

CDC Support towards HIV Programming in Uganda

Rakai Health Sciences Program, Uganda
30+ Anniversary Celebration
24 September 2019



Lisa J. Nelson, MD MPH MSc
CDC Uganda Country Director

Center for Global Health

U.S. Centers for Disease Control and Prevention (CDC) Uganda



Outline

- CDC Uganda background
- CDC's role in PEPFAR
- Unique contributions
- Implementation science
- Way forward

CDC Uganda

- Activities started in 1991
 - Field Epidemiology Training Program (FETP) at Makerere University
- Country Director in 1999
- CDC funding to Uganda health sector exceeds \$2 billion



Current Staff: 126 (110 Ugandan staff; 16 Direct Hires)
FY19 Budget: \$192.5 million (94% Extramural; 3% Non-PEPFAR)

Critical Pillars of Focus for CDC

WHAT WE DO

CDC has more than 70 years of public health excellence, a record of trail blazing science, and evidence-based decision making. Led by the world's experts in disease detection, outbreak investigation, laboratory systems and emergency response, CDC provides critical services to keep Americans safe, healthy, and secure.



LABORATORY EXPERTISE

Our labs have developed gold standard tests used during emergencies, and serve as reference centers across the globe



PUBLIC HEALTH SURVEILLANCE

We track and monitor diseases to stop and eliminate their spread



WORKFORCE DEVELOPMENT

We build in-country public health preparedness, including training a ready global workforce



EMERGENCY OPERATIONS

We provide expertise to other nations to develop emergency operations centers and stop outbreaks faster



REAL TIME EVALUATION AND RESEARCH

We conduct on-the-ground evaluation of what works to optimize life-saving programs and services

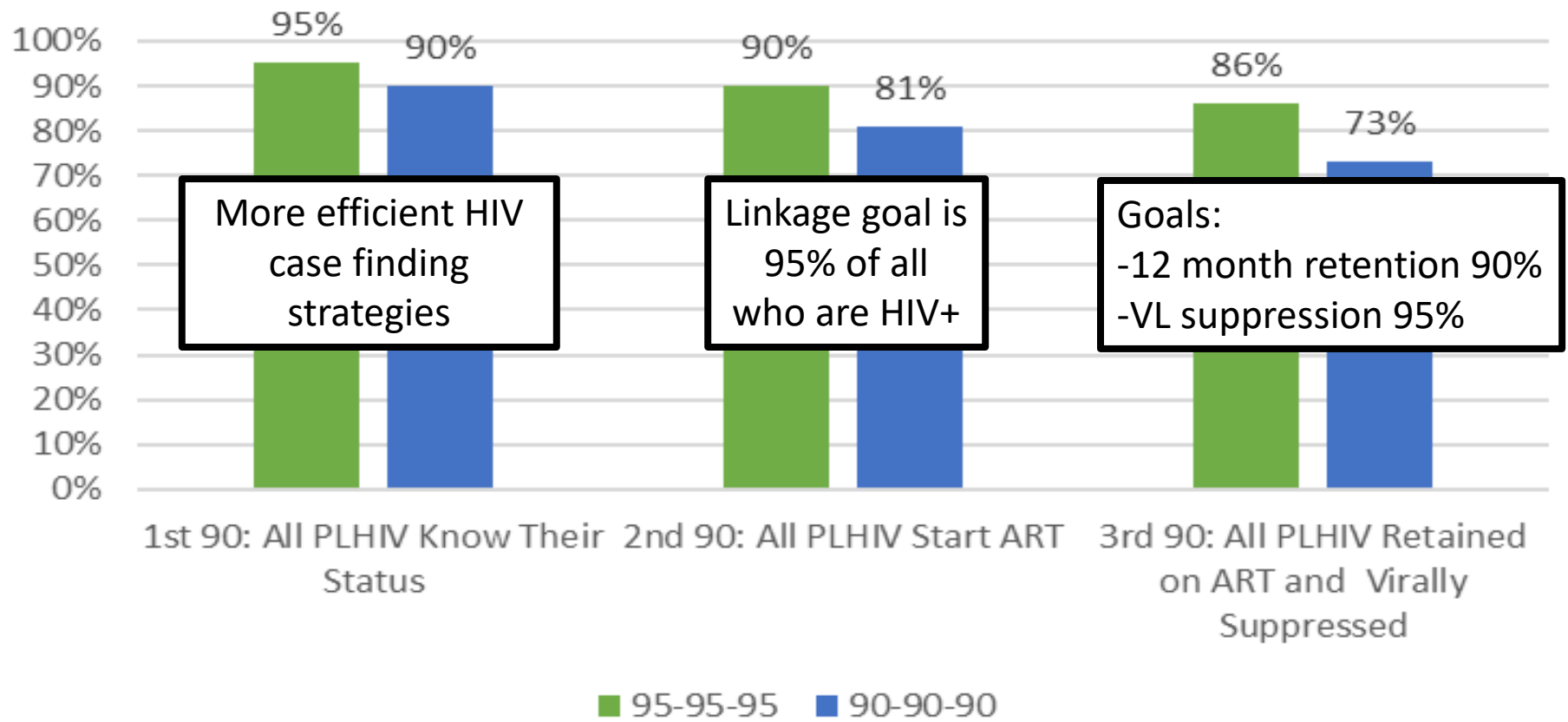
Public health programs and service delivery

PEPFAR--HIV

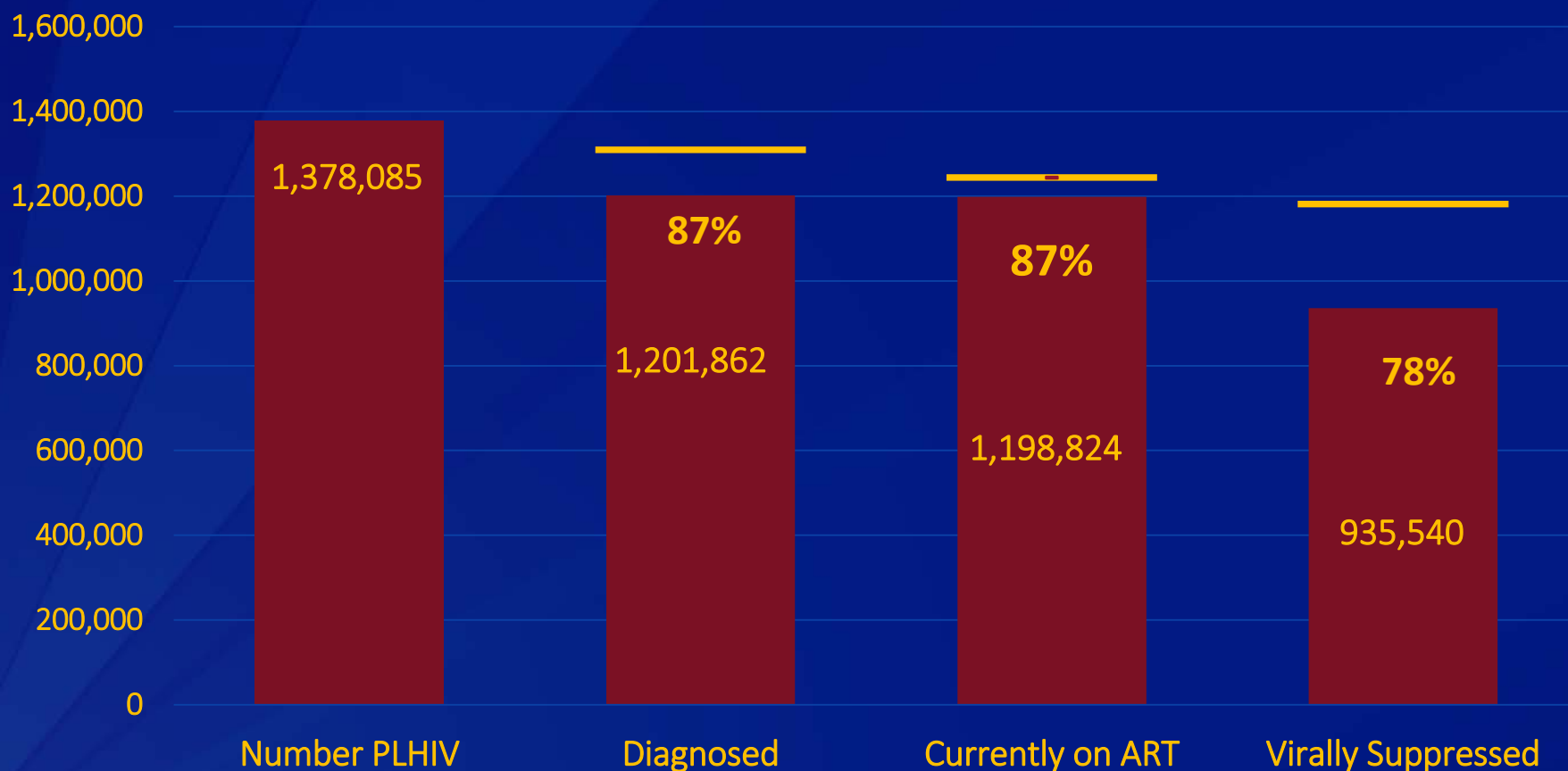




Uganda Approaches HIV Epidemic Control and Meeting 95-95-95 by 2020



Uganda Is Closing in on 95-95-95 (June, 2019)



Summary FY19 Key Indicators – by Agency

Funding Agency	Indicator	FY19 Q1	FY19 Q2	FY19Q3	FY19 Cum. Results	FY19 Target	FY19 %
CDC	HTS_TST	1,245,772	1,075,221	993,915	3,314,908	2,190,418	151%
	HTS_TST_POS	38,049	42,321	31,616	111,986	74,400	151%
	TX_NEW	28,429	28,691	25,546	82,666	69,533	119%
	TX_CURR	627,664	616,326	624,035	624,035	695,474	90%
	VMMC_CIRC	70,816	105,327	83,979	260,122	343,431	76%
USAID	HTS_TST	773,411	707,469	690,924	2,171,804	1,662,374	131%
	HTS_TST_POS	19,514	20,398	17,940	57,852	50,578	114%
	TX_NEW	15,712	16,284	15,415	47,411	46,431	102%
	TX_CURR	399,737	408,832	415,233	415,233	477,126	87%
	VMMC_CIRC	62,014	74,092	99,761	235,867	342,199	69%
DOD	HTS_TST	130,823	111,625	123,991	366,439	283,726	129%
	HTS_TST_POS	4,150	5,119	4,045	13,314	9,870	135%
	TX_NEW	2,680	3,097	3,043	8,820	9,167	96%
	TX_CURR	63,854	65,923	68,327	68,327	87,574	78%
	VMMC_CIRC	11,373	10,071	28,155	49,599	70,826	70%
STATE	HTS_TST	19,985	10,471	14,773	45,229	29,352	154%
	HTS_TST_POS	265	254	325	844	990	85%
	TX_NEW	268	285	281	834	1,259	66%
	TX_CURR	6,524	6,285	6,806	6,806	8,149	84%
	VMMC_CIRC	4,975	0	530	5,505	0	

Priorities for PEPFAR 2019

- Use of local (indigenous) partners
- Index testing for HIV case finding (assisted partner notification)
- Recency testing to rapidly identify new HIV cases
- Adolescent girls and young women (DREAMS)
- Better antiretroviral regimens (dolutegravir-containing, lopinavir/ritonavir)
- TB preventive therapy (TPT)
- Differentiated service delivery and patient-centered approaches
- Strong interoperable data systems: electronic medical records, unique identifiers, case-based surveillance

PEPFAR: Highlights of CDC Support

- **Comprehensive support to service delivery for HIV prevention, care, and treatment**
- **Supporting evidence generation and leadership on strategic information and surveillance**
- **Providing leadership on laboratory systems**
- **Support for implementation science and innovative programs**
- **Providing direct support to government and other Ugandan institutions**

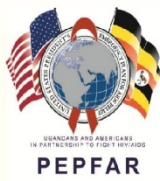
CDC Funds Ugandan Partners

Government entities

- Ministry of Health
- Uganda Virus Research Institute (UVRI)
- Uganda National Health Laboratory Services (UNHLS)
- Makerere University School of Public Health
- Uganda Prison Service (UPS)

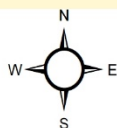
Other Ugandan institutions

- Infectious Diseases Institute (IDI)
- The AIDS Support Organization (TASO)
- Mildmay Uganda
- **Rakai Health Sciences Program (RHSP)**
- Baylor Uganda
- Medical Access Uganda (MAUL)
- African Field Epidemiology Network (AFENET)



Regional Distribution of PEPFAR Supported Partners

Legend



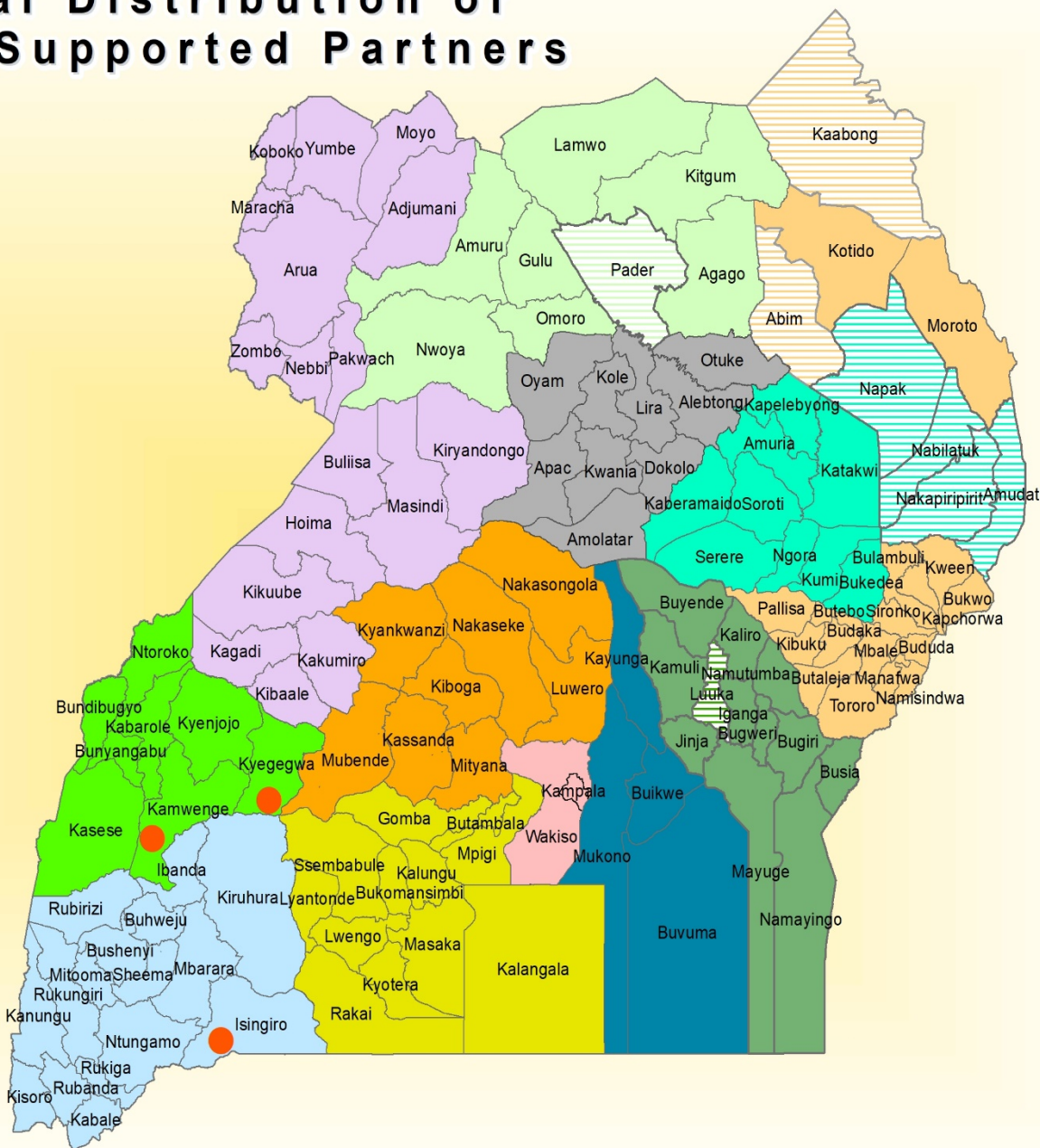
SITE and Above Site Support

- DOD/MUWRP
- CDC/TASO/Soroti Region
- CDC/Mildmay/Mubende Region
- CDC/RHSP/Masaka Region
- CDC/IDI/Kampala Region
- CDC/IDI/West/West Nile
- CDC/Baylor/Fortportal Region
- USAID/EGPAF/RHITES-SW
- USAID/URC/RHITES N -Acholi
- USAID/JSI/RHITES N-Lango
- USAID/URC/RHITES-EC
- USAID/Intra Health/RHITES-E
- State/UNHCR

Above Site Support Only

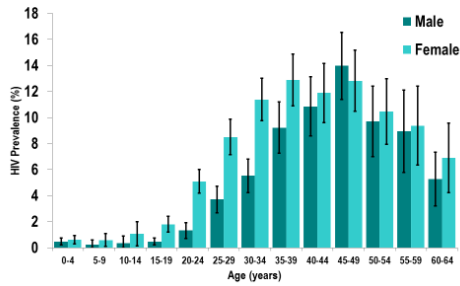
- USAID/URC/RHITES N -Acholi
- USAID/URC/RHITES-EC
- CDC/TASO/Soroti Region
- USAID/Intra Health/RHITES-E

0 35 70 140 Kilometers



CDC Supports Data Generation to Drive Programs

UPHIA: HIV Prevalence by Age and Sex



UGANDA PRISONS SERVICE

Background characteristics

Participation

- 24,205 were invited to participate, 10,609 (43.4%) participated
- 8,513 prisoners, 93.4% men
- 1,567 prison staff, 87.2% men

Age

- Prisoners: 24.1% in 15-24 age group
- Staff: 10.2% in 30-34 age group
- Median (IQR), age at first imprisonment: 26 (12 years)
- Males: 25 years, females: 28 years

Religion

- Prisoners: 78.5% Christians, 18.8% Muslims
- Staff: 83.4% Christians, 4.2% Muslims

HIV prevalence

Prisoners

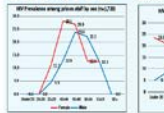
1,566 out of 8,513 (18.3%)

184 (11.7%) Positive

Prevalence by self-report (11.7%) was close to that determined by laboratory testing (12.7%)

Staff

11.0% (10/91), females: 18.7%



HIV prevalence by region

Staff

- Highest in the Northern Region (28.1%)
- Mid-eastern region (23.1%) and lowest in the southern region (18.1%)

Prisoners

- Highest in Northern Region (23.1%)
- Mid-eastern region (18.1%) and lowest in the southern region (13.1%)

CD4 levels and ART status of HIV positive prisoners

Prisoners (n=1,566)

- 12.0% had a CD4 count less than 350
- 33.8% were on ART, 33.4% males and 36.4% females

Staff (n=91)

- 41.6% had a CD4 count less than 350
- 58.4% were on ART, 53.8% males and 66.7% females

Undiagnosed incidence of recent HIV infections

Limiting Antigen assay (LAg) to check recent infections

Recent infections

- Staff: 11.0% out of 91 HIV positive individuals, incidence 1.2 per 1,000 individuals
- Prisoners: 47 (3.0%) out of 1,566 HIV positive individuals, incidence 3.0 per 1,000 prisoners
- 33.5% of 47 recent infections in prisoners were male

	Male	Female	Male	Female
History and source of HIV testing	80.3%	95.9%	69.6%	90%
Male circumcision	46.7%			49.8%

Prevalence of HIV-associated infections

Hep B virus

Staff (0.2%) Prisoners (7.0%)

Hep B was most prevalent among the prisoner staff group

Hep C virus

Staff (0.2%) Prisoners (4.4%)

Hep C was most prevalent among the prisoner staff group

By region

Staff highest in Mid-eastern (8.1%), Prisoners highest in Southern (13.1%), Southern (10.1%) and Central (8.1%) regions

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By sex

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SERO-BEHAVIOURAL SURVEY

FACT SHEET

Knowledge about HIV AIDS

Awareness about HIV/AIDS

75.4% of staff, 74% of prisoners

Had ever heard of HIV/AIDS

56.4% of staff, 20.5% of prisoners

Attitudes towards HIV/AIDS and HIV/AIDS services

Prison staff

90.8% thought that HIV testing services should be available in prisons

95.0% believed that getting tested would reduce the spread of HIV in prisons

Prisoners

78.6% thought that HIV testing services should be available in prisons

83% thought that getting tested would reduce the spread of HIV in prisons

Attitude toward provision of HIV testing in prisons

Prison staff

98% thought that HIV testing services should be available in prisons

83.7% thought that HIV testing services should be available in prisons

86% believed that having HIV testing services in prisons would reduce the spread of HIV in prisons

89.2% believed that having HIV testing services in prisons would reduce the spread of HIV in prisons

Prisoners

82.3% thought that HIV testing services should be available in prisons

83.4% thought that HIV testing services should be available in prisons

81.1% thought that HIV testing services should be available in prisons

Perceived risk of acquiring AIDS virus among staff and prisoners

Staff

- 38.4% of staff perceived their risk as low
- More male staff than women perceived their risk as low (42.8% vs 33.7%)
- 22.8% of staff perceived their risk as high
- More male staff than women perceived their risk as high (28.1% vs 18.1%)

Prisoners

- 38.4% of prisoners perceived their risk as low
- More male prisoners than women perceived their risk as low (42.8% vs 33.7%)
- 22.8% of prisoners perceived their risk as high
- More male prisoners than women perceived their risk as high (28.1% vs 18.1%)

Men having sex with Men (MSM)

2.0% of male staff had ever had sex with a male partner

Proportion of staff engaging in MSM was most prevalent among staff aged 20-29 years (5.4%)

Among staff, MSM was most prevalent in Mid-eastern (10.1%)

MSM was most prevalent among prisoners in Northern region (12.1%)

Drugs/Substance abuse

6.7% of staff had ever used drugs to get high, and 1.1% had ever injected

9.9% of prisoners reported that they had ever used drugs to get high

Problem Drinking

Staff (8.1%) Prisoners (18.1%)

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Tattooing

7.8% of prisoners used for tattooing prisoners were tattooed while in prison, 33.4% had shared tattooing instruments

By region

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Planned Activities:

- Case-based surveillance with recency testing
- PMTCT impact evaluation (with recency)
- Updated IBBS surveys for key populations
- Data quality and longitudinal monitoring

VACS Uganda Methods

- National household survey, 2015
- Led by Ministry of Gender, Labour, and Social Development
- 1st ever VACS with subnational sampling
 - Sexual, physical, and emotional violence estimates for **females** in the **DREAMS clusters** (Central 1, Central 2, mid-Northern)
 - Physical and emotional violence estimates for **males** in **Northern, Western, Eastern, and Central** regions

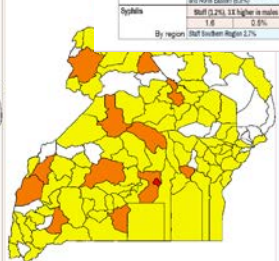
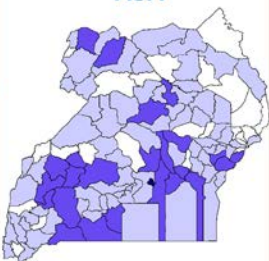
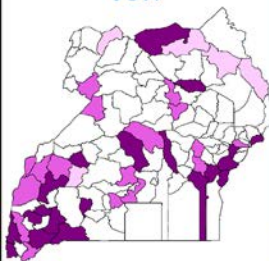


KP-PP Population Estimates

UGANDA

FSW

MSM



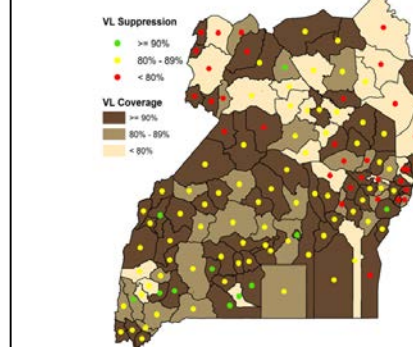
1 - 211 (5)
255 - 591 (17)
606 - 979 (20)

43 - 433 (66)
457 - 915 (24)
10807 (1)

19 - 980 (81)
1072 - 3295 (12)
7251 (1)

National Viral Load Coverage and Suppression Rates - FY17Q4

UGANDA



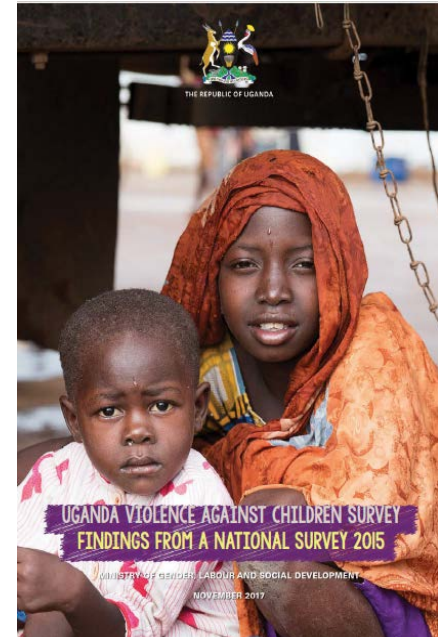
Violence Against Children Survey (VACS) 2015 informs Violence Against Children response

Uganda goal: All Ugandan children are empowered to live in an environment free of all forms of violence

Uganda fast tracks **INSPIRE**

(Implementation of laws, Norms and values, Safe Environments, Income and economics; Parenting, Response and Education)

- Draft Uganda Comprehensive Children's Policy & action plan prioritizes INSPIRE strategies (Launch 11 October, International day of girl child)
- Government-led Child Help Line with 30 district action centers
 - 9 CDC supported District Action Centers: catalyzing real time response
- USG implementing INSPIRE strategies through DREAMS/OVC
- USG supporting GOU to improve service delivery
 - Harmonize violence screening for children
 - Community campaign to seek services, Every Hour Matters
- CDC supported \$1m INSPIRE initiative in Mityana
 - Hosting 1st INSPIRE Jamboree June 24-26, Kampala (*Advancing evidence-based action to end violence against children*)



Sexual Violence

Girls 35%, Boys 17%

Told someone

Girls 53%, Boys 57%

Sought services

Girls 10%, Boys 6%

Received services

Girls 8%, Boys 5%

CDC's Science & Innovation to Direct Adolescent Girl and Young Women (AGYW) Programming

- **Epidemiology: Guide investment on where, who, targets**

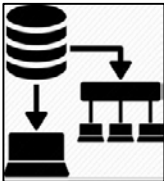
- Surveys and surveillance: VACS, PHIA, Case based surveillance, recency testing
- Program evaluations to measure impact, identify optimal intervention mix

Systems: Monitoring beneficiaries

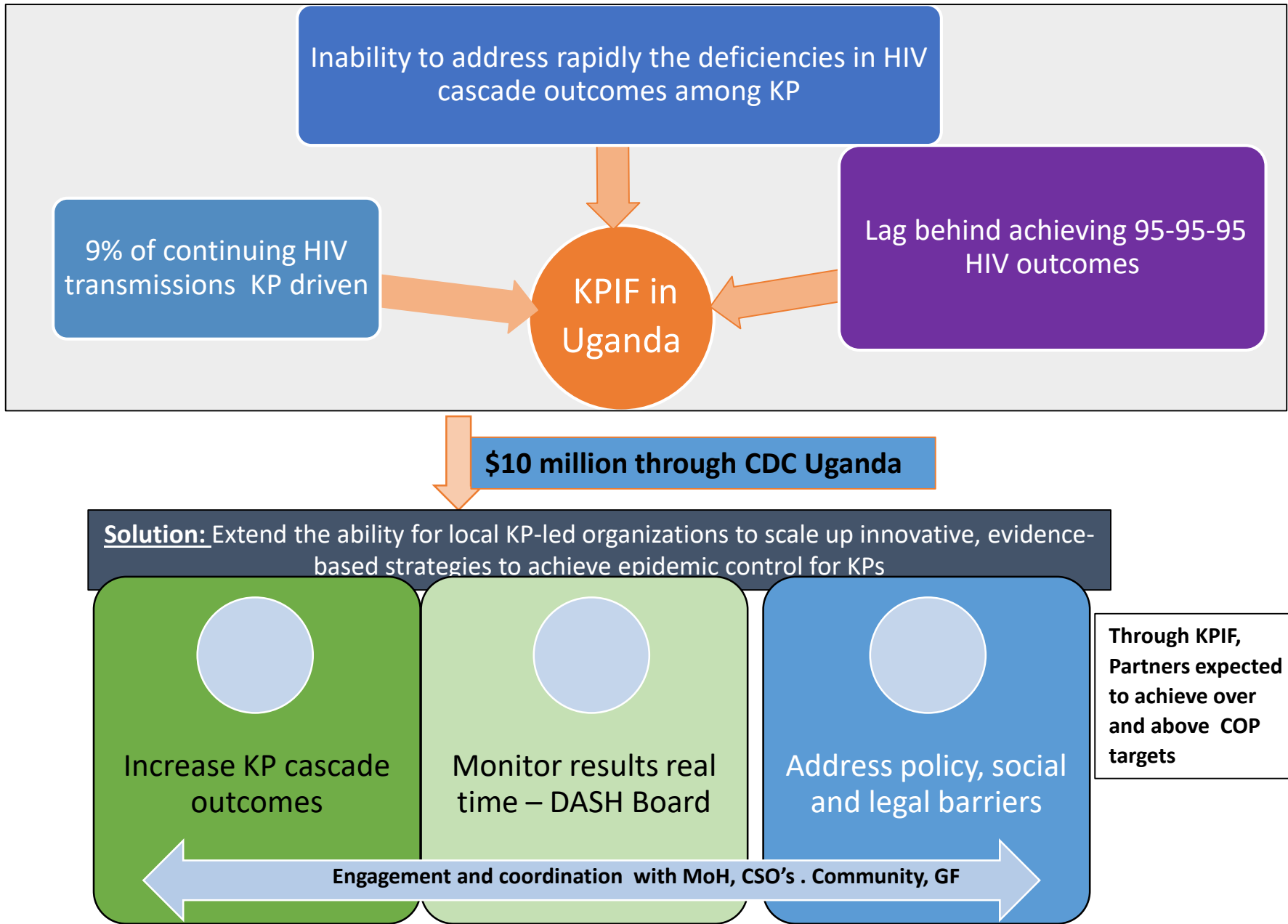
- Tracking systems: Uganda DREAMS tracking System, Weekly dashboards
- Innovate: Develop prevention calculator, Early warning index (VAC)

Program: Using data to inform practice and policy

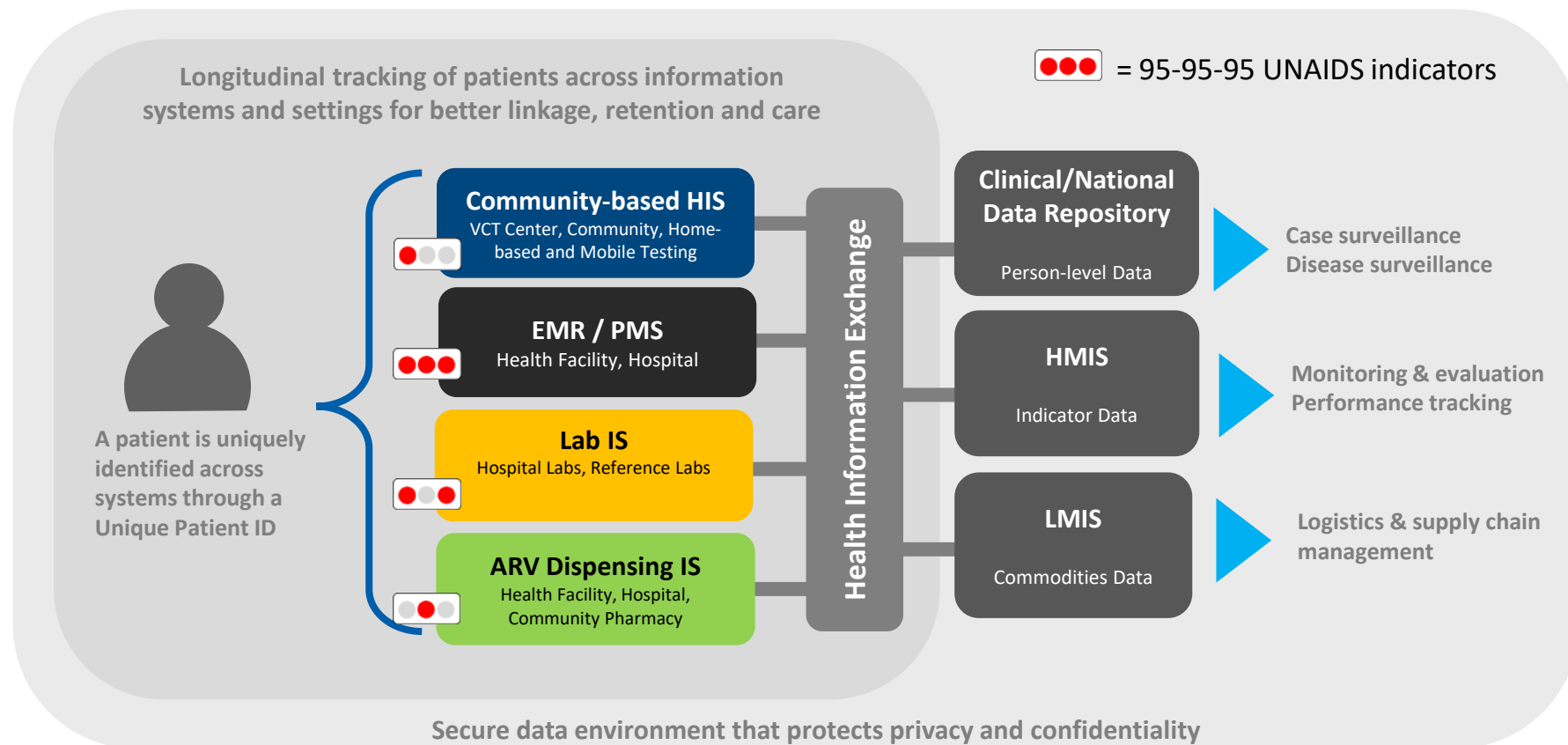
- Develop implementation guidance, data to influence policy and scale-up
- Partnerships: Government, community and other key stakeholders



Key Populations Investment Fund (KPIF) for Uganda



Key Priorities for Information Systems

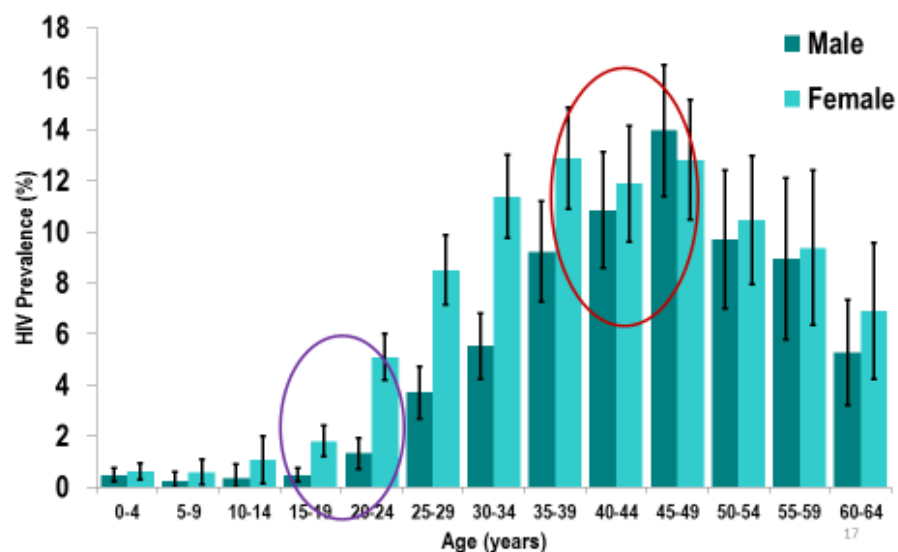


LEGEND: ID=identifier, HIS=Health Information System, VCT=Voluntary Counselling and Testing, EMR=Electronic Medical Record, PMS=Patient Monitoring System, IS=Information System, HMIS=Health Management Information System, LMIS=Logistics Management Information System, red and grey dots=95-95-95

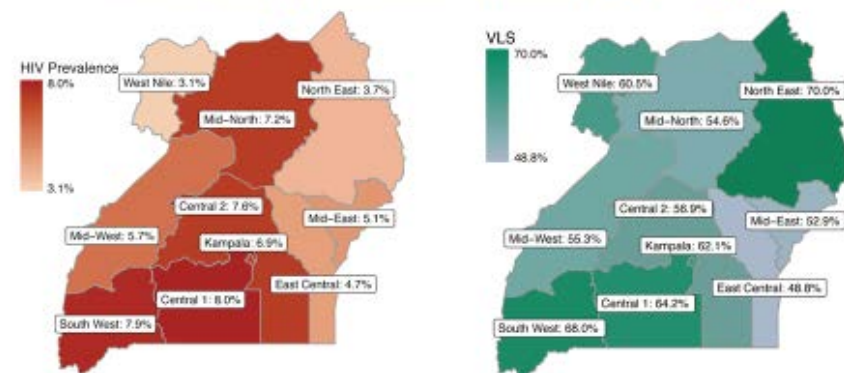
Implementation Science Summary: Surveys and Surveillance

- Uganda Population-Based HIV Impact Assessment (UPHIA)
- Recency/HIV Case-Based Surveillance
- Birth Defects Surveillance (MUJHU)
- Integrated Bio-Behavioral Surveys (IBBS) for key populations
- HIV drug resistance (UVRI and AIDS Control Program)

 UPHIA: HIV Prevalence by Age and Sex



UPHIA 2017: Adult HIV Prevalence and Viral Load Suppression (VLS) by Region



Source: UPHIA 2017

Implementation Science Summary: Studies

- **PATEST (EGPAF)** Developing and validating a pediatric and adolescent HIV testing eligibility screening tool for health care providers in Uganda
- **FASTER (CRS)** Caregiver-assisted oral fluid based HIV screening in children: estimation of acceptability, feasibility and effectiveness linked to index testing services in Uganda
- **RAPID-VL Study (UCSF-IDRC)** Optimizing HIV viral load monitoring and outcomes for high risk populations
- **Community TB project (Baylor)** A household- and family-centered approach to improve case finding, diagnosis, and linkage to treatment for TB and HIV in Uganda
- **Kalangala ART-DSDM (IDI)** Impact of a community-facility case management intervention on retention in HIV Care among HIV-Infected individuals initiating antiretroviral therapy in a Test and Start model

Implementation Science Summary

- Regional comprehensive program evaluation protocols for all CDC Implementing Partners
- **Rakai:** Combination HIV Prevention Impact Evaluation
- **Rakai:** PMTCT Impact Evaluation: Evaluation of the Impact of the National Program for Prevention of Mother-to-Child Transmission of HIV (PMTCT) in Uganda
- DREAMS Evaluation
- Evaluation of the Uganda National Health Laboratory Hub and Sample Transport Network
- HIV&TB-focused Public Health Fellowship projects

Conclusions

- Uganda benefits from comprehensive and strong PEPFAR-supported program and is approaching HIV epidemic control
 - CDC plays a leadership role in key aspects of the PEPFAR program and the HIV response in Uganda
- Many opportunities to translate research findings into program implementation
 - Plan to convene planning consultation



Mweebale Nnyo!

Asante sana!

Thank You!

For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333

Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348

E-mail: cdcinfo@cdc.gov Web: www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

