. In a good ADDO, dispensers would communicate politely with consumers and offer detailed explanations for the use of drugs. In addition, dispensers should also be able to perform diagnostic tests especially for malaria and blood pressure.

Leaders recommended that ADDOs have clean premises with drugs stored properly and organized well. They support the idea of having a logo that distinguishes ADDOs from other shops. They also asked the program to find ways to ensure a reliable supply of good quality drugs. This could be accomplished either through delivery to the district centers or by establishing a depot nearby. Mbinga leaders were especially concerned since the main road to the district center is not good. However, it is important to maintain drug prices at an affordable level and to have consistent stocks of the drugs that are needed the most by community members. These drugs must include antibiotics and antimalarials. In rural areas, leaders asked that injection services be made available partly to alleviate congestion at hospitals.

The maduka ya dawa owners must be supplied drugs by car or must have a close by source of drugs instead of travelling a long way like they do now. Female Community Leader, Mbinga Urban.

ADDOs should be inspected regularly by authorities according to strict rules. This is best accomplished by assigning honest inspectors who are rotated frequently. The purpose of inspections would be to maintain high standards of quality for the safety of communities. When the ADDO program is first established, ensure that standards have been met before the shops are allowed to provide services.

While some of the leaders encouraged the addition of diagnostic and injection services to drug dispensing, others were concerned that developing ADDOs might encourage people to go straight there instead of consulting a doctor first to get a prescription.

My concern is that most of the patients instead of consulting a doctors they will end up running to an improved duka la dawa or any other pharmacy. Male Community Leader, Mbinga Rural.

Community Leader recommendations for ADDOs are summarized in the box below and in Figure 8.

Community Leader Expectations for ADDOs
1. Provide Part I drugs, especially antibiotics and antimalarials
2. Maintain affordability of drugs
3. Support the development of a local depot or supplier of good quality drugs
4. Train and develop dispensers as professionals
5. Provide uniforms and identification badges for dispensers
6. Dispensers communicate politiely with consumers and explain drugs thoroughly
7. Ensure ADDOs meet standards before they are allowed to open
8. Inspect ADDOs strictly using honest inspectors that are rotated
9. Provide injection services in more remote areas
10. Have clean, organized premises where drugs are stored properly
11. Link CHF/NHIF to ADDOs

Community Leader Roles with ADDOs

Community Leaders were asked to comment on how to introduce ADDOs to communities. They suggested that the program approach promotion similarly to what was done for the CHF. This means training leaders about ADDOs and how to sensitize communities, then setting up a schedule of ward and village meetings to introduce the idea and answer questions. Leaders would also be willing provide information to individuals and smaller groups in more informal discussions. Some leaders felt it would be easier to introduce the program after the ADDOs were in place.

The potential role of community leaders in a redesigned inspection system was also queried. Leaders from different districts recommended a variety of possible participants including ten cell leaders, street leaders, and Ward Executive Officers (WEO). Some added village level leaders (VEO) and committees to the list. Most felt the Ward Health Committee could be used to conduct inspections and reporting provided they are educated on the specifics. However, they cautioned that corruption should not be allowed to creep into inspections and stated that national, regional, and district government-related inspectors had to be involved. Inspections are best carried out by a team. Inspections should be announced on a billboard in each village so that communities will be aware and follow up when necessary. Mbinga leaders suggesed that they be done twice per month to be effective.

FIGURE 8

H. Medical Leaders

Four medical leaders were interviewed at regional and district levels and asked to provide information on health services ande drugs, MYDB, ADDOs, and systems of supervision and regulation. Medical leaders report that consumers seek care in the public and mission health sector as well as at MYDB and with traditional healers. The quality of care at hospitals, health centers and dispensaries is better but factors that contribute to DLDB use include drug availability, queues, consultation fees, distance, and opening hours.

In MYDB there are no queues, no payment for cards, or even cost for consultation.

Quality Perceptions of MYDB

Drug availability at public health facilities was a sensitive topic. There are stockouts or lack of supply of a variety of drugs, but the level and scope of either was not made clear. The quality of drugs at these facilities is assumed to be good because of MSD kit supply, while the quality of drugs at MYDB is very variable depending on their origins, whether they had expired, and how they were stored. In Songea there have been official complaints against MYDB made by consumers about expired drugs, unknown drugs without labels, and drugs that dispensers cannot recognize because of foreign language packaging. Most complaints arose because consumers were not cured.

The CHF has helped to increase the availability of drugs in Mbinga and to a lesser extent in Songea Rural. However, the CHF, NHIF, and the MSD kits all require some kind of individual or community contribution and there is some overlap and confusion as they all address the same problem.

Medical leaders also question the quality of services in the MYDB. They believe that many dispensers lack essential skills, and are incompetent because of poor training. This is compounded by a lack of understanding and commitment to medical ethics. Owners reinforce these problems by focusing on maximizing profits, causing dispensers to sell expired and questionable drugs. Some of this is caused by the lack of capital and marginal earnings for some owners.

Licensing, Inspections, and Supervision

Medical leaders are heavily involved in licensing of MYDB. DMOs receive applications and assess them for compliance with conditions or guidelines. They may offer professional advice to the applicant, inspect premises, and recommend action by the regional level. In Songea, the DMO handles approximately 20 to 30 applications annually not all of which are processed or approved. In Mbinga, the number of applications appears to be lower. District Health Services Boards (DHSB) are not yet functional in these districts, but DMOs report that they will have a role to play in licensing and inspection.

At the regional level both the RMO and the Regional Pharmacist participate in licensing. The RMO is a member of the RTAC which reviews applications sent on from districts. In addition to assessing compliance with rules (qualifications of dispensers, owners, etc.), the regional level considers applications in light of geographic and population distribution of MYDB.

The RP is Secretary to the RTAC for Part II poisons and makes recommendations regarding approval of DLDB applications. His responsibility is to discuss plans to establish MYDB with owners, communicate application reviews to the RTAC, and inspect DLDB premises. The RP in Ruvuma handled 54 applications in 2001. The disposition of these applications was effected not only by meeting guidelines but by changes in status such as applicants shifting to another location or getting transferred, opting for another business and even dying.

RMOs do not usually directly supervise MYDB in the districts but work through their technical staff especially the RP. The RMO identified the most common problems for MYDB as dispensing of Part I drugs, unhygienic conditions, and selling of drugs leaked from the public sector (MSD). Technical staff are intended to make four visits per year to districts although they can also respond to emergencies.

Since coming to Ruvuma two years ago, the RP has visited only Mbinga. He has not been able to visit other districts in the region including Songea Rural because of lack of reliable transport and per diem funds. (This is a common problem at Regional levels with decentralization.) When he does visit his role is to ensure that all products in the MYDB are safe and approved by the PB. During this past year's inspections the RP has found that some MYDB are presentable, arrange drugs on shelves properly, and follow regulations. Most have licenses and relevant records. The most common problems have been that dispensers and owners hide forbidden drugs as the inspectors approach and that they sell expired drugs or those from questionable sources.

The DMOs from Mbinga and Songea approach inspections somewhat differently. In Songea, the DMO noted that the 1978 Act stipulates the Regional Pharmacist as the inspector and does not clarify the role of DMOs. It does not allow the DMOs to inspect the MYDB unless on instruction from the RP. When he has visited MYDB he has found the common problems to be drugs in packages with foreign language labeling, unauthorized and expired drugs, and untrained dispensers. The Mbinga DMO conducts surprise checks accompanied by other members of the CHMT. The number of inspections corresponds to the CHMT supervision calendar and they are done by the Acting District Pharmacist. The most important problem this DMO has seen is the selling of Part I drugs. If Part I drugs are found, they are reportedly confiscated and if the owner resists he or she is sent to the police station to answer charges.

Suggestions for Improving MYDB

The DMOs would like to see MYDB stock and dispense drugs of good quality. In order to accomplish this owners and dispensers would need to be more service oriented and practice medical ethics. If MYDB were located close to dispensaries where there are professional health workers, then proper prescriptions could be obtained and used in the MYDB. MYDB need to be inspected regularly to assure quality and have a regular supply of authorized drugs nearby. It would also be helpful to strengthen the links between the PB, region, district and wards.

Recommendations for ADDOs

All medical leaders support the institution of an ADDO program. They believe that consumers should first seek care in health facilities so that diagnosis and prescribed treatment are done well. This means that ADDOs need to be located near to health facilities and with an eye to population need. When consumers are referred to or visit an ADDO, it should be

attractive, spacious and clean. The ADDOs would stock unexpired, registered drugs which are stored correctly. Qualified dispensers with sufficient training from the program would then dispense drugs in full doses, explain to consumers how to take them, and when to seek further care.

In order to have this happen it will be important to convince owners to make the needed investments and exercise appropriate leadership. They are likely to need increased capital to make improvements through some new mechanism. Dispensers and owners must be ethical in their approach to work and empowered to continue to learn as new drugs are introduced. Dispensers may need some protections such as contracts to be able to avoid pressures to make profits at any expense.

Owners will be motivated more if they are provided with capital (loans) to boost their business. The loan can be in cash or in material things such as medicine.

ADDOs will need systems of support including a local supply of registered drugs, training, inspection, supervision, and better systems of communication with district, regional, and PB authorities. Supervision and inspection should be done regularly (monthly or quarterly), according to a timetable by people appointed by the DHSB. These people would include: RP, District Pharmacist, DMO, WEO, VEO, and other influentials from villages. Reliable transportation, updated communication systems, and per diem facilities are needed for these people to work. It may also be necessary to provide training to the supervisors so they are cognizant of drug issues and inspection procedures. It may help to create learning networks for owners and dispensers for continuing education and exchange of ideas.

Linking the CHF and ADDOs will be useful to both. But to make this work each institution has to be clear about what will be done and transparent in the relationship. Memoranda of understanding between ADDOs and the CHF would allow transfer of drugs to health facilities when they are stocked out with subsequent payment.

Medical Leader Expectations for ADDOs
1. Attractive, spacious, clean premises
2. Local supply of registered drugs that maintain affordability
3. Store drugs properly
4. Train dispensers to provide drugs and explanations
5. Advocate with owners to invest in ADDOs
6. Provide capital/loans to owners
7. Owners and dispensers apply medical ethics in practice
8. Contracts or protections for dispensers
9. Regular supervision by community-district-regional group
10. Support provided to supervisors (transport, communication, per diem)
11. Link CHF/NHIF to ADDOs
12. Owner and dispenser networks for continuing education

Medical Leader Roles with ADDOs

Medical leader roles will be central to implementing ADDOs with a focus on the district level. They will be involved in introducing the program to district residents, in licensing, in training, in supervision and inspection, and in reporting. They will form part of the link with

the health service delivery system so that everyone is working toward the same goal of improving health in the community.

There will be a need for medical leaders to participate in sensitizing and training stakeholders at district and community levels. These include political leaders, other sector leaders, potential inspectors, community leaders, owners, dispensers, and consumers. For DMOs, roles in licensing will be twofold; to shepherd qualified applications for ADDOs through the proper channels and to ensure ADDOs are established according to the guidelines.

Medical leaders at the district level would be centrally involved in both supervision and inspection. During inspections which would focus on ensuring all guidelines are met, they should be able to take out expired drugs. This may require action on the part of the PB to authorize the DMO, as well as clear direction on sanctions for owners. DMOs would also serve to strengthen communication among the various stakeholders by incorporating ADDO reports into CHMT activities.

Regional level leaders believe their licensing and supervisory/inspection roles should continue although this is under discussion. They think the DMOs need to be more empowered to participate in supervision and take action when necessary, but the locus of licencing decision making should remain stable. The RP and any district pharmacist would also participate in technical training. In addition to transport and per diem facilities, computers and internet access would enable the regional level to conduct its role well.

The support that is needed from the Pharmacy Board to implement a new program of accreditation from the perspective of the regional and district level staff is to: set the standards for ADDOs, technically and financially support program implementation, and clarify or standardize the prices of drugs.

The final word of one medical leader was:

I would like to congratulate those who thought about this. What we need is this program to begin quickly and make it a reality - not experimental as we have seen others do.

I. Political and Civic leaders

Political or civic leaders who were interviewed included the RC, the RAS, DEDs, DCs, and Ward Councilors. They were asked a short set of questions on problems with MYDB and recommendations for the ADDO program. Their view of health care needs, care seeking choices, and the current situation of MYDB is similar to that of consumers, although they have a deeper understanding of the resource situation of health facilities.

Leader Perceptions of Quality and Suggested Improvements for MYDB

Regional level leaders reported that drug and service quality at MYDB are substandard or poor. The root causes of this problem involve resources available for health facilities and drugs, lack of qualification or training of dispensers, and consumer beliefs. The CHF has been used to begin to address insufficient drug supplies. Other actions needed to improve the situation include training of better qualified dispensers about drugs and educating the community on the effects of self medication. (One leader estimated that 80% of the population self medicate.)

When asked about drug and service quality in MYDB, district level leaders noted problems with the sale of expired drugs and fear and side effects of SP. Some have been working to activate the DHSB to more strictly supervise and sanction MYDB through the licensing process. They believe better supervision and enforcement will help improve the situation.

Ward Councillors reported that there are problems with DLDB drugs which are expired, incorrect, or even harmful. This happens because MYDB are businesses rather than service organizations. Some WCs have participated in the business licensing process for MYDB as these are discussed in the Ward Development Committee (WDC).

Recommendations for ADDOs

Regional leaders noted that the idea of ADDOs isn't new but for it to work there has to be stronger attention to regulations and rules. There needs to be better quality drugs that are on MSD checklists and consumers educated about any changes that are made. The program should require dispensers with higher qualifications and provide additional training on drugs and medical ethics.

This service is dealing with people's life so all parties should know that and play their roles accordingly - having the clear mind on what they are doing will result to positive or negative impact to human life.

District leaders recommended registering all ADDOs that meet preset requirements and are located where they are needed. Ensuring these requirements are maintained should become more district focused and supported by a district level pharmacist. In order for this to work, directives which clarify roles and responsibilities will need to come through proper channels from the PB. Once this has been accomplished the program should work with community leaders to understand their new roles. Meanwhile, technical staff may educate both dispensers and owners to improve services and practice more ethically. If owners are to make these changes they will need additional capital as well as access to supplies of better quality, affordable drugs in the region.

Ward Councilors stated that to make this idea work the community, owners and sellers must be educated about the objectives and outcomes, and the program must build on community level expertise. Owners are likely to need loans and training for their dispensers to maintain affordability and accessibility to consumers. The most important aspect of ADDOs will be that good quality drugs are delivered with clear explanations that are appropriate to health problems.

This program will be very good if all the community will be involved. The crucial illnesses facing people in the community will be overcome.

Political and Civic Leader Roles

Leaders at the regional level see their role as sensitizing owners, dispensers, inspectors and district leaders to the purposes and implementation of the ADDO program. District level leaders do not see themselves being directly involved but interacting with the needs of the program through the DHSB. Ward Councilors believe they will have a much more active role in sensitizing communities, educating consumers about better drug use, advising on licensing, supervising, and participating in inspections of ADDOs.

J. Information Sources

All FGD participants and interviewees were asked where they got information about drugs and MYDB, and which sources they found to be the most trustworthy. Findings are summarized in Table 13 on the following page.

Information sources for drugs range from leaflets and billboards to technical and common people to radio and television. In general, consumers, owners, and dispensers report a greater range of information sources than any of medical, community, or political/civic leaders. Owners obtain information from health facilities and medical professionals, and are the only group receiving information from manufacturers of drugs. Dispensers rely heavily on written media including MIMS booklets, leaflets, books and posters, and do not seem to have direct access to official seminars and medical leaders. Medical leaders identified official sources exclusively, including the Pharmacy Board, directives from the Ministry of Health, and health facility colleagues. The PB is a recognized source of information only for medical leaders. Political leaders seem to have two types of sources; those they access as leaders which includes official seminars and health personnel, and those they access as consumers including the radio, newspapers, and friends and neighbors.

The most trusted sources of information also varied by respondent group. Consumers trust the radio and newspapers, their own hospitals and health centers, DLDB owners, and friends. The most important sources for dispensers are the owners (their bosses), MIMS booklets and journals, the MOH, and the radio. Owners believe in the official health system including medical leaders, facilities and practitioners. This extends to seminars that are offered through those agencies. The radio is also a trusted source. Community leaders trust district level leaders, the radio and newspapers, and political leaders trust medical leaders, doctors, and friends and neighbors. The variety of information sources is large given the different audiences, however the radio and the official medical community appear to be common channels.

Table 13: Sources of Information About Drugs and Sources Perceived the Most Trustworthy by Discussant or Respondent Group**

Group	PB	MOH	RP, DMO	Docs*	Hosp, HCs, Clinics	Labs	Seminars	Manu-facturers	District leaders	Friends, Neighbors	Owners	Journals, Books	Leaflets	MIMS	Posters Bill-boards	Radio	News-papers	TV	Malawi, Zambia
Consumers					✓	✓	✓			✓	✓		✓		✓	✓	✓	✓	
Dispensers		✓		✓	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	
Owners		✓	✓	✓	✓		✓	✓			✓					✓	✓	✓	✓
Community Leaders				✓	✓		✓		✓							✓	✓		
Medical Leaders	✓	✓		✓															
Political Leaders			✓	✓	✓		✓			✓		✓	✓			✓	✓		

* Doctors or other medical personnel referred to as "doctor"

**Shaded areas indicate the most trustworthy sources of information as identified by groups

VIII. Discussion

The current behaviors and preferences of Mbinga and Songea consumers, owners, dispensers, local government, medical, and community leaders regarding maduka ya dawa baridi have been described in detail. In addition, all groups expressed expectations and recommendations for establishing ADDOs, and for providing support to develop a successful and ongoing program that meets community health needs. These findings were presented, discussed, and interpreted by a group of district, regional and national experts. While behaviors and preferences were not surprising, there were differences in expectations between groups and contextual limitations that raised issues that are important to resolve to move forward with ADDO program implementation.

A. Issues from Findings

Care seeking

The consumer preference for seeking care directly at MYDB without the benefit of consultation and prescriptions is frustrating to health systems leaders. On the one hand good quality health care requires trained health workers with diagnostic facilities and appropriate prescribing practices, and on the other hand the public and voluntary health systems have difficulty providing enough of them efficiently and conveniently. Drug stockouts are common even with the kit system and the CHF.

To address care seeking choices would require more representative knowledge about consumer experiences with the public and voluntary health system aside from what was learned about MYDB. Then to achieve the best quality care would require work across public and private systems as well as MYDB, and will take longer term investments for change beginning with the national level. It would be counterproductive to insist on prescriptions everywhere all the time, when it isn't feasible to provide them. In the interim, community health will benefit from improvements in DLDB practices and drug stocks. ADDO program design must first focus on short term needs but fit into the longer term context of improved health care. Meanwhile, leadership should continue to educate consumers about proper use of the health system and owners/dispensers should be trained to refer to facilities for serious and undiagnosed illness.

Part I Drugs

There must be changes in directives to allow some Part I drugs into the ADDO formulary, especially those that can be used to treat the most common illnesses. These will need to be accompanied with clear guidelines for use which will begin to address inappropriate prescribing. However, another part of the aim is to ensure adequate quality, registered drugs for ADDO stocks that are still affordable and this will require establishing a regular, local supplier of registered drugs.

Premises

Everyone agrees that ADDO premises should be clean, well lit, well ventilated, and organized. One question is what is required to maintain the privacy and confidentiality of consumers? Program designers first assumed that separate rooms and space, as well as ethics training for dispensers were required. However, consumers reported that privacy was better protected in MYDB than in health facilities. This issue would benefit from further query into consumer definitions of privacy, and observations of dispenser practice in the field. From a premises standpoint, the aim of privacy might be reached with adequate arrangement of interiors and/or with how dispensers arrange to interact with consumers.

Dispensers

Since dispensers will be asked to perform more technically, they will require upgrading. The question of baseline qualification was raised because nursing assistants have little clinical training and may have come from any number of programs. Nursing assistants currently make up over one half of current dispensers so it is unlikely that higher qualification requirements will be met to obtain licenses. Given this reality, training courses, materials, and continuing education need to be oriented to levels required by this audience. Dispensers will be taught to understand their own limitations. It was also pointed out that sometimes dispensers in MYDB have the same or higher qualifications than health staff in dispensaries, and to some extent they can be considered providers.

Clinical Services

MYDB currently provide a range of clinical services, especially injections. Consumer demand for injections is high because of local beliefs in efficacy and the desire to complete prescribed treatments of sequential injections closer to home. This poses serious safety concerns and raises the question of how will the program communicate why there needs to be limitations to ADDO services?

Licensing

Both business and pharmacy licensing processes and the variation in them between districts, are still not very clear. This requires more detailed interviewing and estimation of time frames and decision making points. However, licensing is an area that can be changed to accommodate and/or solve some of the problems raised by ADDOs. For example, the timing and cost of licenses can be changed to decrease costs to owners or licensing can be used to negotiate a workplan for ADDO improvement. Refocusing the locus of licensing to the district level and including community leaders in the process may streamline it, and should allow for better understanding of applicants and ultimately follow up of performance through inspection and supervision. Requirements for medical qualifications of owners that are specific to the Ruvuma region may also be relaxed.

There is still an issue of location of ADDOs given population and geographic need. Where should ADDOs be located and what criteria are used to make this decision? Information from this study may need to be combined with the DLDB mapping exercise and further meetings with district and community leaders. However, ADDOs are private sector business enterprises and location is usually the result of market forces. If the program decides to encourage ADDOs in underserved areas, it will probably need to consider incentives.

Inspection and Supervision

Inspection and supervision are sometimes treated as interchangeable words, however for MYDB much of the emphasis has been on inspection as policing and enforcement. ADDOs will have a clear inspection system whose aim is to assure quality drug stocks and practices. The challenge is to design a fair and effective system that achieves the aim without causing fear and manipulation by those who are being inspected. Currently owners and dispensers want advance notification while medical and political leaders say that this is impossible. Several changes in inspection were discussed including peer inspection, increasing transparency, involving consumers and community leaders, and improving attitudes and communications. How to design supportive supervision mechanisms that enable ADDOs to improve have not yet been discussed.

Resource Support from the Program

It is clear that providing some type of financial support to owners to make initial investments for ADDOs is essential. Whether this is through loans or subsidies, and what organizations need to be involved is unclear. The PB and the MOH are unlikely to be in a position to make loans directly, so alternatives at district and community levels need to be explored. In this regard, how can community leaders engage in a substantive way with owners to persuade them to invest. Questions were also raised about support for the initial training of dispensers. While training curricula and trainers may need to be provided by the progam at the outset, it was felt that ADDO owners have to make a tangible commitment and investment to ensure they take it seriously.

MYDB are Businesses

Much of the difficulty in designing the ADDO program is in having to conceptualize the ADDOs as private enterprises imbedded in a public, voluntary, and private health system. This requires thinking to shift from sanctions and directives to incentives and persuasion. The nature of profit making in a service activity for social good needs to be accepted and used to further health outcomes. The ADDO program is not a regular health program but requires a marketing approach.

What does this imply for MYDB? Ultimately all else being equal, if ADDOs meet community health needs successfully within the context of Tanzanian law, then other sources of drugs such as MYDB or other shops will drop to a low level. They will not be able to compete. However, this is best left to market forces while the focus of the program is on the development of the ADDOs.

B. Common Themes

A review of expectations about ADDOs by the different actors or stakeholders reveals several areas of agreement and a few key differences that will require negotiation and resolution some of which have been discussed above. Areas of agreement provide a picture of the well functioning ADDO in Songea and Mbinga. (See box below). Consumers will be greeted by trained dispensers who are dressed in uniforms with identification. These dispensers will have good attitudes and will be skilled in dispensing and in effective communications with consumers. An expanded list of Part I drugs will be available and owners will have reliable access to registered and unexpired drugs through nearby suppliers. Storage and dispensing

problems will be simplified by blister packaging. Consumers will receive appropriate drugs and advice at affordable prices.

The support systems necessary for this kind of ADDO involve supply of drugs, training, licensing, supervision, inspection, and loans. The content and frequency of training have not yet been determined, but will need to include how to educate and communicate with consumers as well as information about drugs. Deciding on frequency should eventually be based on experience with maintenance of skills by dispensers. Licensing, supervision, and inspection will become the systems of interaction between the official health system and ADDOs. Licensing changes have already begun to be discussed. Agreement on supervision and inspection is only that they should be done. There is disagreement on how they should be done and who should do them. Last, stakeholders agree on the need for loans but are less cognizant of how they would be managed or funded at the community level. This is likely to require expertise and experience with microfinancing.

What Stakeholders Agree about ADDOs
1. Trained dispensers with identification and uniforms.
2. Expanded list of drugs.
3. More blister packaging.
4. More efficient, cheaper licensing process.
5. Affordable prices of drugs and services.
6. Supervision and inspection should be done.
7. Loans to owners and bonuses to dispensers as incentives to move ADDOs forward.
8. Dispensers communicate well with clients about drugs and services. (polite, thorough)
9. Reliable source of drugs nearby.
10. All groups must contribute and work together.

The three major areas of differences between stakeholder expectations are noted below.

Differences in Stakeholder Expectations about ADDOs
1. Inspection mechanisms; who will do it and how will it be done.
2. Injections and other clinical service provision at ADDOs; will they be allowed?
3. Extent and source of incentives; what is the balance between ensuring commitment and providing needed support?

C. Behavioral Analysis

The behavioral analysis that follows was completed by identifying barriers to the practice of desired behaviors by each target audience, and by identifying motivators or facilitating factors. These are drawn from the focus group and interview findings, and will be used in designing communications and marketing strategies. Ultimately it will be important to align this behavioral analysis with other program interventions in training, service delivery, and monitoring and evaluation.

Table 14: Behavioral Analysis Framework

Target Audience*:* ***Consumers or clients***

Behavioral Analysis		
Desirable Behaviors	**Barriers**	**Motivations/ Facilitating Factors**
PRIMARY FOCUS Choose to visit an ADDO (rather than any DLDB)	Distance from home Cost of drugs Drugs they want are not there Services they want are not there Expired drugs Inspection problems	Good Part I drugs available (antibiotics, antimalarials) Clean, organized premises Drugs stored separately from animal drugs, food Smartly dressed dispensers Dispensers communicate politely, respectfully Dispensers explain about drugs well Payment options (credit, in-kind, daily payment) Diagnostic tests (blood, stool, BP, weight) Injections, drips available Quick service Privacy, confidentiality Previous drugs from ADDO cured them

Target Audience: ***Duka la Dawa Baridi owners***

Behavioral Analysis		
Desirable Behaviors	**Barriers**	**Motivations/Facilitating Factors**
PRIMARY FOCUS Accept and are willing to use standards -Physical attributes -Source/supply of drugs -Qualification/training of dispensers -Ethics (relationship with patients, providers, well being of patient, info) Make required upgrades in DLDB Support training of dispensers Seek accreditation	Capital costs of improvements Current licensing process and costs High recurring costs of dispensers (training, salaries) Dispenser turnover Competition from unlicensed shops and MYDB Surprise inspections and resulting harrassment High taxes	Soft loans or subsidies to make needed changes Regular, affordable wholesale supplier in region Expanded list of Part I drugs made legal (antibiotics) Information about new drugs (materials, seminars) Injections allowed CHF/NHIF can resupply from ADDO ADDO promotion by program

Target Audience: ***Duka la dawa dispensers***

Behavioral Analysis		
Desirable Behaviors	**Barriers**	**Motivations/Facilitating Factors**
Provide and maintain service to ADDO standards including: -communicate with clients to assess problem -dispense appropriately -inform, educate clients -refer if needed -maintain ethics (confidentiality, patient well being, relationships with providers, patients, keep up to date)	Drugs in foreign language packaging Problem/stubborn clients Owners pressures for profits/lack of trust Owners lack of capital Drug stockouts Inspection problems Premises of low standard	Increased salaries Regular opportunities to learn about drugs Training Blister packaging Uniforms and identification badges Recognition as professionals

Target Audience: ***Community leaders***

Behavioral Analysis		
Desirable Behaviors	**Barriers**	**Motivations/Facilitating Factors**
PRIMARY FOCUS: Disseminate accurate information about ADDOs to villagers (in all useful venues) Mobilize villagers to use ADDOs Inspect ADDOs quarterly	Corruption in licensing, inspection Distance from community High costs of drugs and services	Training for sensitization and inspection Facilities such as meeting support Availability of Part I drugs Good quality, unexpired drugs Availability of injection services Upgrading of dispensers CHF/NHIF can resupply at ADDOs Inspection done by group with technical support

Target Audience: ***Medical Leaders***

Behavioral Analysis		
Desirable Behaviors	**Barriers**	**Motivations/Facilitating Factors**
PRIMARY FOCUS: Communicate accurate information to district leaders (council, local government officers, DC), health providers, CHMT Persuade district leaders to promote ADDO program Monitor ADDO quality including oversight of drug list/supply	Competing directives from MOH Time availability Beliefs about the necessity of prescriptions Beliefs about appropriateness of care seeking choices Clinical services continue to be done by ADDOs	Training/orientation to program Transportation/per diem facilities to visit and inspect Directives to clarify respective roles and authority Upgrade communications between levels (internet, computers) Upgrading of dispenser skills Continuing education for owners, dispensers Regular supply of registered drugs Upgrading of ADDO premises Dispensers refer cases to health facilities appropriately Loans provided to owners

Target Audience: ***Political and Civic Leaders***

Behavioral Analysis		
Desirable Behaviors	**Barriers**	**Motivations/Facilitating Factors**
PRIMARY FOCUS: Promote ADDO program with regional or district influentials Support recommendations and decisions of PB and DHSB (licensing, inspection requirements)	Current regulations and directives Status of decentralization DHSB not yet active	Training to sensitize others Localization of licensing, inspection to district level Directives to clarify roles come through proper channels

D. Marketing Approach and Strategy[18]

Marketing means to change the behavior of people to buy a product or use a service. In this case the desired behavior is to use ADDOs. There are several steps needed to create a marketing strategy including assessing the market and current behaviors, assessing the barriers and motivators to people practicing desired behaviors, selecting target audiences, positioning the service/product as unique and better than the competition, designing messages for each audience, specifying a plan to implement activities, and evaluation. The formative research that forms the bulk of this report provides the contextual and behavioral assessments needed to move towards positioning, designing communications campaigns, and implementation.

Following expert group review and discussion of the study findings, the concluding workshop focused on using this information to develop a marketing strategy. Marketing utilizes the four "Ps" of Product, Place, Price and Promotion to conceptualize strategy design. For this program, the "products" are the services of the ADDOs including drug dispensing, education, referral, and non-drug products. The "place" is where and how products are available – in this case the ADDO shop and the wholesale supplier mechanism that is being contemplated. The "price" is the cost plus profit as well as the perceived value of the ADDO services. "Promotion" is the communication that is used to convince consumers that ADDOs are the better choice.

Services (Products)

The services that were proposed to be provided are listed in the box below.

ADDO Products and Services
1. Assessment of consumer's health problems
2. Dispensing of registered, quality drugs (adequate explanation, side effects, indications)
3. Information provision and education of consumers
4. First aid
5. Hygiene products (toothpaste, cosmetics, bandages)
6. Blood pressure check, weighing

The activities that are required to ensure these services are in place for the ADDO program include:

1. Provision of Quality Drugs

    a. Identify drug register and potential supplies
    b. Establish supply mechanism

2. Provision of Quality Services

    a. Identify the dispensers (needs assessment)
    b. Identify training needs
    c. Develop training materials

[18] Jamu L. Proposal to Develop an ADDO Marketing Strategy, 2002 and ADDO Marketing Plan Presentation, Sept 2002.

d. Identify trainers and venues
e. Conduct training
f. Certify qualified dispensers

3. Accredit Dispensers in ADDOs

a. Develop, place logo
b. Equip with uniforms
c. Prepare identification badges

4. Branding

a. Brand name development
b. Test the brand

Place

As noted earlier, there are differing opinions on how ADDO outlets should or should not be encouraged or permitted to locate in terms of proximity to health care facilities and population/geographic need for reasonably close access to drugs. One option is to encourage people to shift MYDB to ADDOs in those places that are near dispensaries and other health facilities which would increase the likelihood of having a prescription. The second option is to provide incentives to have them established in or near communities who do not have good access to dispensaries and health centers. Further inquiry or analysis of why they are located where they are now might provide a better analysis of the current market for ADDO services.

The activities that are needed to set up a stable supply of approved quality drugs to ADDOs and consumers are:

1. Solve source of supply issues

a. Promote and encourage wholesalers to open branches at regional level in disadvantaged areas.
b. If dealer opens a wholesale business at regional level should be allowed to open a branch at each district without a locally placed pharmacist. (That is keep the pharmacist at the regional level.)

2. Establish a recording system that allows good quality distribution of products

Price

The price of drugs and services in the MYDB are considered affordable by consumers. The objective with ADDOs will to be ensure that the cost of drugs to consumers and owners will not rise. The factors that influence costs are transport of products, list cost of drugs, quantities that can be bought at once, market promotion, margin and operational costs. Activities that can be done to keep costs low are:

1. Establish network of ADDO owners who can go and buy together in order to reduce transport costs

2. Identify ADDO wholesaler who will be able to invest in Songea

3. Increase capital available to owners to purchase in quantity to get a lower unit cost

4. Request tax waivers and reductions from tax authorities (local government, TRA)

5. Joint promotion for whole program to reduce the costs of "advertising" for an ADDO

6. Reduce operational costs through subsidy, sponsorship, or soft loans

Promotion

Promotion involves the most appropriate ways to communicate with consumers, owners, dispensers, and leaders to foster the use of the ADDOs. Most marketing approaches use an integrated communications campaign that involves different methods based on where target audiences are along the spectrum of behavior change, barriers and motivators. Methods can include mass media, advocacy and interpersonal communication. What types or means of promotion should be used for ADDO shops for the various ADDO groups?

1. Logos on:

    a. Vehicles, taxis, buses, officials cars
    b. Clocks in dispensaries, mosques, health facilities, officials offices
    c. Calendars, special prescription forms with ADDO logo, dispensing bags with ADDO labels, counting trays
    d. Cups and plates to give to primary school children
    e. Tee shirts, hats
    f. Umbrellas
    g. Pencils, pens

2. Mass Media

    a. Radio including broadcasting advertising before news and sports events, church hymns about ADDOs
    b. Special events sponsorship
    c. Local newspapers
    d. TV
    e. Video

3. Music

    a. Traditional dances
    b. Drama
    c. Comedy

4. Posters and Billboards at stadiums and market areas

5. ADDO inauguration ceremonies

Messages

Promotion methods and channels are used to communicate messages to each of the target audiences which have been defined earlier. What does the program want to communicate? The messages that are developed will be based on an understanding of the barriers and motivators to practice for each group. Brainstorming of messages was initiated during the workshop but continues to be developed and will be reported elsewhere.

Next Steps

The next steps for transforming the findings of this behavior change communication study begin with revising the marketing plan based on discussions and decisions made. Following completion of messages development, a creative brief will be written for use with advertising agencies. The brief will lead to the development of several brand names and logos, radio spot, outdoor ideas and art designs. Program leadership will then decide on the agency that will continue with the work and move into testing brand ideas in focus groups.

D. Conclusions: Toward an Accredited Drug Dispensing Outlet System

The purpose of this study was to provide an understanding of consumer, owner, dispenser, and local leaders experiences with duka la dawa baridi and recommendations for achieving a successful ADDO system. The current situation in Songea Urban, Songea Rural, and Mbinga has been expressed from all viewpoints and behavioral determinants described. Barriers and motivators to changing behavior to choose to use an ADDO, to provide high quality drugs and services, and to support the needed shifts in systems have been analyzed and are in the process of being linked to marketing and program plans. The outputs of the study can be put into four categories: ideas for further study; marketing strategy and tactics; operational issues for programs; and direct input into design of specific activities.

Ideas for Further Study

During any indepth study, new and sometimes surprising information is uncovered which generates more questions and the need for more information. Whether these questions should be pursued and with what methods depends on how the information would be used within the program. In the area of care seeking by consumers, it would be useful to better understand why choices about health care facilities are made and in what circumstances. Similarly, it would be useful to be clear about what consumers understand about the efficacy of drugs, expiration, and source or origin implications. There are many assumptions made about prescribing practices of both health care facilities and MYDB, but little information about why they happen the way they do. Finally, why are public facilities unable to fulfill community health needs, and how does this affect the market for MYDB?

Marketing Strategy and Tactics

Information about product, place, price, and promotion have been informed by the behaviors and preferences of the target groups as described in the findings. The success of the ADDO program rides on its ability to rapidly change the behaviors through an integrated communications campaign linked to training and service delivery interventions.

Operational Issues

Analysis and interpretation of the focus groups and interviews have also lead to the identification of operational program issues that are now informed by different points of view. Decisions can be made based on a better understanding of how things actually work in communities and districts. The three main areas requiring attention now are inspections, injections, and incentives. These will be resolved as standards are defined and finalized, new systems are outlined, and resources allocated. As major program components are designed the findings can be reviewed to deepen understanding of possibilities and problems.

Direct Input into Activities

Study findings also contributed and may continue to contribute detailed information to specific tasks. The significant need of dispensers for client education skills can be incorporated at the outset into training curricula centered on drug dispensing. The problem with SP can be addressed as an example of ongoing transfer of information to dispensers and owners to better serve consumers and achieve expected health outcomes. Details on how the licensing process actually works provides information on what authority must be granted through directives. Other examples exist but the important point is to note that information is available to test assumptions and provide guidance for designing activities.

These findings and their interpretation were intended to contribute to achieving the overall goal of the ADDO program. They represent the voices of people who will be intimately engaged in the program in the three districts. The challenge now is to take them forward into practice.

To improve access to affordable, quality drugs and pharmaceutical services in retail drug outlets in rural or peri-urban areas where there are few or no registered pharmacies.

Annex A: References

Boulay M, Msamanga G, Amani H, O'Leary M. Tanzania Performance Improvement Initiated: Assessment of Community and Provider Perceptions of Health Care Services. Dar es Salaam, Tanzania: Ministry of Health, JHUCCP, 2000.

Bureau of Statistics [Tanzania] and Macro International Inc, 1997. Tanzania Demographic and Health Survey 1996. Calverton, Maryland: Bureau of Statistics and Macro International. 1997.

Bureau of Statistics [Tanzania] and Macro International Inc, 2000. Tanzania Reproductive and Child Health Survey 1999. Calverton, Maryland: Bureau of Statistics and Macro International, 2000.

Bureau of Statistics [Tanzania] and Macro International Inc, 2000. Tanzania Services Availability Survey 1999. Calverton, Maryland: Bureau of Statistics and Macro International, 2000.

Center for Pharmaceutical Management. Strategies for Enhancing Access to Medicines, Program Year 1 Report. Arlington, VA: Management Sciences for Health. July 27, 2001.

Chowdhury HR, Goergen R, Mwengee W. STD Case Management in Private Pharmacies Assessed by Simulated Patients with Urethral Discharge in Tanga Municipality. Dar es Salaam, Tanzania: GTZ, University of Heidelberg. 1999.

Clark M, Mbwasi R, Helzer N, Mfuko W, Alphonse E, Hebron Y. Selection of ADDO Program Districts. SEAM Project: Dar es Salaam, April 2002.

Green M. Too Sick Too Long: Why People Avoid the Hospital in Southern Tanzania. Tanzanian Journal of Population Studies and Development. Vol 5, Nos 1 and 2, 1998:1-21.

Kihinga C. Female Condom Consumer Profile Survey. Dar es Salaam, Tanzania: Population Services International. 2000.

Kapinga AM, Kiwara AD. Quantitative Evaluation of CHF Igunga Pretest (Including Singida Rural District). Dar es Salaam, Tanzania: Institute of Development Studies, Muhumbili University College of Health Sciences. June 1999.

Krueger R.A. Focus Groups: A Practical Guide for Applied Research. London: SAGE Publications. 1994.

Mfuko W, Follmer A, Staszewics A, Mapunda JP. The Community Education Fund. Dar es Salaam, Tanzania: World Bank, October 1995.

Mfuko W, Follmer A, Staszewics A, Mapunda JP. A Core Marketing Plan for the Community Health Fund. Dar es Salaam, Tanzania: World Bank, October 1995.

Mfuko W, Follmer A, Staszewics A, Mapunda JP. Marketing/Media Plan for The Girls Secondary Education Support. Dar es Salaam, Tanzania: World Bank, October 1995.

Ministry of Health, Tanzania. Burden of Disease Profile 2000, Coastal Zone. Dar es Salaam, Tanzania: NSS, TEHIP/AMMP. October 29, 2001.

Ministry of Health Tanzania. Pharmaceuticals and Medical Supplies Sectors Study. Dar es Salaam, Tanzania: SGV Consulting. July 1995.

Morgan DL. Focus Groups as Qualitative Research. London: SAGE Publications 1989.

Robles A, Chuwa V, Mkini A, Mwinyi M, Urrio T. Qualitative Evaluation of the Community Health Fund in Igunga District, Tanzania. Dar es Salaam, Tanzania: Ministry of Health. 1999.

Robles A, Shirima RM, Kimary RT, Mapunda M, Masimba, D, Mlay NH, Mongo LM, Mpingirwa I, Mushi M, Sadalah M. Community Acceptability of the CHF and its Potential for Improving the Health Services and Health Situation in Madamigha Village, Singida District, Tanzania. Dar es Salaam, Tanzania: Ministry of Health. August 1998.

Severo C. Debriefing from Trip to Temeke, Tanza, Moshi Rural and Masasi Districts – SEAM Project. Arlington, VA: MSH. October 2001.

Shirima RM. Community Health Fund (CHF) Districts in Tanzania. Dar es Salaam, Tanzania: Management Sciences for Health. 2001.

Taylor, Kihinga, Mbwasi, Mfuko. Behavior Change Communication Study Guide Tanzania ADDO Program. Dar es Salaam, Tanzania: Strategies for Enhancing Access to Medicines (SEAM), Management Sciences for Health, October 1, 2002.

Taylor, Kihinga, Mbwasi, Mfuko. Preliminary Report on Behavior Change Communication Study: Tanzania ADDO Program. Songea Rural, Songea Urban, and Mbinga Districts, Ruvuma Region, April 22-May 26, 2002. Dar es Salaam, Tanzania: Management Sciences for Health and Healthscope, Ltd. June/July, 2002

Annex B: Workshop Objectives and Participants

Transforming Duka la Dawa Baridi into ADDOs
Review of Behavior Change Study Findings

Workshop Objectives

Bagamoyo, September 29-October 2, 2002

I. Understand the goals, purpose, and methods of the behavior change study that was conducted in three districts.

II. Develop a common understanding of focus group discussion and interview findings.

- **A. Understand how the different groups of respondents view duka la dawa baridi in local context.**
- **B. Understand what different groups think about and recommend for the ADDO system.**
- **C. Understand these groups and stakeholders as target audiences and the behaviors desired for the ADDO system.**
- **D. Understand what factors influence behavior change for these audiences.**
- **E. Determine the most influential of these factors at this time.**

III. Develop a common understanding of a marketing approach for changing behaviors so that ADDOs succeed.

- **A. Understand the basics of a marketing approach.**
- **B. Link the study findings about behavioral influences with the marketing approach.**
- **C. Identify marketing priorities.**
- **D. Generate marketing tactics (what is done to achieve plan priorities in Place, Products or services, Pricing, and Promotion.)**

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