Innovations in Differentiated Service Delivery

Six-month Multi-month Scripting Lessons from Ethiopia, Malawi, and Zambia

A CQUIN Learning Network Webinar

April 17, 2019

HIV LEARNING NETWORK
The CQUIN Project for Differentiated Service Delivery

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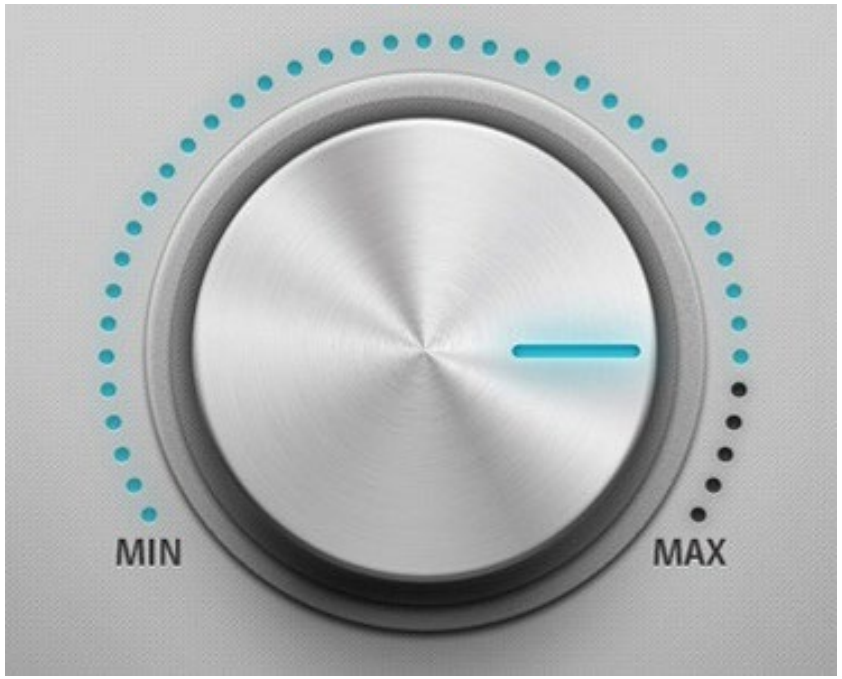
The CQUIN Learning Network

Cote d'Ivoire
Ethiopia
Eswatini
Kenya
Malawi
Mozambique
South Africa
Tanzania
Uganda
Zambia
Zimbabwe

- **South-to-south learning**
  - Meetings and workshops
  - Website, webinars, journal club, monthly updates
  - South-to-south visits
  - Online communities of practice
- **Focused technical assistance**
  - Seconding national DSD coordinators to MOHs
  - Support for national DSD review meetings
  - ICAP consultation/TA
- **Implementation research**
  - Catalytic projects

Differentiated Service Delivery



- Service Intensity
- Service Frequency
- Service Location
- Service Provider

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Illustrative DART Models

Undifferentiated Model

Facility-Based Individual Models	Facility-Based Group Models
Visit Spacing + multi-month prescribing	ART Clubs
Fast-Track + Visit Spacing	Facility-Based Teen Clubs

Community-Based Individual Models	Community-Based Group Models
Outreach model	Community ART Groups
Community Drug Distribution	Community-based Teen Clubs

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Why six-month MMS?

Recipients of Care Perspective

- Several studies, including DCE in Zambia and Zimbabwe, indicate clear recipient of care preference for visit spacing and MMS
- Convenience, cost-saving
- But...may create other challenges in terms of ART storage and privacy

Health System Perspective

- Early data suggest that longer follow-up intervals lead to improved retention
  (Mody *et al.* Clin Infect Dis 2018)
- Health system efficiencies
  (Prust *et al.* JIAS 2017)
- 6-month MMS is part of the "minimum requirements" for PEPFAR support in COP19
- But...may pose challenges for procurement, distribution, storage and clinical screening

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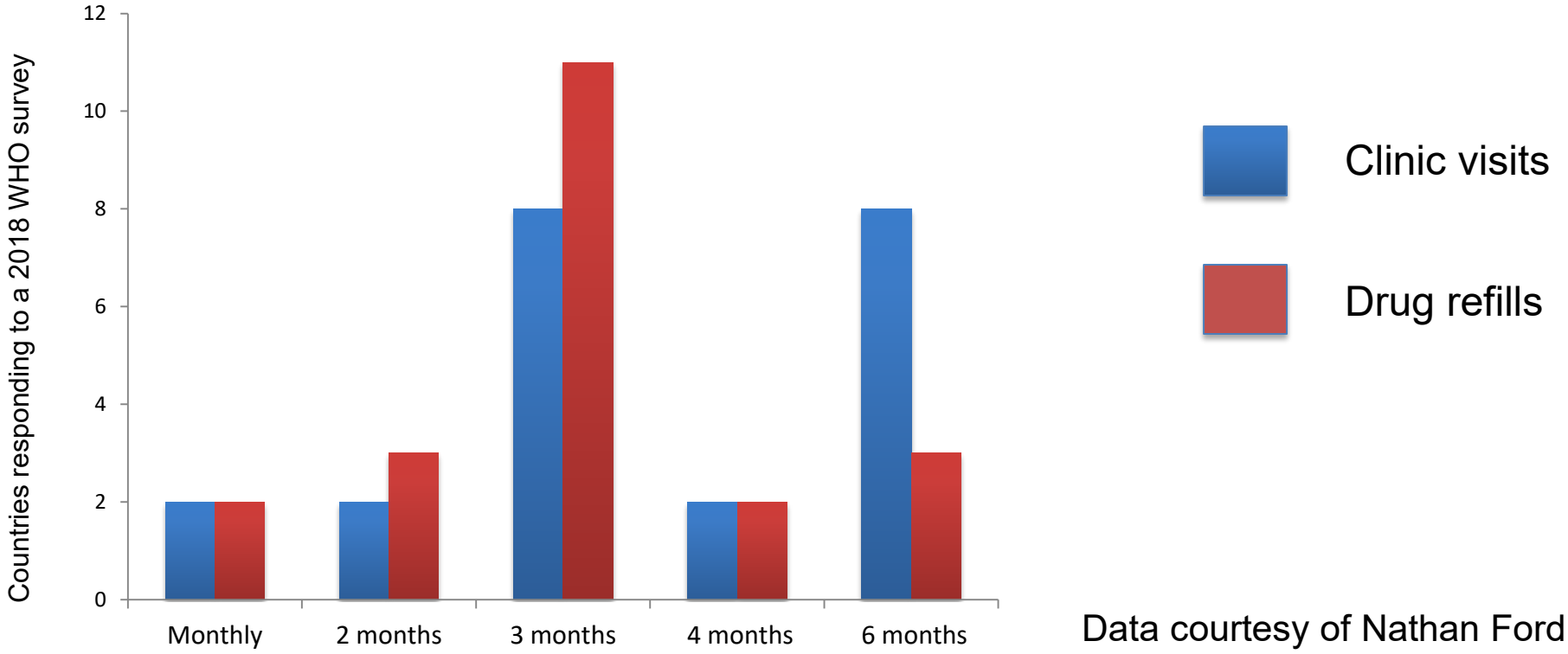
Visit Spacing & Multi-month Scripting (MMS)

- Many countries have moved to multi-month ART prescribing
- Fewer have moved to multi-month ART dispensing



Data courtesy of Nathan Ford

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Today's Webinar

- Lessons from national program scale-up in Ethiopia
- Lessons from qualitative research in Malawi and Zambia

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Acknowledgements

- Bill & Melinda Gates Foundation
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- ICAP global team

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Six-month Multi-month Scripting
The Ethiopia Experience

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Outline

- **Background**
- Planning, preparation and piloting
- Moving to scale
- Lessons learned

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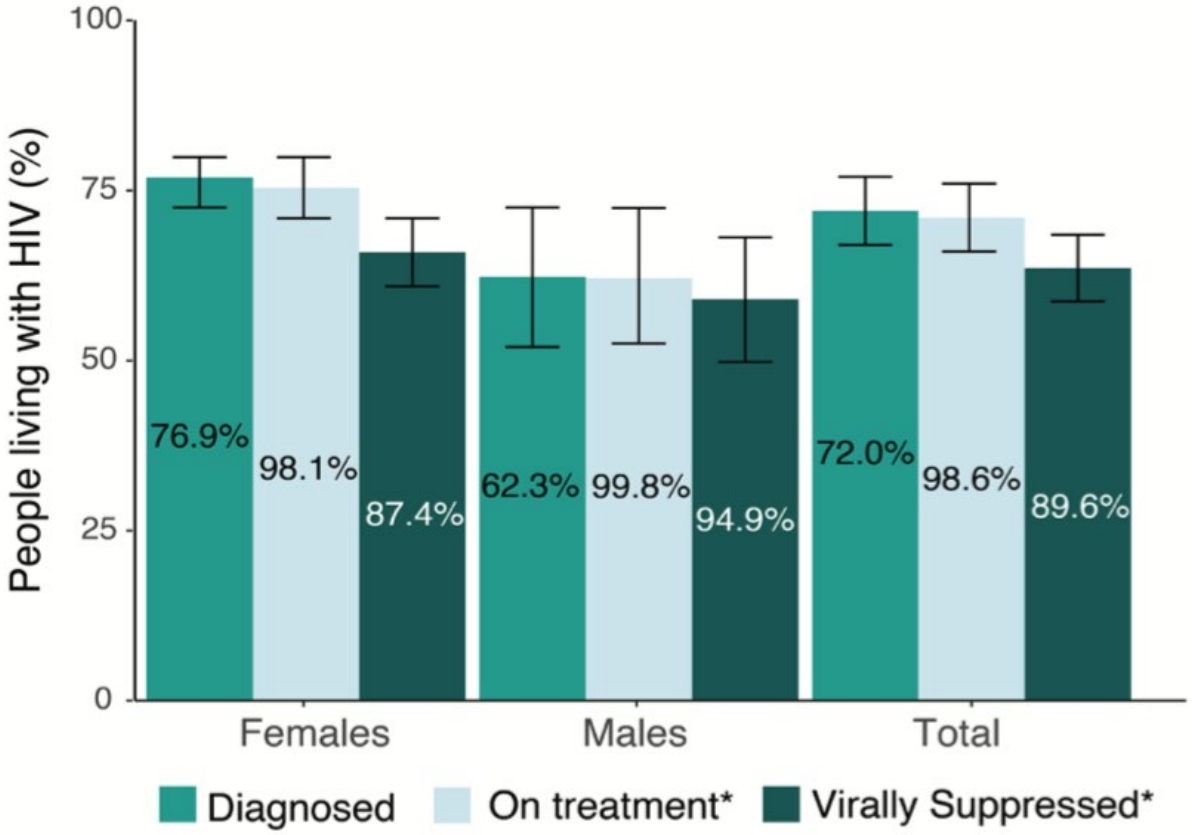
HIV in Ethiopia

- Estimated population ~ 100 million
- Adult HIV prevalence: 0.9% (3% in urban areas)
- Estimated number of PLHIV: 613,533
- People living with HIV on ART: 440,000



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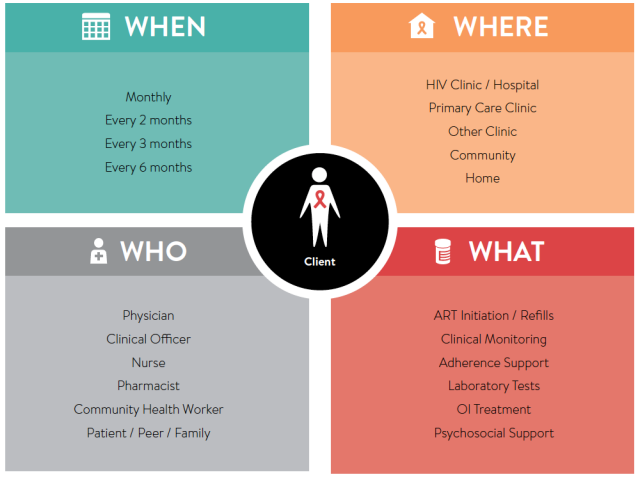
Selecting a DSD Model for Ethiopia

Key policy questions:

- How many DSD models to implement?
- Which DSD models to prioritize?



Decisions:

- In contrast to some countries in which multiple DSD models are implemented at once, FMOH decided to prioritize one DSD model, pilot it at six hospitals, and then take it to national scale
- DSD model selected = appointment spacing

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Appointment Spacing: the Ethiopia Approach

Stable* adult patients are offered the opportunity to:

- Have twice-yearly clinical visits (every six months)
- Receive six months' worth of ART at each visit

* Stable is defined as: (a) on ART for at least one year; (b) no adverse drug reactions requiring regular monitoring; (c) good understanding of lifelong adherence; (d) evidence of treatment success (i.e. two consecutive VL measurements < 1000 copies/mL or rising CD4 cell counts, or CD4 counts above 200cells/mm^3); (e) objective adherence measure; (f) no acute illness; (g) not pregnant or breastfeeding.

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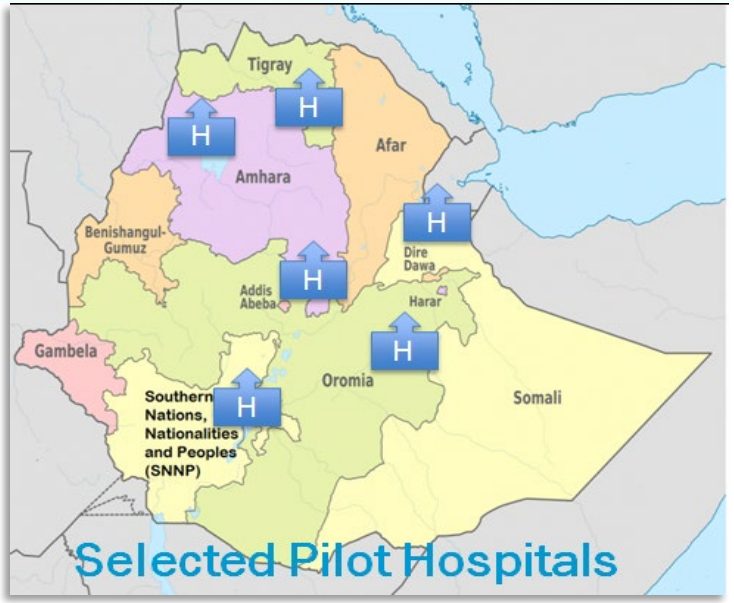
Planning and Preparation

- Expert panel/TWG establishment
- Engagement of people living with HIV
- Guideline adaptation
- Development of training materials
- Design of job aides and client education materials
- Facility readiness assessment
- Drug quantification
- Adaptation of M&E system
- Stakeholder orientation



Approach-Start up activities

- Letter issued from FMOH to regions and facilities
- Orientation provided for all service providers in the six hospitals
- Tailored training provided for Pharmacy professionals (dispensary, store and from RHB)
- Two days training conducted for service providers and program managers from the six regions and facilities
- Discussion with PFSA and HUBs on timely delivery of drugs

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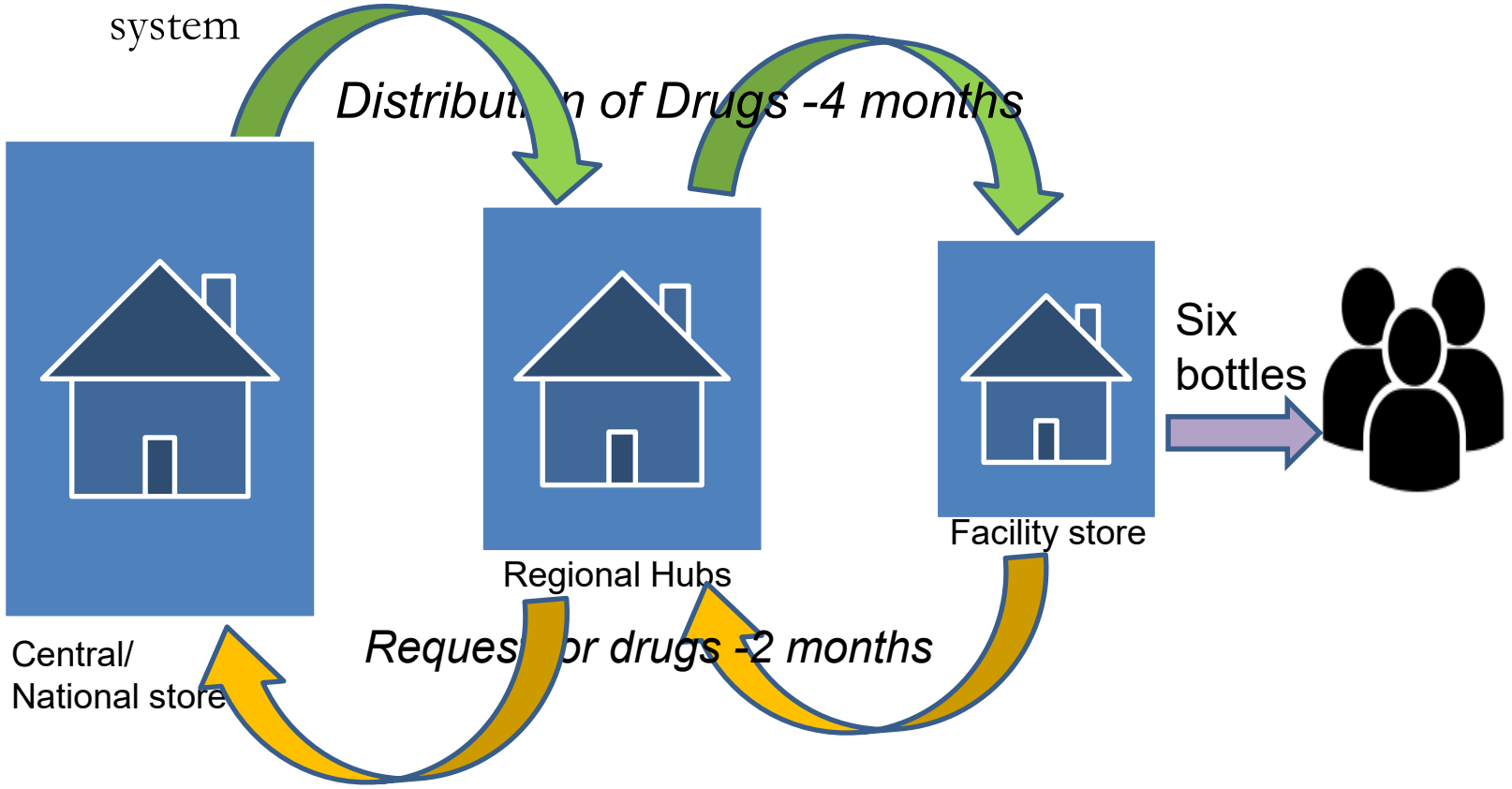
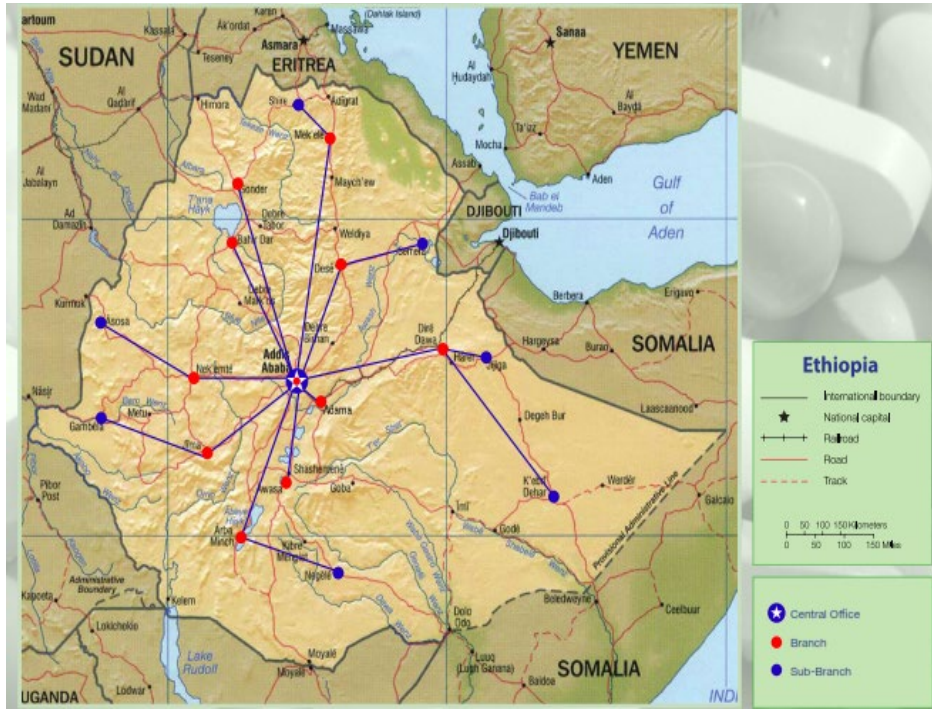
ART Quantification

- Different quantification or procurement process not required
- Optimizing the national distribution system



PFSA Geographic Map



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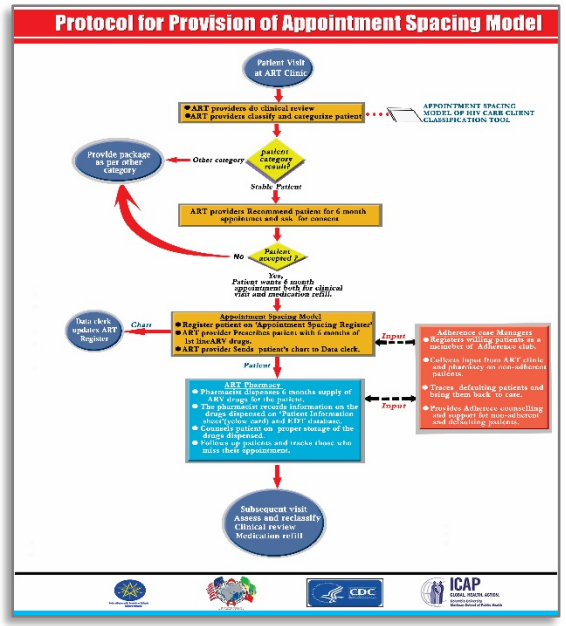
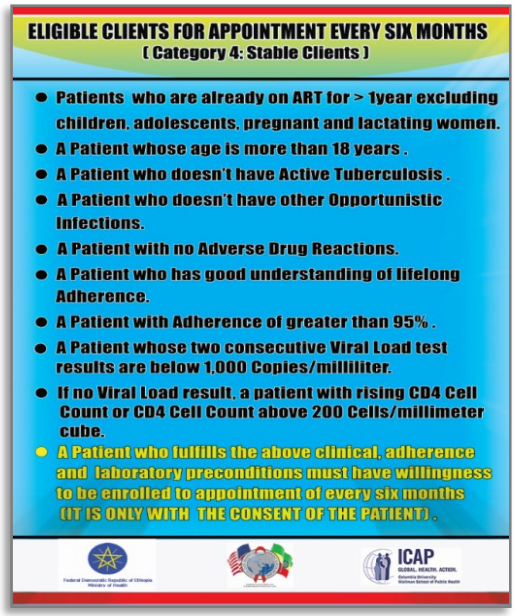
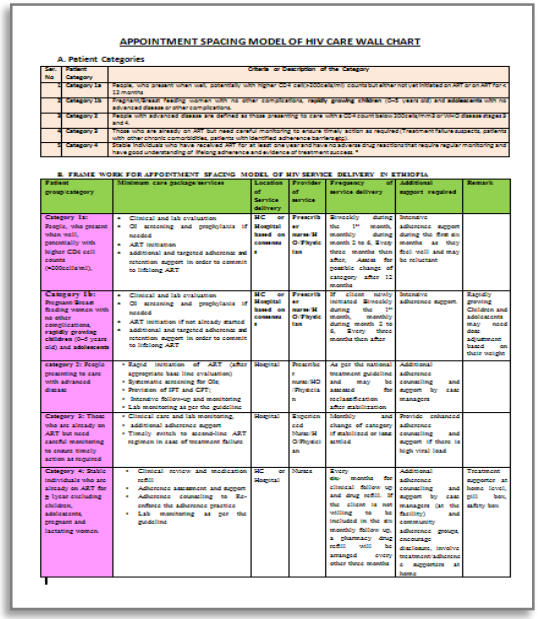
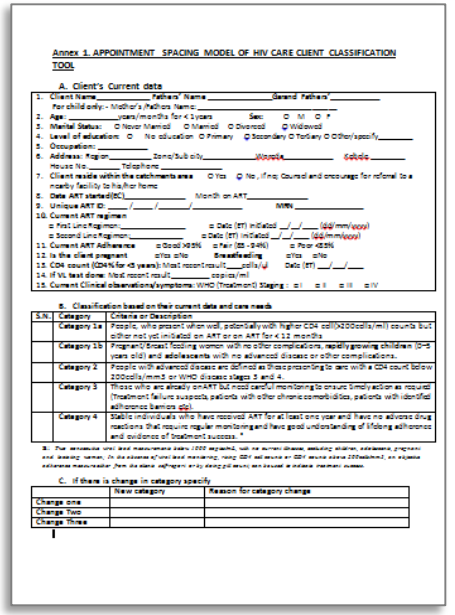
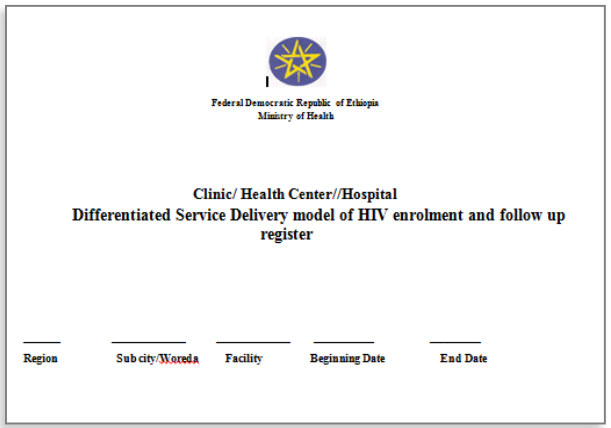
Appointment Spacing model: job aides and resources

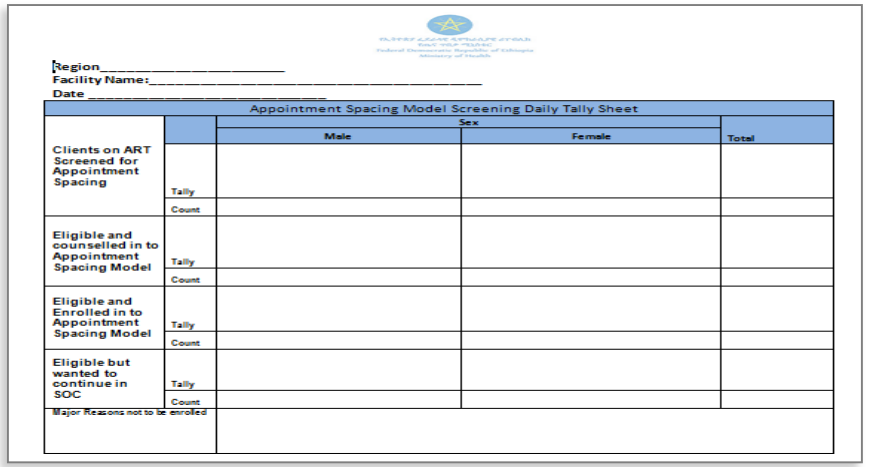


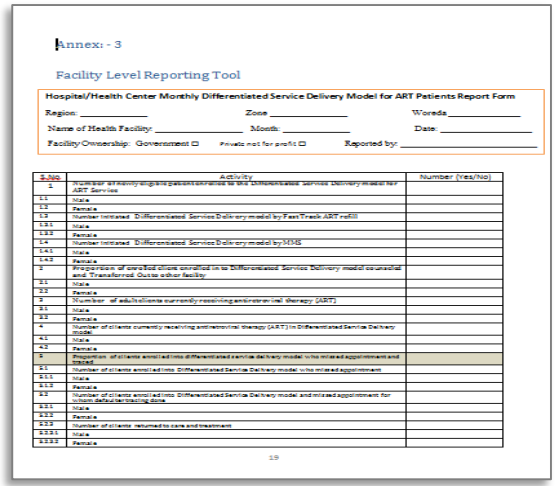












Implementation of Appointment Spacing model

Stable clients given:

- Appointment every six months for clinical follow up and medication refill
- Enhanced counseling to disclose to their family members and arrange at least one treatment supporter for each client (among their own family members)
  - Clients receiving treatment as a couple = counseled to sequence their follow-up visits so that each goes to the health facility every three months
- Support for medication storage techniques
- Peer adherence support

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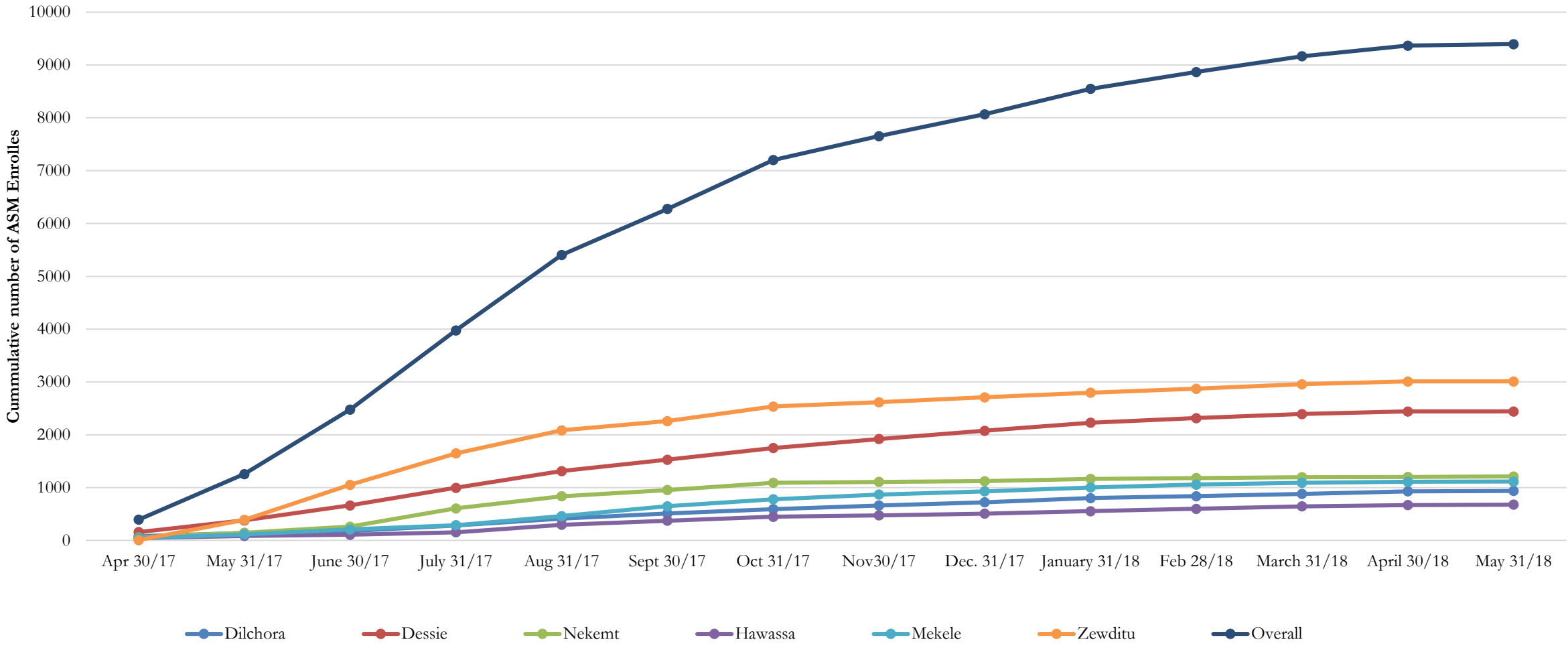
Pilot Project: Cumulative Enrollment
April 2017- May 2018



Outline

- Background
- Planning, preparation and piloting
- **Moving to scale**
- Lessons learned

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Moving to Scale

- Following the pilot project, FMOH implemented the six-month MMS approach nationwide
- 1,086 health facilities are implementing the model
- As of January 2019, 176,925 clients were enrolled
  - This is **79%** of all eligible clients on ART in Ethiopia
  - Approximately 20% of clients offered MMS declined to participate

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Lessons Learned

- Rapid enrollment of a large number of clients within a short period; variations across different hospitals
- More than two thirds of those eligible have already been enrolled in the program
- Among those who declined the major reasons included
  - Fear of inadvertent disclosure due to having to store large quantities of medication at home
  - Concerns regarding safety and storage of medication for prolonged periods at home

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Thank You

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Client and Provider Experiences with Multi-month Dispensing in Malawi and Zambia

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The INTERVAL Study

- Overview
  - A cluster randomized study performed in Malawi and Zambia comparing 3 and 6 month ART dispensing in stable patients
    - Primary outcome
      - Retention in care at 12 months
    - Secondary outcomes (also at 12 months)
      - Virologic Suppression, cost-effectiveness, qualitative responses from clients and providers
- Study Progress
  - Enrolled over 9,000 individuals from Malawi and Zambia (2017-2018)
  - Qualitative data collection (June-September 2018) in Malawi (clients and providers) and Zambia (providers only)
  - Endpoint data for Malawi (Completion July 2019)
    - Funding being mobilized to collect data in Zambia (anticipated June-August 2019)

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Qualitative Methods: Client (Malawi)

- Semi-structured in-depth interviews (IDIs) were conducted with a random subset of study clients at 10 health facilities (5 facilities in the 3-month and 5 facilities in the 6-month arm)
  - One hour interview in local language
  - Questionnaire focused on:
    - Benefits and challenges of dispense interval (3 or 6 months)
    - Pressure to sell or share ART
    - Whether ART was lost or stolen
    - Whether people had extra facility visits for illness or family planning
    - Ideal amount of ART they would like to receive

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Qualitative Methods: Provider (Malawi and Zambia)

- Participating providers in Malawi and Zambia were interviewed at the end of 12 months of dispensing either 3- or 6- months of ART
  - clinical officers or nurses
  - directly prescribing and/or dispensing ART at a study site for at least six months during the first year of study implementation.
- One hour interview in local language. Questions on:
  - feasibility and acceptability of ART dispensing intervals
  - provider perceptions of the challenges clients face in transporting and storing ART;
  - provider views on the scope of sharing and selling of ART;
  - facility-level challenges, including ART stock and drug expiration;
  - perceptions of the impact of extended ART dispensing on provider workload and clinic efficiency;
  - and, provider views about the "ideal" ART dispensing interval.

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Methods: Data Analysis Patients and Providers

- The study was approved by the Malawi National Health Sciences Research Committee (NHSRC), the ERES Converge ethical review board in Zambia, and the Institutional Review Board at the University of California Los Angeles (UCLA).
- Audio recordings of interviews were transcribed and imported to Atlas.ti v7
- Interviews were analyzed using inductive thematic analysis to identify key themes and patterns within the data.
- Findings were arranged by the socio-ecological model (SEM) and presented based on common themes within the SEM framework, with a focus on comparing the experience between 3- and 6- month dispensing of ART.

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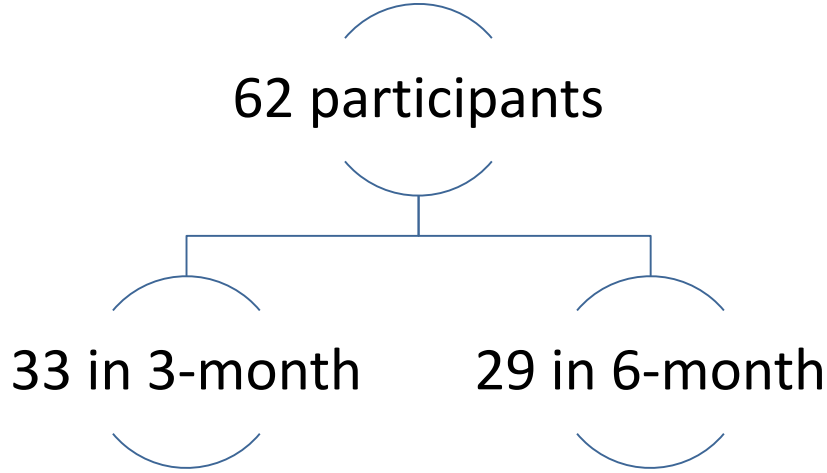
Preliminary results: Client Interviews

- Median age 41.5 years
- Majority had a primary sex partner (89%)
- Majority had disclosed their HIV status to this partner (98%)
- Median household size : 5
- Median number of children: 2
  - IDI participants were more likely to be married and more likely to be formally employed than the general study population.



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Individual and Interpersonal Level

- **Disclosure:**
  - No reports in either arm of unwanted disclosure to members of the household due to ART supply
- **Carrying:**
  - No logistical problems carrying 6 month supply – people adapted by bringing larger bags for carrying
- **Storage**:
  - No reports of problems with storage at the home
    - Biggest consideration was keeping ART where children could not reach
    - No reports of unwanted disclosure due to large supply
- **Lost and stolen:**
  - Only one respondent in the 3-month arm had lost ART during the prior year

When they changed me to six bottles, it was difficult to put three bottles in one pocket and the other three bottles in another pocket. That is why I thought of taking a bag to carry the medicine.

(Male, 6-month arm, 47 years)

No, I have never lost any. I take care of them, because it's my whole life.

(Female, 3-month arm, 53 years)

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Community Level

If you get the drugs and sell them that means you are selling your life.

(Male, 6-month arm, 27 years)

What people say is that they want the beer to be sour and that people should get drunk fast [if ART is added]. I don't have the proof that people do that.

(Male, 6-month arm, 46 years)

Sometimes we ride on a bicycle and the drugs make sounds and the bicycle men are the ones who talk about it. 'Such a woman rode on my bicycle and she carried some [HIV] drugs'.

(Female, 6-month arm, 45 years)

- **Sharing**
  - Only one client in the 3-month and one in 6-month reported sharing
- **Selling**
  - None of the participants reported selling ART
  - Only rumors of alternative uses of ART were provided: adding to beer and feeding livestock
- **Stigma**
  - Being mocked for being seen with ART bottles or carrying bags with bottles
  - Reported in both three- and six-month arms, and therefore, not found to be associated with dispense interval

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Organizational Level

- **Decreased cost of visits**
  - Direct costs: transport
  - Indirect costs: loss of wages
- **Increased freedom**
  - Employment
  - Family travel

I was traveling often and finding [transport] money was hard, but now with the 6-month supply, it is good become I stay a long period without coming to the health facility.

(Female, 6-month arm, 48 years)

Since I am working, it is not good to be excusing yourself, and sometimes they [employers] don't respond positively, saying 'you are fond of excuses.'

(Female, 6-month arm, 39 years)

The biggest benefit is that for me, I live like a normal person because the [six month] period is long.

(Male, 6-month arm, 58 years)

It was affecting my work because every two months I was supposed to come here. When I go for field work, I was concerned that I might skip medication. Now that I get six months of drugs, I am able to plan my time and my appointment date, so it's good for me.

(Male, 6-month arm, 56 years)

Additional Client Results

- 72% of participants reported visiting a health facility during the study period for reasons other than ART refills
  - 77% three-month arm
  - 66% six-month arm

- When asked about their hypothetical ideal amount of ART, participants mentioned intervals of four to 18 months, but most wanted either six-months (17 respondents) or 12-months (16 respondents) of ART

Client Conclusions

- The theme of 'value of ART' is reported to be a strong protector against sharing, buying, and selling
- Six months of ART was "normalizing" for many clients
- Unwanted disclosure is not an issue (carrying and storage)
  - Could be due to high rates of disclosure to primary sexual partners in our sample (98%)
- Strongest impact was at the organizational level
  - Decreased visit frequency
  - Decreased transport costs and lost wages
- More data needed on additional visits and where/if women seek family planning

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Provider Data

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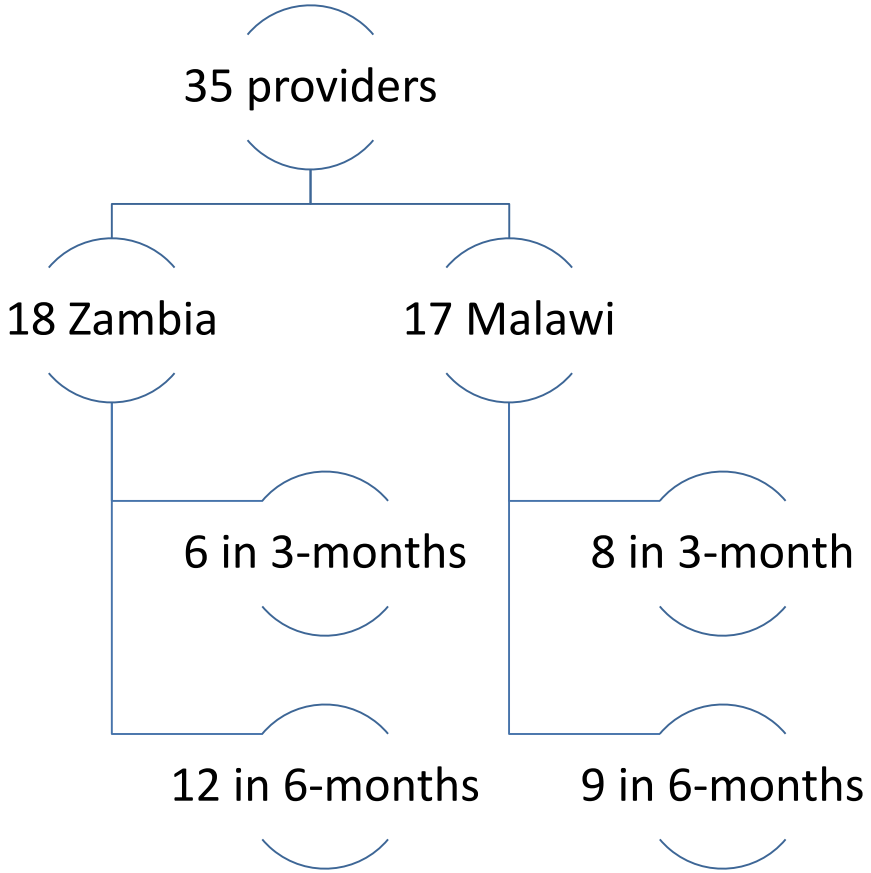
Preliminary Provider Results



- 10 were clinical officers and the remainder were nurses.
- Health care workers had been providing ART for an average of four years and working at their current facility for at least three years.

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Results: Provider Perspective
3 and 6 month dispense intervals

- **ART carrying and storage**
  - Clients managed with larger supply - brought bigger bags for carrying their medication comfortably; importance of plastic bags provided by the study.
  - Half of providers were concerned clients having challenges with storage at home, regardless of arm but few specific examples
- **ART sharing and selling**
  - pill sharing was raised as a common issue in both arms
    - Opening one bottle that is used by both partners
    - Short-term sharing pills when one partner runs out of his/her supply or is traveling
    - Short-term sharing with a friend
  - Providers attributed discrepancies in pill counts to sharing among partners.

> *When it comes to carrying of drugs it's really a challenge.... You can see since some come with bags...*
> *(Nurse, 6-month facility, Malawi)*

> *It was very difficult to keep the drugs because some kids may want to play with the drugs*
> *(Nurse, 6-month facility, Zambia)*

> *You find that this person comes on the wrong date and they tell you that, no my husband was travelling and I had to share my drugs*
> *(Clinical officer, 6-month facility, Zambia)*

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Provider Results (cont.)

- No direct experience with clients who sell ART for income
  - communities know that ART is available to clients for free
- Rumors of clients selling ART to people that are crossing borders for work (no specific examples)
- Rumors of ART being sold for use in brewing beer or feeding livestock to help them grow (no specific examples)

> *I have never heard of such a thing [selling ART]. Who can buy these drugs because they are dispensed freely....*
> *(Clinical officer, 6-month supply, Zambia)*

> *I don't know anyone here who takes drugs and sell, no. But just rumors that some people use the drugs to feed animals like pigs.*
> *(Nurse, 6-month facility, Malawi)*

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Results (cont.)

- Perceived benefits to clients for longer intervals:
  - Reduced cost of transportation to facility
  - Reduced time away from income-generating activities.

They [clients] stay very far and them not coming here frequently saves on the time and also the money.
(Nurse, 6-month facility, Zambia)

They are happy; they are doing their work and they are doing their household activities without the disturbance that they should rush to the hospital. For six months, somebody can cultivate, harvest, before coming for another refill. So they are happy at home. It has done a lot to them.
(Nurse, six-months, Malawi)

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Results (cont.)

- Reduced workload and decongested facilities
- No reported challenges with ART shortages or drug expirations due to multi-month dispensing.
  - It should be noted that our study had support from the Ministries of Health for supply chain - not "real world"

> *We have never experienced the stock outs. Even for expiration date, most of the times when we have 5A [first line ART with efavirenz, tenofovir, and lamivudine] the expiry date is in a year. (Nurse, 6-month facility, Malawi)*

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Results (cont.)

- Providers raised concerns that there is delayed health seeking for intercurrent illnesses
- 91% of providers chose a six-month supply as an ideal dispensing interval.

> *These clients of ours being on ART might develop acute illnesses and the problem comes in when you have dispensed [ART] while the person is fine... most resort to staying home because they say I still have the medicine and have months ahead. You find that others come when the problem has gone very far, you ask them and they say it [has been going on for] 3 months....*
> *(Clinical officer, 6-month facility, Zambia)*

> *Yes, 6 months is ideal because we are trying to promote more like a super market, so that we do everything on the same day so that they come for their clinical appointment they also pick their medication. Nurse,*
> *(3-month facility, Zambia)*

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Conclusions: Provider Data

- Providers perceived six-month dispensing as advantageous over three-month dispensing as it
  - reduced burden on clients (cost and time)
  - reductions in provider workload and clinic congestion
- Providers had concerns around sharing and selling regardless of the amount of ART being dispensed, and concerns were largely based on rumor, rather than specific provider experiences.
- Delayed health seeking behavior for intercurrent illnesses is an important challenge of six-month dispensing that requires further evaluation

Comparison of Findings: Clients and Providers

Theme	Client	Provider	Agreement
Carrying	Reported minimal challenges with easy adaptation strategies	Perception of challenges but with adaptation (carrying big bags)	No/Yes
Storage	No significant challenges	Perception that challenges are common	No
Sharing	Only 2 patients reported sharing, all others denied	Common problem, particularly amongst partners (observed by pill count)	No
Return visits for health	Reported returning for acute illnesses	Observed delays in health seeking services (specifically in the 6 month arm)	No
Selling & alternative ART uses	No reports of personal experience; rumors only alternative uses – livestock and alcohol	No concern about selling; Rumors only for alternative uses – livestock and alcohol	Yes
Reduced visits	Beneficial for patients (cost and time)	Beneficial for patients (costs and time) and providers (workload)	Yes
Ideal ART interval	6 months	6 months	Yes

Potential reasons for discrepancies

- Social desirability bias from client reports
- Provider reports were based on *perceptions* of client experiences

Conclusion

- Common experience of benefits; different views of challenges

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