Multi-component assessment in districts served by ADDOs: What do we learn about the ADDO Program?

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Stakeholder's Meeting

Arusha, Tanzania

August 5-6, 2014

Overview

- Assessment objectives and issues addressed
- Assessment design and samples
- High-level results and implications
- Strengths and weaknesses

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Status of ADDO program implementation: August 2013

Regions scaled up	**21**
Total number of drug shops	9226
Shops accredited (ADDOs)	5467
Shops in application process	3759
Trained dispensers	13,302
Trained district inspectors	262
Trained ward inspectors	3000

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Sustainable Drug Seller Initiatives (SDSI) Objective 3

- Immediate objectives
  - Conduct multi-component assessment of role of ADDOs in community access and use of medicines
  - Explore knowledge and perceptions of stakeholders about ADDOs, medicine use, and AMR
- Intermediate objectives
  - Explore methods to monitor of the quality of services and products in ADDOs
  - Build capacity of Tanzanian organizations to collect, analyze, and use data for policy development
  - Facilitate development of public health policy, regulatory standards, and treatment guidelines

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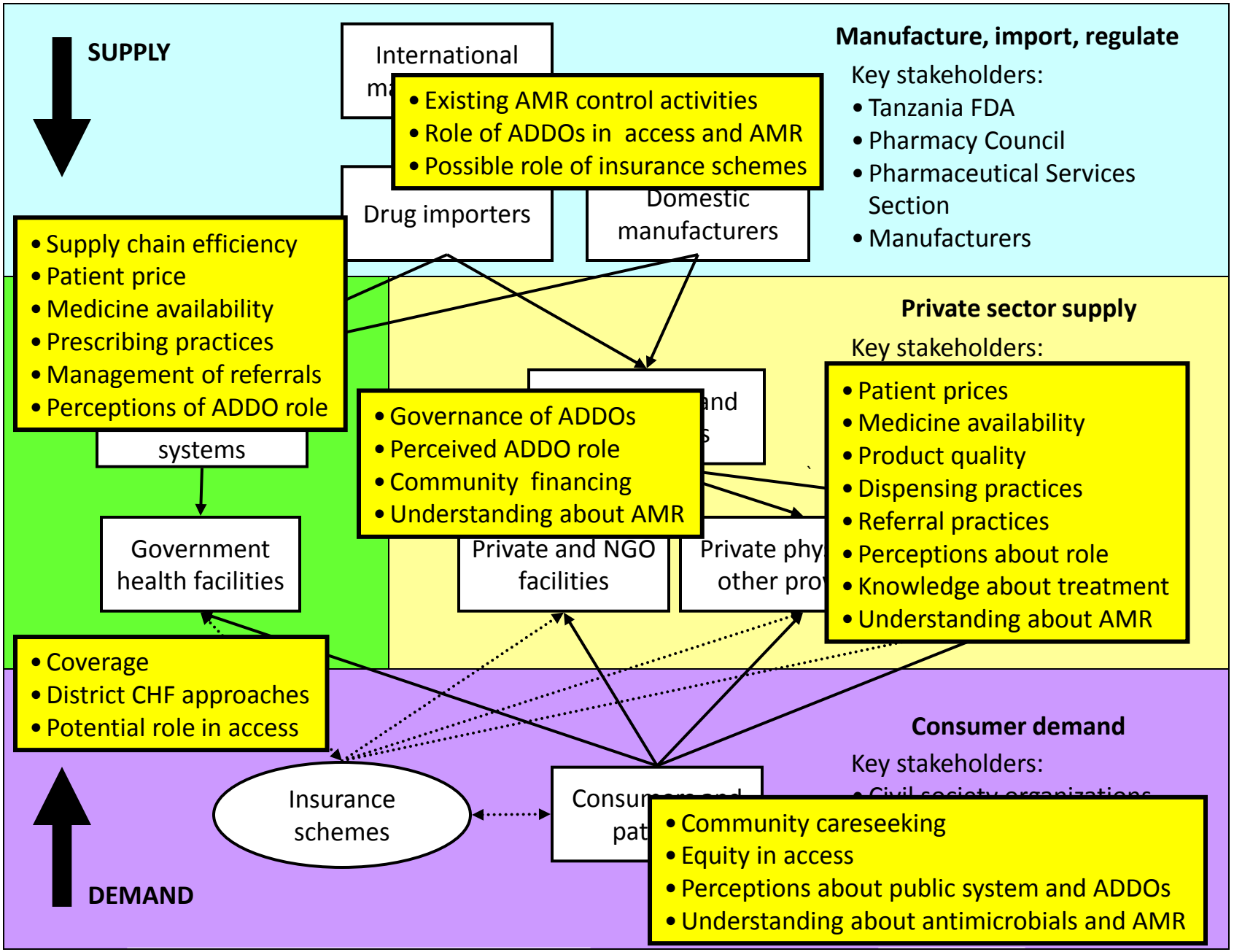
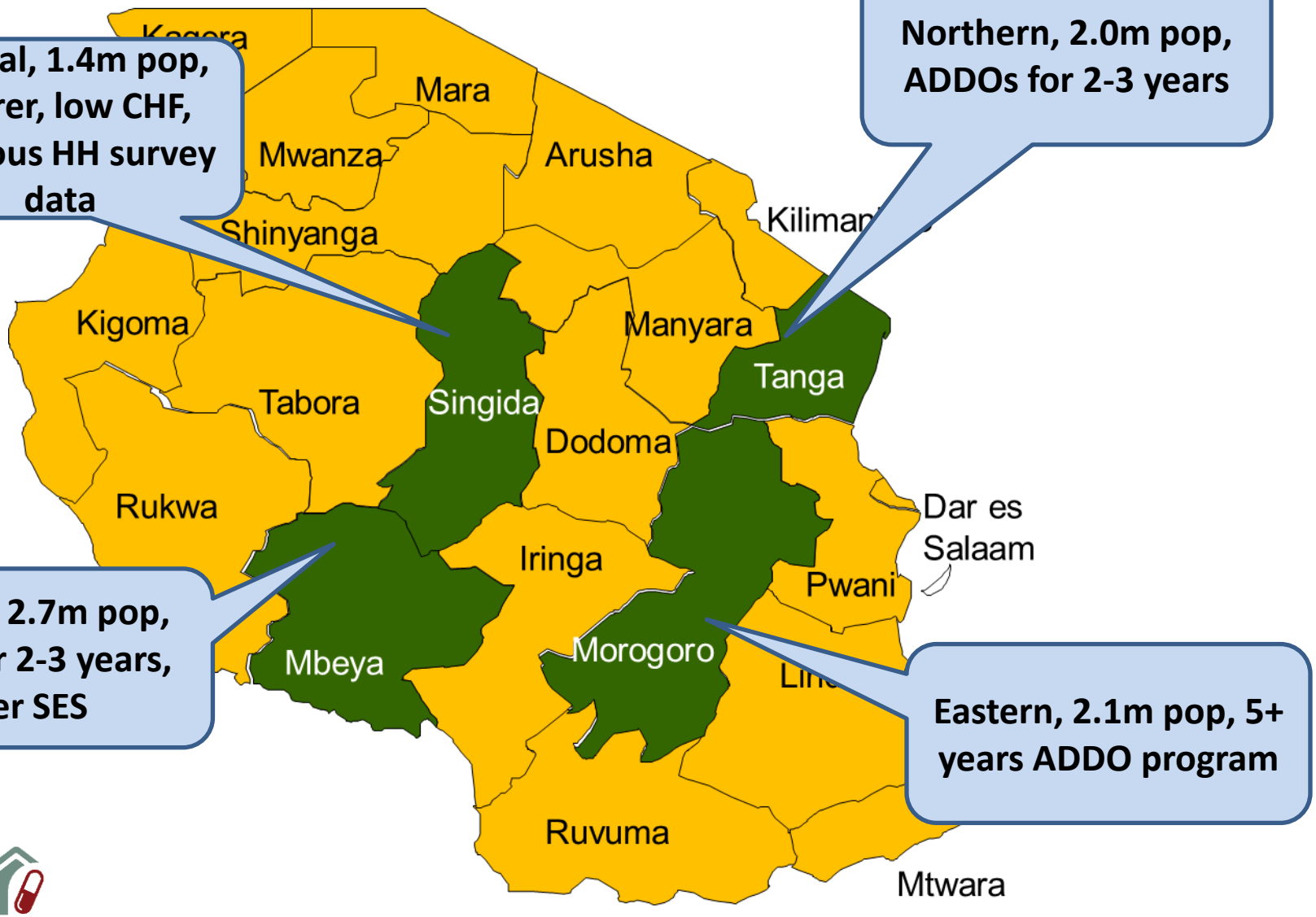
Tanzania Pharmaceutical System and Issues Addressed in Assessment



Study regions



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Methods linked to study objectives

- Interviews with policy makers and ADDO staff
  - Knowledge and perceptions regarding ADDOs, medicines access/use, and AMR
- Health facility and ADDO survey
  - Medicine availability, price, practices, attitudes
- Product sampling and lab analysis
  - Product quality in ADDOs and pharmacies
- Household survey
  - Care-seeking, medicines access, attitudes about sources of care, medicines, AMR
- Mystery shoppers at ADDOS and pharmacies
  - Communication and treatment about ARI

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Study team composition

- Oversight partners
  - Pharmacy Council
  - Tanzania Food and Drugs Authority
- Implementation partners
  - Apotheker
  - Muhimbili University School of Pharmacy
  - Muhimbili University School of Public Health
  - Tanzania Consumer Advocacy Society
  - Invention and Technological Ideas Development Organization
  - Management Sciences for Health
  - Harvard Medical School

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Geographic area and facility sample

- Districts (n=12)
  - 3 per region with probability proportional to population
- Wards (n=60)
  - 5 per district by ADDO density (2 high, 2 mid, 1 low)
  - High=3+ ADDOs, mid=1-2 ADDOs, low=no ADDOs
- Facilities (n=98)
  - 2 each in high- and 1 each in mid- or low-density wards
  - Hospitals or NGO facilities if present
- ADDOs (n=86) and pharmacies (n=13)
  - 2 ADDOs in high-, 1 in mid-density wards
  - Pharmacies if present

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Household sample

- Villages (n=240)
  - 4 per ward
  - Random sample from strata by distance from ADDO or ward center (3 within 5 km, 1 >5 km)
- Households (n=1200 target)
  - 5 per village
  - Systematic sample from household list within village
- Respondents (n=1180 completed)
  - 1 knowledgeable person 18+ years old per house
  - Substitute next house if respondent unavailable during day

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Example of samples in one district

1 High ADDO Density Ward	1 High ADDO Density Ward	1 Mid ADDO Density Ward	1 Mid ADDO Density Ward	1 Low ADDO Density Ward	**TOTAL: 5 Wards**
2 Public Health Facilities	2 Public Health Facilities	1 Public Health Facility	1 Public Health Facility	1 Public Health Facility	**7+ Public Health Facilities**
2 ADDOs	2 ADDOs	1 ADDOs	1 ADDOs	0 ADDO	**6 ADDOs**
20 Households	20 Households	20 Households	20 Households	20 Households	**100 Households**

In each district, the sample also included:

- **up to two private pharmacies**
- **one nonprofit health facility, if applicable**

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Mystery shopper and interview samples

- Mystery shoppers
  - 3 scenarios with 102 per scenario (total n=306)
  - 51 (Singida) to 93 (Morogoro) ADDOs per region
  - ADDOs selected randomly within regions
- Key policy informant
  - 8 central officials: PC, PSS, TFDA, NHIF, CHF
  - 84 district officials in 7 districts in 3 regions (Mbeya, Morogoro, Ruvuma)
- ADDO owner-dispenser interviews
  - 84 ADDO owners-dispensers in 2 districts (1 urban, 1 rural) in 2 regions (Tanga, Ruvuma)

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High-level findings from key informant interviews

- Interviews with central and district officials
  - Generally positive perceptions about ADDOs
  - Almost all officials see AMR as a serious problem
  - All central officials but fewer district officials believe controls would be adequate if applied
  - NHIF-ADDO linkage positive, but not CHF-ADDO linkage
  - Suggest need for education of health providers and the public, along with supportive supervision
- Interviews with ADDO owners/dispensers
  - Good clinical knowledge, so training should continue
  - Practice determined by many factors beyond knowledge
  - Need for linked multi-faceted interventions targeting ADDOs, public health facilities, and the community.

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High-level findings from facility survey and product quality testing

- ADDO and health facility survey
  - Availability in ADDOs as good as or better (for pediatric suspensions) than health facilities
  - Medicine prices comparable in ADDOs and facilities
  - Half of ADDO dispensing from facility prescriptions
  - ADDOs stock medicines off approved list
  - Dispensing registers and referral forms mostly unused
  - Facility leaders report poor staff knowledge about AMR
- Product quality
  - 8 of 9 products tested had almost perfect results
  - All ergometrine failed suggesting need to assess supply system for heat-sensitive products

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High-level findings from household and mystery shopper surveys

- Household survey
  - 71% of households have acute and >25% chronic illness
  - Health providers provide most treatment advice, but more medicines are obtained in ADDOs
  - 36% of households have medicines at home
  - ADDOs are a trusted source of advice and medicines
  - Need education on careseeking, treatment, antibiotics
- Mystery shopper survey
  - ADDO staff differentiate pneumonia and mild ARI, treat them differently, and refer appropriately for pneumonia
  - Suggest need for continued training and supervision to support best practice

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Developing an ongoing monitoring approach

- Assessment can inform monitoring possibilities
  - Inspections, supervisory visits
  - Peer supervision through ADDO associations
  - Consumer advocacy and monitoring
  - Self-monitoring
- Possible structure
  - Brief summary data by phone to central server
  - Dashboard accessible online by regulators, supervisors, and others as appropriate
  - Feedback to ADDOs regarding performance

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Strengths of the assessment

- Multi-faceted view of ADDOs in the health system
  - Policy perspective (central and district)
  - Facility perspective
  - ADDO perspective
  - Community perspective
- Electronic data capture in facilities and households
- Valid regional comparisons
- Can examine variation by SES
- Can compare patient prices and mark-ups
- Suggest intervention and monitoring approaches

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Limitations

- Four regions may not represent Tanzania
  - Represent regions where ADDOs are located
- Mystery clients and surveys focus primarily on one clinical area (antibiotic use)
- Poor records in facilities and ADDOs
  - Prescribing and dispensing
  - Referrals
- Challenges in data consistency
- Cannot directly link situation in facilities and ADDOs with patient behavior
- Cannot assess potential role of insurance

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Summary

- ADDOs play a central and valued role in the pharmaceutical supply system in Tanzania
  - Better availability and prices similar to public sector
  - Patients obtain majority of medicines in ADDOs
  - ADDO staff know and tend to follow best practices
- But improvements are needed
  - Better recordkeeping and supervision
  - Coordinated interventions in ADDOs, public health care facilities, and the community
  - Greater access through insurance schemes

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