The CQUIN Learning Network

2018 Annual Meeting Summary

February 13-15
Maputo, Mozambique

Empowering Health for 15 years
ICAP
Columbia University Mailman School of Public Health

HIV LEARNING NETWORK
The CQUIN Project for Differentiated Service Delivery

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Resumo Executivo

Contexto

Em Março de 2017, o ICAP (Centro Internacional de Programas de Cuidados e Tratamento do SIDA) da Universidade de Columbia lançou a Rede de Cobertura, Qualidade e Impacto do/sobre o HIV (HIV Coverage, Quality, and Impact Network - CQUIN), com o apoio da Fundação Bill e Melinda Gates. No seu primeiro ano, a rede de aprendizagem CQUIN expandiu de seis para dez países, incluindo agora a Costa do Marfim, Etiópia, Quénia, Malawi, Moçambique, África do Sul, Suazilândia, Uganda, Zâmbia e Zimbabwe.

A CQUIN tem fomentado o intercâmbio contínuo da aprendizagem sobre a implementação e expansão da provisão de serviços diferenciados (DSD – *differentiated service delivery*) para o HIV, tem organizado workshops, seminários e *journal clubs* (grupos de indivíduos que avaliam artigos académicos), e tem apoiado visitas de intercâmbio sul-sul, assistência técnica e projectos de investigação catalítica. A rede lançou três comunidades de prática, com enfoque em serviços diferenciados de monitorização e avaliação, DSD para pacientes em alto risco de progressão da infecção de HIV, e DSD para adolescentes. A CQUIN introduziu ainda o painel de DSD, uma ferramenta que ajuda os países a diferenciar o progresso da expansão da DSD.

A reunião anual da CQUIN permitiu que os países efectuassem uma revisão das melhores práticas globais de DSD, avaliassem o seu progresso, que tivessem intercâmbio sobre as melhores práticas e identificassem as suas prioridades para 2018. Também permitiu que o ICAP, como organização organizadora, recebesse feedback dos membros da rede e dos membros do grupo consultivo sobre o desempenho da rede e as suas prioridades para o segundo ano.

Datas e Objectivos da Reunião

Moçambique organizou a reunião anual, em Maputo, que decorreu de 12 a 15 de Fevereiro de 2018, cujos objectivos eram:

- Rever o progresso dos países em direcção à expansão de DSD
- Facultar o intercâmbio de conhecimentos recursos e estratégias para utilizar os modelos de DSD (DSDM) e expandi-los ao nível nacional
- Partilhar os achados de pesquisas, as melhores práticas e as inovações dos DSDM em diferentes categorias de pacientes
- Rever experiências iniciais e produtos das comunidades de prática da CQUIN
- Identificar lacunas, desafios e oportunidades comuns para uma aprendizagem conjunta futura, para a co-criação de ferramentas e recursos e para futuras visitas de intercâmbio sul-sul

Participantes da Reunião

A reunião contou com participantes da Etiópia, Quénia, Malawi, Moçambique, África do Sul, Suazilândia, Uganda, Zâmbia e Zimbabwe. A Costa do Marfim não participou, por ter aderido à rede apenas algumas semanas antes da reunião. As equipas nacionais incluíam representantes dos ministérios da saúde, sociedade civil, instituições académicas e parceiros de implementação do PEPFAR.

Participaram ainda na reunião representantes da Fundação Bill e Melinda Gates, dos Centros de Prevenção e Controlo de Doenças dos EUA (*Centers for Disease Prevention and Control* ou CDC), da Organização Mundial da Saúde (OMS), do Fundo das Nações Unidas para a Infância (UNICEF), do Programa Conjunto das Nações Unidas para o HIV e SIDA (ONUSIDA), do Fundo Mundial (*Global Fund* ou GF), da Fundação *Elizabeth Glazer Pediatric AIDS Foundation* (EGPAF), da *Médecins Sans Frontières* (MSF), da *International AIDS Society* (IAS), da Coligação Internacional de Preparação para o Tratamento (*International Treatment Preparedness Coalition*, ITPC) e do Foro Global sobre MSM e HIV (MSMGF).

Principais Questões Apresentadas/Discutidas

A Dra. Wafaa El-Sadr, Directora Global do ICAP, estabeleceu o cenário para a reunião anual de três dias, salientando o nível extraordinário da difusão global do tratamento do HIV, particularmente na África subsariana, e apontando as lacunas que existem ainda na cobertura e nos sistemas de saúde. Embora a expansão de DSD não constitua uma panaceia, é uma forma importante de controlar a epidemia de HIV e é uma das prioridades de muitos ministérios da saúde.

Segundo os dados nacionais da OMS, apresentados pelo Dr. Nathan Ford, Responsável Científico do Departamento de HIV/SIDA e Hepatite Global, as políticas nacionais na região do AFRO (Escritório Regional para África) demonstram um aumento do apoio nacional a implementação de DSD. Muitos países têm directrizes políticas que apoiam uma redução de visitas clínicas e colecta de medicamentos. O painel de dados da CQUIN, apresentado pelos países da rede, validou essas conclusões. Os dados demonstram um progresso notável em direcção ao estabelecimento de uma base para a expansão de DSD, incluindo uma expansão da disponibilidade de políticas de apoio, directrizes, ferramentas auxiliares de trabalho e materiais de formação. Isto posiciona os países de forma a facilitar a difusão geográfica dos modelos DSDM, que actualmente é limitada.

A Dra. Miriam Rabkin, Investigadora Principal da rede CQUIN, e o Dr. Peter Preko, Director de Projectos da CQUIN, salientaram as actividades principais da rede e os resultados alcançados este ano. Três workshops anteriores da CQUIN deram origem a 24 planos de acção em nove países. Dos 132 itens de acção, dois terços foram concluídos ou estão ainda em curso. Alguns exemplos de visitas sul-sul de Moçambique à Suazilândia e ao Malawi, e da Suazilândia ao Malawi, demonstraram a maneira como os intercâmbios sobre melhores práticas entre os países têm informado as alterações de directrizes e a adopção de novos modelos.

A Sra. D. Solange Baptiste, Directora Executiva do ITPC, apresentou perspectivas comunitárias sobre DSD e sublinhou a necessidade de aumentar o engajamento e educação das comunidades. Citando dados de uma avaliação rápida feita a profissionais de saúde e pessoas a viver com HIV (PVHIV) sobre o grau de prontidão no contexto de DSD, ela explicou que a maioria dos membros das comunidades entrevistados não percebiam claramente o que é o DSD.

A Reunião Anual incluiu 14 sessões, a saber: seis sessões de discussão em painéis, sessões moderadas, apresentações em sessões plenárias e sessões paralelas em grupos (incluindo relatórios dos mesmos). Tiveram ainda lugar sessões ambulantes diárias, com cartazes que apresentavam o progresso alcançado por cada um dos países da rede em relação à expansão de DSD, bem como cartazes dos parceiros de implementação.

Um dos pontos principais da reunião foi uma discussão moderada sobre a expansão de DSD, incluindo os seus sucessos, desafios e questões chave. Os participantes fizeram perguntas não redigidas a um painel que incluía o Dr. Ade Fakoya (Fundo Mundial), o Dr. Issac Zulu (CDC-

Atlanta), o Dr. Nathan Ford (OMS), aDra. Susan Michaels-Strasser (ICAP), a Sra. D. Rose Nyirenda (MdS-Malawi) e o Sr. Dinku Worku (Network of Ethiopian Positives (NEP+) - Etiópia).

Os participantes identificaram a expansão de DSD como sendo o objectivo do segundo ano e anos subsequentes da CQUIN, já que a maioria dos países da rede conseguiu já estabelecer as bases da implementação. A sessão realçou a necessidade de novas ideias e de uma mudança de foco, dos estabelecimentos de saúde para a comunidade, para se superarem os desafios em termos de se conseguir controlar a epidemia. Os participantes constataram que o DSD para as populações chave está a ficar para trás, e reconheceram que a melhoria da cobertura de DSD pode constituir uma forma de reduzir o estigma em relação às populações a viver com HIV.

Problemas e Desafios Comuns / Intersectoriais

- O engajamento da comunidade é uma prioridade, pois cria demanda para a expansão de DSD.
- A monitorização e avaliação (M&A) diferenciada continua a ser uma questão chave na maioria dos países. Os sistemas actuais de M&A não foram concebidos para capturar a mudança de onde e como os clientes recebem normalmente os serviços. Os ministérios da saúde podem precisar de dados mais detalhados do que os financiadores, particularmente durante a fase de expansão da implementação de DSD. É preciso estabelecer um equilíbrio entre o que é necessário e o que é pragmático.
- Embora os modelos de Tratamento Antirretroviral Diferenciado (TARD) tenham sido concebidos primariamente para melhorar a qualidade dos serviços, a mudança para tratamentos menos intensivos tem também contribuído para o aumento da esperança de uma maior eficiência e custo-eficácia. Porém, até à data existem dados limitados sobre o custo-eficácia de DSD. A documentação dos custos e contributos vai ajudar os investigadores e explorar melhor estas questões.
- São necessários novos modelos de DSD para uma série de grupos / condições diferentes, tais como pacientes mais idosos, pacientes com resistência aos medicamentos, pacientes que interrompem o tratamento e populações chave (para quem os serviços de DSD estão normalmente mais atrasados).
- É importante considerar testes diferenciados e métodos de prevenção diferenciados, bem como tratamentos diferenciados.

Resultados Chave

- Os nove países submeteram planos de acção e metas rastreáveis para facilitar a expansão da DSD durante o ano.
- Todos os países submeteram sugestões sobre visitas de intercâmbio sul-sul de interesses baseados nas lições aprendidas de outros países na reunião.
- Os países partilharam recomendações com a CQUIN em relação às actividades que a rede deveria priorizar no segundo ano.
- A comunidade da prática de M&A da CQUIN preparou aperfeiçoamentos da estrutura diferenciada de M&A.

Etapas Seguintes

- Partilhar o relatório e apresentações da reunião com os participantes
- Actualizar as agências governamentais dos EUA sobre a reunião anual e eventos futuros
- Dar seguimento, com os países, ao progresso dos planos de acção
- Encorajar os países a convocar uma sessão de balanço pós-reunião com os seus respectivos grupos de trabalho técnicos

Introdução

Contexto

Tem-se alcançado um progresso extraordinário na luta contra a epidemia global de HIV. O número de pessoas a viver com HIV que têm acesso a tratamento antirretroviral (TAR) nos países de rendimento baixo a médio aumentou de 400.000 em 2003 para 18,2 milhões em 2016, e calcula-se que se evitaram cerca de 7,8 milhões de mortes devido à expansão dos serviços de TARV. O aumento do acesso à prevenção e tratamento resultou também numa redução de 35 por cento em novas infecções de HIV desde 2000, incluindo uma redução de 58 por cento nas crianças.

Apesar destes sucessos, resta muito trabalho a fazer. Para poderem alcançar as metas ambiciosas 90-90-90 da ONUSIDA até 2020, os países afectados devem resolver vários desafios críticos:

- O número de pessoas a fazer o TARV precisa de aumentar para o dobro, criando um grande problema para as unidades sanitárias superlotadas, asseguradas por profissionais de saúde com uma carga de trabalho elevada.
- A qualidade e aceitabilidade dos serviços de tratamento do HIV precisam de melhorar, para permitirem um melhor engajamento e retenção dos pacientes no tratamento.
- Os programas de HIV precisam de se tornar mais eficazes, para se tratarem mais pacientes com os mesmos (ou menos) recursos.

Em reacção a estes imperativos, há cada vez mais evidência de que a oferta de serviços diferenciados (DSD, *differentiated service delivery*) é uma forma de permitir que os sistemas de saúde administrem os números crescentes de pacientes a fazer tratamento ao HIV, ao mesmo tempo que melhoram o acesso aos serviços de prevenção e tratamento do HIV, a qualidade dos programas de HIV, a satisfação dos pacientes e os resultados.

Com o apoio da Fundação Bill e Melinda Gates, o ICAP, na Universidade de Columbia, lançou em Março de 2017 a Rede de Cobertura, Qualidade e Impacto do/sobre o HIV (CQUIN), para fomentar a adopção, implementação e expansão de modelos de DSD de grande qualidade, através do apoio a uma rede de países em diferentes fases de implementação de DSD, permitindo a partilha de experiências, aprendizagem cruzada e uma colaboração na resolução de problemas.

O objectivo geral da reunião anual era fazer com que a CQUIN fizesse uma avaliação do progresso alcançado no seu primeiro ano, incluindo as realizações, os desafios e os pontos que é necessário priorizar no segundo ano e nos anos subsequentes.

Objectivos

- Rever o progresso de cada país na expansão de DSD
- Facilitar o intercâmbio de conhecimentos, recursos e estratégias para ampliar os modelos de DSD (DSDM) a escala nacional
- Partilhar as conclusões, melhores práticas e inovações das investigações no DSDM, em diferentes categorias de pacientes
- Rever as experiências e resultados iniciais das comunidades de prática da CQUIN

- Identificar lacunas, desafios e oportunidades comuns para futuras aprendizagens conjuntas, para a co-criação de ferramentas e recursos e para futuras visitas de intercâmbio sul-sul

Ordem de Trabalhos da Reunião

A reunião teve lugar em Maputo, Moçambique, de 12 a 15 de Fevereiro de 2018. Foi iniciada com uma cerimónia de abertura, na noite de 12 de Fevereiro, à qual se seguiram três dias inteiros de workshops. Os workshops incluíram apresentações em sessões plenárias, discussões em painéis, sessões paralelas em grupos, com diversos temas, sessões de apresentação de relatórios, uma sessão ambulante com cartazes e sessões individuais nacionais, realizadas no último dia para desenvolvimento de planos de acção específicos para cada país.

A agenda integral encontra-se incluída no apêndice do relatório.

Monday, 12 February: Opening Reception

Dr. Wafaa El-Sadr
Global Director, ICAP at Columbia University

Dr. Wafaa El-Sadr welcomed participants to the meeting on behalf of ICAP. She acknowledged Dr. Rosa Marlene Manjate Cuco, the National Director of Public Health in Mozambique, who was representing Mozambique's Minister of Health. She also highlighted the Ministry of Health's commitment to confronting the HIV epidemic and its dedication to the health and well-being of the people of Mozambique.

Dr. El-Sadr reviewed the goals for the meeting: to reflect on what has been accomplished in the first year of CQUIN, and to look forward, thinking about what needs to be done in the year ahead. She thanked Dr. Peter Ehrenkranz and the Bill & Melinda Gates Foundation for their continued support of the network, and the ICAP team for planning and organizing the meeting.

A complete transcript of Dr. El-Sadr's remarks is available in the Appendix.

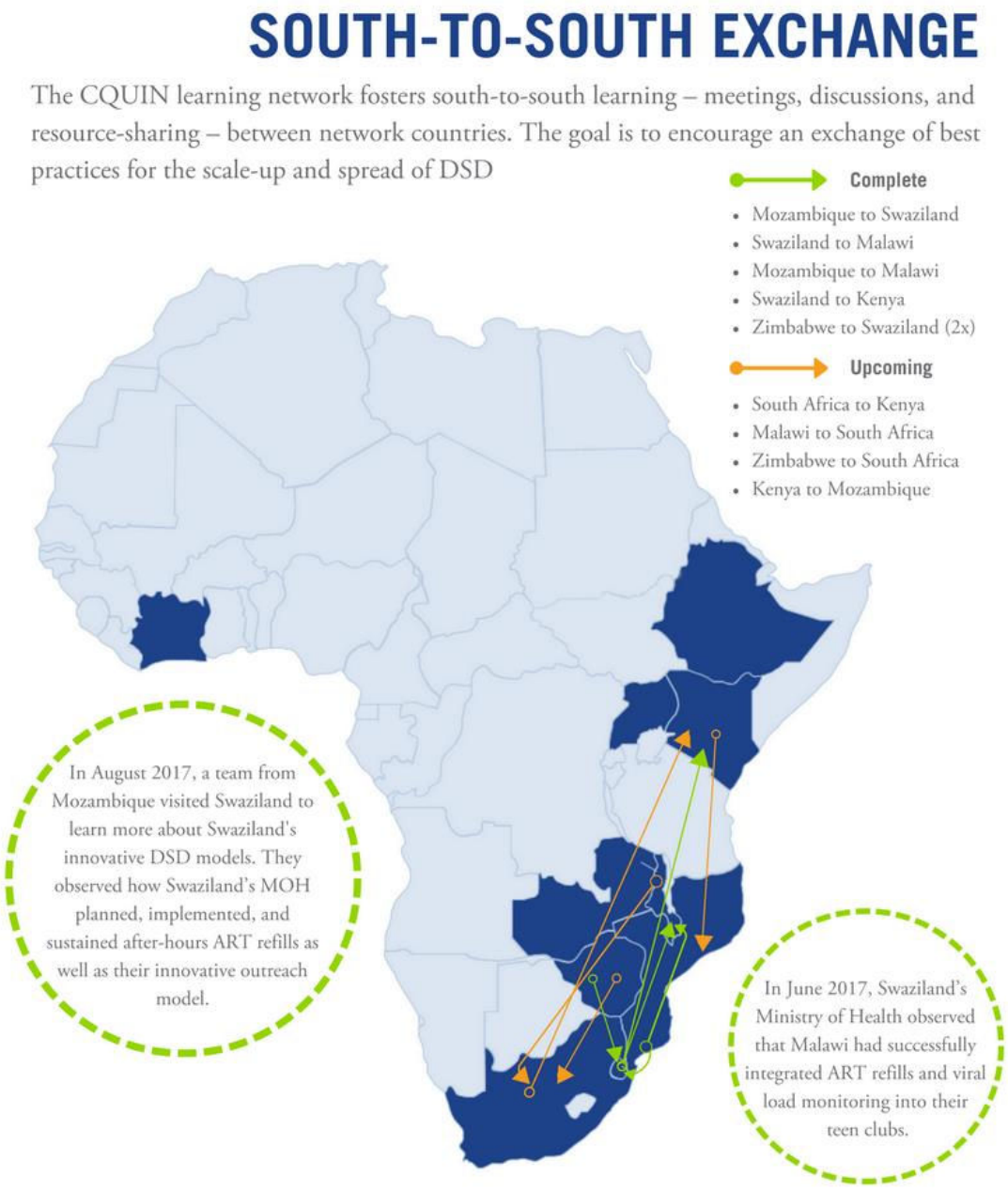
Dr. Miriam Rabkin
Director for Health Systems Strategies, ICAP New York

Dr. Rabkin gave an overview of the CQUIN network, and its three domains: knowledge exchange, implementation support, and knowledge generation/implementation science. She welcomed the tenth network member, Côte d'Ivoire, acknowledging the importance of having a West African country join the network and the unique challenges to scaling up DSD in the region.

Dr. Rabkin summarized the accomplishments of the last 11 months since the launch of CQUIN, and the progress made toward the network's priority challenges and research agenda to take DSD to scale. She highlighted the network's six initial thematic focus areas, prioritized by the CQUIN member countries present at the launch meeting in 2017. These include: differentiated M&E (monitoring and evaluation of DSD); DSD for patients at high risk of HIV disease progression (P@HR); DSD for men; DSD for adolescents and young people; DSD for patients with both HIV and non-communicable diseases (NCDs), and quality improvement (QI) for DSD.

These themes, as well as exploration of the affordability and effectiveness of DSD models, laboratory barriers and facilitators of DSD, and DSD for key populations, formed the basis for the network's initial joint learning activities.

Dr. Rabkin discussed the CQUIN Dashboard, a maturity model-based self-assessment tool, designed to help countries stage their progress towards DSD scale up and prioritize activities to achieve both coverage and quality. She also mentioned the network's online resources, including the network website, webinars, and newsletters. Dr. Rabkin outlined the network's south-to-south learning exchange visits, virtual communities of practice, and catalytic projects exploring targeted questions related to the scale-up of DSD.



Summary of the network's south-to-south learning exchanges, February 2018

Dr. Rabkin summarized the pre-meeting survey results. She highlighted the increase in the proportion of respondents who said that DSD was being implemented at scale in their countries compared to last year. There was also an increase in the proportion of respondents who said there were national DSD review meetings; a national DSD scale-up plan; a national DSD technical working group in their countries, and a national system for M&E that incorporates DSD.

"Countries have achieved a lot in the past year," Dr. Rabkin said. "CQUIN has contributed by fostering knowledge creation and a rich exchange of lessons learned; this annual meeting will enable ongoing exchange and joint learning."

A complete transcript of Dr. Rabkin's remarks is available in the Appendix.

Ms. Solange Baptiste
Executive Director, the International Treatment and Preparedness Coalition (ITPC)

Ms. Baptiste leads a global coalition of activists who work to ensure access to treatment for people living with HIV. She explained the mission of the International Treatment Preparedness Coalition (ITPC), noting that, "ITPC ensures that DSD does not just reside in Geneva, or only in government policy papers...Our collective efforts include direct work with communities to understand DSD, to demand DSD, and to advocate for the appropriate scale-up of quality DSD in their communities."

She explained that discussions of DSD empower stakeholders to ask questions about what makes a health system weak, fragile, or not work for those who need it. "To see overcrowding, stock-outs, and bad services, is to see poor infrastructure, dwindling resources, no political will, and systemic discrimination," she said.

Ms. Baptiste praised governments like Mozambique's, which, despite challenges, increased ART coverage for pregnant women living with HIV, resulting in a nearly 75 percent decline in new infections among children from 2011 to 2014, and reduced new infections among adults by 40 percent. She explained that, in her many conversations with community leaders, one theme seemed to be constant as they discussed DSD: Communities must be at the center for DSD to work.

Ms. Baptiste urged participants to ask themselves the following three questions as they prepare to scale-up DSD:

- How can DSD be operationalized so communities are at the center of design, planning, and implementation?
- How can we ensure that those who are not in the system are reached by the interventions?
- How can we ensure that DSD services provided along the cascade are of optimal quality for the recipients of care?

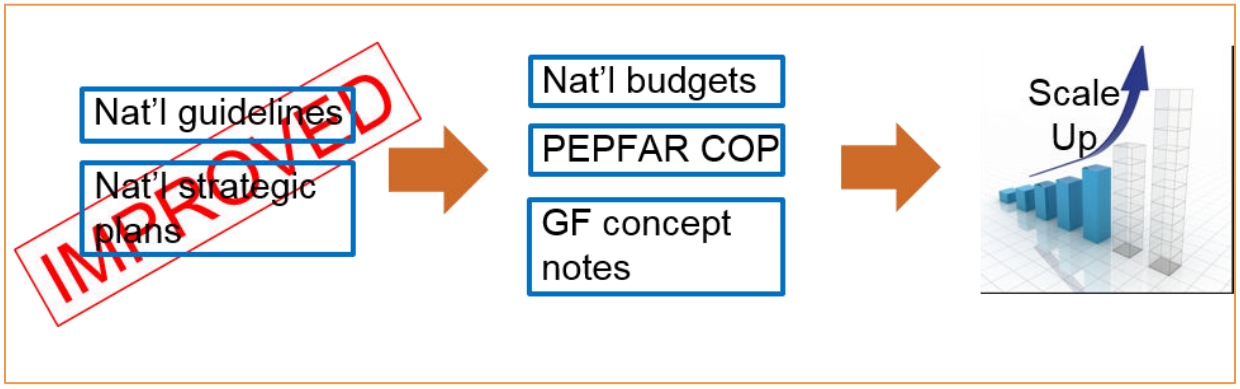
A complete transcript of Ms. Baptiste's remarks is available in the Appendix.

Dr. Peter Ehrenkranz
Senior Program Officer, the Bill & Melinda Gates Foundation

Dr. Ehrenkranz focused on how CQUIN fits into the Bill & Melinda Gates Foundation's theory of action related to the scale-up of DSD, and shared examples of work supported by the Foundation, including support for the International AIDS Society's (IAS) advocacy for DSD scale-up; the African Society of Laboratory Medicine's (ASLM) new Laboratory Community of Practice (LabCoP) learning network; the World Health Organization's (WHO) initiatives on monitoring and evaluation; and implementation science projects exploring such issues as using patient and provider feedback to improve the quality of health services in Zambia and encouraging providers to change patient management in Malawi. He also spoke about the Foundation's efforts to measure the progress, quality, and impact of scale-up.

He reminded participants that "all of us in this room are experts in some area, and we're also beginners in other areas…We all have something to teach; we all have something to learn. We're here to bring you all together to learn from one another by organizing the network around the prioritized gaps. There's an opportunity here to bring forward ideas and to teach others."

He ended by stating that the ultimate goal of the CQUIN network is to improve outcomes for people living with HIV and to make better use of health system resources. He noted the importance of exchanging information and ideas to inform one another's national guidelines and strategic plans. He postulated that if done successfully, this should lead to improved national guidelines and strategic plans, that could facilitate changes in funding that will enable further scale-up, as illustrated in the figure below. "That funding can be from national budgets, from PEPFAR funding, or Global Fund funding," he added.



Dr. Ehrenkranz encouraged participants to work with their PEPFAR colleagues to shape their 2018 and 2019 national strategic plans, which would ultimately lead to improved outcomes for the patients, and better use of resources for the health system.

A complete transcript of Dr. Ehrenkranz's remarks is available in the Appendix.

Dr. Rosa Marlene Manjate Cuco
National Director of Public Health, Mozambique Ministry of Health

Dr. Cuco delivered the keynote speech on behalf of Mozambique's Minister of Health. She welcomed participants to Mozambique, stating that, "There is no better place to be this evening than among a group of people who have spent the past year focusing on a group of the health sector's most valued clients—people living with HIV—to ensure that they receive services according to their needs and preferences."

She noted that Mozambique was one of the first countries to start differentiating ART services, and has been a model to the world in the area of DSD. Using the Community ART Group (CAG) model, Mozambique was able to reduce the burden of accessing ART services for clients, while strengthening psychosocial support through group interactions. She talked about the lessons they learned along the way, and how they have shared experiences that have since enabled other countries to adopt the CAG model.

Dr. Cuco said the Ministry has embraced CQUIN, which came at a critical point as they prepared to revise national HIV treatment guidelines. She stated that the opportunity CQUIN provided to learn from the experiences of other countries—via workshops and south-to-south visits to Malawi and Swaziland—afforded Mozambique with a unique advantage: "Participating in CQUIN has enriched

our understanding of DSD and provided us the opportunity to exchange best practices, identify gaps in our service delivery models, and prioritize activities for scale-up," she said.

She reminded participants that the possibility of controlling the HIV epidemic has never been this promising, and challenged everyone to put clients at the center of the decisions they make. "Excuses to maintain the status quo while depriving clients of their right to safe and affordable services are no longer acceptable. This is my charge to all of the ministries that are part of this network," she emphasized.

Dr. Cuco concluded by thanking ICAP leadership and the Bill & Melinda Gates Foundation for the timely intervention, as well as PEPFAR, the Global Fund, and all supporting partners.

A complete transcript of Dr. Cuco's remarks is available in the Appendix.

Tuesday, 13 February: Coverage – Taking DSD to Scale

Session 1: Setting the Scene

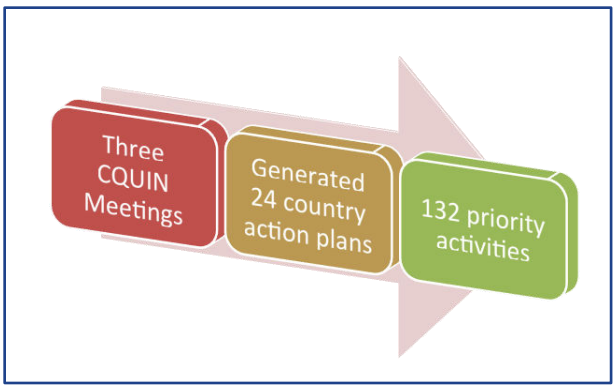
Dr. Aleny Couto from the Mozambique Ministry of Health, and Dr. Antiono Mussa, Country Director at ICAP Mozambique, moderated the first panel, titled, "Setting the Scene". Panelists presented current updates and global, country, and community perspectives on access to DSD models.

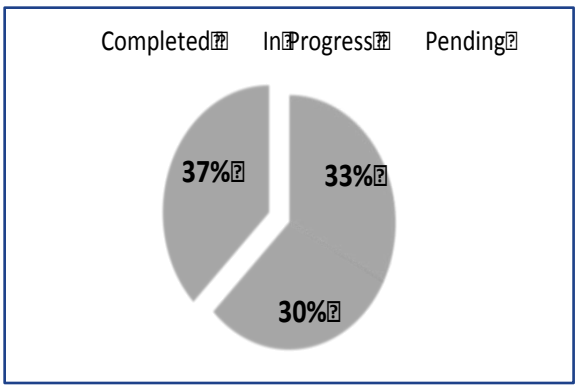
Presentations and Panelists

- **Dr. Wafaa El-Sadr**, Global Director, ICAP at Columbia University: Epidemic Control: Successes, Challenges and the Promise of Differentiated Service Delivery
- **Dr. Nathan Ford**, Scientific Officer, WHO: Differentiated Service Delivery: Where Are We Now?
- **Dr. Peter Preko**, CQUIN Project Director: CQUIN Update
- **Ms. Solange Baptiste**, Executive Director, ITPC: "Nothing About Us Without Us": Engaging Clients in Program Design and Delivery

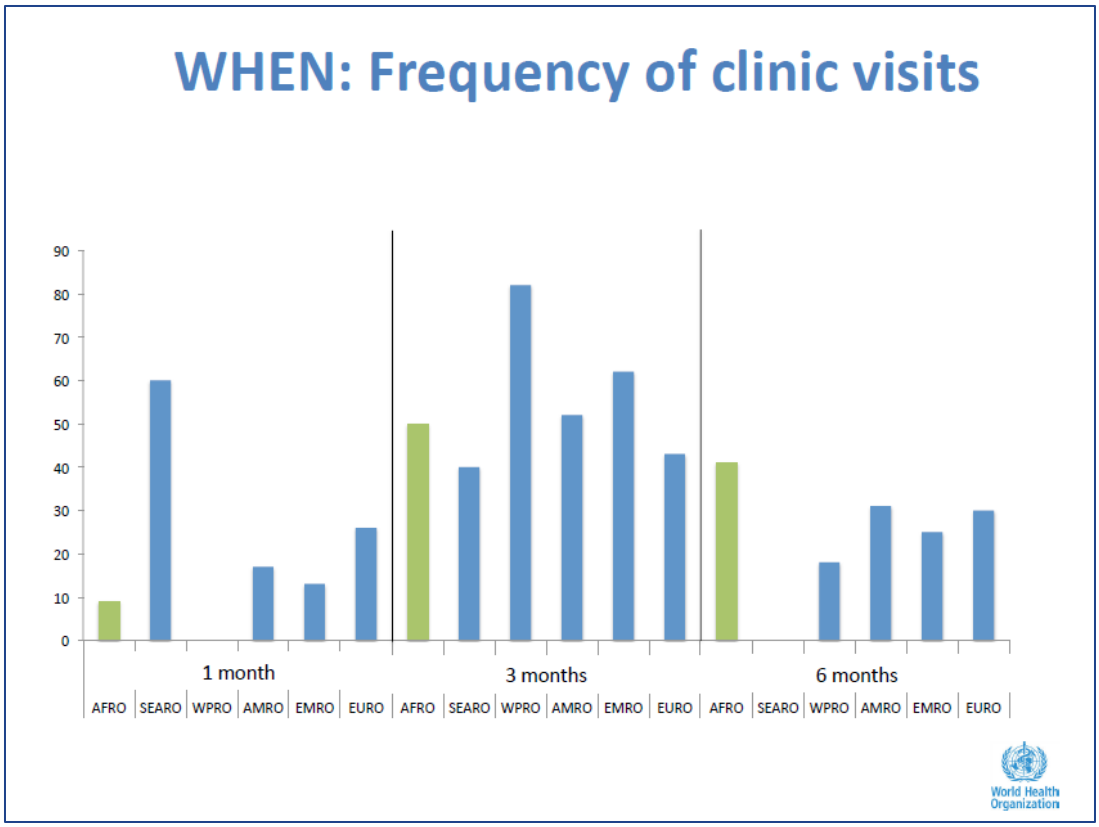
Key Takeaways

- Globally, there has been a substantial increase in the number of individuals accessing HIV treatment; however, gaps remain in coverage, treatment, and health systems.
- DSD is a means to attain epidemic control – not an end in itself.
- There has been a rapid uptake of DSD into national policies and guidelines, most notably in Southern and Eastern Africa. The figure below illustrates the spread of appointment spacing.
- The country level dashboards developed by CQUIN are important tools to review progress towards scaling up high quality DSD services.
- Communities are open to DSD, but there is a knowledge gap in how to access services, and the potential benefits of DSD.
- The support of the CQUIN network has enabled countries to generate and implement DSD scale-up action plans (see figure).





Source: Preko: Number of Action Items Generated by Countries at CQUIN Workshops, and Progress of Implementation



Source: Ford: Progress in Uptake of Appointment Spacing in WHO Regions

Session 2: Panel Discussion – Mapping DSD Scale-Up

Dr. Anna Grimsrud, Lead Technical Advisor at IAS, and Dr. Miriam Rabkin, CQUIN Principal Investigator and Director for Health Systems Strategies at ICAP, moderated the panel discussion on mapping DSD scale-up. The panel discussed the challenges in mapping DSD scale-up, and presented four approaches to tracking change in DSD implementation over time.

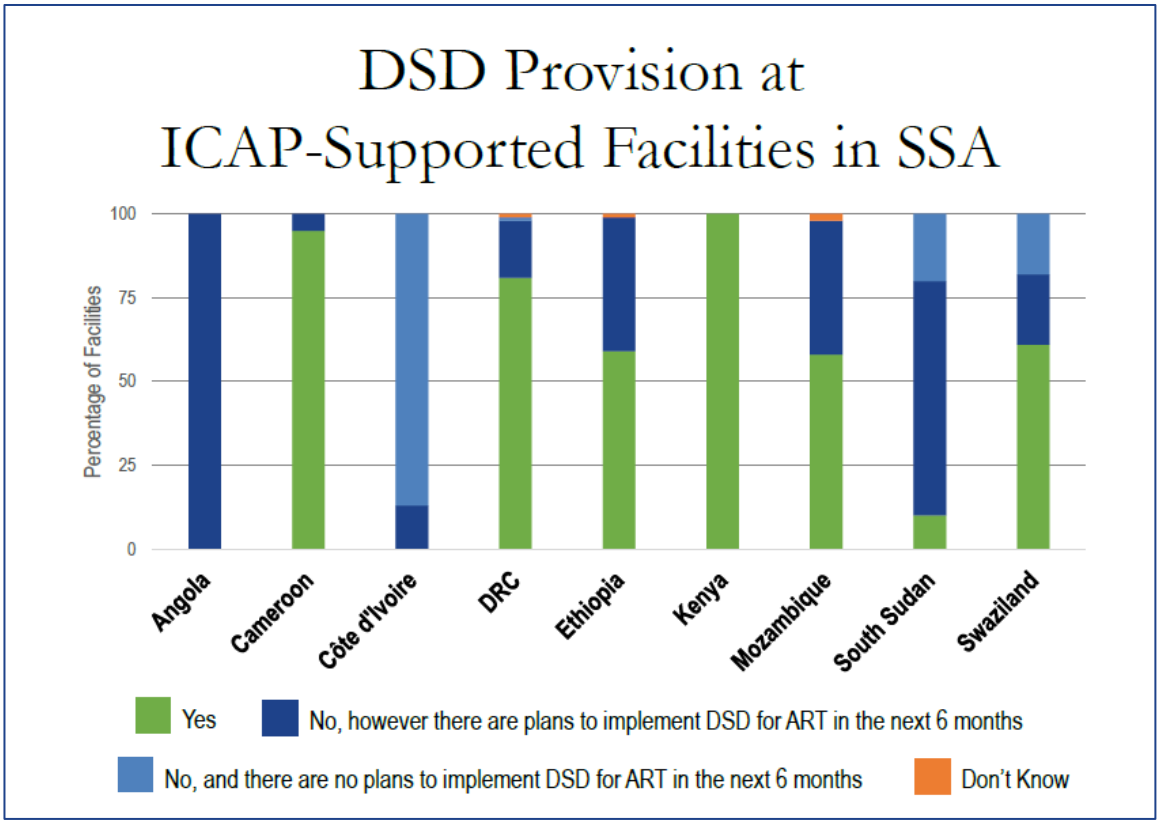
Presentations and Panelists

- **Ms. Andrea Schaaf**, CQUIN SI Specialist, ICAP at Columbia: Mapping DSD Scale-Up: Findings from a Facility-Based Survey
- **Dr. Maureen Syowai**, Regional Clinical Advisor, ICAP Kenya: Tracking DSD Program Maturity with the CQUIN Dashboard
  Dr. Ade Fakoya, Senior Advisor HIV/AIDS, the Global Fund: DSD: View from the Global Fund
  Dr. Isaac Zulu, Medical Officer, CDC/CGH/DGHT: Mapping DSD in PEPFAR Supported Countries

Dr. Ade Fakoya

Key Takeaways

- DSD remains a focus for the Global Fund and PEPFAR and has been advanced in countries supported by each donor.
- There is no comprehensive measurement of DSD scale-up in any country. The panelists noted that to the best of their knowledge, no country has patient-level data on DSD coverage and very few have accurate facility-level data.
- The CQUIN dashboard provides a useful way to track DSD implementation over time, but needs to be further standardized moving forward.
- The PFaCTS site-level survey represents an effective approach to episodic data collection. Data from a survey of ICAP-supported facilities in 13 countries during October-December 2017 showed that DSD models are in the midst of rapid scale-up. Among these facilities, 50 percent are currently offering at least one DSD model, and of these, half began offering DSD within the last six months. An additional 25 percent of facilities are planning to offer DSD for ART in the upcoming six months.
- CQUIN countries reported substantial progress in certain foundational aspects of DSD implementation, such as development of policies and guidelines, but indicated that other key areas such as monitoring and evaluation, impact assessment, and quality improvement for DSD, are lagging behind as DSD models are implemented.



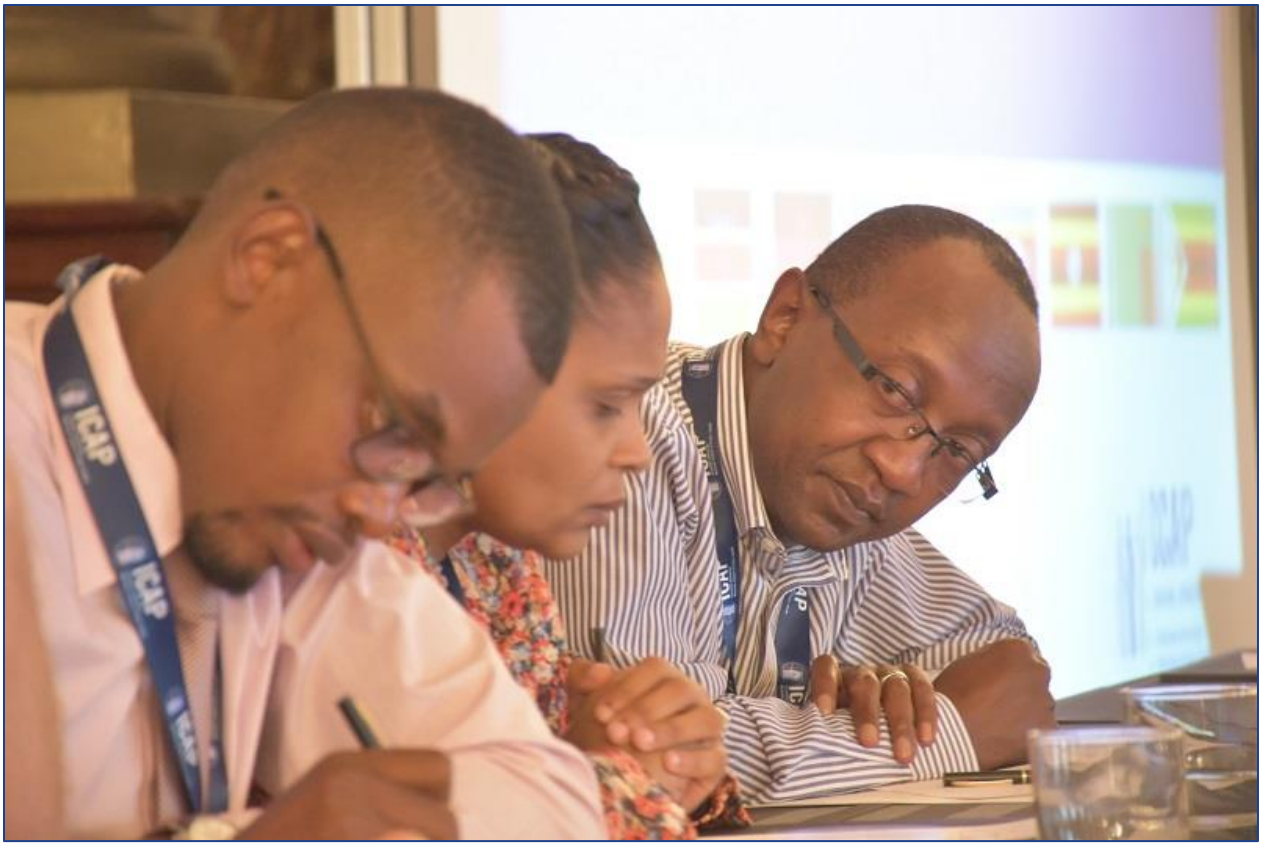
Source: Andrea Schaaf, ICAP; Mapping DSD Scale-Up: Findings from a Facility-Based Survey

Session 3: Panel Discussion – Taking DSD for Stable Patients to Scale

Dr. Tsitsi Apollo, Deputy Director for HIV/AIDS and STIs at the Zimbabwe Ministry of Health and Child Care, and Dr. Alfredo Vergara, Country Director for CDC Mozambique, co-moderated the discussion on taking DSD to scale for stable patients. The panel discussed progress of scale-up for diverse DSD models in the CQUIN network.

Presentations and Panelists

- **Dr. Baker Bakashaba**, Regional Program Manager (Soroti), TASO Uganda: Demand Generation for DSD in Uganda
- **Dr. Aleny Couto**, HIV National Program Chief, MoH Mozambique: Taking CAGs to Scale in Mozambique
- **Dr. Kigen Bartilol**, Head of NASCOP, MoH Kenya: Kenya's National Scale-Up Plan
- **Mrs. Alemthshey Abebe**, Program Officer, FMoH Ethiopia: Appointment Spacing in Ethiopia
- **Dr. Andrew McKenzie**, Technical Lead, Policy and Planning, Health Partners International: Adherence Clubs in the Western Cape, South Africa



From Left: Drs. Kigan Bartilol, Aleny Couto, and Baker Bakashaba

Key Takeaways

- As DSD implementation continues, community-level demand can increase with better client information and education on the types of models offered and benefits of enrolling in specific models of care.
- Data should support DSD implementation and be used to share progress with health care workers and communities. It is also important to document and address reasons patients are not joining DSD or specific models.
- It is important to engage stakeholders, partners, civil society, health care workers, PLHIV, and policy makers when rolling out DSD.
- Sharing best practices within the CQUIN network allows countries to find optimal models and resources for their patient populations and local settings.

Session 4: Panel Discussion – Optimizing Treatment at Scale

Dr. Pascale Ondoa, Director of Science at ASLM, and Mr. Peter Cloutier, the Chief of the Health Office at USAID Mozambique, co-moderated the panel discussion on optimizing treatment at scale. The panelists presented key considerations and implications for planning of DSD scale-up, including supply-chain issues, the introduction of new antiretroviral drugs (ARVs), lab testing, and costing of models.

Presentations and Panelists

- **Mr. Phil Roberts**, Project Lead, Last Mile, South Africa: Community-Based ART Pickup Points
- **Mr. Joao Teixeira**, Director, Forecast, Supply, and Distribution Planning, GHSC/PSM, Mozambique: Warehouse and Distribution Optimization for DSD
- **Dr. Nandita Sugandhi**, OPTIMIZE Project Coordinator, ICAP at Columbia: Introduction of New ARVs: Implications for DSD
- **Dr. Charles Kiyaga,** Program Manager, African Society for Laboratory Medicine, Uganda: Laboratory Barriers and Facilitators to DSD
- **Mr. Nick Tan**, University of Washington: DSD Costing Review

Key Takeaways

- The scale-up of DSD requires supply-chain and procurement systems to adapt – this requires guidance and leadership from ministries of health.
- Investing in data systems to record patient and health care facility consumption of DSD commodities can optimize supply-chain for ART distribution.
- Public/private partnerships can be leveraged to expand coverage and address crowding at public sector health facilities and pharmacies.
- Coordination between warehouses or dispensing units, and healthcare facilities can avoid stock-outs and ensure efficiency in ART distribution at the community level.
- There is a pre-existing infrastructure and labor in place for DSD, however, scale-up requires proper allocation of resources to train staff and modify systems to improve patient outcomes.

Wednesday, 14 February: Quality – Ensuring Effective, Patient-Centered Services

Session 5: Panel Discussion – Beyond "Stable" Patients (Part 1)

Dr. Chewe Luo, Associate Director, Program Division and Chief of HIV/AIDS at UNICEF, and Dr. George Ayala, Executive Director for the Men Who Have Sex with Men Global Forum (MSMGF), co-moderated part one of the panel discussion, "Beyond Stable Patients". The session addressed DSD within the context of specific patient populations including, men, key populations, women, and adolescents.

Presentations and Panelists

- **Dr. Tsitsi Apollo**, Deputy Director for HIV/AIDS and STIs, MoHCC Zimbabwe: Engaging Men in CARGs: Results of a Qualitative Study in Zimbabwe
- **Mr. Jeffrey Walimbwa**, Health and Programs Coordinator, ISHTAR, Kenya: Differentiated Services for men who have sex with men (MSM)
- **Dr. Anna Grimsrud**, Lead Technical Advisor, IAS: Report-back from the Cape Town Workshop on DSD for Key Populations
- **Ms. Maurine Murenga**, Executive Director, Lean on Me Foundation, NEPHAK Kenya: Engaging Women and Girls
- **Dr. Ruby Fayorsey**, Deputy Director, Clinical and Training Unit, ICAP at Columbia: What Do Adolescents Want from DSD? Results of a Survey in Kenya

From right: Dr. Grimsrud, Mr. Walimbwa, Dr. Apollo, Dr. Luo, and Dr. Ayala

Key Takeaways

- DSD needs to be adaptable for diverse groups, which can be facilitated by the inclusion of PLHIV in the planning and design of models for specific patient populations.
- There is an ongoing need to address issues around stigma, confidentiality and respect with key populations, adolescents, and women. This includes consent and sensitization to any new services offered to patients.
- Peer-led approaches have enabled successful linkage between key populations and DSD programs, targeting hotspots, and referrals via drop-in centers.
- Preliminary results from a qualitative study on male engagement in CARGs in Zimbabwe, showed that men would be encouraged to join CARGs, if they included income-generating activities.
- Preliminary results from a survey of 422 adolescents in Kenya showed that school attendance was the main reason for missing a clinical appointment in the last year. Study respondents indicated that they prefer weekday morning appointments, picking up refills at the clinic, and 2-3 month spacing of clinical appointments.

Session 6: Panel Discussion – Beyond "Stable" Patients (Part 2)

Ms. Lillian Diseko, Deputy Director of HIV Care and Treatment at the National Department of Health in South Africa, and Dr. Velephi Okello, Deputy Director, Clinical Services at the Swaziland Ministry of Health, co-moderated part two of the panel discussion, "Beyond Stable Patients". The session included presentations on introducing DSD for populations with advanced HIV, patients with tuberculosis (TB), sex workers, and mobile populations.

Presentations and Panelists

- **Mr. Ben Cheng**, Consultant, International Diagnostics Centre, London School of Hygiene and Tropical Medicine
- **Dr. Enos Masini**, TB Advisor, WHO Kenya, The International Consortium on Advanced HIV Disease: Patient Pathway Analysis for DSD of TB in Kenya
- **Dr. Tom Ellman**, Head, South Africa Medical Unit, MSF: DSD for Sex Workers and Mobile Populations
- **Mr. Tonderai Mwareka**, Respondent, Programme Officer, ZNPP+, Zimbabwe

Key Takeaways

- Older patients, patients who experience treatment interruptions, patients who experience drug resistance, patients with advanced HIV, patients with TB, key populations, and their partners (sex workers, men who have sex with men [MSM]), and mobile/migrant populations, need new DSD models.
- Income-generating activities could be a driver for specific patient populations to join community ART groups.
- Patient-centred care requires understanding patients' preferences. PLHIV should play an active role in establishing DSD models.

Session 7: Moderated Discussion – DSD Scale-Up: Successes, Challenges, and Key Questions

Brief summary and co-moderators:

Dr. Wafaa El-Sadr, ICAP Global Director, and Mr. Kevin Osborne, Director of HIV Programs and Advocacy at IAS, co-moderated the discussion, "DSD Scale-Up: Successes, Challenges, and Key Questions." The moderated discussion included a variety of stakeholders who identified 2018 as the year for scale-up, as many countries have laid the foundations for DSD.

Panelists

- **Dr. Ade Fakoya**, Senior HIV/AIDS Advisor, Global Fund
- **Dr. Nathan Ford**, Scientific Officer, WHO
- **Mrs. Rose Nyirenda**, Director of the HIV Treatment Unit, MOH Malawi
- **Dr. Susan Michaels-Strasser**, Senior Implementation Director, ICAP at Columbia
- **Mr. Dinku Worku**, Program Manager, NEP+, Ethiopia
- **Dr. Isaac Zulu**, Medical Officer, CDC/CGH/DGHT

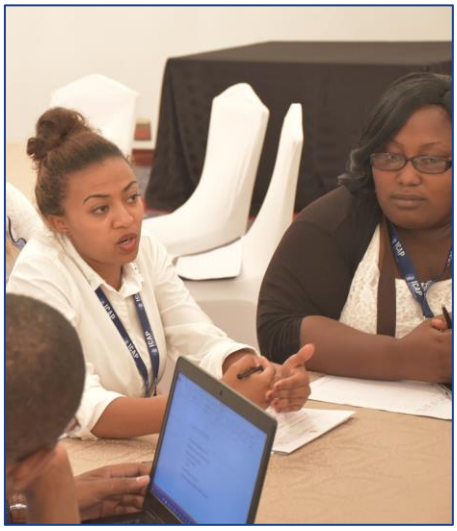
Left: Dr. Wafaa El-Sadr co-moderates. Right: From left, Mrs. Rose Nyirenda, Dr. Ade Fakoya, and Dr. Nathan Ford, answer audience questions

Key Takeaways

- CQUIN countries have laid the foundation for DSD implementation and the next step is to focus on national scale-up. Without close attention to the challenges of taking DSD to scale, it runs the risk of being limited to pilot programs serving relatively small numbers of people.
- South-to-south learning and knowledge exchange are effective ways to catalyze innovation and adaptation.
- Attention to issues of task shifting, capacitating nurses, and exploring the extent to which community health workers can deliver DSD, are key priorities.
- The limited data on DSD coverage, quality, and outcomes (including cost-effectiveness), is an ongoing challenge
- Data disaggregation and electronic medical records systems were highlighted as some of the tools that can be used to identify challenges to be addressed in "left behind groups".
- Resources must remain available to support initiatives and trainings to sustain DSD at the community level. Donors and governments must continue to invest in community healthcare workers.

Session 8: Parallel Breakout Sessions

Participants joined one of six breakout groups, focusing on DSD topics of interest: (1) DSD for adolescents and young people; (2) Patients at high risk of HIV disease progression; (3) Engaging men in DSD; (4) DSD for key populations; (5) DSD for individuals with TB and HIV; and (6) DSD for individuals with both HIV and NCDs. Each group had a discussion and used the Prioritization Matrix tool to categorize priority interventions based on importance and ease of implementation. Dr. Ruben Sahabo, Country Director of ICAP Swaziland, and Dr. Sombo Fwoloshi, DSD Advisor at the Zambia Ministry of Health, co-moderated the report-back session.



Left: Frehiwot Nigatu from Ethiopia discusses DSD for adolescents during the breakout session. Right: priorities by level of importance for scaling up DSD for adolescents

Adolescents and Young People
The adolescent breakout group was co-facilitated by Dr. Chewe Luo (UNICEF) and Maurine Murenga (NEPHAK Kenya).

Priority Interventions:

- Special clinic days for adolescents
- Appointment spacing
- Fast-track for Adolescents Living with HIV (ALHIV)
- Psychosocial support groups

Patients at High Risk of HIV Disease Progression (P@HR).
Dr. Nathan Ford (WHO) and Dr. Wafaa El-Sadr (ICAP) were co-facilitated the P@HR group.

Priority Interventions:

- High viral load registers
- Customized M&E indicators to track and manage P@HR
- Advocacy for ongoing access to baseline CD4 measurement to identify asymptomatic P@HR
- Improved management of ART-experienced patients (training, mentoring)
- Provision of a standardized preventive care package (cotrimoxazole, isoniazid preventive therapy, empiric antihelmiths)
- Algorithmic approaches to screening for opportunistic infections (including cryptococcal disease and TB)
- Harmonization and coordination of scheduled interventions
- Patient literacy, self-care empowerment, community support, psychosocial support
- Triage for sick patients to higher level facilities
- Home-based care using registered nurses
- Mortality auditing

Engaging Men
Dr. Joanne Mantell (ICAP NY) and Tonderai Mwareka (ZNNP+ Zimbabwe) co-facilitated the group discussing how to improve male engagement in DSD.

Priority Interventions:

- Evening hours and weekend services
- Engaging men at bars, sporting events, workplace, and social clubs
- Peer model led by male champions
- Provision of a comprehensive "men's health" package (e.g., sexual health, NCDs, mental health)
- Sero-concordant couples (as entry point for men) underpinned by choice of service delivery, location (urban/rural), and incentives (e.g., income-generating activities)


Left: Mr. Tonderai Mwareka co-faciliates the breakout session on DSD for men. Right: Dr. Joanne Mantell co-moderates and takes a question from Mr. Dinku Worku Asfaw from NEP+, Ethiopia

DSD for Key Populations
Dr. Anna Grimsrud (IAS) and George Ayala (MSMGF), co-facilitated the breakout session on DSD for KP.

Priority Interventions:

- Sensitivity training for health care workers, including values clarification
- Utilization of key-population peer support
- Ensuring confidentiality and protecting anonymity
- Creating safe spaces
- Talking about sex without judgment
- Co-location of services, health, and beyond
- Decriminalization
- Sensitization of political leaders

TB/HIV
Dr Felix Ndagije (ICAP Lesotho) and Dr. Enos Masini (WHO Kenya) were co-facilitators for the TB/HIV group.

Priority Interventions:

- More investment for sample transport
- Network all gene Xpert equipment to online SMS reporting
- DSD for TB/HIV patients who work in mines
- Rapid ART initiation for ambulatory patients who screen positive for TB
- Increased utilization of geneXpert
- One-stop shops
- Align Isoniazid Preventive Therapy (IPT) refills with ART refills

- Improve quality of TB symptom screening
- Strengthening TB infection prevention and control (IPC)

HIV/NCDs
The co-facilitators for this group were Dr. Miriam Rabkin (ICAP NY) and Dr. Daniel Mwamba (CIDRZ Zambia).

Priority Interventions:

- Develop policies and guidelines to support systematic screening of PLHIV for chronic NCDs
- Support demand creation for NCD services among PLHIV
- Train health care workers to provide integrated HIV-NCD services
- Integrate HIV and NCD testing/screening services
- Policy change to enable nurses at primary health care (PHC) level to prescribe NCD medication, especially for diabetes and hypertension
- Resource mobilization for NCD services for PLHIV
- Advocacy for free NCD services for all

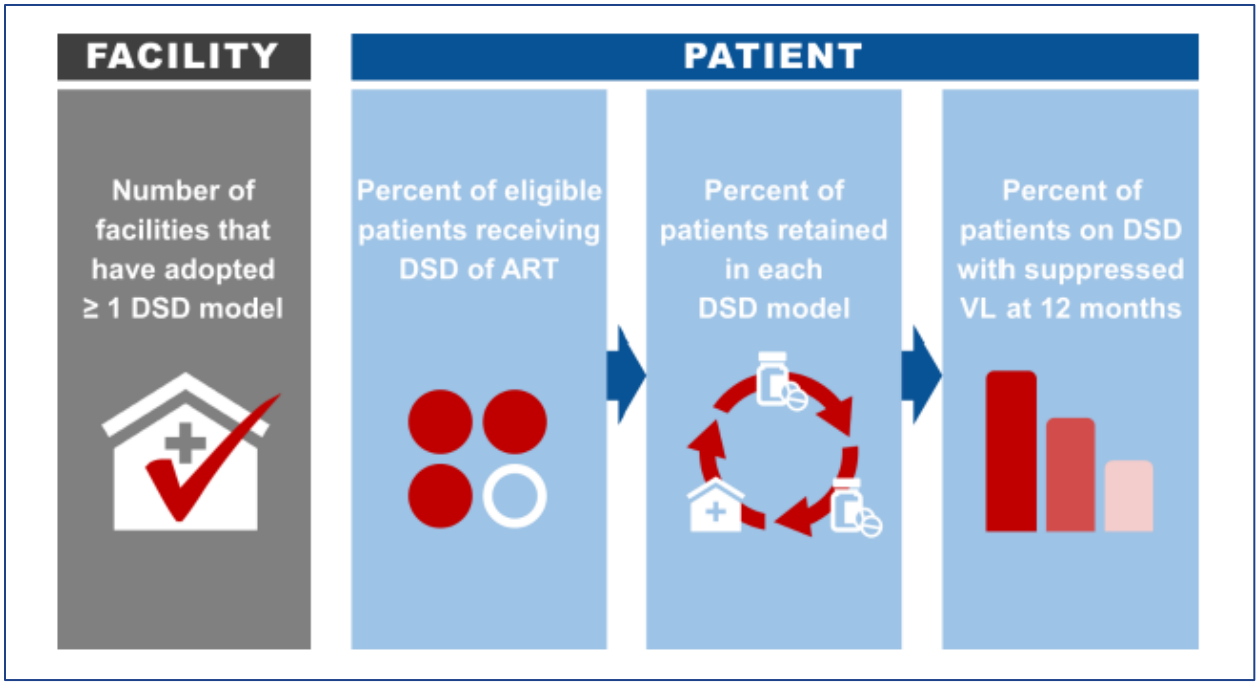
Thursday, 15 February: Impact – Assessing DSD Outcomes

Session 10: Measuring Impact – Monitoring, Evaluation & Research

Dr. Peter Godfrey-Faussett, Senior Science Advisor at UNAIDS, moderated the panel discussion on measuring impact. The panel included presentations on the status of M&E of DSD at the global and country levels, and selections of the latest research for DSD.

Presentations and Panelists

- **Dr. Bill Reidy**, Strategic Information Advisor, ICAP at Columbia
- **Dr. Peter Ehrenkranz**, Senior Program Officer, Bill & Melinda Gates Foundation
- **Dr. Charles Holmes**, Professor of Global Health, Georgetown University



Source: Patient-level and program-level monitoring and evaluation of differentiated service delivery for HIV: a pragmatic and parsimonious approach is needed

Key Takeaways

- The goals of DSD are to improve patient outcomes, patient and health care provider experience, and efficiency of resources for patient care.
- Evidence-based considerations for taking DSD to scale demonstrate the importance of systematic M&E of DSD.
- Programs, priorities, and resources should inform M&E of DSD, as it is a work in progress.

- There is a need to develop harmonized DSD indicators.
- There are many questions about quality of care, and patient-level experiences, which can affect long-term retention in DSD models. There is a need for further discussion about the probability of patient disconnection from the health system, post scale-up, as well as optimal retention and return-to-care.
- There was consensus on embedding patient-experience assessment methodologies in routine DSD.
- There have been many successful DSD pilots in Africa. It would be beneficial to determine the most effective strategies of taking these pilots to scale, while maintaining, preserving, and monitoring the core elements of the successful DSD models.

Session 11: Panel Presentation – M&E of DSD

Dr. Nomthandazo Lukhele, ART Coordinator at the Swaziland Ministry of Health, and Dr. Joyce Wamicwe, Strategic Information Unit Lead at the Kenya National AIDS & STI Control Programme (NASCOP), co-moderated the panel discussion on M&E of DSD. The session focused on the implications and processes for integrating DSD into country level M&E systems.

Presentations and Panelists

- **Dr. Clorata Gwanzura**, DSD Coordinator, MOHCC Zimbabwe: the CQUIN M&E Community of Practice
- **Mr. Ivan Lukabwe**, M&E Program Officer, MOH Uganda: M&E of DSD Using Paper-Based Records
- **Dr. Munyaradzi Pasipamire**, Senior Program Officer, MOH Swaziland: M&E of DSD with Electronic Medical Records
- **Mr. Ivan Teri**, Technical Advisor, Quality, EGPAF: Lessons from the EGPAF Project

Key Takeaways

- Ministries of health need more detailed data than funders are requesting, particularly during the scale-up phase of DSD implementation.
- Current M&E systems within countries are not designed to capture data specific to DSD models.
- Paper-based and electronic systems are capable of collecting data on DSD, though revisions to systems and tools are necessary.
- Ministries of health and implementing partners share a need for improved systems for M&E of community-based services.
- Overall health systems improvements, including improvements in human resources and lab capabilities, are prerequisites for M&E system improvements.
- Evaluations and special studies are critical to assessing the impact of DSD.

Session 12: Parallel Breakout Sessions

During session 12, participants broke into groups to discuss:

1) **M&E of DSD**
2) **DSD Research Priorities**
3) **Building the CQUIN Network**

M&E of DSD: Update on the Draft M&E Framework Developed by the CQUIN M&E DSD Community of Practice

Co-moderators: Dr. Bill Reidy (ICAP NY) & Dr. Munyaradzi Pasipamire (MOH Swaziland)

The M&E of DSD breakout session featured a discussion of the M&E Framework created by the members of the M&E community of practice.

Key Takeaways:

The facilitators led the participants through each domain of the framework. They described the elements of each proposed measure and the community's decision-making process used during its development. The community of practice will simplify the framework and draft additional instructions to improve the framework's ease of use in response to the comments, concerns, and questions raised at this session.

Research Priorities

Co-moderators: Dr. Charles Holmes (Georgetown University) & Dr. Peter Godfrey-Faussett (UNAIDS)

Twenty participants from the ministries of health, CDC, ICAP, IAS, MSF, FHI360, UNAIDS, and civil society organizations participated in this breakout group. The aim was to decide on the most important priorities for DSD research to measure impact.

Key Takeaways:

Participants agreed on priority research questions for DSD, and briefly discussed optimal methods/study design. Questions included:

1. What are the outcomes (e.g., retention, VL suppression, mortality, patient satisfaction) associated with participation in DSDM?
    a. How do DSDM patient outcomes compare to "traditional" models of care?
    b. How do various DSDM patient outcomes compare to one another? For example, how do outcomes differ between community-based vs. facility-based DSDM?
    c. How do DSDM outcomes compare for "unstable" patients?
2. What is the impact of DSD on other comorbid conditions (e.g., NCDs)?
3. What is the impact of various DSDM on the workload of health care workers?
4. What is the impact of DSD on the provision of other health services?
5. What is the most efficient DSDM that leads to high levels of VL suppression? How affordable are various models? How cost effective are they?

6. What are optimal approaches to taking DSD to scale? What are key barriers and facilitators?
7. What are optimal models of DSD for key populations?
8. How do various DSDM affect stigma?

Building the CQUIN Learning Network – Next Steps and Priorities
Co-moderators: Dr. Peter Preko (ICAP/CQUIN) and Ms. Rose Nyirenda (MOH Malawi)

Fourteen participants from the Mozambique, Malawi, and South Africa MOH, EGPAF, UNICEF, ASLM, and ICAP New York, Ethiopia, and Zambia, participated in this breakout group. The aims were to reflect on CQUIN's first year, with an eye to what worked and where gaps remain, and to identify areas of focus for the upcoming year to help facilitate the scale-up of high quality DSD.

Key Takeaways:

In general, the group felt that the first year of the CQUIN network was successful, and that its approach to country engagement, collaborative decision-making, and south-to-south learning is highly effective. Participants appreciated CQUIN workshops, while highlighting the importance of complementary technical assistance and country-level support. Interventions flagged as particularly high impact included:

- *National DSD coordinators:* The group observed that countries with dedicated DSD officers are doing exceptionally well in scaling up DSD compared to those without a dedicated DSD focal person. They recommended that CQUIN advocate for full-time DSD coordinators.
- *Technical assistance with M&E of DSD:* The use of the CQUIN dashboard is considered a powerful approach; participants suggested that the development of a sub-national dashboard would be an important initiative for year two. Participation in the CQUIN network have also made many countries aware of the gaps in their M&E frameworks and tools related to DSD; ongoing TA from ICAP/CQUIN on this topic was requested.
- *South-to-south visits:* Only a subset of network member countries participated in South-to-South visits in year one, but participants felt they were high-impact and should continue.

Some ideas for year two fell outside of CQUIN's current scope, such as the suggestion that ICAP/CQUIN provide country-specific technical assistance with the development of DSD related training materials or patient/community sensitization materials.

There was no consensus on the extent to which the CQUIN network should continue to grow. Participants were eager to learn from more countries and colleagues, but did not want to expand the breadth of the network at the expense of its depth.

Drs. Tamrat Assefa and Lillian Diseko discuss next steps and priorities for building the CQUIN Network

Community-Led DSD Monitoring
Moderator: George Ayala (MSMGF)

Key Takeaways:

Two examples of community engagement in monitoring the HIV response were presented as a springboard to facilitating discussion: The Global Men's Health and Rights (GMHR Survey) and the People Living with HIV Stigma Index. Community-led monitoring helps to capacitate communities. Participants discussed ways to increase support for community-led monitoring by engaging PLHIV as interviewers and working in close partnership with the populations.

Participants identified several capacity needs, including gathering data on internalized stigmas. They agreed that there is no documentation on community activities, and that PLHIV would benefit by demonstrating their contributions to the HIV response via surveys and community health worker registers.

The group discussed developing M&E indicators for community involvement (e.g., in areas of advocacy and research). Communities need to have a role in formulating indicators, not just at the local level, but at the national level as well. Stigma affects coverage, quality, and impact of HIV services, so it should be measured over time at the country level.

Participants discussed developing demand-generation strategies for DSD, and acknowledged that DSD should not complicate the role of the health system, and that the system must acknowledge the importance of the community's role. It is important to combine the expectations of the government with the community. Community-led monitoring can help with the scale-up of DSD by informing DSD models. The group agreed that it's important for PLHIV to have clearly defined roles, such as mobilizing others and helping them to access services, provide treatment literacy and adherence counseling, and helping people overcome stigma.

Attendees participate in the breakout session on community-led DSD monitoring.

Session 13: Country Breakout Sessions

Countries convened to update their DSD action plans. Countries prioritized their activities for the current year, formulated targets and timelines, and discussed what they learned from other countries.

Ethiopia

Ethiopia prioritized action items for the year in thematic areas:

- DSD for P@HR - i) advocacy ii) developing guidelines, SOPs, and job aids
- DSD for Appointment Spacing Models (ASM) – i) enrolling all clients eligible for ASM and increasing health facilities implementing ASM from 79 percent to 95 percent by December 2018 ii) conduct qualitative assessment for ASM in implementing health facilities in April 2018
- Health care worker led community ART groups – i) establishment of a national task force for community ART groups ii) developing an operational plan by March 2018 iii) Establish health-worker led community ART groups in 20 health facilities from April 2018 to May 2019

Kenya

Kenya representatives discussed the importance of prioritizing communities in DSD and the pathway analysis of TB patients. Their priority action items for the year are to measure the 90-90-90 targets across all sub-populations; engage communities in DSD scale-up while strengthening links between communities and health facilities; to improve treatment literacy; and to coordinate quality improvement services nationally.

Malawi

Malawi's targets are; i) to have 70 percent of health facilities implementing DSD by December 2018; ii) to have at least 70 percent of patients on one DSD model iii) have each patient receive a maximum of four clinic visits per year.

Malawi's priorities for 2018 include; i) advocate for a DSD focal person ii) strengthening access and improvement of community ART models iii) to adapt Kenya's DSD toolkit iv) revise M&E systems to capture DSD data v) activate program-level reporting on DSD coverage vi) engage the community on DSD scale-up vi) scaling up teen clubs (to at least three per district), appointment spacing models, nurse-led ART, and fast-track models

On south-to-south exchange visits, Malawi proposed to visit i) Swaziland to learn the electronic and paper M&E systems ii) South Africa for viral load scale-up and result-utilization for DSD decision-making, and iii) TASO Uganda for community engagement.

Mozambique

Mozambique will complete their DSDM national guidelines by March 2018. To scale up DSDM, Mozambique prioritized the following activities: i) to develop training materials by April 2018 ii) to conduct training of trainers (TOT) by May 2018 iii) to initiate the national rollout of DSD implementation in June 2018 iv) to incorporate P@HR in their existing package of DSD for stable patients v) implement an M&E framework for DSD using Uganda and Kenya's hybrid (electronic- and paper-based) framework.

Mozambique proposed two south-to-south learning exchange visits. Kenya to observe best practices in DSD for key populations and Zimbabwe for DSD training package.

South Africa

South Africa's 2018 target is to have 90 percent of health facilities providing DSD services.

2018 priorities include: i) convening a DSD workshop for adults and adolescents to review the current DSD models for adults and brainstorm models for adolescents by March 2018 ii) to link the centralized chronic medicines dispensing and distribution (CCMDD) module to the tier.net electronic patient-management system by March 2018.

South Africa proposed a south-to-south visit to study Kenya's M&E system, which cascades from health facilities up to the national level.

Swaziland

Swaziland has completed revision of their DSD M&E tools and has integrated them into the national electronic medical records system.

Swaziland's 2018 target is to have 80 percent of high-volume facilities (>1000 patients) providing fast track and teen clubs, and for stable clients to have two clinical visits per year.

2018 priorities include; i) rolling out a package of care for P@HR groups (late presenters, children, key populations, and pregnant and breastfeeding women) with the launch of the new treatment guidelines later this year ii) engaging people living with HIV to review DSD progress and provide feedback every three months iii) distributing DSD M&E tools to all health facilities iv) integrating DSD data review and implementation experiences into the regional and national HIV semi-annual meetings v) developing a survey tool to get patients and health care worker feedback on DSD, and vi) having special clinic days dedicated to treating and conducting ART services for children.

Swaziland's south-to-south learning visit priorities is to visit Uganda to learn about community M&E systems from TASO.

Uganda

Uganda's 2018 targets are i) to have 30 percent of all ART health facilities trained, prioritizing high-volume sites ii) to have 70 percent of stable patients on ART in DSD.

2018 priority activities are as follows; i) to adopt global indicators for DSD by April 2018 ii) to pilot DSD for ALHIV at the community level iii) to create an M&E module for DSD by June 2018 iv) to conduct client-awareness campaigns in December 2018 v) engage the ART and DSD technical working group to provide guidance on categorizing stable clients switched to dolutegravir by April 2018.

Zambia

Zambia's targets for 2018 are i) to have 90 percent of health facilities implementing DSD ii) 50 percent of stable patients in any DSD model iii) for patients to have two visits per year, all by December 2018.

Zambia set the following priorities for 2018: i) to develop a national DSD operational plan and standardize the DSD models ii) to integrate M&E systems for DSD into one national M&E system by June 2018.

Zambia's south-to-south learning exchange priorities are to visit i) Uganda and Swaziland to learn about M&E of DSD by April 2018 ii) South Africa to learn about DSD for key populations by October 2018.

Zimbabwe

Zimbabwe will scale up the number of health facilities offering at least one DSD model from 45 percent to 75 percent.

Zimbabwe's priorities are i) to strengthen coordination between IPs and MOH technical working groups ii) leverage resources iii) complete DSD indicators for reporting at the national level iv) to have standard reporting system for IPs at the national level v) to evaluate the learning sites and disseminate implementation experiences to other provinces at the national level vi) support peer learning at existing platforms in order to share DSD best practices vii) updating their HIV treatment literacy manual viii) to sensitize PLHIV to DSD models through the media and meetings ix) to develop IEC materials.

Zimbabwe proposed the following south-to-south learning exchange visits; i) Swaziland to learn about migration from APMR to CMIS with the inclusion of DSD indicators ii) South Africa for best practice on VL load uptake and utilization for decision making around DSD for both stable patients and P@HR.

Closing Remarks

Dr. Wafaa El-Sadr
Global Director, ICAP at Columbia University

Dr. El-Sadr focused on the network's accomplishments since its launch, and accomplishments during the three-day meeting. She observed the rich exchange of information at the meeting, and the diversity of the groups that gathered during the breakouts. "I was happy to see community representatives alongside those from the ministries and others all sitting around the table listening to one another and charting a way forward, together," she said.

She encouraged all participants to disseminate information learned during the meeting with country stakeholders. She also noted the importance of the south-to-south learning visits, and how ICAP would work with countries to plan more visits over the next year.

She noted that that the communities of practice have enabled joint work and co-creation of resources, and that the network would identify and establish additional communities of practice in year two. Dr. El-Sadr highlighted countries' willingness to begin distilling lessons learned from the two catalytic projects that were completed, and encouraged participants to use the data to inform their programs and guidelines.

Dr. El-Sadr highlighted the importance of implementing new discoveries, emphasizing that 2018 should be the year of scale-up for DSD, particularly for stable patients. She acknowledged that much more work needs to be done to take DSD to scale for P@HR, as well as key populations.

She clarified the concerns some people have about doing more with less – that less contact with a health system could lead to a decrease in quality and a deleterious impact on the programs and on the health the patients. She explained: "Ultimately, the goal is for less to be more. We need to think about how that can be translated to more quality and coverage."

Dr. El-Sadr ended by thanking the ICAP Mozambique team, the ICAP/CQUIN team, the Bill & Melinda Gates Foundation, the advisory group, and all of the participants for their commitment to the work.

A complete transcript of Dr. El-Sadr's closing remarks is available in the Appendix.

Dr. Peter Ehrenkranz
Senior Program Officer, the Bill & Melinda Gates Foundation

Dr. Ehrenkranz began by thanking Dr. Couto and Mozambique for hosting the meeting, as well as the ministries of health, implementing partners, civil society representatives, international organizations, and others who actively contributed to the discussions during the meeting. He noted that DSD is just a means to an end; the end being coverage, viral load suppression, lowering incidence of HIV, and an eventual end to mortality.

"What is wonderful about CQUIN is that it moves the conversations about DSD implementation from the periphery to the center," he said. "While DSD is the current focus of the network, it's the connections we make here that will help us address the next challenge, and the challenges that come after that. These connections, while hard to measure, are CQUIN's most important output."

Dr. Ehrenkranz stated that there would likely be two themed workshops in 2018, including one on the science and practicalities of scale-up, focusing on engaging communities of people living with HIV as well as demand creation among the health care providers and the end users of DSD. He acknowledged that more countries would benefit from a DSD coordinator at their ministries, and that ICAP and the Foundation would work with country teams, as well as CDC and USAID, to identify relevant resources.

Dr. Ehrenkranz urged participants to return to their countries and arrange to meet with their USG counterparts to brief them on the discussions held at the meeting as well as to share their priority plans. "This is an important experiment we are having. It's an experiment in learning, in sharing, and diffusion of scale-up. It's been a great success in its first year, and I'm very excited as we embark on CQUIN's second year – the year of scale-up," he concluded.

A complete transcript of Dr. Ehrenkranz's closing remarks is available in the Appendix.

Dr. Aleny Couto
Director of STI and HIV/AIDS Programs, Mozambique Ministry of Health

Dr. Couto thanked the CQUIN member countries for attending the meeting, and ICAP for choosing Mozambique to host the meeting, and for its commitment to making the network stronger.

"This network makes sharing all of the new information we have for the populations that need DSD possible," she said. "It helps us explore where we can have DSD, and also shows us the progress we have made in our countries." She concluded by stating that everyone must continue the work, and encouraged member countries to participate in learning exchange visits to learn about other countries' progress and challenges, and to document them as they scale-up DSD.

A complete transcript of Dr. Couto's closing remarks is available in the Appendix.

APPENDIX

Agenda

Monday 12 February

Opening Reception and Dinner
Moderator: Dr. Antonio Mussa (ICAP Mozambique)

- Dra. Rosa Marlene Manjate Cucuo, National Director of Public Health, Mozambique
- Dr. Miriam Rabkin, Director for Health Systems Strategies, ICAP NY
- Ms. Solange Baptiste, Executive Director, International Treatment Preparedness Coalition (ITPC)
- Dr. Peter Ehrenkranz, Senior Program Officer for HIV Treatment, Bill & Melinda Gates Foundation

Tuesday 13 February: Coverage – Taking DSD to Scale

Session 1: Setting the Scene
Co-Moderators: Antonio Mussa (ICAP Mz) & Aleny Couto (MOH Mz)

- Epidemic Control: Successes, Challenges and the Promise of Differentiated Service Delivery *Wafaa El-Sadr (ICAP)*
- Differentiated Service Delivery: Where Are We Now? *Nathan Ford (WHO)*
- CQUIN Update *Peter Preko (ICAP/CQUIN)*
- "Nothing About Us Without Us": Engaging Clients in Program Design and Delivery *Solange Baptiste (ITPC)*

Session 2: Panel Discussion – Mapping DSD Scale-Up
Co-Moderators: Anna Grimsrud (IAS) and Miriam Rabkin (ICAP NY)

- Andrea Schaaf (ICAP NY): Mapping DSD Scale-Up: Findings from a Facility-Based Survey
- Maureen Syowai (ICAP Kenya): Tracking DSD Program Maturity with the CQUIN Dashboard
- Ade Fakoya (Global Fund): DSD: The View from the Global Fund
- Isaac Zulu (CDC): DSD: Mapping DSD in PEPFAR Supported Countries

Tea Break & Poster Walk (featuring MOH Swaziland, Zimbabwe, and Zambia)

Session 3: Panel Discussion – Taking DSD for Stable Patients to Scale
Co-Moderators: Tsitsi Apollo (MOH Zimbabwe) + Alfredo Vergara (CDC Mozambique)

- Baker Bakashaba (TASO Uganda): Demand Generation for DSD in Uganda

- Aleny Couto (MOH Mozambique): Taking CAGs to Scale in Mozambique
- Kigen Bartilol (NASCOP Kenya): Kenya's National Scale-Up Plan
- Alemthshey Abebe (FMOH Ethiopia): Appointment Spacing in Ethiopia
- Andrew McKenzie (Health Partners Intl): Adherence Clubs in the Western Cape, South Africa

Session 4: Panel Discussion – Optimizing Treatment at Scale
Co-Moderators: Pascale Ondoa (ASLM) + Peter Cloutier (USAID Mozambique)

- Phil Roberts (Last Mile, SA): Community-Based ART Pickup Points
- Joao Teixeira (GHSC/PSM): Warehouse and Distribution Optimization for DSD
- Nandita Sugandhi (ICAP NY): Introduction of New ARVs: Implications for DSD
- Charles Kiyaga (ASLM): DSD: Laboratory Barriers and Facilitators
- Nick Tan (University of Washington): DSD Costing Review

Wrap-Up and Plans for Day Two
Miriam Rabkin (ICAP NY)

Wednesday 14 February: Quality – Ensuring Effective, Patient-Centered Services

Welcome and Recap of Day One
Peter Preko (ICAP/CQUIN)

Session 5: Panel Discussion – Beyond "Stable" Patients (part 1)
Co-Moderators: Chewe Luo (UNICEF) and George Ayala (MSMGF)

- Tsitsi Apollo (MoHCC Zimbabwe): Engaging Men in CARGs: Results of a Qualitative Study in Zimbabwe
- Jeffrey Walimbwa (ISHTAR Kenya): Differentiated Services for MSM
- Anna Grimsrud (IAS): Cape Town Workshop on DSD for Key Populations
- Maurine Murenga (NEPHAK Kenya): Engaging Women and Girls
- Ruby Fayorsey (ICAP NY): What Do Adolescents Want from DSD? Results of a Survey in Kenya

Tea Break & Poster Walk (featuring MOH Uganda, Kenya, and Ethiopia)

Session 6: Panel Discussion – Beyond "Stable" Patients (part 2)
Co-Moderators: Lillian Diseko (NDOH S. Africa) and Velephi Okello (MOH Swaziland)

- Ben Cheng (iCAHD): The International Consortium on Advanced HIV Disease
- Enos Masini (WHO Kenya): Patient Pathway Analysis for DSD of TB in Kenya
- Tom Ellman (MSF): DSD for Sex Workers and Mobile Populations
- Tonderai Mwareka (ZNNP+ Zimbabwe): Respondent

Session 7: Moderated Discussion – DSD Scale-Up: Successes, Challenges, and Key Questions
Co-Moderators: Wafaa El-Sadr (ICAP) and Kevin Osborne (IAS)
Discussants: Ade Fakoya (Global Fund), Isaac Zulu (PEPFAR), Nathan Ford (WHO), Susan Michaels-Strasser (ICAP), Rose Nyirenda (MOH Malawi), Dinku Worku (NEP+ Ethiopia)

Session 8: Parallel Breakout Sessions

- Adolescents and Young People
  Co-facilitators: Chewe Luo (UNICEF), Maurine Murenga (NEPHAK Kenya)
- Patients at High Risk of HIV Disease Progression
  Co-facilitators: Nathan Ford (WHO), Wafaa El-Sadr (ICAP)
- Men
  Co-facilitators: Joanne Mantell (ICAP NY), Tonderai Mwareka (ZNNP+ Zimbabwe)
- Key Populations
  Co-facilitators: Anna Grimsrud (IAS), George Ayala (MSMGF)
- TB/HIV
  Co-facilitators: Felix Ndagije (ICAP Lesotho), Enos Masini (WHO Kenya)
- HIV/NCDs
  Co-facilitators: Miriam Rabkin (ICAP NY), Daniel Mwamba (CIDRZ Zambia)

Session 9: Report Back from Breakout Sessions
Co-Moderators: Ruben Sahabo (ICAP Swaziland) & Sombo Fwoloshi (MoH Zambia)

Wrap-Up and Plans for Day Three
Siphiwe Shongwe (ICAP/CQUIN)

Thursday 15 February: Impact – Assessing DSD Outcomes

Welcome and Recap of Day Two
Miriam Rabkin (ICAP NY)

Session 10: Measuring Impact – Monitoring, Evaluation & Research
Moderator: Peter Godfrey-Faussett (UNAIDS)

M&E of DSD: Challenges and Lessons Learned
Bill Reidy, ICAP at Columbia University
Peter Ehrenkranz, Bill & Melinda Gates Foundation

DSD Research Priorities
Charles Holmes, Georgetown University

Session 11: Panel Presentation – M&E of DSD
Co-Moderators: Nomthandazo Lukhele (MOH Swaziland) & Joyce Wamicwe (NASCOP Kenya)

- Clorata Gwanzura (MoHCC Zimbabwe): The CQUIN M&E Community of Practice
- Ivan Lukabwe (MOH Uganda): M&E of DSD Using Paper-Based Records

- Munyaradzi Pasipamire (MOH Swaziland): M&E of DSD with Electronic Medical Records
- Ivan Teri (EGPAF): Lessons from EGPAF Project

Tea Break & Poster Walk (featuring MOH Mozambique, South Africa, and Malawi)

Session 12: Parallel Breakout Sessions

- M&E of DSD: Update on the Draft M&E Framework Developed by the CQUIN M&E DSD Community of Practice
  Co-moderators: Bill Reidy (ICAP NY) & Munyaradzi Pasipamire (MOH Swaziland)
- Research Priorities
  Co-moderators: Charles Holmes (Georgetown University) & Peter Godfrey-Faussett (UNAIDS)
- Building the CQUIN Learning Network – Next Steps and Priorities
  Co-moderators: Peter Preko (ICAP/CQUIN) and Rose Nyirenda (MOH Malawi)
- Community-Led DSD Monitoring
  Moderator: George Ayala (MSMGF)

Session 13: Country Breakout Sessions

- Each country team splits off to discuss next steps

Session 14: Report Back from Country Breakout Sessions
Co-Moderators: Zenebe Melaku (ICAP Ethiopia) and Norah Namuwenge (MoH Uganda)

Next Steps and Closing Remarks

Participants

David Allen is Deputy Director, HIV Southern Africa for the Bill & Melinda Gates Foundation. Dr. Allen received his MD from the New York University School of Medicine and his MPH degree from the Johns Hopkins School of Public Health. He worked as a pediatrician in Washington D.C. before joining the Centers for Disease Control and Prevention (CDC) for a twenty-year career. At CDC, Dr. Allen worked in a variety of public health areas including infant mortality, homeless health, community health, epidemiology training and HIV/AIDS. He served as an advisor to the South African Department of Health, and as Director of the CDC Global AIDS Program for South Africa, the Regional Director of the Global AIDS Program for Southern Africa, and the Director of the Global AIDS Program, Caribbean Regional Office before moving to the Bill & Melinda Gates Foundation in 2006.

Tsitsi Apollo is Deputy Director for HIV/AIDS and STIs at the Zimbabwe Ministry of Health and Child Care. She is a medical doctor and public health specialist who has been practicing in Zimbabwe's public health system for over 18 years. Dr. Apollo is an active member of the Zimbabwe National Medicines Therapeutics Advisory and Policy Committee, and participated in the 2013 and 2015 World Health Organization Guidelines Development Group for Consolidated ARV Guidelines. She plays an Advisory role to the WHO Director General as a member of the Strategic and Technical Advisory Committee for HIV/AIDS and Hepatitis. Dr. Apollo is also a member of the CQUIN Advisory Group.

George Ayala is Executive Director of the Global Forum on MSM and HIV (MSMGF) where he leads the agency's international policy, advocacy, research, and technical support responses to HIV among gay men and other men who have sex with men. A clinical psychologist by training, Dr. Ayala has worked in the non-profit HIV/AIDS sector for over 20 years. His research has mainly focused on understanding the mechanisms through which social discrimination affects the risk for HIV among gay men of color in the U.S. He has more recently explored facilitators and barriers to HIV-related services via his international cross-sectional online survey research with gay men/MSM.

Tamrat Assefa is the Director for Regional Programs at ICAP Ethiopia. He has over 20 years of experience in public health, specializing in health systems strengthening, HIV, and Quality Improvement. Mr. Assefa received his MPH in health system management and policy from Prince Leopold Institute of Tropical Medicine in Belgium, an MPH from Addis Ababa University and a BSc

in Nursing from Jimma University. He is also a fellow of the visionary leadership program funded by the Packard Foundation, a fellow of the Management Development Institute at UCLA and a member of the Ethiopia reproductive health leadership network.

Hudson Balidawa is a Public Health and Monitoring and Evaluation expert with vast experience in design, monitoring and research for public health programs in resource-limited settings. He is a pediatrician who has worked in design and implementation of public health interventions for maternal and child health for the last 15 years. He has supported scale up of the public health approach to ART management in Uganda, Namibia, Zimbabwe and Nigeria, using the adapted WHO IMAI, IMPAC and IMCI guidelines. He is an Honorary Senior Quality Improvement Advisor for URC and has supported HIV care quality initiatives that have spread to other health services programs. He worked with the Global Fund consulting teams on Program Quality Assessment (PQA) to develop the Toolkit for Health Facilities Differentiated Care for HIV and Tuberculosis. He currently monitors Global Fund funded interventions for HIV and TB, and heads the National Technical Working Group for Differentiated Service Delivery Models (DSDM) in Uganda.

Baker Bakashaba is the Regional Project Manager, Soroti Region, the AIDS Support Organization (TASO), Uganda. For seven years, Dr. Bakashaba has managed HIV/AIDS programs focusing on design and implementation of facility- and community-based, client-centered projects and health systems strengthening at TASO. He has contributed to the design of community ART models, such as community drug distribution points (CDDP) and community- client-led ART delivery (CCLAD), as well as other national-level differentiated service delivery models. He is currently the regional project manager for the Accelerating HIV Epidemic Control in Soroti Region project – a regional HIV/AIDS project funded by the President's Emergency Plan for AIDS Relief (PEPFAR) via CDC. Dr. Bakashaba received his Bachelor of Medicine & Surgery Degree from Makerere University in Uganda, and is currently pursuing his Master of Science in Project Management at the University of SalD, UK. Dr. Bakashaba is also a member of the CQUIN Advisory Group.

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Kigen Bartilol is the Head of NASCOP at the Kenyan Ministry of Health.

Solange Baptiste has worked with ITPC since 2008, when she was hired to manage a small grant-making program called the HIV Collaborative Fund. Over the past seven years, Solange has played several roles, including Program Manager and Director of Global Programs and Advocacy, in which she provided technical expertise and support in monitoring and evaluation, treatment access knowledge

building, health financing, accountability projects, global advocacy and small grants. Previously Solange worked at John Snow Inc. in Boston, Massachusetts mainly on USAID-funded health and development projects across Africa and Asia. Solange is constantly inspired by the power of communities across the world to mobilize and improve their own lives. As an activist, she is compelled to act against injustice, and believes in the power of education and the importance of evidence-informed advocacy to bring about change. Solange has a Master's degree in Population and International Health from the Harvard School of Public Health and a Bachelor's of Science in Biology, from Tuskegee University. She has worked in Pakistan, Ukraine, Tanzania, South Africa, and Trinidad.

Lopa Basu is the USAID Mozambique mission Senior Infectious Disease Team Lead, managing the 2nd and 3rd 90 and TB portfolios. A board certified internal medicine physician, she has worked clinically in the US and during disaster response efforts in Haiti and Sri Lanka. She has degrees in medicine, global public health and business administration. Her previous work experience includes management and coordination of the WHO Service Delivery and Safety Department, where she was the US Liaison, providing technical oversight with multiple quality and patient safety initiatives including African Partnerships for Patient Safety (APPS) and the USAID quality improvement flagship program, ASSIST. She also served as a co-lead on the Primary Health Care Performance Initiative. Dr. Basu's global health work includes technical oversight and national-level strategy development in quality improvement programs in multiple countries including Malawi, Ethiopia, Tanzania, Liberia, Uganda, Mozambique, Mali, South Africa and Mexico. Her research experience includes working at Johns Hopkins University School of Public Health focusing on patient-centered outcomes research exploring how reverse innovation frameworks co-developed in Africa can apply in East Baltimore.

Sam Biraro is ICAP's Country Representative in Uganda and leads UPHIA,the PEPFAR-supported population-based HIV impact assessment survey that is reaching 15,000 households. Dr. Biraro began his career in clinical practice at Mulago Hospital in Kampala and later worked at Kisiizi, a rural missionary hospital. He then worked in clinical research with Epicentre/MSF on strategies for HIV care and treatment and treatment of malaria. At the Medical Research Council and the Uganda Virus Research Institute, Dr. Biraro conducted population-based surveillance of HIV, HSV2, and sexually transmitted infections. Most recently, his work has focused on non-communicable diseases. Dr. Biraro graduated as a medical doctor (MBChB) from Mbarara University and earned an MPH from Loma Linda University. He completed his PhD at the London School of Hygiene and Tropical Medicine.

Theresa Simione Beatriz is a Medical Doctor specializing in general paediatrics. She attained her degree from Eduardo Mondlane University in Maputo, Mozambique and currently works as a Senior Technical Adviser in Paediatric HIV Care and Treatment at the Mozambique Ministry of Health. Prior to her current role, she spent four years as the PMTCT Senior Technical Adviser at the Ariel Glaser Paediatric AIDS Foundation. During this time, she worked as a PMTCT consultant to AIDS Free program in Angola. She has more than 10 years of experience as a clinician and hospital administrator.

Nurbai Calú is a physician with a Master's degree in Public Health and 17 years of experience in clinic areas, public health and management. Dr. Calú is currently the National Professional Officer for TB and HIV at the WHO in Mozambique. She has worked at the community, district, autarchic, provincial and National levels and technical, administrative and management positions. After the floods in 2000/2001, Dr. Calú worked 10 years in the Gaza province, the most affected province with HIV and AIDS. She held a number of positions, including, Director and District Medical Chief and District Health Director in Chibuto, Rural Chokwe Hospital Director, Provincial Medical Chief and Provincial Health Director. After serving these roles, she assumed the position of National Malaria Control Program Manager in Mozambique. She additionally assumed the position of Councilor of Health and Social Welfare of Maputo. She is also Chair of board of Fundação ARIE, specializing in paedriatic AIDS and serves as a member of National Malaria technical committee.

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Netinho Cancha is the Focal Person for PMTCT at the Ministry of Health, Mozambique

Steven Chambers is the Senior Monitoring and Evaluation (M&E) Technical Advisor at the Swaziland Ministry of Health. Mr. Chambers has a BSc. (Comp-Sci & Maths) and MSc (Leadership & Change Management), and has worked on Information Systems, Data Management and Data Visualization since 2003. In 2016, Mr. Chambers re-joined the Swaziland MoH and the National AIDS Programme (SNAP) .In this role, he works closely with the M&E Unit in the MoH by providing direct technical expertise and support in the strengthening and implementation of a robust monitoring and evaluation system for HIV Treatment, Care support. He supports HMIS in the extraction of data from the RxPMIS/APMR, CMIS and any other electronic patient management systems.

Ben Cheng has more than 20 years' experience working in global public health. Ben's work has included HIV treatment access and advocacy, HIV drug resistance and pharmacology, stigma and discrimination, strategic planning, and program evaluation. More recently, Ben's focus has been on increasing access to quality assured diagnostics, and leveraging new technologies to improve global public health. Ben has held leadership positions at Pangaea Global AIDS Foundation, PATH, the Forum for Collaborative HIV Research and Project Inform, and served as a member of the FDA's Blood Product Advisory Committee, the Department of Health and Human Services National Task Force for AIDS Drug Development, the Opportunistic Infections and Primary Infections Committees of the NIH AIDS Clinical Trials Group (ACTG), the WHO Expert Panel to Develop Operations Manual for Delivery of HIV Prevention, Care and Treatment in High Prevalence Resource Constrained Settings, the WHO Infant Diagnosis Working Group, the NIH Rapid HIV Test Working Group, and numerous NIH and FDA review panels and data safety monitoring boards. He currently serves as the co-Chair of the International Consortium for Advanced HIV Disease, on the Board of Directors for the Foundation for AIDS and Immune Research (FAIR) and on the Advisory Board for the Social Entrepreneurship for Sexual Health (SESH) program.

Noela Chicuecue is the Head of the Prevention Branch at the National Control Program of STI-HIV/AIDS at MoH Mozambique. Dr. Chicuecue is an experienced infectious disease clinician with a Master's degree in public health, and has spent four years in health management at the National STI/HIV program.

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Ema Chuva is a representative of the National AIDS Council (NAC) in Mozambique.

Aleny Mahomed Couto is a Mozambican physician with over seven years of experience in public health. She is the head of the HIV program at MoH, with experience in management and implementation of national and provincial level health programs with specific focus on HIV/AIDS, as well designing policies, country guidelines and strategic plans following WHO guidelines. She has also worked at District level (mainly primary care) and implemented a wide range of public health programs. Prior to 2011, Dr. Couto was a clinician in the local hospital, treating HIV patients in the HIV Day Hospital. Dr. Couto is also a member of the CQUIN Advisory Group.

Peter Cloutier holds an MBA and a bachelor's in biology, and is office chief for USAID Mozambique's health programs, overseeing an annual $200 million portfolio of projects and assistance in the areas of HIV/AIDS, malaria, TB, maternal/child health, family planning, nutrition, and water/sanitation. He represents Mozambique's Health Partners Group as its 'primary contact' with the Ministry of Health and Government of Mozambique under the direction of the U.S. Ambassador and Head of Cooperation. From 2013 to 2015, he served in a similar role in Angola. From 2007 to 2012, Mr. Cloutier was the Technical Office Chief in Timor-Leste for all governance and health activities including water/sanitation, maternal/child health, and family planning. Prior to joining the U.S. foreign service, he worked for an AIDS vaccine development company.

Rosa Marlene Manjate Cuco is the National Director of Public Health in Mozambique. She is a Public Health Specialist and served as adviser for Gender, Child and Social Affairs at the Mozambique Ministry of Health. She previously served as deputy National Director of Public Health, where she played a leading role in introducing task shifting of ART-related care to address the country's high HIV disease burden. Dr. Cuco is a lecturer in epidemiology of communicable diseases and community health at Eduardo Mondlane University.

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Morais da Cunha is the Monitoring and Evaluation Focal Person for the Ministry of Health in Mozambique.

Lillian Diseko is a Program Manager in the HIV, AIDS and STI Cluster at the National Department of Health, South Africa. She worked for 10 years as a professional nurse/ midwife and HIV coordinator in Johannesburg before joining the Gauteng provincial office as a TB/HIV integration manager. She provides all provinces with logistical and technical support to efficiently implement the National Strategic plan and other relevant policies aimed at improving the delivery of quality HIV and TB services in the public sector. Her passion is to improve the quality of life and health outcomes for persons living with HIV and TB. She has a Degree in Nursing Sciences (UNISA), post-graduate diplomas in Community Health Nursing (Wits Tech) and Health Management (UCT) as well as a Certificate in Project Management from UNISA Business School.

Peter Ehrenkranz is Senior Program Officer for HIV Treatment at the Bill & Melinda Gates Foundation. From 2010 to 2015, Dr. Ehrenkranz worked in Swaziland with CDC, first as the PEPFAR Care and Treatment Lead, and later as the Country Director. Prior to that, he spent two years in Liberia with a joint appointment as the senior advisor to the National AIDS Control Program and the medical director for CHAI-Liberia. He earned an undergraduate degree in history from Yale,

medical and public health degrees from Emory, and trained in internal medicine and completed the Robert Wood Johnson Clinical Scholars Program at the University of Pennsylvania.

Tom Ellman is director of the MSF Southern Africa Medical Unit (SAMU). Since first working for MSF in Rwanda in 1995, he has over 15 years of experience in humanitarian medical work, mostly with Médecins Sans Frontières. His focus has been on HIV, TB, and malaria in Africa and South-East Asia, apart from a three-year 'break' working on Chagas disease – the 'AIDS of the Americas' – in Bolivia. Dr. Ellman received his medical training in Edinburgh, has a Diploma from the School of Tropical Medicine and Hygiene (Liverpool), and a Masters in Communicable Disease Epidemiology from the School of Tropical Medicine and Hygiene (London). He is a member of the Royal College of Physicians, UK and a beekeeper.

Wafaa El-Sadr is the Director of ICAP at Columbia University, University Professor of Epidemiology and Medicine at Columbia University's Mailman School of Public Health and College of Physicians and Surgeons. She is also Mathilde Krim-amfAR Professor of Global Health at Columbia University and leads the Global Health Initiative at the Mailman School of Public Health. Dr. El-Sadr's interests include HIV/AIDS, tuberculosis maternal/child health, capacity building and health systems strengthening. She has led research studies that have focused on HIV prevention and management and currently co-leads the NIH-funded HIV Prevention Trials Network (HPTN). Through ICAP, the center she established more than a decade ago at Columbia University, she has led efforts that enabled the establishment of large-scale programs in 24 countries in Africa and Asia that link research, education, training and practice with a focus on HIV, other public health threats and health system strengthening.

Through ICAP's work, more than two million people have received access to HIV programs around the world. This was accomplished in partnership with ministries of health, academic institutions, non-governmental and community-based organizations. ICAP has championed the integration of research into programs and investment in health system strengthening and quality improvement. Dr. El-Sadr received her medical degree from Cairo University in Egypt, a Master's of Public Health from Columbia School of Public Health and a master's in public administration from Harvard University's Kennedy School of Government. Her scholarly work has appeared in leading scientific journals. She was named a MacArthur Fellow in 2008 and is a member of the National Academy of Medicine.

Adeniyi Fakoya is senior disease coordinator, HIV, the Global Fund to Fight AIDS, Tuberculosis, and Malaria. Dr. Fakoya is a clinician and specialist in HIV and international health with over 20 years of domestic and international experience in HIV, STI clinical care, service management, and program delivery. He is currently senior disease coordinator, HIV at the Global Fund in Geneva. Dr Fakoya has previously held technical, senior management, and research posts working in the UK and internationally. Over the last three years, his team has provided technical support and coordinated partner cooperation resulting in the approval of five billion dollars in Global Fund HIV grant approvals. His areas of expertise include HIV clinical care and treatment, prevention, and care; ARV scale-up; and the provision of STI clinical services. He has provided technical support to national HIV programs in Africa, Asia, and Latin America. He has sat on a number of national and international advisory committees including those for ARV treatment guidelines, prevention of mother to child transmission guidelines, and sexual and reproductive health. Dr. Fakoya is also a member of the CQUIN Advisory Group.

Peter Godfrey-Faussett is the Senior Science Advisor at UNAIDS.

Ruby N Fayorsey is a pediatric infectious disease specialist, and Deputy Director of the Clinical and Training Unit at ICAP Columbia. She provides clinical and programmatic support to ICAP's programs in sub-Saharan Africa including those Kenya, Tanzania, Democratic Republic of Congo, Ethiopia, and South Sudan. She has over 18 years of experience working with women, infants, children, adolescents and young adults with HIV and families in impoverished environments in the U.S. and sub-Saharan Africa. Dr Fayorsey has served as a consultant to the WHO on several topics including IMCI, pediatric HIV disclosure, and HIV diagnosis in infants, children, and adolescent HIV. She is also involved in implementation science research to improve retention of HIV-infected pregnant and breastfeeding women. Dr. Fayorsey is an attending physician at Harlem Hospital, NYC where she provides HIV prevention, care and treatment to infants, children, adolescents and young adults at the Family Care Center.

Joaquim Fernando is a Mozambican Medical Doctor with a post graduate degree in Reproductive Health, and Masters in Public Health-Disease Control. Dr. Fernando has more than 15 years of experience working as Public Health Physician and managing HIV/AIDS, TB, and Reproductive health programs. He joined FHI360 in 2009, and he is currently serving as CHASS (Clinical & Community HIVAIDS Services Strengthening) Chief of Party for a USAID project implemented in four provinces of Mozambique.

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Gianluca Ferrario is the Medical Coordinator for the MSF Belgium mission in Mozambique.

Nathan Ford is a scientific officer with the Department of HIV/AIDS and Global Hepatitis Programme of the World Health Organization in Geneva, and chair of WHO's Guidelines Review Committee. Prior to joining WHO in 2012 Dr. Ford worked with Médecins Sans Frontières (MSF) for 14 years supporting HIV programmes in a number of countries in southern Africa and South-East Asia. He holds a degree in Microbiology and Virology, a Master's of Public Health and Epidemiology, and a PhD in Clinical Epidemiology, and is a Fellow of the Royal College of Physicians of Edinburgh. He has published over 400 peer-reviewed publications and is an editorial adviser for the *WHO Bulletin* and a member of the editorial boards of *JAIDS*, *JIAS*, *Tropical Medicine and International Health*, and *Conflict and Health*. Dr. Ford is also a member of the CQUIN Advisory Group.

Sombo Fwoloshi is an Infectious Diseases Registrar at the Department of Internal Medicine at University Teaching Hospital in Zambia. She completed her post graduate training in internal medicine and infectious diseases and holds a DTM&H from the London School of Hygiene and Tropical Medicine. Dr. Fwoloshi is currently involved in clinical care of patients, running HIV/AIDS clinics, training all health care cadres on HIV prevention and treatment and advising on appropriate antibiotic use in the hospital. Her infectious disease team offers complicated HIV care and advice across the university teaching hospitals in Lusaka. Her research interests include adolescent HIV care and interactions of infectious diseases with non-communicable diseases. She also participated in the National epidemic preparedness committees on various diseases including viral hemorrhagic fevers, cholera and meningitis. Most recently, she conducted research on treatment outcomes in patients with TB/DM, as partial fulfilment towards obtaining her Master's degree in Infectious Diseases.

Irénio Gaspar is a Medical doctor, qualified at Eduardo Mondlane University and currently working as the STD and HIV/AIDS Programme Supervisor at the Maputo City Branch/Directorate of the Ministry of Health since 2015. Due to the nature of his work, as well as the country's high HIV prevalence, he works mostly with the general population, with special focus on high- risk groups: the LGBT community, prisoners and sex- workers.

Charles T. Gombar is currently Deputy Director, Long-Acting Antiretrovirals, HIV at the Bill & Melinda Gates Foundation where he helps guide the overall HIV strategy for the organization and guides product development investments and activities with key partners to introduce new interventions for HIV prevention and treatment. Prior to joining the foundation, Dr. Gombar spent over three decades in the pharmaceutical industry, all in R&D. He worked for SmithKline Beecham, Sterling Winthrop, Wyeth, Pfizer, and Endo Pharmaceuticals. His early career in the industry was spent primarily in pre-clinical development studying drug metabolism and pharmacokinetics of promising drug candidates. The bulk of his career was spent as a development project team leader, leading teams that successfully developed products such as carvedilol (Coreg®), clopidogrel (Plavix®), venlafaxine (Effexor XR®), and zaleplon (Sonata®). Dr. Gombar serves on the executive committee and faculty for the American Course in Drug Development and Regulatory Science being sponsored by the University of California, San Francisco. Dr. Gombar received his undergraduate degree in Chemistry from Pace University and his Ph.D. in Pharmacology from the Albany Medical College.

Anna Grimsrud is the Lead Technical Advisor for the International AIDS Society (IAS). Dr. Grimsrud focuses on supporting the implementation of differentiated models of antiretroviral therapy delivery in sub-Saharan Africa. She holds a Master of Public Health and PhD from the University of Cape Town, and has been involved in research with IeDEA-Southern Africa Collaboration, the Desmond Tutu HIV Foundation and Médecins Sans Frontières.

Not Pictured

Joe Gumulira is the Adolescent Services and Clinical Research Training Team Leader at Lighthouse, Malawi.

Clorata Gwanzura, is the Differentiated Care Medical Officer: HIV Care and Treatment at MoHCC Zimbabwe. With support from the CQUIN project, she supports differentiated care projects in the AIDS and TB Unit, focusing on the scale-up of DSD models nationwide. She has 5 years' experience working at various levels in the Zimbabwe Ministry of Health, implementing and managing health programs including HIV programming. Key areas of interest include health systems strengthening and program management. Clorata is a medical doctor and holds an MPH degree.

Charles B. Holmes is the Faculty Co-Director of the Center for Global Health & Quality and a Visiting Associate Professor in the Department of Medicine at Georgetown University Medical Center. Dr. Holmes recently served a four-year tenure as CEO of the Centre for Infectious Disease Research in Zambia (CIDRZ) and was previously Chief Medical Officer and Deputy U.S. Global AIDS Coordinator for the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), where he was also founding Director of the Office of Research and Science. He is currently on leave from Johns Hopkins University, where he is Associate Professor of Medicine and International Health.

Dr. Holmes continues to lead a multi-disciplinary policy focused research group testing large-scale strategies to improve information for public health decision-making and the development of more effective and efficient models of healthcare delivery in low resource settings, and practices medicine on the infectious disease service at Johns Hopkins Hospital. He trained in internal medicine and infectious diseases at Massachusetts General Hospital, Brigham and Women's Hospital, and Harvard Medical School, and served on the faculty at Harvard Medical School as part of a health policy group studying the cost-effectiveness of health interventions. Dr. Holmes obtained a BA from Kalamazoo College, an MD from Wayne State University and a Master of Public Health degree (epidemiology and international health) from the University of Michigan.

Julie Kadima is a medical doctor and the Care and Treatment Technical Adviser for the Family AIDS Care and Education Services (FACES) Program in Kenya. Dr. Kadima has worked in HIV since 2008, both as a service provider and in various technical capacities. FACES is a PEPFAR funded program formed through collaboration between the Kenya Medical Research Institute (KEMRI) and University of California San Francisco. It currently supports HIV prevention, care and treatment services in 73 sites within Kisumu County (Western Kenya). Dr. Kadima is also a member of the Nyanza and Western Regional HIV Clinical Technical Working Group (TWG) (an offshoot of the National HIV

clinical TWG), which oversees mentorship activities and treatment failure case management in the region.

Edgar Kansiime holds a Master of Public Health Degree from the School of Public Health, Makerere University and a Bachelors of Medicine and Surgery from Mbarara University. Dr. Kansiime also holds a Post Graduate Diploma in Monitoring and Evaluation from Uganda Management Institute. He is currently the HIV epidemiologist/Project Coordinator, HIV Case Based Surveillance (at the School of Public Health, Monitoring and Evaluation (METS) Program, Makerere University. He leads a project implemented in partnership with the Uganda Ministry of Health.

Hervé Nzereka Kambale is a Differentiated Care Advisor, seconded to the Swaziland National AIDS Programme (SNAP) with support from CQUIN. He is dedicated to scaling up differentiated service delivery in Swaziland, with a special interest in DSD for patients at high risk of disease progression. Dr. Kambale has 8 years' experience in HIV clinical and program management, as well as five years' of clinical experience in general medicine. His major contributions include health education and capacity building, mentoring and supervision, and effective collaboration with the Ministry of Health and other Non-governments agencies in the following fields: Palliative Care, Cancer Management, PMTCT, HIV/AIDS, Maternal and Child Care. Dr. Kambale graduated with an Mphil, HIV/AIDS Management from Stellenbosch University in 2013, and MBChB from the Catholic University of Bukavu in 2005. He has previously worked in Rwanda, DR Congo, Botswana, and Swaziland.

Prisca Kasonde is the Country Director for ICAP in Zambia. She is an experienced Zambian medical doctor/Public Health specialist with a career spanning over 25 years in the public and private health sector as well as in international non-governmental organizations. She has a Master's degree in Public Health with a focus on HIV/AIDS epidemiology as well as a Master's degree in Medicine specializing in Obstetrics and Gynecology. Dr. Kasonde's experience includes both clinical as well as program management in the area of HIV/AIDS, STIs, Reproductive Health, Obstetrics and Gynaecology, and health systems strengthening. She has successfully provided technical leadership and programmatic guidance to the design, development, introduction, implementation and monitoring and evaluation of HIV/AIDS prevention, care and treatment programs in donor funded projects. Prior to joining ICAP, Prisca worked on large PEPFAR/USAID funded HIV/AIDS projects in Zambia (- ZPCT/ZPCTIIB) and has experience implementing differentiated service delivery models. She has co-authored over 20 different publications in peer-reviewed journals.

Josen Kiggundu is the National Technical Advisor for differentiated service delivery at Ministry of Health AIDS Control Program in Uganda. Dr. Kiggundu is a public health professional with training and practical experience in managing health programs within the Public Sector and Non-Government Organization (NGO) setting, e.g., District-led health services, Maternal and Child Health programs and comprehensive HIV/AIDS programs. He worked with Baylor College of Medicine Children's Foundation in Uganda as an acting program manager, Care and Treatment Coordinator and Regional Coordinator between April 2014 and March 2017. He was a Program Officer with Protecting Families Against HIV/AIDS (PREFA) from February 2012 to March 2014, a District Health Officer and Medical officer with Manafwa District Local Government between August 2007 and February 2012. He holds a Master of public health (Uganda Christian University), a post graduate diploma in Project Planning and Management (Uganda Management Institute) and a Bachelor of Medicine and Bachelor of Surgery (Makerere University).

Maureen Kimani works with Kenya's Ministry of Health at the National AIDS/STI Control Program (NASCOP). Dr. Kimani is the HIV care and treatment Program Manager, and coordinated the development of Kenya's differentiated care operational guidance for health care providers. She will also provide coordination in national roll out of differentiated care models. She is committed to contributing to the country vision 2030 of zero new HIV infections, AIDS related deaths, stigma and discrimination.

Charles Kiyaga is the Program Manager for the new Laboratory Systems Strengthening Community of Practice (LabCoP) project at the African Society of Laboratory Medicine (ASLM). He has a MSc. in Biomedical Science from Makerere University and a Master of Philosophy in Medical Science from Cambridge University, UK. He also has a Diploma in Health Management from Galilee Management Institute in Israel. Mr. Kiyaga previously worked at the Central Public Health Laboratories at the Ugandan Ministry of Health. He initiated and ran the Early Infant Diagnosis (EID) Program, the Sample Transport System and the Viral Load (VL) Program, all of which received the African Society of Laboratory Medicine's Best Practice Awards in 2012, 2014 and 2016. Mr. Kiyaga has been a key focal person in internationally accredited and centralized EID and VL laboratories in Uganda.

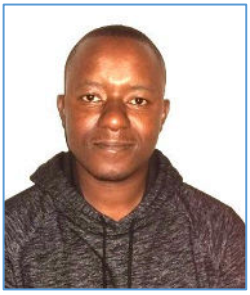
Ivan Lukabwe is a Statistician currently working as a Program Officer for Monitoring and Evaluation with the STD/AIDS Control Programme of Ministry of Health, Uganda. He has accrued over ten years of experience in management of HIV/AIDS data; serving in several strategic information positions with the Government of Uganda through Ministry of Health (STD/AIDS Control Program-ACP and National TB/Leprosy Program-NTLP); PEPFAR supported projects (Baylor College of Medicine, Infectious Diseases Institute, Rakai Health Sciences Program & The AIDS Support Organization (TASO); and international organizations (KNCV Tuberculosis foundation, GOAL). Mr. Lukabwe obtained a Bachelors of Statistics degree from Makerere University, Kampala and a Masters in Statistics. He also holds a Post Graduate Diploma in Monitoring and Evaluation from Uganda Management Institute and is a registered Practitioner-Projects in Controlled Environment (PRINCE 2).

Nomthandazo G. Lukhele is the National ART Coordinator at the Swaziland Ministry of Health. Dr. Lukehele coordinates HIV care and treatment services in Swaziland, and has extensive hands-on experience in the delivery of HIV care and treatment services at both clinical and programme level. She holds a Bachelor of Medicine and Surgery Degree (MBCB) from Witwatersrand University, South Africa (2006) and a Bachelor of Science Degree from the University of Swaziland (2000). She is currently studying for a Master of Public Health degree at Witwatersrand University, majoring in Health systems strengthening. Dr. Lukhele is also on the CQUIN Advisory Group.

Chewe Luo is the Associate Director, Programme Division, and Chief of the HIV/AIDS Section at UNICEF. A paediatrician and tropical child health specialist, she served prior to this appointment as technical team leader for children and AIDS country programme scale-up and Senior Programme Adviser on HIV and Maternal Child Health in the Programme Division. She has nearly 20 years of experience in HIV and AIDS and child health as a clinician and researcher at the University Teaching hospital in Zambia; clinician in the UK and working with UNICEF at country, regional and headquarters levels. Dr. Luo has a Medical Degree and a Masters of Medicine in Paediatrics from the University of Zambia School of Medicine, and a Masters in Tropical Paediatrics and a Ph.D. from the Liverpool School of Tropical Medicine, Liverpool University School of Medicine, in the UK. She is a fellow of the Royal College of Physicians, Edinburgh, Scotland.

Helder Macul is the Quality Improvement Focal Person at the Mozambican Ministry of Health.

Nyikadzino Mahachi is the deputy Chief of Party (Technical) for FHI360 in Zimbabwe. He completed his medical degree in Zimbabwe and his MSc at the London School of Hygiene and Tropical Medicine. He has worked within the public, private and not-for-profit sectors. Nyika has been involved in the development of HIV treatment guidelines and operationalisation in Zimbabwe, with a particular emphasis on PMTCT & pediatric HIV. He joined FHI360 in 2015 as Deputy Chief of Party/technical lead with the overall responsibility of designing and implementation of the Zimbabwe HIV Care and Treatment Project (ZHCT), a community focused project aiming to scale up differentiated care services in Zimbabwe. Under this project, FHI360 has implemented high yield home based index testing and community ART refill groups in 13 priority districts in Zimbabwe. He is currently Vice President of the Zimbabwe College of Public Health Physicians.



Talent Maphosa has had over 12 years' experience in the field of health management. In his current position as technical advisor for OPHID, Talent is responsible for ensuring that health programs are technically sound in line with international and national guidelines. As the Technical Advisor, Dr. Maphosa actively participate in policy development, donor and implementing partner meetings and with technical working groups with the AIDS and TB Unit in the MOHCC. He is responsible for contributing to the program's strategic direction, and building the technical HIV Clinical service capacity and expertise within the FACE-Pediatric HIV Consortium.

Not Pictured

Fau Mangore is a representative of the LGBT rights organization LAMBDA, Mozambique.

Joanne E. Mantell is a research scientist at the HIV Center for Clinical and Behavioral Studies and a Professor of Clinical Psychology (in Psychiatry), Department of Psychiatry, Columbia University Medical Center. With the HIV Center since 1999, she has worked extensively in the US as well as in China, Nigeria, South Africa, Kenya, Lesotho, Zimbabwe, and other countries in sub-Saharan Africa. Currently, Dr.

Mantell is the Principal Investigator of a bar/club-based intervention for male and female sex workers and their clients in Mombasa, Kenya, a qualitative study of ARV-based prevention and treatment in high-risk women in Durban, South Africa, an implementation science study on integrating PrEP into primary care in New York City, and studies on reducing health disparities in access to HIV prevention among women of color in New York City, and decision-making around PrEP among providers in different practice settings in New York City.

She also is a Co-Investigator on studies of HIV testing and engagement in HIV care in Kenya's Lake Victoria region, a combination strategy for HIV prevention among young female sex workers in Kisumu, Kenya, differentiated HIV service delivery in Zimbabwe, and an intervention for miner-friendly services for integrated HIV/TB care in Lesotho. Other recent studies included HIV self-testing among male truck drivers in Kenya, medical male circumcision in South Africa, female condom promotion among South African university students, a national evaluation of South Africa's female condom program, integration of sexual and reproductive health services into HIV care in Cape Town, South Africa, and pathways to care for people living with HIV in the Durban area.

Enos Masini is the TB focal point at WHO Kenya. He previously served in various positions in Kenya including as the National TB Program (NTP) Manager and TB/HIV coordinator. Under his tenure as Program Manager at the Kenyan NTP, he provided leadership towards the successful scale –up of TB preventive therapy among people living with HIV and use of Xpert MTB/RIF as the first TB test. In addition, he led the successful implementation of the Kenya TB Prevalence Survey 2016, the Kenya Drug Resistance Survey 2015 and the TB Patient Pathway Analysis that are currently shaping the designing of TB interventions in Kenya.

He also served as a member of the WHO Strategic Advisory Group on TB and was involved in the Technical Consultations on programmatic management of Latent TB infection and the first Social Protection Action Research & Knowledge Sharing network. In addition he has visited several African countries to support TB program reviews. He holds a Masters of Public Health and Bachelor of Medicine and Bachelor of Surgery from the University of Nairobi. His research work includes several scientific articles mainly on optimizing TB control interventions including one on Using Patient-Pathway Analysis to Inform a Differentiated Program Response to Tuberculosis in Kenya.

Victoria Masuku is a URC Senior Advisor for community grants and partnerships. She is a Public Health specialist with 27 years' experience in clinical and community health care settings and currently oversees the implementation of differentiated care models in collaboration with community based organizations to roll out patient-centered HIV care. She participates in various technical working groups and has supported development of key national guiding documents. Mrs. Masuku recently participated in the development of the Swaziland National Differentiated Care Guidelines and Standard Operating Procedure Manual and support scapacity building for health care facilities and community partners to implement these ART service delivery models.

Gloria Maimela is the Director and Chief of Party for the Health Systems Strengthening (HSS) Project in South Africa. HSS is a five-year USAID-funed project to improve HIV/TB outcomes through the implementation of the South African adopted UNAIDS 90-90-90 policy in Sub-District F, Johannesburg Health District, Gauteng and Dr Kenneth Kaunda (DKK), North West. This is done through provision of technical and direct service support as well as capacity building to the Department of Health (DOH) at district, sub-district and facility level. Dr Maimela joined Wits RHI in November 2013 as a Paediatric HIV/TB Programme Advisor, was promoted to Programme Manager in 2014, HSS Technical Head in 2015 and Director in 2016. Dr Maimela is a medical doctor with extensive experience in Paediatric and adult TB and HIV. She also has experience in managing primary health care clinics and medical wards. Dr Maimela holds a Masters in Business Administration (MBA) from Gordon Institute of Business Science; and a Bachelor of Medicine and Surgery from the University of Witwatersrand. She also obtained a Bachelor of Nursing from the University of Witwatersrand in 1995; and a Diploma in HIV Management from the College of Medicine in 2012.

Allen Mayi is the Deputry Project Director and Technical Advisor for Care and Treatment at EGPAF Kenya. He oversees DSD implementation for EGPAF on the CDC funded Timiza90 Project.

Lawrence Mbae has 12 years' experience in health care systems management having worked across the public (MOH) and private-for and not-for-profit sectors. He has vast experience in HIV programming, quality improvement and service integration. Dr. Mbae is currently the Technical Advisor - Differentiated Service Delivery (DSD) at ICAP Kenya. Dr. Mbae has previously worked for FHI (Goldstar) and PSI and in addition, consulted on quality improvement for Aga Khan University and JHPIEGO.

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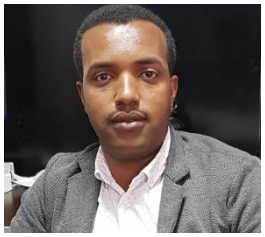
Tauzene Mbange Murgo is a representative of PLASOC and the Pfuka U Hanya civil society organization in Mozambique.



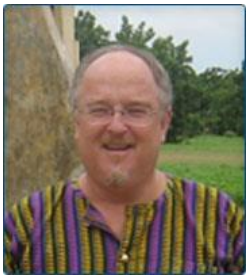
Legese A. Mekuria holds a BSc degree in Public Health from Haremaya (formerly Alemaya) University and a MPH degree from Addis Ababa University, Ethiopia. He did a MSc degree in Epidemiology at The Netherlands Institute for Health Sciences (NIHES) and a PhD at the Academic Medical Center, University of Amsterdam, The Netherlands. Dr Legese has worked in governmental and non-governmental organizations at various capacities, including as a Clinician, a Program Officer, a Monitoring and Evaluation Advisor, and as a Postdoctoral Researcher at the Amsterdam Institute for Global Health and Development (AIGHD). Dr Legese's interest includes Epidemiological research and program management in the area of HIV/AIDS, Health Systems, Public/Global Health, Reproductive Health, Antimicrobial Resistance (AMR), Primary Care, and Disease Surveillance. Currently, he serves as a Program Manager at the African Society for Laboratory Medicine (ASLM).

Zenebe Melaku is ICAP's country director in Ethiopia. He has over 20 years of clinical, academic, programmatic, and managerial experience in medicine and public health in Ethiopia. In his current role, Dr. Melaku oversees the planning and implementation of comprehensive and high quality HIV/AIDS care and treatment services at ICAP-supported sites in eight regions of Ethiopia. He provides technical and managerial oversight to program activities at the national, regional, and site levels and liaises with the Federal Ministry of Health and other project partners and collaborators. Before joining ICAP, Dr. Melaku was an associate professor of internal medicine at Addis Ababa University and served as the technical advisor for HIV/AIDS Care and Treatment at the U.S. Centers for Diseases Control and Prevention (CDC) in Ethiopia.

His areas of expertise include HIV/AIDS, tuberculosis, health systems strengthening, program management, organizational development, and strategic planning. Dr. Melaku holds a medical degree with a specialty in internal medicine from Addis Ababa University, a certificate of fellowship in neurology from the University of Limoges (France), as well

as certificates in rheumatology, advanced epidemiology, and research methodology and clinical field trials from the University of Bergen (Norway).

Alemtsehay Abebe Wolde Micheal is an HIV Program Officer for the Federal Ministry of Health in Ethiopia. She holds a Master's in Public Health.



Andrew McKenzie is the technical lead for Governance, Policy and Planning in Health Partners International, a DAI Global Health company. Dr. McKenzie is a health manager with 35 years of experience gained in Africa. He has an excellent understanding of managing health systems and services, health sector reform and district development in sub-Saharan Africa. Qualifications include a medical degree, a masters in public health and a post-graduate diploma in adult education. In 2016, he evaluated the HIV Adherence Clubs in Cape Town metro for the Gates Foundation and the Stop Stock Out project in South Africa for MSF.

Not Pictured

Tshepo Molapa is the Deputy Director for Monitoring and Evaluation for the HIV Cluster at NDOH in South Africa.

Lucas Mofino is the Head of Mission and medical coordinator of MSF in Mozambique. He completed his medical training at University of Buenos Aires in Argentina. He did a specialization in Internal Medicine and after working for several years in Argentina and joined MSF in 2006. Since his first mission in Uganda, he has over 10 years' experience working in humanitarian medical work with Médecins sans Frontières focusing mostly on HIV and TB in Africa and South-East Asia.

Dan Mugisha is the PMTCT/Care and Treatment Technical Advisor at EGPAF Uganda.

Priscilla Lumano-Mulenga is an Infectious Disease Specialist who is currently working as the Technical Advisor to the HIV unit at the Ministry of Health, Zambia. She has been involved with the National Anti-Retroviral (ARV) Program since its inception in 2002. In 2005 she joined the Centre for Infectious Disease Research in Zambia (CIDRZ), where she held various positions including that of Head – Quality Assurance/Quality Control (QAQI) before moving to the Elizabeth Glaser Paediatrics AIDS Foundation (EGPAF) as the Technical Director.

Maurine Murenga is an advocate for the health, development and human rights of women and girls living with HIV. She has been a pioneer in Kenya amongst the young women and adolescent girls living with HIV movement. Ms. Murenga founded and is currently the Executive Director of the *Lean on Me Foundation* – an organization providing comprehensive care and support to adolescent girls and young women living with HIV and affected by TB in Kenya. Ms. Murenga has worked extensively in community development and she currently serves as the Alternate Board Member of the Communities Delegation on the Board of the Global Fund, Vice Chair of the Global Fund Implementer Group and represents Communities on the TB Stakeholders Association of TB Alliance. She is part of the Global Fund Advocates Network; Steering Committee member of Women 4 Global Fund and a member of the Global Fund's Community Rights and Gender (CRG) Division Advisory Group. Ms. Murenga is a member of Gender Technical Committee on HIV and AIDS, and formerly the Global Fund Coordinator of the International Community of Women Living with HIV (ICW) Global.

Pasipamire Munyaradzi is the National ART Programme Officer for Swaziland's National AIDS Programme. He has more than eight years of clinical and programmatic experience in HIV and TB health services., and was instrumental in the development of Swaziland Differentiated Care (CommART) policies and SOPs. He is passionate about research, monitoring and evaluation, and is a recipient of the Lange/ Tongeren Young Investigator Prize for Clinical Research at the International AIDS Conference 2016. He holds a bachelor's degree in medicine and surgery from University of Zimbabwe and a Master of Science degree in Epidemiology and Biostatistics from University of the Witwatersrand and a certificate in Health Economics.

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Annamore Mutisi is the District Medical Officer for Hurungwe at the Ministry of Health and Child Care in Zimbabwe.

Antonio Mussa is ICAP's country director in Mozambique. He is a public health specialist with 25 years of experience in health care, health systems management, and human resources. At ICAP Mozambique, he leads a team of over 200 staff to implement technical assistance and capacity building HIV prevention, care and treatment programs. Previously, he served as a senior manager in the Mozambican Ministry of Health for nearly 20 years as director of human resources director, provincial director for health, provincial chief medical officer, district director and hospital director and district director. His areas of expertise include clinical care, human resources, workforce development, health governance issues, health systems strengthening, and management. Dr. Mussa holds a medical degree from University of Eduardo Mondlane and a Master of Public Health degree from the University of Washington, Seattle. He is registered with the Mozambican Medical Council.

Godfrey Musuka is the Country Director at ICAP Zimbabwe. He is an HIV/AIDS M&E and public health expert with 20 years of experience implementing health interventions in Zimbabwe, Botswana, and Nigeria. He has worked for UNICEF, ACHAP (the partnership between the Government of Botswana, the Gates Foundation, Merck & the Merck Company Foundation) in the areas of HIV/AIDS, TB, and immunization. His key areas of interest include strategic information and program management. Godfrey is a Doctor of Veterinary Medicine and holds MPhil and MSc degrees.

Batanayi Muzah is the acting country director of ICAP in South Africa. Dr. Muzah has extensive experience in HIV/TB from Zimbabwe, Namibia, and South Africa and possesses a medical degree from the University of Zimbabwe, an MSc in Epidemiology (epidemiology and biostatistics) from the University of the Witwatersrand in Johannesburg, and a diploma in HIV management from the Colleges of Medicine of South Africa. Post clinical practice, he has managed several research projects during his time as a program manager with the Wits Reproductive Health and HIV Institute, and held several management positions before his recent secondment to the South African National Department of Health as lead advisor for the initiative aimed at accelerating the country's progress toward the UNAIDS 90-90-90 targets. In this role, he led support that resulted in the development and implementation of the Novel District Improvement Micro-Planning (DIP) process. He was also instrumental in the development of a revolutionary Integrative Thematic Pillar-based planning framework that has transformed health development planning in the country. Dr. Muzah is an active academic, lecturing, mentoring,

and supervising master's-level students from the University of Pretoria, University of The Witwatersrand, and Monash University.

Daniel Mwamba is a Provincial ART Coordinator at the Centre for Infectious Disease Research in Zambia (CIDRZ). Dr. Mwamba is a dedicated HIV clinician with more than 10 years' work experience, gained from working in hospitals both in the public and private health facilities including the mining sector. He has growing interest in HIV research, striving for evidence to improve patient outcomes in HIV prevention, care and treatment programs. As a certified trainer of trainers for the Zambian Ministry of Health, he is dedicated to improving the knowledge and skills of various cadres of health workers to improve the quality of services for people living with HIV and related co-morbidities.

Dr. Mwamba is currently working as a Provincial ART Coordinator for Lusaka province, Zambia for the five year "Achieving HIV Epidemic Control in Zambia" (ACHIEVE) project, a U.S. President's Emergency Plan for AIDS Relief and Centers for Disease Control and Prevention supported project. Dr. Mwamba completed his medical degree from University of Lumbumbashi, School of Medicine, Democratic Republic of Congo. He is currently pursuing an MSc. in Infectious Disease from the University of London.

Tonderai Mwareka is a Social Scientist who has been in the field HIV and AIDS programming beginning in 2003. Mr. Mwareka has experience in program design, implementation, management, monitoring, evaluation, coordination, and research and resource mobilization. He is currently the Programme Officer with Zimbabwe National Network of People Living with HIV (ZNNP+) and responsible for coordinating and representing the interests of People Living with HIV (PLHIV) throughout Zimbabwe. Mr. Mwareka's DSD work includes working with PLHIV and ZNNP+ Provincial Coordinators to roll out models of care such as, Family Centered, Diary Spacing, fast-track and facility adherence clubs. In 2018, he will be leading research on community monitoring/surveillance on enablers and barriers to differentiation of service. Mr. Mwareka holds a BSc Degree in Psychology from the University of Zimbabwe and is currently pursuing a Masters in Child Rights and Childhood Studies at Africa University.

Norah Namuwenge is a National ART Programme Coordinator at the Ministry of Health in Uganda.

Felix Ndagije has over 17 years of experience in the design, implementation, and scale-up of HIV prevention, care, and treatment programs, and the implementation of HIV Prevention, Care and Treatment Programs and Health Systems Strengthening in East and Southern Africa. Working with a number of countries, he led the adoption of the 2015 WHO HTS guidelines; revision of the 2014 ART Care and Treatment Guidelines to adopt the WHO Test and Start ART guidelines. Dr. Ndagije worked with the CQUIN team to review evidence and guidelines available for Differentiated Service Delivery for High Risk Adult Patients with HIV. He is a member of a team at ICAP-Columbia University that supports programmatic and technical aspects of comprehensive HIV care and treatment across about 22 countries. Dr. Ndagije is responsible for providing day-to-day direct technical assistance to ICAP country programs to six countries in East, Central and Southern-Africa.

Stanley Ng'oma, is a Care and Treatment Officer at MoH Malawi where is the focal person for Differentiated Service Delivery, Clinical Mentorship, Trainings, Skills, Development and Coordination. Mr. N'goma holds a Bachelor's Degree in International Obstetrics and leadership from the University of Warwick. He also has a Diploma in Clinical Medicine from the Malawi College of Health Sciences and he is registered with Medical Council of Malawi.

Frehiwot Nigatu is a medical doctor and the Community Service Delivery Director at Project Hope in Ethiopia. Prior to joining Project Hope, Dr. Nigatu worked for the Ethiopian Federal Ministry of Health as the National HIV/AIDS focal. Dr. Nigatu attended medical school at Jimma University.

Rose Nyirenda is the Director of the HIV Treatment Unit in the Ministry of Health in Malawi. She is a Community Health and Interprofessional Health Care Leadership Specialist. Currently a PhD candidate at the University of Malawi, her previous assignments include working as a Director of Mzuzu Referral Hospital in the northern region of Malawi, heading the Ministry of Health's Community Health Nursing program, and acting as Nurse Educator and Principal of a Nursing College. She is a researcher and was a Principal Investigator of the EARNEST ART clinical trial; she is currently a member of the National Health Research Ethical Review Board in Malawi. Her achievements have been the accreditation of the Mzuzu Central Hospital laboratory (SLIMTA) with 3 star status, and accreditation of the hospital in Standards Based Infection Prevention and Reproductive Health Standards. She received a special award of recognition on Leadership in Quality improvement from JHPIEGO in 2013. Ms. Nyierenda is also a member of the CQUIN Advisory Group.

Michael Odey Odo is a HIV/AIDS Expert and Public Health Physician with sixteen years of health management experience. He is a medical graduate of the University of Calabar- Nigeria, and Public Health from the University of Liverpool, UK. Dr. Odo is the former Technical team lead in HIV/AIDS and TB care, treatment and support under the $450 million USAID country-wide GHAIN project and the $350 million follow-on SIDHAS project in Nigeria. He served as the FHI360/TBCARE1 Nigeria Team leader implementing community TB/HIV Care and treatment, as well as programmatic management of DR TB in facility and community. Dr. Odo is currently the Technical Advisor for HIV Care and Treatment for the Department of HIV/AIDS, Ministry of Health in the Republic of Malawi.

Velephi Okello holds a Degree in Medicine from Uganda and a Master of Public Health Degree from Harvard University. She is currently working at the Ministry of Health in Swaziland as the Deputy Director of Health Services in charge of clinical services. Before this, Dr. Okello worked at the Swaziland National AIDS Programme for nine years, where she was in charge of the HIV Care and Treatment Programme. During her nine years in the HIV/AIDS field, she spearheaded policy changes to ensure access to quality ARV medicines for people living with HIV (PLHIV) in Swaziland.

Not Pictured

Jacobus Olivier is a Public Health Specialist (HIV/AIDS Treatment) at CDC in South Africa.

Pascale Ondoa is a virologist and Director of Science at the African Society of Laboratory Medicine (ASLM). Dr. Ondoa obtained her medical degree from the University of Yaoundé, Cameroon and her PhD in Biomedical Sciences from the University of Antwerp, Belgium. After her studies in 2002, she worked at the Institute of Tropical Medicine in Antwerp focusing on models of resistance to HIV infection in non-human primates, incomplete immune restoration upon suppressive ART and the development of alternative laboratory assays to monitor ART in resource-limited settings. In 2009, Dr. Ondoa joined the team of the late Prof. Joep Lange at the Amsterdam Institute for Global health and Development (AIGHD). She was involved in the research and implementation aspects of projects looking at HIV drug resistance in sub-Saharan Africa, exploring ways to mitigate barriers to laboratory test uptake, and addressing gaps of the laboratory systems in resource in African countries. Since 2017, Dr. Ondoa provides scientific leadership to the ASLM team, for the building of medical laboratory services, systems and network capacity throughout Africa.

Kevin Osborne is the Director of HIV Advocacy and Programmes at the International AIDS Society in Geneva. He has over 20 years' experience of working in HIV and his background in human rights and education has provided a solid base on which he has helped shape many national and global HIV responses. Mr. Osborne has supported a number of national, regional and international programmes by forging sustainable partnerships with governments, UN agencies, community organisations and the donor community.

Many of these have focused on ensuring that people living with HIV are at the center of the response. The *PLHIV Stigma Index* – which is used by UNAIDS as a tool to capture changes in stigma and has been applied in over 44 countries (including in the UK) – was conceptualized and developed by Kevin. He has extensive experience in supporting large-scale advocacy initiatives through his previous roles as South Africa Country Director for PATH and as the International Planned Parenthood Federation's Global HIV Advisor in London. Most recently he served as FHI 360's Global Project Director in Washington DC of the PEPFAR- and USAID-supported LINKAGES project, which is the world's largest global programme aimed at providing services for key populations (men who have sex with men, sex workers and their clients, people who inject drugs and transgender people.)

Not Pictured

Ana Paula is a representative of Ungagodoli, a sex worker led organization in Mozambique.

Edna Paunde is a Clinical Psychologist for the Mozambican Ministry of Health. Edna began her work in HIV in the Sofala Province, counseling and providing psychological support for people living with HIV at the Ponta-Gea Health facility. In 2014, she joined the Ministry of Health, through the National Control Program for STI, HIV, and AIDS as a psychosocial support and positive prevention Focal Point. The focus of her work is to enhance Psychosocial Support and Positive Prevention to ensure patient adherence and retention on ART. Her work focus is currently the development of guidelines, procedures, standards, manuals and technical materials and national report tools.

Peter Preko is the Project Director for ICAP's CQUIN HIV Learning Network. Dr. Preko started his career in HIV work as the CEO and co-founder of AIDS ALLY, a local NGO that provided care and treatment in Ghana before national HIV treatment programs started in Africa. Prior to his current role, he was with ITECH – University of Washington, seconded to the Malawi Ministry of Health as the Senior Care and Treatment Advisor. Dr. Preko worked with CDC Swaziland from 2011 to 2016 as the PEPFAR Swaziland Care and Treatment Lead. Before joining CDC, he was the Senior. Care and Treatment Specialist at ICAP in Swaziland. In Ghana, before moving to Swaziland, Dr. Preko was the Senior Program Manager (HIV/AIDS) at AED-SHARP and Engender Health respectively. Dr. Preko obtained his BSc Human Biology and medical degrees from the Kwame Nkrumah University of Science and Technology and an MPH from the University of London School of Hygiene and Tropical Medicine.

Miriam Rabkin is the principle investigator for the CQUIN project at ICAP. She has worked in the field of HIV/AIDS for 20 years, focusing on strengthening health systems to improve the delivery of prevention, care and treatment services for underserved populations. Dr. Rabkin is an associate professor in epidemiology and medicine at the Mailman School of Public Health, and director for health systems strategies at ICAP. At ICAP, she focuses on strengthening health systems, improving access to HIV services in resource-limited settings, and the design, delivery, and evaluation of chronic care programs for HIV and non-communicable diseases. Dr. Rabkin's current research focuses on implementation science, and on ways to leverage the successes and lessons of HIV scale-up to strengthen broader health systems, to enhance the quality of programs for HIV, maternal/child health, non-communicable diseases, and infection prevention and control (IPC) in sub-Saharan Africa, and to improve refugee health services in Turkey, Jordan, and Lebanon.

Bill Reidy is a Senior Strategic Information Advisor at ICAP and an Assistant Professor of Epidemiology in the Mailman School of Public Health at Columbia University. He has more than 15 years of experience in HIV/AIDS program implementation, research, and evaluation. Dr. Reidy's work has taken place in the United States and internationally—primarily in sub-Saharan Africa—with a wide range of populations.

In his current role at ICAP, he is an investigator or collaborator on numerous studies and projects with aims to optimize HIV/AIDS programs, and has provided key support for implementation of large-scale or targeted government-led HIV/AIDS programs in countries including Swaziland, Myanmar, South Africa, Tanzania, and Kenya. As a collaborator on several US government-funded grants, he worked extensively on designing and implementing efforts to use routinely-collected data from health records to assess the performance of HIV programs, including HIV testing and care and treatment, prevention of mother-to-child HIV transmission, and HIV prevention, including HIV pre-exposure prophylaxis services.

Phillip de Bathe Roberts is the CCMDD Project Lead at Last Mile in South Africa. He has served in various management roles for over 30 years in the private sector and non-profits. Mr. Roberts holds an executive MBA from the University of Cape Town.

Ruben Sahabo has been the country director for ICAP in Swaziland since 2011. Previously, he was the ICAP country director in Rwanda, where he led the rapid expansion of care and treatment activities, overseeing technical and financial assistance to over 50 urban and rural clinics that enrolled over 50,000 patients enrolled in HIV care and treatment. He also supported the start-up of ICAP's programs in Cote d'Ivoire in 2008 and the Democratic Republic of Congo in 2010. Dr. Sahabo has managed numerous program evaluations and research studies in Rwanda and Swaziland.

Andrea Schaaf is a Strategic Information Specialist at ICAP in New York. Andrea joined the CQUIN project following her graduation from the MPH program at the Mailman School of Public Health at Columbia, where she worked with ICAP supporting the evaluation of Lesotho's Accelerating Children's HIV Care and Treatment (ACT) Initiative and the ICAP Informatics Center.

Siphiwe Mabaka Shongwe is the CQUIN Clinical Advisor based in Swaziland. She has a Master's degree in international public health from the University of New South Wales, Australia and a nursing degree and midwifery certificate from the University of Swaziland. She has worked in different non-governmental organizations and also in the Ministry of Health, providing clinical services including HIV prevention and treatment, comprehensive sexuality education, as well as working in public health research. She worked for the Ministry of Health at the Mbabane public health unit as a nurse and midwife, since 2009, then joined the World Bank working as a project officer for the Maternal, Neonatal and Child Health project in 2012. She pursued her career and joined World Vision Swaziland as a TB/HIV project coordinator in 2015 before she joined ICAP Swaziland as a research advisor.

Suilanji Sivile is an infectious diseases physician working at University Teaching Hospital in Lusaka Zambia. He attends to adults and adolescents with advanced HIV at the UTH Center of Excellence. He is a member of the MOH DSD Steering Committee. Dr. Sivile participates in different HIV related programs at MOH. His interests include immunologic and metabolic outcomes in patients on long-term HIV treatment.

Jackie Smith is the Programme Manager and Health Systems Trust in South Africa and a health professional with 30 years of public health experience. She is a Professional nurse with qualifications in midwifery, community health, Primary Health Care, a Bachelor's degree majoring in Administration and Education as well as a Masters in Public Health from University of KwaZulu Natal. Jackie has worked in the areas of Health Information systems, district health management and communicable diseases with a special emphasis on HIV and TB. Jackie is currently Programme Manager on the SASURE project funded by CDC and which supports seven focus districts with Health Systems strengthening and direct service delivery in TB and HIV. Jackie is currently registered for a PhD in Public Health with the University of KwaZulu Natal.

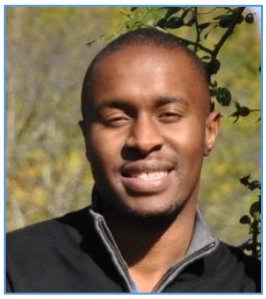
Susan Michaels-Strasser has over 25 years of experience in nursing and public health. She is the senior implementation director at ICAP, providing leadership and direction for the development, implementation, monitoring and evaluation of ICAP's global portfolio. In her role as associate director for nursing programs, she serves, also, as Principal Investigator for a HRSA-funded, multicountry initiative to strengthen and sustain nursing's role in the care of people living with HIV. Her areas of expertise include pediatric care and support,

nurse training, and use of point of care diagnostics. She is a pediatric nurse practitioner, a member of the Sigma Theta Tau Honor Society for Nurses, a member of the Association of Nurses in AIDS Care, and a Fellow of the American Academy of Nursing. Dr. Strasser holds a MPH and MSc in nursing from Yale University and a PhD in public health from the University of Cape Town.

Nandita Sugandhi is a pediatrician with over 10 years of experience working in pediatric HIV care and treatment. After completing her training in New York, she spent four years working as a Pediatric AIDS Corps doctor with the Baylor International Pediatric AIDS Initiative (BIPAI) in Swaziland, Botswana, Tanzania and India. She went on to work with the Clinton Health Access Initiative (CHAI) as a Clinical Advisor to improve access to essential drugs and diagnostics for HIV. She joined ICAP as a Senior Staff Associate in 2017. She is a practicing pediatrician, providing care to HIV infected and affected infants, children, adolescents and young adults in New York City. She leads the technical advisory panel for Pediatric AIDS Treatment for Africa (PATA), a network of over 250 clinics in sub-Saharan Africa dedicated to providing high quality pediatric HIV care. In addition, she is an active member of the IATT Child Survival Working Group.

Maureen Syowai is a HIV Care and Treatment Advisor at ICAP Kenya, where she supports the OPTIMIZE project, a consortium using innovation and partnership to accelerate the introduction of better, less expensive antiretroviral treatment (ART) regimens for HIV patients in low- and middle-income countries. Dr. Syowai is a physician and public health specialist. In her previous role at ICAP, she worked to support the Kenyan Ministry of Health National AIDS Control Program to design, implement, and monitor Differentiated Service Delivery for HIV in Kenya. Within CQUIN, Dr. Syowai leads south-to-south learning and knowledge exchange focused on the implementation of differentiated care programs.

Nick Tan is a research consultant in Dr. Ruanne Barnabas's research group in the Global Health Department in the University of Washington. He received his B.S. in Bioengineering and B.A. in Biochemistry from the University of Washington. Nick develops and programs mathematical models of infectious disease to study the population-level impact of HIV and HPV interventions on sub-Saharan African populations. He has co-authored a systematic review on viral-load differentiated care and is currently conducting a systematic review on the cost and cost-effectiveness of various differentiated care strategies.



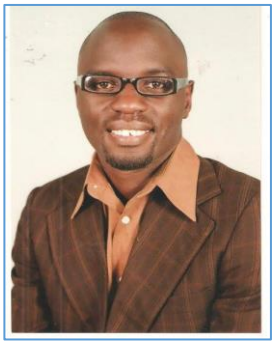
Ivan E. Teri is the global Quality Lead at Elizabeth Glaser Pediatric AIDS Foundation, overseeing the implementation of quality health programs and services in nearly 5,00 health facilities in 19 countries. For the past 4 years, his role has been to guide the quality of work of the Foundation's staff and ensure the Foundation maintains a culture to continuously improve service delivery to the nearly 1 million clients currently on HIV treatment including 70,000 children. Ivan is a certified Manager of Quality/Organizational Excellence and certified Quality Improvement Associate with over 10 years international experience in the health and social development sector, particularly in sub-Saharan Africa.

He has experience in designing, planning, managing, monitoring and evaluating, researching and improving the performance and quality of national and international health programs – working closely with ministries of health in Tanzania, Malawi, Uganda and Namibia. He holds a BSc (Hons) Medical Genetics degree from University of Leicester (UK) and MSc International Health from Queen Margaret University (Uk). Ivan has previously held positions at PharmAccess Foundation (Tanzania), All Africa Global Media (USA) and Institute of Cancer Research (UK).

Joao Teixeira is the Director of Forecast, Supply, and Distribution Planning for GHSC/PSM in Mozambique. Mr. Teixeira is a pharmacist by training and has spent 17 years in Mozambique working in logistics for public health. He holds a Pharmacy Degree from the University of Lisbon.

Alfredo Vergara is the CDC Country Director and Division of Global HIV and TB Program Director for Mozambique. Dr. Vergara is an epidemiologist with 17 years of experience in public health program implementation. Between 2000 and 2006, Alfredo served as the CDC Country Director and Public Health Attaché at the U.S. Embassy in Mozambique. During this time he opened and led CDC's first office in Mozambique, focusing on implementation of the President's Emergency Plan for AIDS Relief (PEPFAR). After he finished his 6-year tour in Mozambique, Alfredo joined Vanderbilt University. There, he served as Associate Director for Program Implementation at the Vanderbilt Institute for Global Health (VIGH). He returned to Mozambique in 2013, where he served the CDC Mozambique office as Branch Chief for public health system strengthening. Dr. Vergara was awarded a B.S. in biomedical engineering by the University of Iowa, a M.S. in

environmental science and a PhD in epidemiology by University of Iowa's Department of Preventive Medicine.



Jeffery Walimbwa is the Program Manager at ISHTAR MSM Kenya. Mr. Walimbwa has been working at ISHTAR-MSM, a community-based organization that advances the sexual health rights of men who have sex with men. ISHTAR MSM aims to reduce stigma and discrimination for MSM by advocating for their rights to access health care, including STI/HIV and AIDS-related care and treatment. ISHTAR-MSM is a member group of The Gay & Lesbian Coalition of Kenya (GALCK). As Program Manager, Mr. Walimbwa has taken part in various activities on advocacy, policy and strategy formulation, and analysis. He is experienced in evidence-based HIV and sexual health programming and has sat on a variety of technical working groups at the national level. He has a keen interest in community research and is a Co-Chair of the G10 a research agency at the Gay and Lesbian Coalition of Kenya.

Joyce Wamicwe is a medical doctor with post-graduate training in Applied Epidemiology under the Field Epidemiology and Laboratory Training Program (FELTP) – Kenya. Her goal is to contribute towards achieving greater good for humankind through her work. She is currently based at the Ministry of Health - at the National AIDS & STI Control Programme (NASCOP) where she is the Strategic Information Unit Team Lead. In her capacity, she has steered improvement in health sector HIV data quality through promotion of cascade approach of data collection and analysis and increased HIV data visibility through extensive use of dashboards. In addition, she has been key in expanding the scope of HIV surveillance in Kenya with introduction of Mortuary and Case Based Surveillance. She remains a champion for promotion of use of electronic health records systems as a key innovation for health systems strengthening and overall improvement and ease of client/patient clinical experience.

Dinku Worku is the Program Manager for the CDC ART Adherence Program at the Network of Networks of HIV Positives in Ethiopia (NEP+). He has over 18 years of experience as a social worker, education unit head, child and family Affairs expert, as program consultant in UNHABITAT & area program coordinator with high exposure to child and family development, anti HIV/AIDS interventions and other integrated development programs. He spent most of the career time in HIV and AIDS focused programs and holds a Master's degree in Sociology.

Isaac Zulu is a Medical Epidemiologist on the Adult HIV Treatment Team, HIV Care and Treatment Branch (HCTB) of the Division of Global HIV/AIDS and Tuberculosis at the U.S. Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia. He joined the Division of Global HIV/AIDS in October 2012 and co-leads the Service Delivery Unit of the HCTB. Dr. Zulu is also a member of the Epidemic Control Leadership Team under the Office of the Global AIDS Coordinator, whose mandate is to develop strategies and advise on policy direction aimed at achieving HIV Epidemic control in PEPFAR supported countries.

Before moving to CDC-Atlanta, Dr. Zulu was the Branch Chief of the Prevention, Care and Treatment Branch at the United States CDC Office, in Lusaka, Zambia, where he oversaw the scale up of the HIV treatment program in Zambia. Dr. Zulu trained as a medical doctor graduating with a Bachelor of Medicine and Surgery (M.B.Ch.B) degree from the University of Zambia in 1989, has specialty training in internal medicine with a Master of Medicine in Internal Medicine (M.Med) degree from the University of Zambia, and a Doctor of Medicine (MD) degree in Gastroenterology from Queen Mary College, University of London, United Kingdom (2008).

He obtained a Masters' degree in Public Health (M.P.H.) at the University of Alabama, at Birmingham, USA, in 2002. Dr. Zulu served as Clinical Chair (2004-2006) and Consultant (Attending) Physician (1999-2006) in the Department of Internal Medicine, University Teaching Hospital (UTH), Lusaka, Zambia. He is an internationally recognized public health leader, clinician and researcher who has co-authored more than 50 articles in peer reviewed scientific journals. Dr. Zulu is also a member of the CQUIN Advisory Group.

Full Transcripts

Monday, February 12th

Opening Reception

Dr. Wafaa El-Sadr, ICAP New York

"On behalf of ICAP at Columbia University, I welcome all of you here to the first annual meeting of the CQUIN Network. It is a pleasure to welcome everyone here. I want to acknowledge Dr. Rosa Marlene Manjate Cuco, the National Director of Public Health in Mozambique. Thank you so much for being with us tonight. We're very honored to have you.

We're thrilled to be in Mozambique and in Maputo, and I need to acknowledge the commitment of the Ministry of Health for confronting the HIV epidemic and your commitment to the health and well-being of the people of Mozambique. People from all over the world join us here. We have representatives from the ministries of health in nine CQUIN countries, implementing partners, NGOs, civil society groups, community groups, funders and major international agencies.

It is quite a diverse group and we are happy to be together to accomplish two things. The first is to reflect on what we've accomplished in the first year of this network. There is a lot to celebrate, and you'll learn about the activities that are ongoing among the country teams during the week. The second thing we are here to do is to look forward and think about what needs to be done for the upcoming year.

I want to acknowledge Dr. Peter Ehrenkranz, the funder, from the Bill & Melinda Gates Foundation. Thank you for all of your support. Peter is more than just a funder of this network. He is a partner, a supporter, a guide; he has been remarkable in working hand in hand with all of us to make this a successful endeavor, so thank you Peter for your support. I want to also acknowledge Dr. Miriam Rabkin, the principal investigator of CQUIN. She has done remarkable work from the day of the launch and played a critical role with Peter Preko, the director of CQUIN. I want to also acknowledge the people behind the scenes who helped organize the meeting, along with Miriam and Peter: Laura Block and Michael Cestare, thank you for all of your hard work. I also want to acknowledge the ICAP Mozambique team who were critical to making this happen, and thank you to the ICAP Mozambique country director, Dr. Antonio Mussa."

Dr. Miriam Rabkin, ICAP New York

"For those of you who are new to CQUIN, it stands for HIV Coverage, Quality, and Impact Network. It's a network designed to advance the implementation and scale-up of DSD. It's funded by the Bill & Melinda Gates Foundation, and convened by ICAP at Columbia University. It's built on the work of a group of partners and stakeholders who have been instrumental in bringing DSD onto the world stage.

The network focuses on three general domains. The first is knowledge exchange. We're attempting to bring people who are practitioners, policy makers and people on the front line, to bring DSD to scale. We are bringing you together so you can share what works: tools, resources, and lessons

learned. The second is joint learning. We want to bring people with experience and the great minds to have them work together on the areas of DSD where there are challenges, but not necessarily best practices. The thirds is innovation: to create new solutions where there may not be any.

We now have ten members, and we're delighted to welcome Côte d'Ivoire, our tenth network member. It's exciting to welcome West Africa into the network, where the health systems and challenges are different. As you'll hear over the course of tomorrow morning's talks, the ability to scale-up DSD is different as well.

I want to take a moment to look back on the past year. Eleven months ago in March, we had our launch meeting in Durban, where the first six member countries came together and identified the priority challenges and research agenda to take DSD to scale. There had already been pilots, evidence, innovation, policy adaptations, and resources, but we wanted to focus on the next steps that were necessary to take DSD to scale. We piloted the CQUIN dashboard, a tool to have country teams do self-staging to describe the maturity of their DSD scale-up. There was also an exchange of best practices, resources, and tools at that meeting.

We asked people at that meeting: What are the most important challenges and barriers around scaling up DSD? The answers that came up most frequently were M&E of DSD; DSD for patients presenting with advanced disease or those at high risk of HIV disease progression; DSD for men and engaging men in DSD models; DSD for adolescents and young people; and the challenge of DSD for patients with both HIV and NCDs.

From that meeting, we came up with priority domains, which were pretty much the ones I just described, and in addition to those were the issues that came up repeatedly: questions around costing affordability and effectiveness of DSD models; issues around laboratory barriers and facilities of DSD; and the important issue of differentiating services for key populations. We'll hear more about these topics over the over the course of the week.

In response to network members' desire to work on these topics, we came up with three categories of activities: south-to-south learning, focused technical assistance, and implementation research or joint discovery. In addition to our launch meeting, we had workshops on DSD for patients at high risk of HIV disease progression in Harare in July that led to many outputs, and a recent workshop on DSD for adolescents living with HIV in Johannesburg in October.

The CQUIN Dashboard is a self-staging tool with domains that countries can consider: whether policies or guidelines are in place; whether there were diversity of different DSD models; whether there is a national scale-up plan; and whether there's engagement from civil society. These are all domains that were identified as important to developing a mature scale-up of DSD. We also have a portfolio of online resources. There are already websites such as differentiatedcare.org that have a repository of resources and guidelines around DSD. The CQUIN website is focused on the network, its projects, and activities. We also have webinars, and a monthly newsletter.

There is a series of south-to-south learning visits, or targeted trips between countries. Examples were ministry of health participants from Swaziland and Mozambique visiting Malawi to observe a specific teen club model for adolescent DSD; a team from Mozambique visiting Swaziland to observe a variety of DSD models in practice; and a team from Zimbabwe visiting Swaziland to observe a

national review meeting approach. There are four more trips planned for the first quarter of this year. Another way we try to support exchange and joint-learning was to develop virtual communities of practice – an opt-in group of people interested in working together virtually on targeted challenges.

Dr. Reidy guides our community of practice related to M&E of DSD. Dr. Mantell and Kambale guide the community of practice to develop a screening tool for DSD, something that came out of our patient at high risk meeting. We also launched a partnership this year with ASLM to work on overcoming lab barriers and facilitators of DSD. One example of the focused technical assistance is that CQUIN is seconding DSD coordinators to ministries of health in certain countries, and supporting things like national review meetings.

In the realm of discovery, ICAP is supporting ministries of health in four countries as they work on catalytic projects to explore targeted questions they had related to the scale-up of DSD. For example, in Zimbabwe, there was an observation that male engagement in some models of DSD was lower than expected, and there's a qualitative study to explore that which you'll hear more about. We worked with Kenya on a survey of adolescent preferences of DSD models, complimenting work that's been done by others, and Dr. Fayorsey will share findings from that work. There are two other projects as well. One looks at the management of both differentiated management of patients with both HIV and hypertension in Swaziland, and the other is a study of patient and provider responses to Ethiopia's scale-up of appointment spacing.

I want to thank you all for completing the pre-meeting survey, and highlight a couple of things that jumped out at me from the data. We asked a question in March of last year before our launch meeting, and again before this meeting: To what extent is DSD being implemented in your country? What we see is that the number of people who said DSD was being implemented at scale has increased since last year, so even from this self-report, we see things are moving forward quickly.

We asked if there were national DSD review meetings, and more people said yes this time than last time. We asked if there is a national DSD scale-up plan; if there is a national DSD technical working group; and if there is a national system for M&E that incorporates DSD. For each of those questions, we see that that more people are saying those things are in place than last year. We also asked what things would make it easier to take DSD to scale. For example, quite a few people said having a focal person or a DSD coordinator at the ministry of health would be helpful, and people noted that having a coordinator or teams at the sub-National level would also help to mature and expand scale-up. Many people mentioned revising the medical records and M&E systems. People talked about improved coverage and utilization of viral load testing, which ASLM will speak about.

We asked what new things would you like to hear about implementation, and the answers were quite similar to last year. People are still interested in learning about strategies and guidelines. They're interested in learning about M&E, and how to monitor outcomes and quality.

We've done a lot in the past year, and there are still many questions. There has been a rich exchange of lessons learned, and still a way to go. In the next three days, we are going to continue to bring people together to learn from one another. We've organized the days based on our three focus areas: Coverage, Quality, and Impact. We're here to explore the new questions and challenges. It's a very full agenda, so you'll see we have presentations, panels, breakout sessions, and posters outside. We'll

also have a marketplace where you can all share information and learn from one another. Throughout the meeting, we want to hear about ideas to facilitate this type of exchange.

I want to acknowledge the Bill & Melinda Gates Foundation, the ministries of health of all the network member countries, the stakeholders that have been involved since the conceptualization of the network, ICAP staff for helping to organize, and ICAP Mozambique for hosting us. This network is about you and we are delighted that you're here. Thank you."

Ms. Solange Baptiste, the International Treatment and Preparedness Coalition (ITPC)

"Honorable representative from the ministry of health, esteemed members of this network and colleagues, good evening.

Thank you to the CQUIN Network. I have the great privilege of being here with you, to reflect on how far we've come, and how far we still need to go to ensure quality HIV services reach all that need it through DSD. My name is Solange Baptiste. I lead a global coalition of activists who work to ensure access to treatment for all people living with HIV called the International Treatment and Preparedness Coalition (ITPC).

ITPC, in collaboration with many national and community partners, such as the AIDS Rights Alliance for Southern Africa (ARASA); the International AIDS Society (IAS); and ICAP, have been working over the past few years to ensure that DSD responds to the needs of people who use and rely on the health care system. We work to ensure that DSD does not just reside in Geneva, or only in government policy papers. Our collective efforts include direct work with communities to understand DSD, to demand DSD, and to advocate for the appropriate scale-up of quality DSD in their communities.

As I look around the room, I see public health experts, researchers, and government leaders. All of you are experts in DSD. So I thought: What can I tell you that will give you a different perspective for the rest of the week?

I want to tell you a short story about a woman named Dora. She's a twenty year old undocumented Zimbabwean woman living with HIV in Botswana. She's a sex worker that attended one of our DSD workshops for community leaders. Dora was shy during our meeting, but otherwise very confident. She approached me at the tea break to let me know she was very confused about DSD. She said, 'What is there to differentiate, if there's no service for people like me?' I think she really hit the nail on the head with that question. To differentiate or specialize a service means that the service must already exist for that population, and if it doesn't, then we're forced to ask why.

If we are honest, DSD forces us to confront the health system head-on. To tackle DSD is to tackle the health system. We ask questions like 'What makes the health system weak, fragile, or not work for those who need it?' To see overcrowding, stock-outs, and bad services, is to see poor infrastructure, dwindling resources, no political will, and systemic discrimination.

In the context of test and treat and increased coverage, we applaud governments like Mozambique, who, despite challenges, expanded coverage for pregnant women living with HIV. This resulted in a nearly 75 percent decline in new infections among children from 2011 to 2014, and reduced new infections among adults by 40 percent. In conversations with community leaders from all walks of

life – adolescents, people using drugs, men, migrants, people with disabilities, and others – one theme was constant as they discussed DSD: communities must be at the center for this to work. Even as I say that, I understand how cliché it is. The crux of the matter is to ask, how?

How and when are communities involved? Are we just paying lip service to them? Communities must be there from the start. They must be part of the team designing the model. They need to have a part in planning, implementing, and monitoring the program. They have to be there to reprogram it when it does not work, and then scale it up when it's going well. They must be paid to do this work, and seen as valued voices at the decision-making table.

As we prepare to spend this week dissecting aspects of the rollout and scale-up of DSD, I would like to remind us to consider three things: How can DSD be operationalized so communities are at the center of design, planning, and implementation? How can we ensure that those who are not in the system are reached by interventions? And how can we ensure that DSD services provided along the cascade are of optimal quality for the recipients of care? Thank you."

Dr. Peter Ehrenkranz, the Bill & Melinda Gates Foundation

"Thank you to the ICAP team, the Mozambique Ministry of Health, and to all of you for coming. It's been quite an impressive journey to see how far we've come in the past 11 months.

I'm going to focus on where CQUIN fits in the Gates Foundation's theory of action and where things fit into the scale-up of DSD. I'll talk a little bit about learning networks, and this very important topic which many of you identified in your surveys: monitoring and evaluating the success of this network and DSD overall.

Even the world's best innovations are sometimes hard to get people to take up. While many of us think that the potential benefits of DSD can be quite impressive, something like this can have a hard time being implemented. Even the wheel had a hard time getting on the wagon. Many things go along with bringing innovation to a health system. Things like human resources, supply chains, planning, donor funding, laboratories, government funding, and the motivation and supervision of health care workers, who are often underfunded and under-supervised.

Gates Foundation is not going to work on those things. We are, however, going to facilitate so you all can work on those things. That's the reason we're here. Foundations have little funding compared to PEPFAR, the Global Fund, and your own governments. So, what we do well is support the important work that WHO does so we can provide normative guidance. We work with IAS to produce these operational and decision frameworks. We work with ICAP to establish the peer-learning network that has brought us all together and laying this important foundation. We also support implementation research which some of you may be working on.

We're working with the Center for Infectious Disease Research in Zambia (CIDRZ) and the Ministry there to support improving the quality of services that are being offered using patient and provider feedback. This feeds right into what Solange was saying. As we design and implement these models, how do we continue to improve them by putting the community at the center? How do we get their feedback in a consistent way so the models actually respond to their needs and aren't just being delivered from higher up?

We're working in Malawi with the University Research Center (URC) and the Ministry of Health to try and figure out how to resolve one of the other issues Miriam talked about, which is encouraging providers to change patient management, and work with the patients so they're demanding services from their providers. A person might say, 'If I have a viral load that's suppressed, maybe I can get access to a level of service that's less intense. That might be better for me and better for my family, and perhaps better for the providers who are trying to deliver it.'

Lastly, we are working to measure the pace, quality, and impact of scale-up. We may have great hypotheses about the large-scale impact we're making by changing the number of annual refills a patient may have, changing the clinical visits, or putting them into a community group. But we don't know and we have to watch out that we're not producing inferior quality of care or costing the system more money.

I'm going to talk about how a learning network functions. ICAP is the coordinator of this network. There are many leaders in this room from the ministries of health, international organizations, and implementing partners, and we all need to work with the experts. All of us here are experts in some area, and we're also beginners in other areas. We all have something to teach; we all have something to learn. We're here to bring you all together to learn from one another, by organizing the network around the gaps that members prioritized. There's an opportunity here to bring forward ideas and to teach others.

We just had a great meeting where teams came together to work on M&E. There was a great give and take between countries, and together, we're violently agreeing on how something works. ICAP's role is to facilitate the network, through meetings like this one, the south-to-south visits, and communities of practice. It's important to remember that what works for one group – one idea, one set of challenges – will not work for the next one. Those are the interactions we're trying to work through.

So how does this work? Where are we trying to go? We're trying to improve outcomes for people living with HIV. These can be clinical outcomes, patient-experience outcomes, decreased time or cost associated with accessing a service. We're also trying to get countries to make better use of health system resources – things like providers time, money spent on outreach visits, and support for viral load tests that are being used to change patient management.

The idea is for you all to work with one another, to feed into each other's national guidelines and national strategic plans on the left. If we improve those, perhaps it will lead to changes in the funding that will lead to scale-up. That funding can be from national budgets, from PEPFAR funding, or Global Fund funding.

I know that many of our PEPFAR colleagues are at home writing their country operational plans for 2018. It is my hope that when you return to your countries, you can take some time to shape those plans, and if it can't be done this year, then next year. That is how we're going to achieve these improved outcomes for the patients, and better use of resources for the health system. So thank you very much. I'm looking forward to the three days here. I'm looking forward to learning from everyone, to challenge some of you, and see where we can go our next time together as a large group or small. Thanks."

Dr. Rosa Marlene Manjate Cuco, Mozambique Ministry of Health

"Good evening. It is my pleasure to welcome you all to Mozambique. I am very delighted to be among you this evening—with leaders in the global fight against HIV, donors, and frontline health providers—on the occasion of the opening dinner of ICAP's HIV Coverage, Quality, and Impact Network's annual meeting.

There is no better place to be this evening than among a group of people who have spent the past year focusing on a group of the health sector's most valued clients—people living with HIV—to ensure that they receive services according to their needs and preferences. Putting clients at the center of strategies for health service delivery is critical to ensuring results for patients with chronic diseases. It is an area of particular interest to me. That is why I was pleased to learn that Mozambique was selected to host this annual meeting, and did not hesitate to accept the invitation to attend this opening event.

Mozambique was one of the first countries to start differentiating ART services, and has been a model to the world in the area of differentiated care. Using the Community ART Group (CAG) model, we were able to reduce the burden of accessing ART services for our clients, while strengthening psychosocial support through their group interactions. We learned many lessons and have shared experiences that have since enabled other countries to adopt the CAG model. However, as a country, we have recognized that CAGs alone do not address the varied needs of our diverse patient populations. That is why we have embraced CQUIN, which was introduced to us at a critical point as we were about to revise our guidelines.

The opportunity to learn more about different models of care from the experiences of other countries through the CQUIN workshops, and south-to-south visits to Malawi and Swaziland, provided us with a unique advantage to incorporate additional models into our new guidelines that will soon be launched. Participating in CQUIN has enriched our understanding of differentiated service delivery and provided us the opportunity to: exchange best practices with countries like Swaziland and Malawi; identify gaps in our service delivery models; and prioritize activities for scale-up. I would like to take this opportunity to thank the leadership of ICAP, CQUIN, and the Bill & Melinda Gates Foundation, for this timely intervention.

As a country, Mozambique is working hard to reach and sustain the 90-90-90 targets. Working in collaboration with our partners such as the U.S. Government, Global Fund, and others, we have scaled-up test and treat, decentralized ART delivery, and embraced DSD to optimize ART services for our clients. We believe taking DSD to scale will help improve efficiencies at our health facilities and improve treatment outcomes as we take on more clients in the context of test and treat.

The possibility of controlling the HIV epidemic has never been this promising. Evidence from countries whose Population HIV Impact Assessment (PHIA) results have been published is very encouraging. We are challenged by these positive PHIA results from other countries to push the boundaries of HIV service delivery in Mozambique, in order to realize the UNAIDS 90-90-90 targets. We will continue to work with our donor partners and other stakeholders to ensure that we sustain the progress that has been made, while adopting new approaches such as DSD.

Ladies and gentlemen, and colleagues from ministries of health of the other CQUIN network countries herein gathered, I would like to challenge all of us to put the client at the center of the decisions we make. It is their right to receive high quality services that are free of stigma and stress; with comfort, dignity, and respect. The health sector must not be left behind when it comes to innovations and creativity. Excuses to maintain the status quo while depriving clients of their right to safe and affordable services are no longer acceptable. This is my charge to all of the ministries that are part of this network.

I would like to end by thanking ICAP for giving me the opportunity to share this important evening with you. May I also take this opportunity to thank the Gates Foundation, PEPFAR, the Global Fund, and all of our donor partners for the unwavering support to health delivery in Mozambique. I wish you all happy deliberations over the next three days.

May you enjoy your stay in our warm and beautiful country. I thank you very much for your attention."

Thursday, February 15th

Closing Remarks

Dr. Wafaa El-Sadr, ICAP New York

"I'm going to talk about what's been accomplished since the launch last year and what we've done over the last few days. As we said at the beginning: this is your network. You're driving the agenda for the work. All of the countries involved have been committed to the goal of implementation and scale-up of DSD.

We are thrilled to have Côte d'Ivoire be part of the network, and hope that next year we'll have a representative from them at this meeting. It's exciting to have West Africa be part of this network, and they're excited about learning from all of you.

Our ultimate goal is to achieve coverage and quality of DSD to enhance health outcomes and programmatic efficiencies. It's not just about the numbers of people on each model, but rather, the health outcomes of the people we serve. At the same time, we must achieve programmatic efficiency to reach more people.

We've been discussing the network's three focus areas over the course of three days. We've talked about knowledge exchange, joint learning, and innovation. I heard during the presentations that we can do a better job at disseminating resources and we encourage you to disseminate the information that's shared among the countries where you work. The south-to-south learning visits have been very important and we learned today that more are desired in the future. We're going to work with you to plan some more of those.

The communities of practice have been another mechanism to enable groups of individuals to work together and I think as we move forward we might identify different communities of practice to inform the purpose of this network. I heard repeatedly that engaging the community and putting the focus on them is important.

The catalytic research projects have also been very important, and it's great to know that two of the projects—the male engagement of DSD project in Zimbabwe, and adolescent preferences for DSD project in Kenya—have been completed. It was also heartening to hear that some of you are already distilling the lessons learned from these projects and are planning to incorporate them into the programs. These are your catalytic projects, so please utilize this data and information. It's very rich, and we're just scratching the surface. I hope the findings can move the work forward when it comes to engaging men and adolescents.

There are three other catalytic projects coming off the launch pad, and I hope that next year when we meet we can share those findings. You have already heard early findings from the costing work that's being done. Another important part of the work has been the self-staging dashboard. We're glad that you all find it useful as a template to guide the work and planning. It's interesting to see how the self-staging varies from country to country, and also the common themes across the self-staging that's been done thus far. Your feedback is welcome as we continue to refine this tool.

I have seen a rich exchange of information at this meeting, both in the larger meetings and smaller meetings. Within the smaller meetings, it's important that a diverse group of people are involved to discuss a topic. I was in the community breakout group and it was great to see the community representatives alongside those from the ministries and others all sitting around the table listening to one another and charting a way forward, together. The posters also offered participants an opportunity to share more. They complimented our oral presentations quite well, and they displayed remarkable work being done by the teams in country.

When I think of impact, I always think of three steps. The first step is discovery, like discovering a new drug or model. Of course, discoveries cannot sit in a drawer or on someone's bookshelf. Discoveries need to be implemented, and lead to scale-up. This is critical if we're going to achieve impact at the population level and improve public health. Scale-up, fidelity, and quality are all very important. I think that 2018 is in fact the year of scale-up for DSD, particularly when it comes to stable patients, where there are models that have been evaluated and scaled up to some degree. We now have an opportunity to take those to scale in the coming year.

Beyond stable patients, we have a lot of work to do, and it was heartening to hear all of the teams talking and thinking about key populations, adolescents, men, and patients at high risk for disease progression. We have discoveries and models of care for these populations that we're now beginning to implement, and I think over the coming year we're going to learn an awful lot through your work and hopefully we'll have learned from these implementation pilots and be poised to teach people the next steps for scale-up.

I also heard the concern about the idea of less: of doing less, having fewer visits or less contact with the health facility, or the fear that there'd be less quality which in turn would have a deleterious impact on the programs and on the health of people themselves. Ultimately the goal is for less to be more, and we need to think about how that can be translated to more quality and coverage. We hope that there will be less intensity with follow up of those patients that are stable, who can do very well with self-management of their care and use community support. We can then do more for those patients who need more services, such as patients at high risk of disease progression, as well as key populations. We'll need to engage these individuals to gain their trust and help them overcome stigma and discrimination.

I want to thank the ICAP teams. It really takes a village to organize a successful meeting. I want to thank ICAP Mozambique, the ICAP team in Swaziland, and of course, the ICAP team in New York. Thank you to Laura, Michal, Miriam, and Peter for their amazing work, diligence, and thinking through all of the details to make this meeting successful. We also want to thank the CQUIN advisory group. This group is very important because they bring reality to the network and help us reflect your thoughts and priorities and we want to thank them for their commitment to this network. I want to thank all of you for being attentive and engaged. I thank you for all of your hard work and for your engagement and commitment to achieving the impact we all want in confronting the HIV epidemic. Thank you."

Dr. Peter Ehrenkranz, the Bill & Melinda Gates Foundation

"Thank you to Aleny and our Mozambican colleagues for hosting us. Thank you to the ministries of health and teams of implementing and civil society partners, whose enthusiasm and energy has filled these halls. To the many international partners from universities and various organizations: WHO, UNAIDS, UNICEF, CDC, IAS, MSF, and countless others, who so actively contributed to the discussions. And a special thank you to our translators who were essential to keeping everyone engaged.

Thank you to ICAP – to Peter, Miriam, Laura, Mike Siphiwe, Mussah and the ICAP Mozambique team. This is an incredible effort and I think it went flawlessly. We are thanking them particularly for so competently imagining and building this network, and there willingness to experiment and iterate on it. To test and adjust based on the feedback you all give. Thank you for completing the surveys before and after the meeting, and thank you for the feedback you want to give us at any other time, because that is how we work with you and facilitate this network. Thank you to the advisory group as well for offering important feedback.

We are indeed on a journey. A journey in which scale-up of differentiated ART delivery is a means to an end. Nomthi mentioned very clearly in the M&E group that DSD is just a means; the end is the coverage, the viral load suppression, lowering incidence, and seeing an end to mortality. A little less than a year ago we were in Durban for the launch of this network, all with different impressions of what CQUIN would be...could be…what it might accomplish. I myself hoped that it would create a forum for ministries of health and their core partners to share their best practices and challenges, to learn from one another about the day-to-day activities of implementation.

These are activities that might occur on the sidelines of other conferences and meetings, but what is wonderful about CQUIN is that it explicitly moves the conversations about implementation from the periphery to the center, and it focuses our energy toward coverage, quality, and impact. While DSD is the current focus of the network, it's the connections we make here that will help us address the next challenge, and the challenges that come after that. I am incredibly excited to see the progress of DSD along the dashboard, to read the posters outside and learn about successes, challenges, and the development of country-specific targets that you have created yourselves, and not let someone from above impose upon you.

I'm even more excited to see the exchange of email addresses among ART coordinators, to see M&E folks from different countries greet each other, who have mostly interacted through a virtual community of practice. While hard to measure, these connections are CQUIN's most important output. Still, while we have much to be proud of, we still have much to do, and I've been really impressed by the targets everyone put out there.

I want to highlight a few things that CQUIN is going to do moving forward. There will likely be two focused workshops in 2018. This is the year of scale-up; it sounds like one of the workshops will focus on the science and practicalities of scale-up. This would be focused on organizing engagement from the communities of people living with HIV as well as the demand creation among the health care providers which some of you highlighted. We'd like to discuss how to roll out and scale-up the models in new facilities and how to use data to support quality improvement and assess progress going forward. There will be other workshops on topics that are more detailed. We've heard clearly about the benefit of the DSD coordinators that some countries have and we've heard from others their desire to have those. We want to work with you to identify some options for that. We'll particularly want to work with our CDC and USAID colleagues when we get there to see if they'd be willing to help.

We certainly missed out by not having our CDC and USAID colleagues at this meeting. It wasn't for a lack of wanting them here. We had a difficulty timing this meeting and hopefully we'll have them at the next annual meeting so the important members of those country teams can be here in person.

In the meantime, I have a very important favor to ask of all of you, and this is a very important favor: When you go back to your respective countries, please arrange to meet with your USG counterparts to brief them on the discussions you've had here, and describe the implementation plans you've put together. There's a brief window of time to get activities into the country operational plans, so please put this as an important critical activity within your existing plans. I also know there are ministry of health leadership interested to hear how the meeting went.

So again thank you to everyone. This is an important experiment we are having. It's an experiment in learning, in sharing, and diffusion of scale-up. It's been a great success in its first year, and I'm very excited as we embark on CQUIN's second year – the year of scale-up. I have no doubt that we'll achieve great things in our individual countries, and together, so thank you."

Dr. Aleny Couto, Mozambique Ministry of Health

"Thank you to all members of CQUIN and to the organizers of the network. Thank you for choosing Mozambique to celebrate the first anniversary, and your commitment to making this network stronger every year and every month. Celebrating the first anniversary is a privilege for all of us. This network makes sharing all of the new information we have for the populations that need DSD possible. It helps us explore where we can have DSD, and shows us the progress we have made in or countries. We can say today that we are a family, an African family. We sit together so we can solve our problems. CQUIN provided this opportunity to us, to explore the commonalities among our countries. When we want to solve a problem, we sit and discuss, and afterwards we do what's best for our people.

We are ending three days of great discussions, knowing we have to go back and do better to scale-up DSD and pay visits to each other. Everyone has something to contribute, and we want to visit any country that has had a good experience. We have to recognize that it's important to start documenting what we're doing. Creating evidence of all the success we've had in our network is important.

We need to attack all of the challenges we have when we're implementing DSD, because challenges will come up when we're trying to solve these problems. We must recognize that this network is helping us do better, and we must do better for all of our countries. Thank you very much."

Country Posters

Taking Differentiated Service Delivery to Scale in Ethiopia: The Appointment Spacing Model

Alemtsehay Abebe[1], Tamrat Assefa[2], Zenebe Melaku[2]
1. Ethiopia Federal Ministry of Health 2. ICAP Ethiopia

BACKGROUND/INTRODUCTION

Ethiopia has made robust progress towards epidemic control, but the increasing number of people living with HIV (PLHIV) in need of antiretroviral therapy (ART) requires innovative approaches to program design. Responding to the increased demand for HIV treatment services, the Federal Ministry of Health (FMOH) selected appointment spacing—a facility-based individual model—as the priority for differentiated ART in Ethiopia. In this model, stable patients are offered the option of shifting from quarterly to twice-yearly appointments. Rather than returning to the health facility every three months for clinical assessments and refills, patients can return every six months, creating efficiency both for patients and for the health system. In addition to multi-month prescribing, Ethiopia also provides multi-month dispensing: stable patients receive a six-month supply of ART at each biannual visit.

In addition to updating Ethiopia's national policy and national HIV care and treatment guidelines to include appointment spacing, the FMOH launched an appointment spacing pilot, implemented by ICAP at Columbia and funded by CDC. Lessons learned from the pilot (described below) then informed a nationwide scale-up of the appointment spacing model.

PILOTING APPOINTMENT SPACING

The appointment spacing pilot began in October 2016 at six high-volume hospitals: Zewditu Memorial Hospital in Addis Ababa, Nekemte Hospital in Oromia, Dessie Hospital in Amhara, Hawasa University Referral Hospital in SNNP, Mekele Referral Hospital in Tigray, and Hiwot Fana Hospital in Dire Dawa.

Important steps included development of in-service training materials, standard operating protocols (Figure 1), job aides such wall charts, and an approach to routine monitoring and evaluation (M&E). The FMOH issued a formal letter explaining the pilot to all regions and health facilities; this was followed by orientation of all service providers in the six hospitals. Tailored training was provided to service providers, facility and program managers, and pharmacy professionals.

Initial challenges included poor program documentation in both clinical and pharmacy settings, and suboptimal inventory management in some hospital pharmacies, leading to occasional difficulty with drug supply and stockouts. Improvements in these areas were documented following supplemental training and supportive supervision. Additional lessons included the fact that less than half of eligible patients were enrolled in the appointment spacing model, as busy clinicians did not always identify and counsel stable patients. In addition, not all patients who were offered appointment spacing accepted it; a substantial proportion declined.

Nonetheless, by July 2017 more than 4,300 patients had enrolled in the appointment spacing model, service quality was felt to be high, and almost all patients received a six-month supply of ART. In response to these promising early results, the appointment spacing model was scaled up nationwide, and is now available in all 11 regions of the country at 765 (65%) of the 1,182 health facilities offering ART.

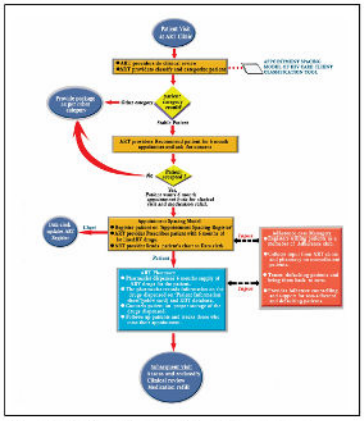


Figure 1. Protocol for Provision of Appointment Spacing Model

DSD UPTAKE

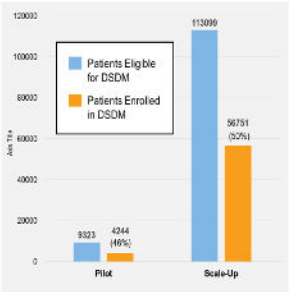


Figure 2. Number of Patients Eligible and Receiving Appointment Spacing by Phase

Patient eligibility for the appointment spacing model is determined by clinical assessment using a specialized classification tool. During the pilot phase, 9,323 patients who received the assessment were found to be eligible for the model and 4,244 (46%) enrolled (Figure 2) across the six participating facilities. During scale-up, when an additional 750 facilities began offering the model, 113,099 patients were found the be eligible and 56,751 (50%) enrolled.

The MOH has identified possible research opportunities addressing some of the barriers to patient uptake of DSDM, including lack of a safe place to store drugs at home and fear of stigma.

DSD DASHBOARD

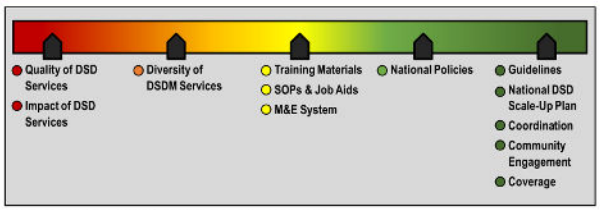


Figure 3. Ethiopia DSD Dashboard, January 2018

A self-assessment tool known as the CQUIN DSD Dashboard was used to characterize the progress being made as Ethiopia scales up DSD for ART. Across 12 different domains, a five-step color scale was used to rank progress and performance from red, indicating no activity, to dark green, indicating significant and robust implementation.

Ethiopian respondents found that the largest number of domains were in the dark green category, the most "mature" level of development (Figure 3). In the highest-ranked domains, the system met a clearly-defined set of standards. In the **Guidelines** domain: detailed and specific information on implementation of DSD is included in the national HIV treatment guidelines; in **National DSD Scale-Up Plan:** the DSD scale-up plan is being actively implemented. In the domains of **Coordination, Community Engagement,** and **Coverage,** the following criteria were met, respectively: DSD progress is being reported in annual program reports and/or annual national review meetings; PLHIV and/or civil society representatives are systematically engaged in DSD policy development, design implementation, and evaluation; and appointment spacing is available at >75% of health facilities providing ART.

Ethiopia's performance in this assessment, with six out of the 12 domains ranking green or dark green, highlights the achievements that the country has made in just over a year of DSD implementation. Despite the successes of the appointment spacing scale-up, opportunities remain to make improvements in the domains concerning the **Diversity of DSDM Services,** currently assessed at the orange level, as DSD is only available for stable patients and only one model has been implemented. Additionally, the domains of **Quality of DSD Services** and **Impact of DSD Services** remain at the red level, indicating that no quality standards have been specified and the impact is still unknown.

As Ethiopia continues to scale-up the appointment spacing model, the MOH may find opportunities to leverage the results of the Dashboard self-assessment to identify ways that the national DSD policy may be strengthened. One such opportunity may be the potential to expand DSDM offerings beyond the appointment spacing model to include other standard models. expanding the DSDM offerings to include more than one model of differentiated services. Similarly, by defining quality standards and performing evaluations of the model to determine the impact appointment spacing has on process and/or outcome indicators, Ethiopia may be able to further strengthen its HIV services.

NEXT STEPS/WAY FORWARD

Program data suggests that uptake of the appointment spacing model is quite variable from facility to facility, despite standardized protocols and training. In 2018, with the support of the CQUIN network, ICAP in Ethiopia will conduct a study of health worker and patient reactions to the introduction of appointment spacing, exploring barriers and facilitators to successful scale-up.

Left: A training is conducted on Provision of the Appointment Spacing Model

Additional priorities include continuing to address issues of stock management and drug shortages, working with civil society and PLHIV groups to address issues of stigma and secrecy that may be exacerbated by the need to store six month's worth of ART in the home, and exploring the introduction of additional DSD models.

February 2018

Taking Differentiated Service Delivery to Scale in Kenya: A National Roadmap for Model Implementation

Bartilol Kigen[1], Joyce Wamicwe[1], Maureen Inimah[1,2], Maureen Syowai[3], Lawrence Mbae[3], Maureen Kimani[1]
1. Ministry of Health – NASCOP 2. HEALTHQUAL 3. ICAP Kenya

REPUBLIC OF KENYA
MINISTRY OF HEALTH

BACKGROUND

With the release of the 2016 Guidelines on Use of Antiretroviral Drugs for Treating and Preventing HIV Infection in Kenya, the Kenya MOH laid out two new strategies that revolutionized the national HIV/AIDS prevention program. The guidelines not only recommended the adoption of Test and Start, but included guidance on differentiated service delivery (DSD) for antiretroviral therapy (ART). In 2017, the Kenya National AIDS and STI Control Program (NASCOP) launched the Differentiated Care Operational Guide, which functions as a step-by-step manual for DSD implementation and includes tools and job aids for use by health care workers (HCW) during service provision. These guidelines lay out requirements for specific models and procedures that must be performed by HCW before determining which DSD model (DSDM) a patient is eligible for (Figure 1). Along with the guidelines and operational guide, Kenya supported the roll-out of DSDM with a training package that was implemented at county, health facility, and community levels.

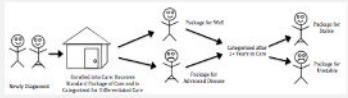


Figure 1. Differentiated Care Based on Patient Clinical Status

As Kenya continues to scale up the implementation of DSDM for ART, the MOH has identified certain vulnerabilities in the system that will require strengthening in order to achieve high quality DSD programs. Ongoing technical support during scale-up will need to be directed at counties, as well as prioritized facilities that require tailored assistance. To properly monitor the effects of DSD scale-up, monitoring and evaluation (M&E) systems will need the capability to capture data on retention and clinical outcomes for people living with HIV (PLHIV) based on DSDM, which will require coordination from the national data warehouse. As part of M&E efforts to track program progress, Kenya is developing a dashboard to measure scale-up of DSD.

DSD MODELS OFFERED

Currently, there are six distinct DSDM offered in Kenya: three that are facility-based and three that are community-based. The facility-based models include the **Appointment Spacing** and **Fast-Track Refills** models for individuals and **Facility-Based ART Groups** that is a group model that includes peer psychosocial support. The community-based models include the **Community-Based ART Groups,** also a group model that allows peers to gather together for ART distribution and adherence and psychosocial support, and **Community ART Distribution/Pick-Up,** which is an individual model. Kenya also offers **Outreach-Based Clinics,** which provide a range of services in locations that are preferable for populations that are hard to reach or face particular challenges accessing health services. Some outreach clinics provide ART services that are limited to refill clients, though some clinics also offer ART initiation in outreach settings.

In addition to the standard models of DSD for ART, Kenya also offers tailored DSDM for priority subpopulations, such as adolescents and young adults, children, discordant couples, and patients with high viral loads or other characteristics of advanced disease progression.

DSD UPTAKE

Kenya is in the process of scaling up DSDM implementation. High-volume facilities were prioritized for roll-out and planned expansion of DSDM to all 3,507 ART facilities in the country is ongoing.

In January of 2018, use of new M&E tools to capture DSD-specific data began and NASCOP is anticipating quality DSD program data to be reported starting in April 2018. A preliminary assessment of county-level uptake of DSD was performed during scale-up activities. This assessment found that, of the 47 counties in Kenya, 42 (89%) had implemented at least one model of DSD for ART (Figure 2). Community ART Groups (CAG) were found to be implemented in 7 (16%) of 45 responding counties (2 counties did not respond) and Fast Track or Different Patient Flows were being implemented in 35 (78%) of the 45 responding counties (2 counties did not respond).

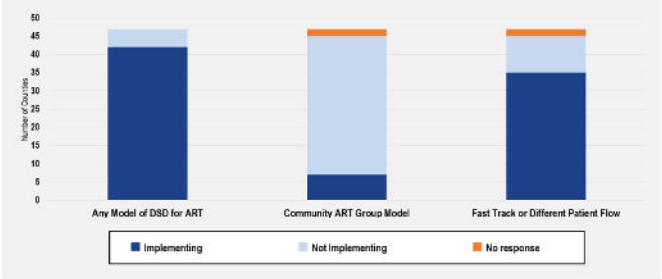


Figure 2. County Uptake of Differentiated Service Delivery (DSD) and Selected DSD Models

DSD DASHBOARD

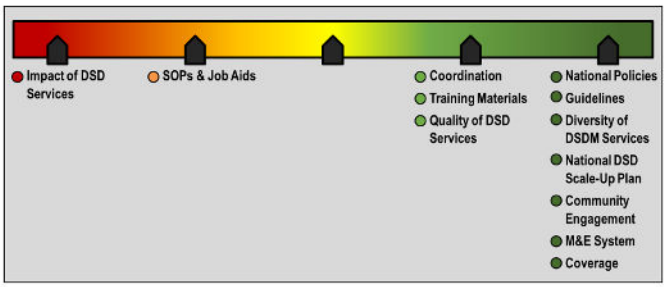


Figure 3. Kenya DSD Dashboard, January 2018

A self-assessment tool known as the CQUIN DSD Dashboard was used to quantify the progress being made as Kenya rolls out its national DSD guidelines. Across 12 different domains, a five-step color scale was used to rank progress and performance from red, indicating no activity, to dark green, indicating significant and robust implementation.

Kenya found that seven domains were in the dark green category (Figure 3) where standards for the highest ranking were met: **National Policies** actively promote the use of DSDM for diverse patient groups; National HIV Treatment **Guidelines** provide detailed and specific guidance on implementation of DSD; **Diversity of DSDM Services** was determined to be high due to the provision of models for diverse patient groups; the **National DSD Scale-Up Plan** is being actively implemented; **Community Engagement** is high due to PLHIV and/or civil society being systematically engaged in DSD policy development, design, implementation, and evaluation; all elements of the **M&E System** for DSD are in place and integrated into one national system for HIV/ART services; and **Coverage** of DSDM reaches >75% of the health facilities that provide ART in Kenya.

Three additional domains were ranked in the light green, indicating advanced progress: **Coordination** of DSD implementation scale-up is spearheaded by a national DSD Focal Person; national DSD **Training Materials** for both professional health workers and lay workers are available and in use; and protocols for the measurement of **Quality of DSD Services** are in place and quality improvement (QI) activities are underway.

CASE STUDY/BEST PRACTICE

Siaya County has the second-highest HIV prevalence (27%) in Kenya. During the 2017 implementation of DSD in Siaya, the county healthcare management team received DSD sensitization training and implementation of DSDM was carried out at 25 health facilities. HCW were trained on patient assessment and categorization (stable or unstable) and how to record DSD data using the M&E tools. Activities aimed at creating demand for DSDM included health talks given at facilities, information provided during counseling sessions and clinical appointments, and display of advertisements and brochures. Following the training and demand-creation phases of implementation, recruitment of patients into DSDM began.

During recruitment, a total of 22,609 (75%) of the 30,186 ART patients in the county were categorized. Of these, 2,695 (12%) enrolled in DSDM: 2,411 (89%) enrolled in DSDM for well patients and 284 (11%) in models for patients with advanced disease (Figure 4). The remaining 19,914 (88%) were stable on standard treatment.

Scale-up of DSDM in Siaya County demonstrated the benefits of a coordinated, phased approach. Challenges to scale-up included delays in the viral load test results necessary for patient assessment and categorization, high staff turnover at health facilities, and limited community structures to leverage for PLHIV support.

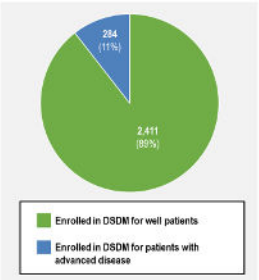


Figure 4. Patients Enrolled in DSDM in Siaya County, by Categorization

NEXT STEPS/WAY FORWARD

Moving forward, Kenya will scale up DSDM to all ART facilities, offering mentorship support to ensure accurate patient categorization, reorganization of patient flows, and training of lay providers to support community models. In 7 counties, ongoing QI activities plan to measure program efficiency and an upcoming study will measure quality and cost. A national DSDM best practices forum is planned for March 2018.

February 2018

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Taking Differentiated Service Delivery to Scale in Malawi: Expanding Models of Care for Impact

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BACKGROUND/INTRODUCTION

Malawi's ability to scale-up differentiated service delivery (DSD) is reinforced by strong governance, a national technical working group, and a national DSD coordinator. In Malawi, community engagement in DSD scale-up is high, with people living with HIV (PLHIV), community members, and local leaders involved in the design and implementation of DSD activities—including participation in the national technical working group (TWG) on DSDM. The country's national policies and guidelines are supportive of decentralization of antiretroviral therapy (ART) services and selected DSD models (DSDM), such as multi-month scripting and teen clubs for adolescents.

Malawi's efforts are backed by scientific evidence and research. In 2016, Malawi's Ministry of Health (MOH), together with the Clinton Health Access Initiative (CHAI), conducted a process evaluation to understand the extent to which ART patients are differentiated based on their clinical stability. The country continues to pilot DSDM and conduct research that can inform policy, while investing in education and training for health care workers, monitoring and evaluation (M&E), and community engagement. Other models in early stages of piloting and evaluation include community ART groups, drop-in centers linked to health facilities for key populations (e.g., female sex workers, injection drug users), evening clinic hours, and weekend clinics for adolescents.

Above: Malawi Ministry of Health hosting the Swaziland Ministry of Health for a south-to-south experience-sharing visit to Mangochi District Hospital ART Clinic, where teen clubs are implemented.

Barriers to the scale up of DSD in Malawi include a lack of human resources and infrastructure in health systems, and regulatory frameworks prohibiting unlicensed health care workers from delivering care—lessening the ability to employ task-shifting to lay workers or expert clients as part of community-based models for stable, adherent patients.

Next steps and priorities for scale-up of DSD include the development of training and guidance materials, including new ART guidelines; integrating endorsed DSDM into existing frameworks and guidelines; increasing the coverage and diversity of differentiated services; and expanding existing community support groups.

DSD MODELS OFFERED

Malawi offers three models of DSD for ART (Figure 1), all three of which are facility-based models. Two are individual models: **Fast Track Refill, Appointment Spacing.** Malawi's **Facility-Based ART Group** model is the country's sole group-based DSDM.

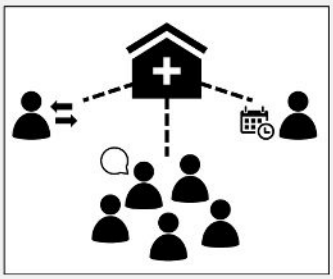

Figure 1: A graphic interpretation of the three different models for DSD of ART offered in Malawi (clockwise from top right: Appointment Spacing, Facility-Based ART Group, Fast Track)

DSD DASHBOARD

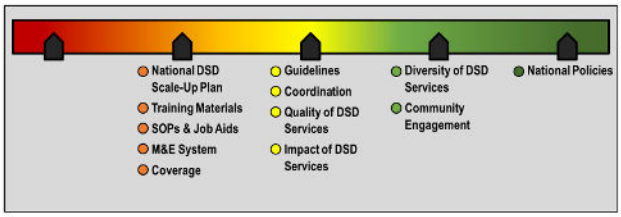

Figure 2. Malawi DSD Dashboard, January 2018

A self-assessment tool known as the CQUIN DSD Dashboard was used to quantify the progress being made as Malawi rolls out its national DSD guidelines. Across 12 different domains, a five-step color scale was used to rank progress and performance from red, indicating no activity, to dark green, indicating significant and robust implementation.

The results of this assessment determined that the country's **National Policies** had achieved the highest level of development, seen above in the dark green category (Figure 2). As defined by the DSD Dashboard, this ranking indicates that Malawi's national policies actively promote the use of DSDM. Other highly-ranked domains of DSD scale-up are those in the light green category: **Diversity of DSD Services** and **Community Engagement.** A light green ranking in these domains indicates that DSD is available for stable patients only and >3 models have been implemented and that PLHIV and/or civil society representatives are engaged in implementation, design, and evaluation of DSDM.

While Malawi is making great progress in the scale-up of DSD, with 3 domains ranking light green or dark green, the majority of domains remain in the basic or mid-implementation rankings of orange and yellow. These categories represent opportunities for Malawi to capitalize on the experiences of other countries that have had success in developing these domains. Some of the lower-ranked domains, such as the **National DSD Scale-Up Plan** are prerequisites to strategic scale-up of DSDM, while others, such as the **M&E System,** represent some of the most challenging issues faced by countries implementing DSDM. As Malawi continues to make progress in scale-up of DSDM implementation, the MOH and other stakeholders may find a valuable resource in CQUIN countries that have successfully addressed the barriers to scale-up posed by these challenging domains.

CASE STUDY/BEST PRACTICE

Teen Clubs

Malawi's **Teen Club** approach is an example of innovative DSDM for adolescents living with HIV (ALHIV). To date, more than 9,300 adolescents have been enrolled in 135 teen clubs located in 26 of Malawi's 28 districts. Members of teen clubs receive social support and encouragement in medication adherence. Teen Clubs in Malawi are exclusively open to ALHIV, unlike those in other countries that may include both HIV-positive and negative individuals. One of the innovative features of the teen clubs is the extended hours of clinics on Saturdays.

Drop-in-Centers for Commercial Sex Workers

A recent innovation with early successes in DSD for key populations are **Drop-in-Centers (DICs)** as a subset of district hospitals for delivering HIV care and treatment for commercial sex workers (CSW).

NEXT STEPS/WAY FORWARD

Malawi's implementation of DSD for ART is evolving through innovations and a commitment to scale-up. HIV care and treatment is available at 736 facilities across the country's 28 provinces and there are 6 partners supporting ART in the country, 4 of which support DSDM. Expanding the number of facilities offering diverse models of DSD and ensuring that patients in every province have access to DSDM is one of the main goals for an ongoing scale-up effort. Patient retention and patient satisfaction are critical measures or importance that will be key considerations as Malawi continues DSD scale-up. Further **priority areas** for DSD implementation include improving coordination efforts with communities and streamlining DSD models into the 2018 ART Guidelines.

Malawi has identified **key questions** for evaluation, to be assessed as scale-up of DSD implementation continues. These evaluations include: 1) Comparing outcomes of transitioning adolescents receiving different models of care [teen clubs or standard ART services]; 2) Performing cost effectiveness analyses of multi-month prescription for ART; 3) Comparing treatment outcomes of members of key populations attending DSD-specific ART clinics to standard clinics; and finally, 4) Addressing data quality assurance issues with various DSDs.

February 2018

Taking Differentiated Service Delivery to Scale in Mozambique: Expanding Community ART Groups through Evidence

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BACKGROUND

As one of the earliest adopters of community adherence support groups, Mozambique has made ground-breaking advancements in differentiated service delivery (DSD). As part of the Ministry of Health (MOH) National HIV and AIDS Response 2017 Strategic Acceleration Plan, the country has emphasized the need to enroll more patients on treatment, and specifies three models of DSD for antiretroviral therapy (ART): community adherence support groups, three-month drug distribution, and six-month clinical visit spacing. Two additional models are being piloted in two provinces: the family approach and adolescent adherence clubs. Results of these pilot projects are expected to inform the national DSD guidelines, currently in development.

Mozambique's Ministry of Health considers the community of people living with HIV (PLHIV) and civil society as key stakeholders for advancing the roll-out of DSD. Despite the mandate for involvement of the PLHIV community and the Mozambican Civil Society Platform for Health (PLASOC-M) in the implementation of DSD, Mozambique still has progress to make in the area of community engagement. Increasing the level of involvement of community groups is among Mozambique's priorities as DSD implementation is scaled up.

Left: MOH engagement with community members can drive up demand for DSDM

Mozambique does not currently have national guidelines for DSD models (DSDM) in place; however, a Community Adherence and Support Group Strategy, adopted in 2015, details the procedures for operating community group models. Other challenges faced by Mozambique in the scale-up of DSD include insufficient infrastructure and health systems resources, such as coverage of viral load monitoring. The MOH has national policies supporting DSD in place, and has plans to continue progress in such areas as building effective data collection systems, learning from the evaluations of the pilots mentioned above to inform the updates to the national guidelines, and finalizing standard operating protocols, training manuals, and tools for providers and communities that support the provision of quality DSD programs.

DSD MODELS OFFERED

Mozambique offers both facility-based and community-based models of DSD for ART. **Community Based ART Groups** are known in Mozambique as Community Adherence Support Groups (CASG) or Community Antiretroviral Groups (CAG). The facility-based services are individual models offering **Appointment Spacing** and **Fast Track Refills,** and the **One-Stop Models** which offer consolidated services for patients visiting both the HIV Clinic and either the Tuberculosis (TB) Clinic or the Prevention of Mother-to-Child Transmission of HIV (PMTCT) Clinic or patients who are adolescents accessing Youth Friendly Services (YFS).

DSD COVERAGE

DSDM is supported in all 11 provinces of Mozambique. While there are currently 1,292 health facilities offering ART in Mozambique it is not known how many facilities offer DSDM, due to a lack of data on the number of facilities providing Fast Track, or how many offer more than one DSDM. It is known that One-Stop for YFS is supported by 113 facilities, One-Stop for PMTCT is offered at 1,310 facilities, CAGs at 576, and Appointment Spacing at 72 (Figure 1).

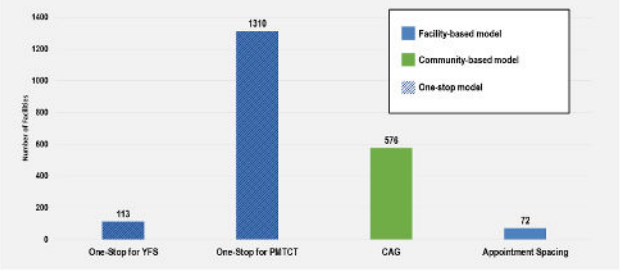

Figure 1. DSDM for ART in Mozambique, by Facilities Offering Each Model

DSD DASHBOARD

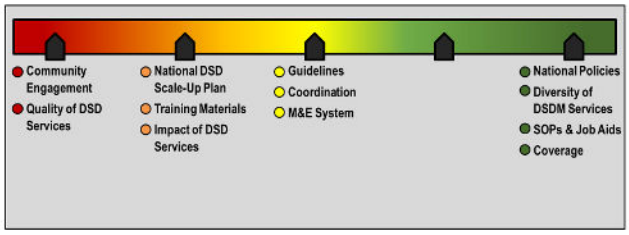

Figure 2. Mozambique DSD Dashboard, January 2018

A self-assessment tool known as the CQUIN DSD Dashboard was used to quantify the progress being made as Mozambique rolls out its national DSD guidelines. Across 12 different domains, a five-step color scale was used to rank progress and performance from red, indicating no activity, to dark green, indicating significant and robust implementation.

Mozambique found that four domains were in the dark green category, the highest level of development (Figure 2). In the highest-ranked domains, the system met the clearly-defined set of standards: **National Policies** actively promote the use of DSDM for diverse patient groups: national policies actively promote use of DSDM; **Diversity of DSDM Services** was determined to be high due to the provision of models for diverse patient groups; step-by-step national standard operating procedures and job aids **(SOPs and Job Aids)** are available for at least three DSDM; and **Coverage** of DSDM reaches >75% of the health facilities that provide ART in Mozambique.

Mozambique has made substantial progress in developing the domains in the dark green category, but the remainder of the domains assessed are in the categories indicating mid-level or lower levels of progress. Some of these domains, such as the **M&E System,** represent areas posing challenges to all countries implementing DSDM. Mozambique is in the process of revising the national HIV/ART program M&E system and, though involvement in the CQUIN M&E Community of Practice (CoP), the MOH has the opportunity to learn from the experience of countries with more advanced M&E systems in this area while aiding countries that have just begun to consider M&E for DSD.

As Mozambique continues to scale up implementation of DSD, the two domains with the lowest level of progress, **Community Engagement** and **Quality of Services,** represent opportunities for the MOH to direct resources on areas of particular need in order to strengthen the overall DSD program.

CASE STUDY/BEST PRACTICE

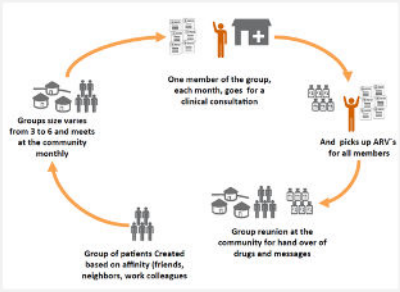

Figure 3. Schematic of Protocol for Community Antiretroviral Groups

Scale up of **Community Antiretroviral Groups (CAG)** is believed to improve overall retention on ART compared to the standard care model. Mozambique's CAGs (Figure 3) were originally designed for stable patients; however each group can now accommodate up to two non-adherent patients, if the patients enrolls in the group immediately following a clinic visit. Due to the benefits of psychosocial support and lower burden of accessing care, and it was thought that those with poor adherence could most benefit from the adherence-promoting characteristics of the CAG model.

NEXT STEPS/WAY FORWARD

Mozambique recently completed a retrospective cohort study comparing retention in care of patients enrolled in CAGs to those receiving routine care. The findings will be used inform the national DSD guidelines and the further scale-up of DSDM throughout the country.

February 2018

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I-TECH International Training & Education Center for Health

Taking Differentiated Service Delivery to Scale in South Africa: Expanding Client Choices through Innovation

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1. National Department of Health

BACKGROUND

South Africa has the world's largest HIV epidemic, and has made marked progress towards scaling up antiretroviral treatment (ART). As part of a strategy to improve linkage to care, retention in care and adherence on treatment for people living with HIV (PLHIV), the South African Government has implemented Adherence Guidelines for HIV, TB and NCDs (AGL), with a special focus on differentiated service delivery (DSD). The AGL and Service Delivery Package have been implemented in all districts and facilities in South Africa to address the breakdowns in the care cascade prioritized by the World Health Organization (WHO) Differentiated Care Framework.

Employing a phased approach to DSD implementation, South Africa is scaling up comprehensive interventions that cover a broad spectrum of Treatment for All. These interventions include but are not limited to: Treatment plans for newly diagnosed PLHIV; DSD models (DSDM) for patients who are stable on treatment; interventions for those failing on treatment; integration of services for HIV and other chronic conditions; and supportive strategies for children and youth living with HIV. In the most recent update to the NDoH National Strategic Plan (NSP) for 2017-2022, the department further outlines policies to enable people living with HIV, tuberculosis (TB), or a sexually transmitted infection (STI) to access appropriately tailored DSDM.

NDoH has launched a major effort to address populations of PLHIV that are among those at highest risk for poor adherence and unfavorable retention outcomes, including adolescents. DSD has been been recognized for its potential to manage ART services in a way that is feasible, acceptable, and successful for adolescents. Another population of PLHIV in need of specialized services are those at high risk for advanced HIV disease progression. At the moment, South Africa is focusing on facility-based models of care, including the Advanced Clinical Care (ACC) pilot, to best address the needs of this population.

National goals for ongoing improvements as scale-up of DSD continues, include leveraging existing expertise in provision of DSD for ART and improving community buy-in of DSDM by increasing coordination with partners and community-based organizations. The reporting of monitoring and evaluation (M&E) data for the purposes of tracking the progress of DSD scale-up and ensuring quality are also a high priority of the NDoH.

DSD MODELS OFFERED

South Africa currently offers six models of DSD for ART. These include three which are facility-based models: the **Multi-Month Refill Model** (also known as appointment spacing), **Fast-Lane Refills** (sometimes called fast-track refills), and **Facility-Based ART Groups.** Both appointment spacing and fast lane are individual models. The community-based models include **Community-Based ART Groups,** a group model, and **Community ART Distribution,** an individual model. Since 2014, South Africa has also utilized a feature known as **Centralized Chronic Medicines Dispensing and Distribution (CCMDD),** by which patients are dispensed ART medications at reduced intervals and the antiretroviral drugs (ARV) can be collected from a private, commercial pharmacy or other designated collection point. This model includes the features of the appointment spacing model and has some similar qualities as community ART distribution.

DSD UPTAKE & COVERAGE

Despite South Africa's large geographical area and high HIV prevalence, DSD scale-up efforts have been very successful. Models of DSD for ART are available in all 9 of South Africa's provinces; 3,989 health facilities are providing ART in the country, of which, 3,092 (76%) are supporting DSD; and 11 (79%) of the 14 ART-supporting implementing partners (IP) are supporting DSD.

Each of the 3,092 DSD facilities in the country provides the community-based ART group model and 96% (n=2,960) of DSD facilities provide appointment spacing and CCMDD (Figure 1). While the total number of facilities providing DSD in KwaZulu-Natal is unknown, data is available on the number of facilities in that province providing two models: 693 facilities in KwaZulu-Natal are providing fast-track and 348 are providing facility-based ART groups (Figure 1).

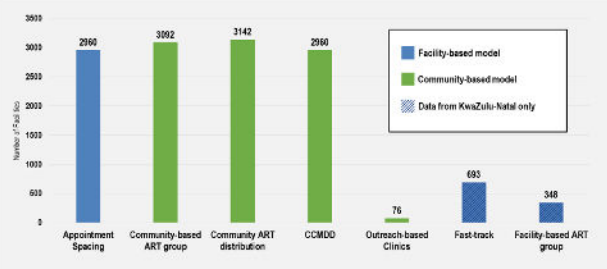

Figure 1. DSDM for ART Offered in South Africa, by Facilities Offering Each Model

DSD DASHBOARD

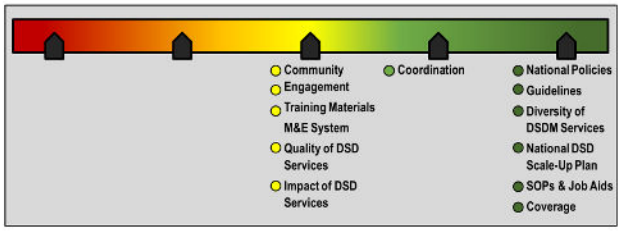

Figure 2. South Africa DSD Dashboard, January 2018

A self-assessment tool known as the CQUIN DSD Dashboard was used to quantify the progress being made as South Africa rolls out its national DSD guidelines. Across 12 different domains, a five-step color scale was used to rank progress and performance from red, indicating no activity, to dark green, indicating significant and robust implementation.

South Africa found that the largest number of domains were in the dark green category, the highest level of development (Figure 2). In the highest-ranked domains, the system met these clearly-defined set of standards: **National Policies** actively promote the use of DSDM for diverse patient groups; National HIV Treatment **Guidelines** provide detailed and specific guidance on implementation of DSDM; there is a **National DSD Scale-Up Plan** and it is being actively implemented; **Diversity of DSDM Services** was determined to be high due to the provision of models for diverse patient groups; step-by-step national standard operating procedures and job aids **(SOPs and Job Aids)** are available for at least three DSDM; and finally, **Coverage** of DSDM reaches >75% of the health facilities that provide ART in South Africa.

CASE STUDY/BEST PRACTICE

South Africa has piloted innovative DSDM approaches such as the **Automated Pharmacy Dispensing** system that is now available in four hospitals in Gauteng Province. This technological innovation enables clinicians to write electronic prescriptions that are uploaded to the electronic patient management system through a cloud-based data portal and automatically available to pharmacists. When new prescriptions are received, ARVs are packed by pharmacy staff and stocked in secure containers. When the patient arrives to pick up their medication, the prescription is dispensed through an automated process by a robotic hand.

Another innovative approach to ART provision utilizes a less cutting-edge but no less successful technology. Founded by a 21 year-old Cape Town-based entrepreneur, the **Iyeza Express** bicycle delivery service delivers chronic care medications, including ARVs, to patients living in low-income areas, particularly townships.

Automated Pharmacy in Gauteng

Iyeza Express delivers medication to low-income areas by bicycle

NEXT STEPS/WAY FORWARD

To capture information about DSDM coverage and patient-level outcomes, South Africa plans to address issues with the current M&E system, which remains a challenge for some models due to parallel reporting systems. One initiative to reach this goal involves continuing updates to the electronic health records database system.

As part of its national priority to boost the number of patients on ART and ensure viral suppression, South Africa has begun program evaluations that will measure the progress of implementing the national DSD scale-up plan and includes an evaluation on health care provider perspectives.

February 2018

Taking Differentiated Service Delivery to Scale in Swaziland: Lessons from CommART Implementation

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Pido Bongomin[2], Lydia Mpango[3], Victoria Masuku[4], Edwin Mabhena[5], Arleta Ndlela[2]
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BACKGROUND

As a country with one of the world's highest HIV disease burden, Swaziland has made significant strides towards HIV epidemic control. Differentiated service delivery (DSD) has the potential to continue Swaziland's momentum towards achieving treatment and viral suppression for the (32%) of the population between the ages of 18-45 years living with HIV. The Swaziland Ministry of Health (MOH) through the Swaziland National AIDS Programme (SNAP), was an early adopter of DSD models, which have been included in the National Policy Guidelines for Community-Centered Models of ART Service (CommART) Delivery, in 2016. SNAP also partnered with communities, including the Swaziland Network of People Living with HIV as part of efforts to roll-out DSD implementation. Other facilitators for DSD scale-up include the Test and Start policy, which created a demand to decongest health systems. However, barriers to DSD scale-up include limited monitoring and evaluation systems, competing programmatic priorities, and limited coverage of routine viral load testing.

Swaziland is committed to improving DSD for key populations, such as female sex workers and injecting drug users. Plans are also in place to develop DSD guidelines for patients with advanced disease. Within this context, Swaziland is continuously working toward a phased DSD implementation targeting hospitals and health centers, high-volume clinics, and other interested facilities. MOH and SNAP are particularly interested in the effect of the CommART program on national-level data, including retention in care and viral suppression.

DSD MODELS OFFERED

Swaziland has policy documents for CommART and Standard Operating Procedures (SOP) for differentiated service delivery models (DSDM). Currently, DSDM for ART is offered in all 4 regions of the country and is supported by 8 of the 12 implementing partners that support HIV treatment and ART.

The models of DSD for ART that are offered in Swaziland include the multi-month refill model (known elsewhere as "appointment spacing"), fast-track appointments, facility-based ART groups (FBG), community-based ART groups (CAG), and community ART distribution. There are also outreach-based ART clinics in Swaziland, some of which offer ART initiation, and the family-centered model, which is a unique group model that address individual needs of the group members—often family members who receive ART services at the same facility. Currently, all 175 health facilities in the country offer the appointment spacing model of DSD for ART, and many offer additional models (Figure 1).

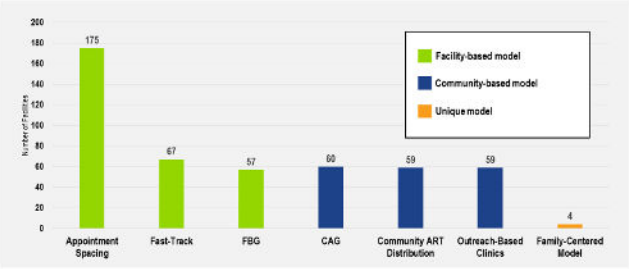
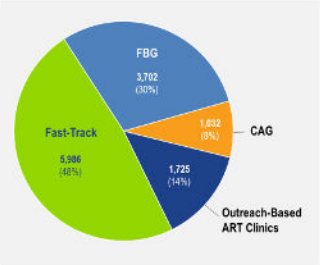


Figure 1. Differentiated Service Delivery Models for ART Offered in Swaziland by Number of Facilities Offering Each Model

DSD COVERAGE

By September 2017, 12,445 patients were receiving ART via DSDM. Of DSDM patients, the largest proportion (5,986; 48%) were enrolled in the fast-track model or FBG, mainly Facility Teen Club (3,702; 30%) (Figure 2). Other models with coverage data for the October 2016-September 2017 program year include outreach-based models, with 1,725 (14%) patients, and CAGs, with 1,032 (8%) patients.



One challenge affecting scale-up of patient coverage is the increasing of the workload and need for mentorship, particularly at high volume facilities. While training has been completed at large facilities, the volume of patient flow and the effort required to prepackage medication present barriers to enrolling more patients on some model types, particularly group models.

Figure 2. Differentiated Service Delivery Models for ART Offered in Swaziland by Number of Patients Enrolled

DSD DASHBOARD

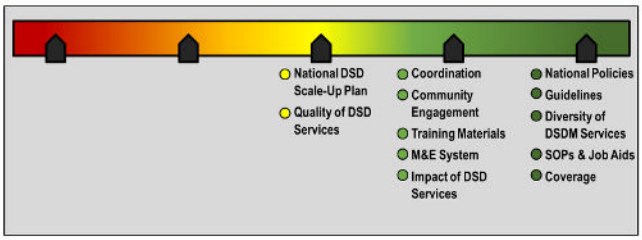


Figure 3. Swaziland DSD Dashboard, January 2018

A self-assessment tool known as the CQUIN DSD Dashboard was used to quantify the progress being made as Swaziland rolls out its national DSD program. Across 12 different domains, a five-step color scale was used to rank progress and performance from red, indicating no activity, to dark green, indicating significant and robust implementation.

Swaziland found that five domains were in the dark green category, the highest level of development (Figure 3). In the highest-ranked domains, the system met the following clearly-defined set of standards: **National Policies** actively promote use of DSDM; the National HIV Treatment **Guidelines** provide detailed and specific information on implementation of DSD; **Diversity of DSDM Services** refers to DSDM provision for diverse patient groups; Swaziland is actively implementing a **DSD Scale-Up Plan;** step-by-step national **SOPs & Job Aids** are available for at least three DSDM; and **Coverage** of at least one DSD model for ART has been achieved by >75% of ART facilities.

Swaziland's performance in this assessment, with 10 out of the 12 domains ranking light green or dark green, highlights the substantial successes of the country's DSD scale-up. However, opportunities remain to strengthen the progress already made in the **National DSD Scale-Up Plan,** by ensuring that scale-up is proceeding according to an MOH-approved plan, and in the efforts to evaluate the program to ensure the **Quality of DSD Services.** Currently assessed at the yellow, or mid-level stage of development, ongoing activity to continue progress in these domains will be necessary.

CASE STUDY/BEST PRACTICE

Monitoring & Evaluation

A challenging aspect of DSD implementation scale-up is the difficulty of measuring services provided through DSDM using historical M&E tools and existing indicators. Through a combination of routine monitoring using an electronic patient-level records system (CMIS) and special studies, Swaziland is currently—or will soon be—able to report on numerous and diverse indicators for M&E of DSD. The development of this system has contributed to Swaziland being one of only two CQUIN countries to achieve a light green ranking on the DSD Dashboard in the domain of M&E.


COMMUNITY REFILLS - CLIENT'S CARD

Above: A Patient Card from the CommART Pilot Program

With DSD-specific indicators and the national CMIS recording information such as dates of DSD enrollment, Swaziland will be capable of reporting retention outcomes based on DSD enrollment cohort. Measures such as this are of critical importance in the judgement of the Swaziland MOH as evaluation of patient outcomes will be necessary for progress to be made in measuring the quality of the DSD program. There is particular interest in determining whether the quality of care provided to clients is the same for those enrolled in DSDM as those receiving the standard care model. With the ability to record enrollment into and switches between models, such reporting will be possible.

NEXT STEPS/WAY FORWARD

In efforts to further improve patient-level impact, Swaziland has initiated a Baseline Assessment for DSD for stable clients, with the objective of evaluating the current status of DSD within the country. The assessment also aims to identify the type of DSDMs implemented at each health facility, and the number of patients enrolled in each DSDM. The implications of the results will be used to inform the national scale-up plan for stable clients and also to introduce a package for patients with advanced disease.

February 2018

Taking Differentiated Service Delivery to Scale in Uganda: Diverse Models for HIV Care & Treatment

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BACKGROUND/INTRODUCTION

In June of 2017, the Uganda Ministry of Health (MOH) released the national implementation guide for differentiated service delivery (DSD), a comprehensive set of guidelines on the provision of DSD for people living with HIV (PLHIV). Uganda is differentiating HIV and TB services for both stable and unstable patients on antiretroviral therapy (ART), including pregnant women, children and adolescents. As of January 2018, progress in the scale-up of DSD models (DSDM) for ART is well underway, with facility- and community-based models offered at over 600 facilities and all national level trainings completed. The MOH is in the process of revising elements of the monitoring and evaluation (M&E) system to account for the new models of HIV services provision.

The Uganda MOH has worked closely with implementing partners (IP), civil society, and representatives from the community of PLHIV throughout the process of developing the national DSD guidelines. While Uganda's national guidelines are new, many IPs operating centers of excellence and at selected public facilities have long employed DSDM and, currently, all 23 IPs providing HIV treatment are supporting DSDM for ART. By employing a consultative process in developing the DSD guidelines, Uganda was able to leverage this existing in-country knowledge and expertise to streamline the process.

DSD MODELS OFFERED

Uganda's national guidelines for Differentiated Service Delivery Models (DSDM) include three facility-based and two out-of-facility—or community-based—models (Figure 1), with specific patient populations targeted for different model types. Clients who have newly started ART, are not virally suppressed, or have other risk factors for disease progression are considered complex or unstable. The patients are prioritized for facility-based care, either in standard HIV care, termed the **Facility Based Individual Management (FBIM)** model, or in a **Facility Based Group (FBG)** that provides ART distribution and psychosocial support. Clients who are stable on ART are eligible for both facility-based and community DSDM and have the opportunity to receive ART distribution in the facility, either through FBG, or through the **Fast Track Drug Refill (FTDR)** model, which features expedited drug pickups at the pharmacy. The community-based models available to stable clients are **Community Client Led ART Delivery (CCLAD)** and **Community Drug Distribution Points (CDDP).** Both models offer community-based ART distribution, with the CCLAD also providing psychosocial support through group activity.

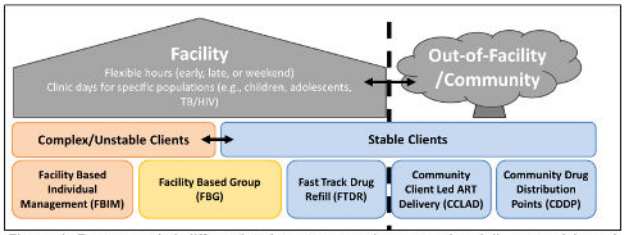

Figure 1. Recommended differentiated treatment and care service delivery models and their respective target populations

DSD UPTAKE & COVERAGE

Uganda is in the process of scaling up its national DSD guidelines and data on uptake of DSD from government facilities will be available in the coming months. Currently, data on DSD is limited to IPs, 100% of which (n=23) offer DSDM. Of the 1,824 facilities offering ART in Uganda, only 654 (36%) are offering any DSDM. The most widely-implemented model is FBG, which is offered in 307 (47% of 654) facilities (Figure 2). Other models are implemented by fewer than half the facilities offering FBG, with roughly 20% of all DSD facilities offering FTR (n=130), CCLAD (n=130), or CDDP (n=133).

One major challenge to DSD-scale up in Uganda was a nationwide shortage of antiretroviral drugs that occurred in 2017, which prevented the distribution of multiple months' of ART and delayed the implementation of some DSDM. Following the drug shortage, the supply chain issues have been resolved and DSDM rollout has accelerated.

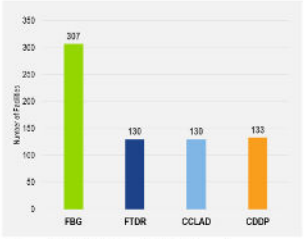

Figure 2. DSDM for ART in Uganda, by Facilities Offering Each Model

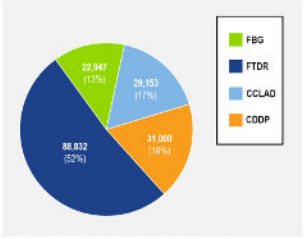

Figure 3. DSDM for ART in Uganda, by Patients Enrolled in Each Model

DSD UPTAKE & COVERAGE, cont.

Across the 654 sites offering DSDM, a total of 171,932 ART patients have enrolled in one of the four standard models implemented in Uganda. Facility-based models overall account for majority (65%) of patients utilizing DSDM for ART, with most of those enrolled in FTDR. Despite being implemented in only 130 facilities, 88,832 (52%) patients are enrolled in an FTDR model (Figure 3). While the FBG model is implemented in the largest number of facilities, it accounts for the smallest share of patients, with 22,947 (13%) enrolled. The community-based models, CCLAD and CDDP, are made up of 29,153 (17%) and 31,000 (18%) patients, respectively.

As DSD scale-up expands the availability and diversity of DSDM for ART, it will be crucial for Uganda to track the uptake of each model to understand patient demand. Monitoring of patient retention and viral suppression by DSDM will also be important to ensure that patient outcomes are good across models. With these priorities in mind, the Uganda MOH is moving forward with plans to revise the M&E system to allow for the collection of DSD-specific data that can be disaggregated by model type.

DSD DASHBOARD

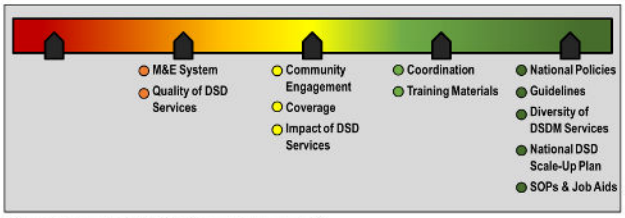

Figure 4. Uganda DSD Dashboard, January 2018

A self-assessment tool known as the CQUIN DSD Dashboard was used to quantify the progress being made as Uganda rolls out its national DSD guidelines. Across 12 different domains, a five-step color scale was used to rank progress and performance from red, indicating no activity, to dark green, indicating significant and robust implementation.

Uganda found that the largest number of domains were in the dark green category, the highest level of development (Figure 4). In the highest-ranked domains, the system met a clearly-defined set of standards. In the **National Policies** domain: national policies actively promote use of DSDM; in **Guidelines:** detailed and specific information on implementation of DSD is included in the national HIV treatment guidelines. In the domains of **Diversity of DSDM Services, National DSD Scale-Up Plan,** and **SOPs & Job Aids,** the following criteria were met, respectively: DSDM are available for diverse patient groups; active implementation of a DSD scale-up plan; and step-by-step national standard operating procedures (SOP) and job aids available for at least three DSDM.

Uganda's performance in this assessment, with seven out of the 12 domains ranking green or dark green, highlights the successes of the country's DSD scale-up. However, opportunities remain to make improvements in the domains concerning the **M&E System** as well as procedures for evaluating **Quality of DSD Services.** Currently assessed at the orange level, which is interpreted as a basic level of implementation, these two domains are crucial components of high-quality health care services provision. As Uganda continues to scale-up DSD, these two weak areas of the system may be prioritized for targeted improvements.

BEST PRACTICE

In addition to DSD for ART, Uganda's national guidelines also lay out provisions for DSD for HIV testing services (HTS). All communities are eligible for DSD for HTS, though the model available depends on the vulnerability and unique needs of the population. Just as in the country's DSDM for ART, HTS models can be facility-based or community-based and are further categorized as either provider initiated or client initiated (facility-based models) or as either a home-based model of testing or an outreach model (community-based models).

NEXT STEPS/WAY FORWARD

The MOH has identified the revision of the health management information systems (HMIS) tools as one of the highest priorities. Currently, the HMIS is not able to capture M&E data related to DSD, which has created challenges for tracking effects of the implementation process, but it is anticipated that the lengthy review process necessary to make these changes will result in a high quality system.

One of Uganda's current research priorities is measuring the impacts of DSD for ART on patients, particularly the impacts on health system costs. The two-phase project aims to estimate the average cost of providing care, per patient, by each model of DSD for ART and the average cost per patient retained in ART and per patient with viral suppression. This study—led by EQUIP, along with the MOH, other IPs, and USAID/CDC—plans to complete Phase 2 in 2019.

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Taking Differentiated Service Delivery to Scale in Zambia:
Using Diverse DSD Models to Achieve Coverage, Quality, and Impact

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BACKGROUND/INTRODUCTION

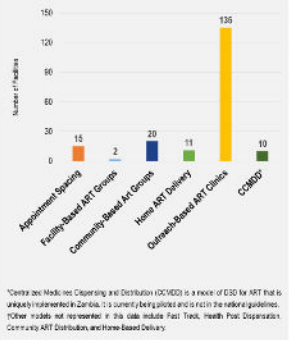
In November 2017, Zambia's National Differentiated Service Delivery (DSD) Guidelines were finalized and incorporated into the National HIV Consolidated Guidelines. These guidelines outline a diverse set of DSD models (DSDM) for antiretroviral therapy (ART) and were the result of months of coordination between the Zambian Ministry of Health (MoH), the National DSD Coordinator, the National DSD Task Force, and supporting partners.

During the process of designing DSD models, implementing partners in Zambia were involved in piloting and evaluating a variety of DSD models for stable patients. Current models include community ART groups in both rural and urban areas, community ART distribution, streamlined ART with multi-month scripting, and fast-track ART initiation.

As implementation scales up, Zambia is working towards standardization of monitoring and evaluation tools; advancing national DSD policies; including non-communicable disease management as part of scale-up; and developing models for key and priority populations. An additional priority of the Zambia MoH is to understand cost-effectiveness of DSD, as preliminary data have shown modest cost savings compared to standard ART care.

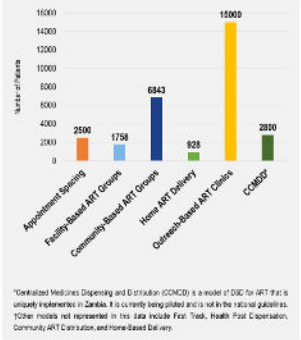
DSD MODELS OFFERED AND UPTAKE

Zambia has implemented DSDM at 198 health facilities in three of the country's 10 provinces and is supported by 11 of the 21 implementing partners that provide ART in the country.



*Central ized Medicines Dispensing and Distribution (CCMDD) is a model of DSD for ART that is uniquely implemented in Zambia. It is currently being piloted and is not in the national guidelines. †Other models not represented in this data include Fast Track, Health Post Dispensation, Community ART Distribution, and Home-Based Delivery.

Figure 1. DSDM for ART in Zambia, by Facilities Offering Each Model†



*Centralized Medicines Dispensing and Distribution (CCMDD) is a model of DSD for ART that is uniquely implemented in Zambia. It is currently being piloted and is not in the national guidelines. †Other models not represented in this data include Fast Track, Health Post Dispensation, Community ART Distribution, and Home-Based Delivery.

Figure 2. DSDM for ART in Zambia, by Patients Enrolled in Each Model†

Zambia is still in the early stages of DSDM scale-up, with fewer than 25% of the ART facilities in the country providing DSDM. Among the 198 facilities offering DSDM in Zambia, the most widely-implemented models are **Outreach-Based ART Clinics.** A total of 135 facilities (70%) offer ART services in an outreach setting (Figure 1) and the majority of those (124) also offer ART initiation. **Community-Based ART Groups,** offered in 20 (10%) of the participating facilities, is the model with the second-highest uptake.

Among the 34,866 patients currently enrolled in any DSDM, the models with the highest uptake by far are the **Outreach-Based Clinic** model. Uptake of the remaining models falls somewhat below that of the outreach models, from 6,843 (20%) in **Community-Based ART Groups** to 1,758 (5%) in **Facility-Based Groups.**

DSD DASHBOARD

The CQUIN DSD Dashboard self-assessment tool was used to quantify the progress being made as Zambia scaled up implementation of DSD for ART. Across 12 different domains, a five-step color scale was used to rank progress and performance from red, indicating no activity, to dark green, indicating significant and robust implementation.

Zambia has achieved the highest level of development in the **National Policies** and **Diversity of DSDM Services** (Figure 3). In these domains, Zambia's DSD implementation has met these clearly-defined set of standards: the country's National Policies actively promote use of DSDM and Diversity of DSDM Services has been reached by providing DSDM for diverse patient groups. Two other domains assessing **Coordination** of the DSD scale-up efforts and **Community Engagement** during implementation are also reaching high levels of development in the light green category, indicating substantial progress has been made.

DSD DASHBOARD, cont.

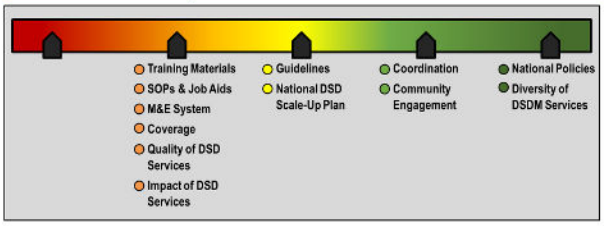


Figure 3. Zambia DSD Dashboard, January 2018

Other aspects of Zambia's DSD implementation remain in the early stages of development, with half (6/12) the domains assessed at the orange level. These rankings indicate opportunities for improvement in domains including **Training Materials, SOPs & Job Aids**, the **M&E System**, and others. These domains are crucial components of a high-quality DSD program, but represent some of the most difficult issues faced by countries as DSDM implementation is scaled up. As Zambia continues to make progress in these areas, the MoH may find a valuable resource in the experiences of other countries and the strategies employed to overcome these common challenges.

CASE STUDY/BEST PRACTICE

Differentiated Service Delivery for Patients on 3rd Line ART:

One of Zambia's diverse DSD models is designed for patients on 3rd line ART. These patients are managed at four selected tertiary health care facilities called Advanced Treatment Centers (ATCs), where they are seen on specific days of the week by HIV Specialists. As of January 2018, 368 patients were enrolled at ATCs. The majority (93%) of patients are enrolled at University Teaching Hospital (UTH), where the retention rate is at 83% with an overall viral suppression rate of 74% (using a cut off of 50 copies/ml) and 95% (using a cut off of 400 copies/ml).[1]

Successful Task Shifting of Services to Community Health Workers:

Zambia has increased the engagement of Community Health Workers (CHW) in some services related to ART provision as a strategy to address health care worker HCW burden and other staffing challenges. The use of a CHW cadre has helped in the scale-up of ART services at lower level health facilities and at those with smaller HCW staff. In addition, some DSD models have employed CHW by assigning a number of clients to workers in this cadre for regular follow-up. Through these procedures, there has been an increase in index client tracking and testing, as well as partner notification.

NEXT STEPS/WAY FORWARD

A number of priorities to be addressed as DSDM scale-up progresses have been identified by Zambia's DSD leaders. As part of the process of developing scale-up plans, there is interest in determining the perceptions of communities regarding the acceptability of various models to the patients and to the health care system.

In concert with scaling up the coverage of DSDM, there is an anticipated need for the development of M&E tools and systems capable of capturing DSDM-specific data. One area of program monitoring that is of great interest is the ability to measure the rate of transfers between community-based models and facility-based models, particularly if the transfer from the community- to the facility-based model is due to the client becoming unstable. With appropriately-specific M&E tools, it would also become possible to measure the cost effectiveness of various DSDM models and the impact on treatment outcomes that DSDM scale-up has for patients.

While Zambia already has a diverse offering of models for DSD of ART, there is interest in DSDM for specific patient groups, such as people living with both HIV and non-communicable diseases, and members of key and vulnerable populations.

Zambia is actively contributing to the body of knowledge of DSDM through current and future research:

- **EQUIP Zambia:** With support from MoH, an economic evaluation of Zambia's DSDM is being conducted to determine cost effectiveness information by population group, not necessarily what is cost effective for Zambia as a whole.
- **M&E of DSDM:** The MoH, in collaboration with the University of Zambia, will be conducting M&E of all DSDM in 2018. This results of this evaluation will be used to inform policy.
- **ZAMBART** is currently conducting a three-arm cluster randomized non-inferiority trial for clinical, immunological, and virological outcomes in patients receiving care via community-based DSDM (CAGs, home delivery) and those receiving care in the health facility (Standard of Care).

REFERENCES:
1. Paul Zulu et al. yet to be published

Taking Differentiated Service Delivery to Scale in Zimbabwe: Progress in Implementation

Clorata Gwanzura[1], Rumbidzai Matewe[2], Daniela Garone[3], Chung Yu Chen[3], Nyikadzino Mahachi[4], Kudakwashe Takarinda[1], Tsitsi Apollo[1]
1. Ministry of Health and Child Care 2. Zimbabwe Network of People Living with HIV (ZNNP+) 3. MSF – Belgium 4. FHI360

BACKGROUND/INTRODUCTION

Differentiated service delivery (DSD) policies in Zimbabwe are supported by the national government's HIV and ART Guidelines. A comprehensive Operational and Service Manual (OSDM), released in February of 2017, includes detailed guidance on every aspect of HIV prevention, care, and treatment. The 2017 OSDM is the first version to include provisions for DSD and, together with an accompanying HIV and AIDS Job Aid, clarifies all aspects of procedures for DSD models (DSDM) affecting supply chain management, health care workers, and pharmacy staff.

As an early adopter of decentralization of care and of task shifting, Zimbabwe has seen improved retention when implementing DSD via adolescent support groups and peer-led approaches. Challenges to scaling up DSD include limited access to routine viral load testing, funding, and acceptance of community-based models in urban and peri-urban areas.

Coordination resources at the national level include a technical working group, and a National DSD Coordinator supported by CQUIN. Plans are underway to update monitoring and evaluation (M&E) systems and training services for mentors, nurses, and the community to incorporate DSD. A key priority will be sensitization of all provinces on DSD standard operating protocols and the OSDM, agreeing on core DSD indicators, and the roll out of comprehensive models to districts. As part of CQUIN, members of the Zimbabwe team visited Swaziland in 2017, and will take part in ongoing learning exchange visits

Research priorities include assessing the cost-effectiveness of DSD, client satisfaction, and male participation. Zimbabwe will prioritize tracking outcomes of the 700,000 patients currently captured in their electronic health database systems. CQUIN is supporting a qualitative evaluation of male participation in community antiretroviral refill groups (CARGs).

DSD MODELS OFFERED

DSD in Zimbabwe is still in its early days, but with models offered throughout all ten provinces and supported by 7 implementing partners (IP), coverage by geographical area has progressed well. In addition, DSD has been integrated with tuberculosis programs and within the national HIV/TB partnership forum. The initial DSDM for ART was the Community ART Group (CARG), first piloted in the Gutu District in 2009, followed by the pharmacy fast-track refills model that started in Buhera. Although there are now five DSDM being offered in Zimbabwe, nationwide coverage of each varies. The DSDM include two facility-based models: the **Fast Track Refills** model for individuals and the **Facility-Based Group** model; two community-based models: the **Community-Based ART Group (CARG)** and **Outreach Refills;** and Zimbabwe's custom **Family Refill Model.**

The Zimbabwe OSDM sets out the definitions and features of each model and the minimum standards for their implementation. For example: the Family Refill Model, a model unique to Zimbabwe, enables a family member to collect medication for others, if there is more than one person living with HIV in the household.

Zimbabwe's diverse DSDMs include a unique method of multi-month ART scripting for adolescents in school. A defining feature of this model is dispensing a four-month prescription of antiretroviral (ARV) medication at the beginning of each school term (Figure 1). Another unique model employing multi-month prescriptions targets migrant workers from Matebeleland South who work in South Africa (Figure 2). The workers have formed groups, which periodically send one person, regardless of HIV status, to collect medications at a home-based clinic. Group members complete viral load (VL) checks in their country of residence and communicate results to health care workers by phone or WhatsApp. In both of these examples of population-specific models of multi-month ART, when the patients return home during the holidays, they complete full clinical consultations at that time.

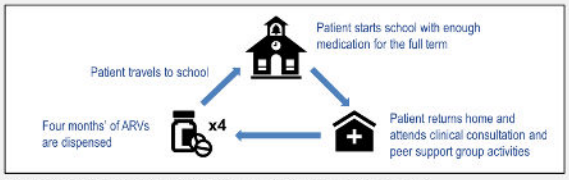


Figure 1: Schematic of Multi-Month ART Scripting for Adolescents

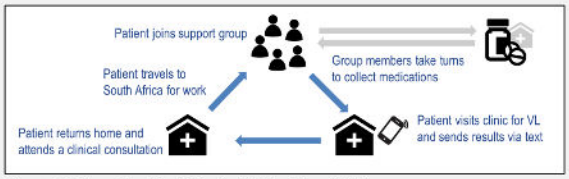


Figure 2: Schematic of Multi-Month ART for Migrant Workers

DSD DASHBOARD

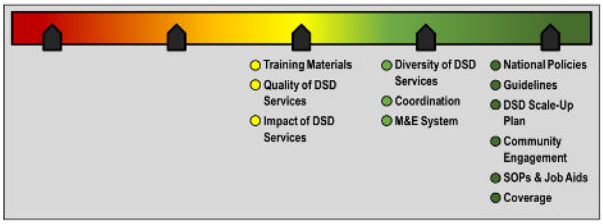


Figure 1. Zimbabwe DSD Dashboard, January 2018

The CQUIN DSD Dashboard was used to describe Zimbabwe's maturing national DSD program. Across 12 different domains, a five-step color scale was used to rank progress and performance from red, indicating no activity, to dark green, indicating significant and robust implementation.

In each domain, the DSD system in Zimbabwe met a clearly-defined set of standards for each color ranking. Most domains were found to meet the standards for the highest-level ranking, indicated by dark green (Figure 2). In the **National Policies** domain: national policies actively promote use of DSDM; in **Guidelines:** detailed and specific information on implementation of DSD is included in the national HIV treatment guidelines. In the domains of **DSD Scale-Up Plan, Community Engagement** and **SOPs/Job Aids,** the following criteria were met, respectively: active implementation of a DSD scale-up plan; people living with HIV (PLHIV) and/or civil society representatives are systematically engaged in DSD policy development, design, implementation, and evaluation; and step-by-step national standard operating procedures (SOP) and job aids available for at least three DSDM. The final domain in which Zimbabwe has achieved the highest ranking is **Coverage,** which is characterized by at least one DSD model available at >75% of health facilities providing ART.

By utilizing this assessment tool, Zimbabwe has been able to quantify the progress being made in the scale-up of DSD implementation. With nine out of the 12 domains ranking light green or dark green, these results highlight the successes of the country's DSD efforts. Opportunities remain to strengthen the system through further development of quality management protocols for DSD and by scaling up evaluations of DSDM. As Zimbabwe continues to improve in all aspects of the domains assessed with this tool, the strategies employed to address the challenges encountered may prove useful to countries in the beginning stages of scaling up DSDM.

CASE STUDY/BEST PRACTICE

Integration of DSD models into HIV programming

A pillar of Zimbabwe's HIV programming is the OSDM guidance that details implementation provisions including, minimum care packages, capacity building and integration of services. Zimbabwe also has peer demonstration of DSDMs at special learning sites and tracks overall implementation progress on a DSD dashboard.

Mwenezi outreach model success

Outreach model implementation in the Mwenezi district was a critical investment and strategically planned model, since 83% of the population were underserved by health facilities. Following outreach model implementation, men were successfully reached through night clinic testing, as shown by high rates of testing 63% with yield ranging from 4% to 7%. The successful outreach effort was further characterized by the recovery of LTFU patients and provided clinical and VL monitoring access to clients in hard to reach areas.

NEXT STEPS/WAY FORWARD

Robust progress towards DSD scale-up has been demonstrated in Zimbabwe since the onset of the CARG pilot in 2009. Key challenges include limited understanding of DSDM among HCW and patients, a perception of increased treatment default in CARGs, long turnaround time for VL, and low CARG uptake in some settings, due to fears of disclosure. To further scale-up DSD in Zimbabwe, research priorities include topics such as acceptability of DSDM among PLHIV, acceptability of DSDM for urban-dwelling , patient satisfaction with DSDM, and cost-benefit analyses of implementing DSDM in low-resource settings.

A number of special studies are underway to inform DSD implementation, including Male Engagement in CARGs, Transforming Community Health Systems to Improve Health Outcomes for PLHIV, Effectiveness and Cost-Effectiveness of Three and Six-monthly Dispensing of Antiretroviral Treatment for Stable Patients in Community ART Refill Groups, an Assessment of CARGs.

February 2018

HIV LEARNING NETWORK

The CQUIN Project for Differentiated Service Delivery

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