A big picture view of quality for HIV services

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ICAP
Empowering Health
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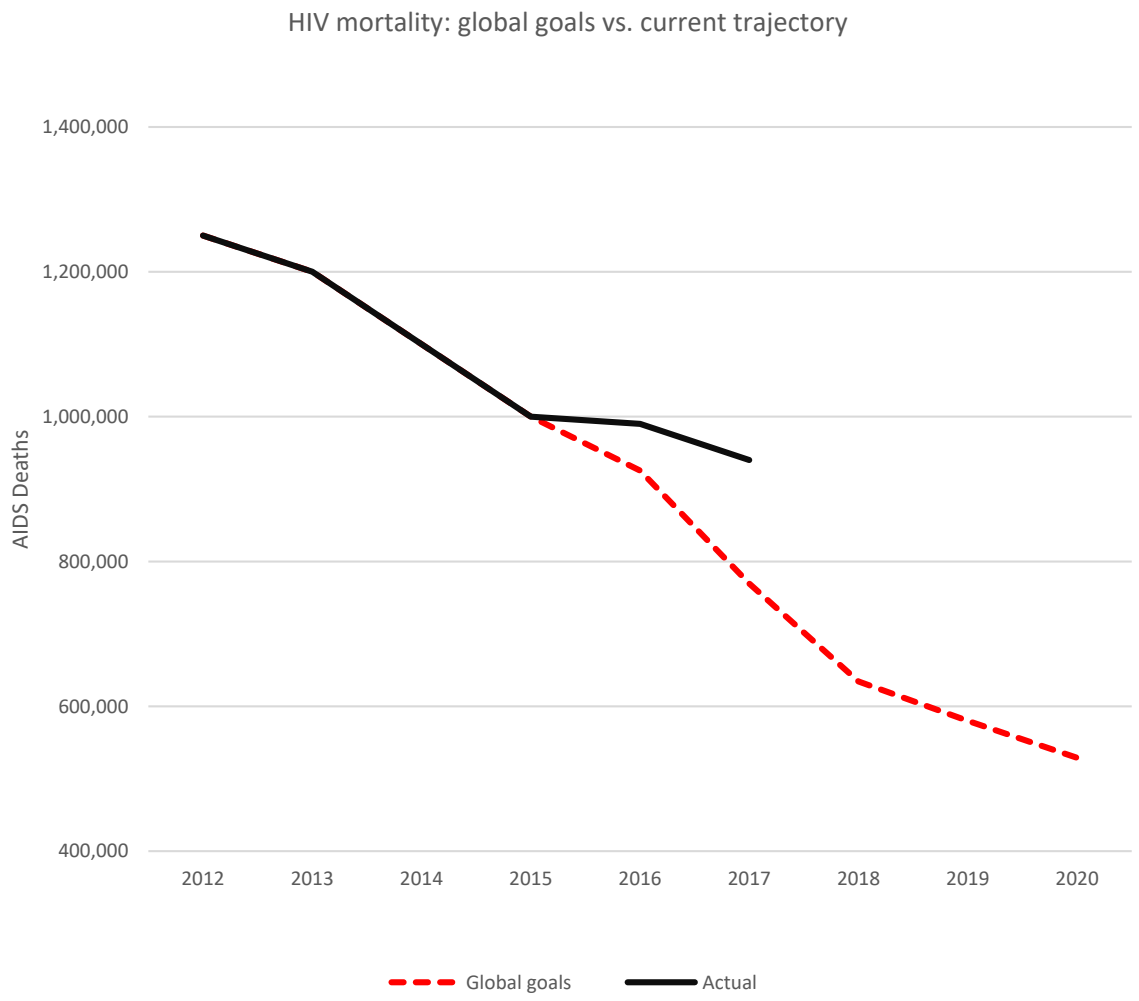
HIV LEARNING NETWORK
The CQUIN Project for Differentiated Service Delivery

Outline

- How is impact achieved?
- Elements of quality HIV services
- How can HIV quality services improve other health services?
- The link between quality care and drug resistance
- What are your quality blind spots?
- Conclusions

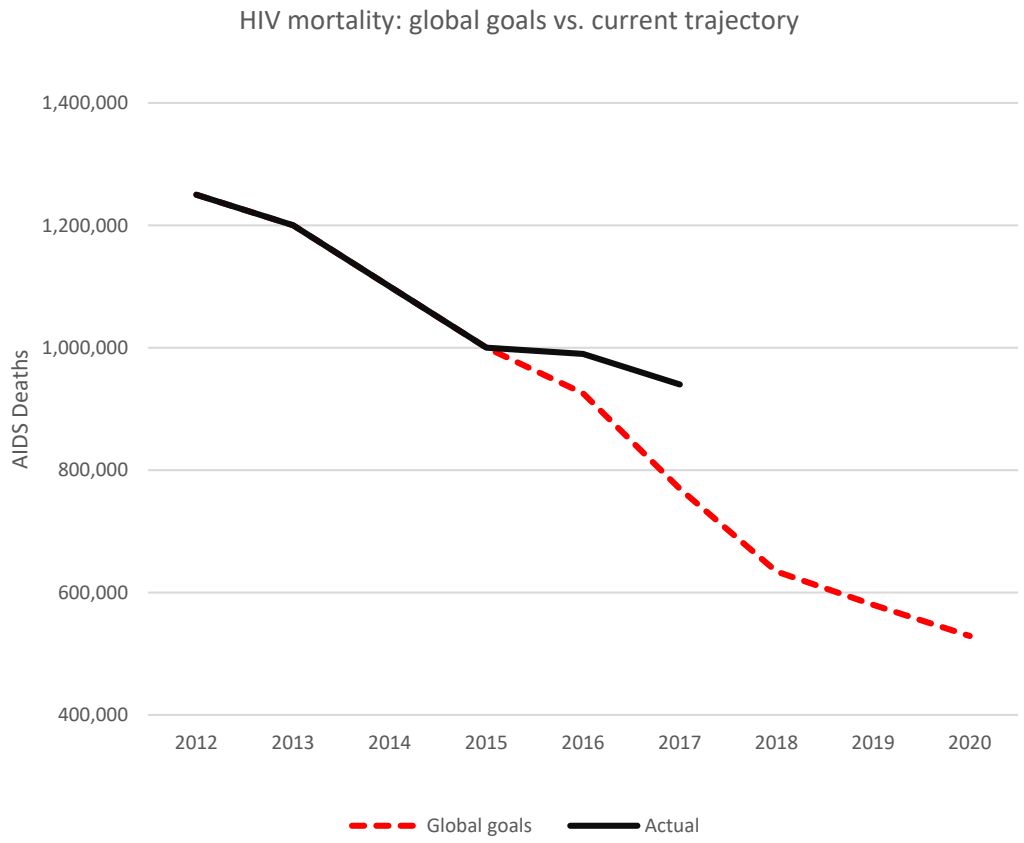
When you look at this curve, what comes to mind?



UNAIDS, 2018

What comes to mind?

Clinical Quality?



UNAIDS, 2018

Quality care and mortality

Longitudinal survival analysis of the (US) Veterans Aging Cohort Study included 3038 people living with HIV

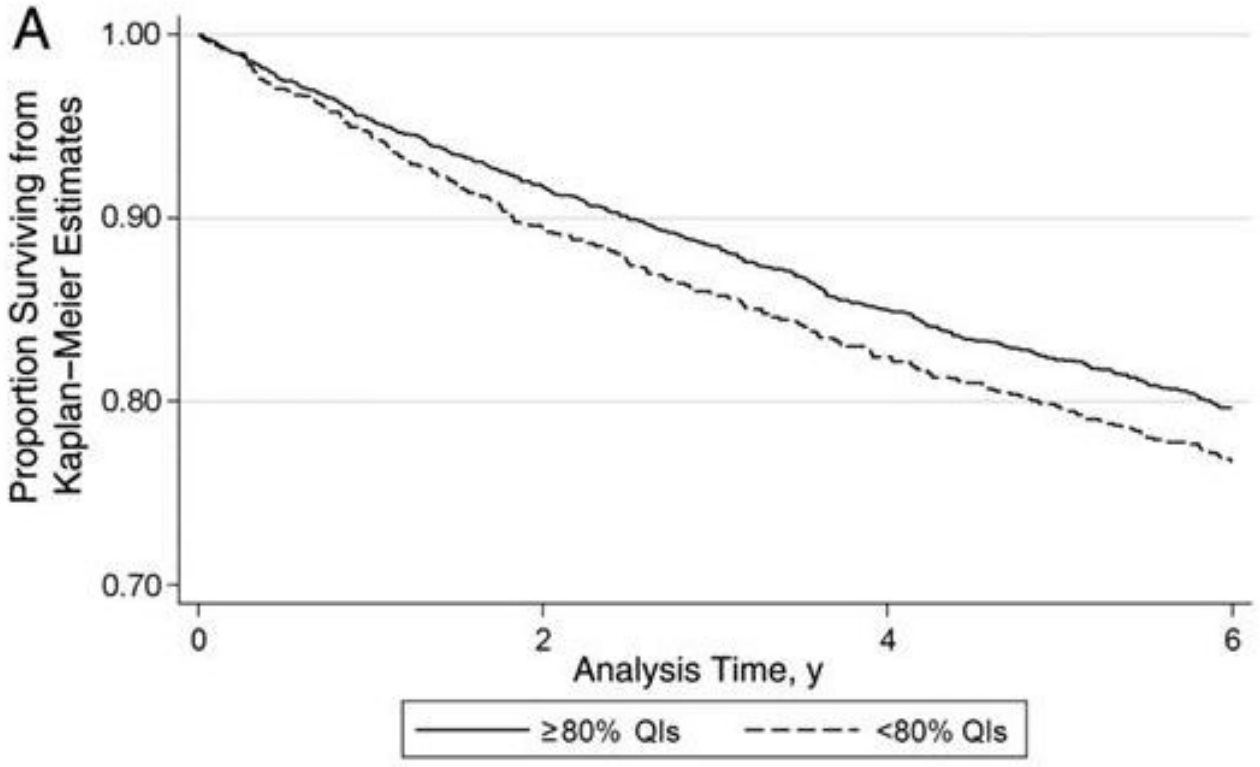
Table 1. Human Immunodeficiency Virus Quality-of-Care Indicators

Quality Indicator	"Pass" Criteria	Eligibility Criteria	Proportion Meeting Criteria, if Eligible, %
Medications			
ART	Receipt of ART in past 12 mo	CD4 cell count nadir ≤350/mL ever	90.6
Pneumocystis jiroveci pneumonia prophylaxis	Receipt of dapsone, trimethoprim-sulfamethoxazole, atovaquone, pentamidine in past 12 mo	CD4 cell count ≤200/mL in past 12 mo	92.9
Mycobacterium avium complex prophylaxis	Receipt of clarithromycin, azithromycin, or rifabutin in past 12 mo	CD4 cell count ≤50/mL	87.6
Screening			
Hyperlipidemia	Lipid test in past 12 mo	Receiving ART	80.0
Hepatitis C	HCV antibody test ever	All	95.3
Prevention			
Pneumovax	Pneumococcal vaccine ever	All	89.2
Influenza	Influenza vaccine in past 12 mo	All	56.8
Monitoring			
CD4 cell count	≥2 CD4 cell counts separated by ≥3 mo, within past 12 mo	All	80.4
HIV clinic visits	≥2 HIV clinic visits separated by ≥3 mo, within 12 mo	All	89.1

Korthuis et al, CID 2016

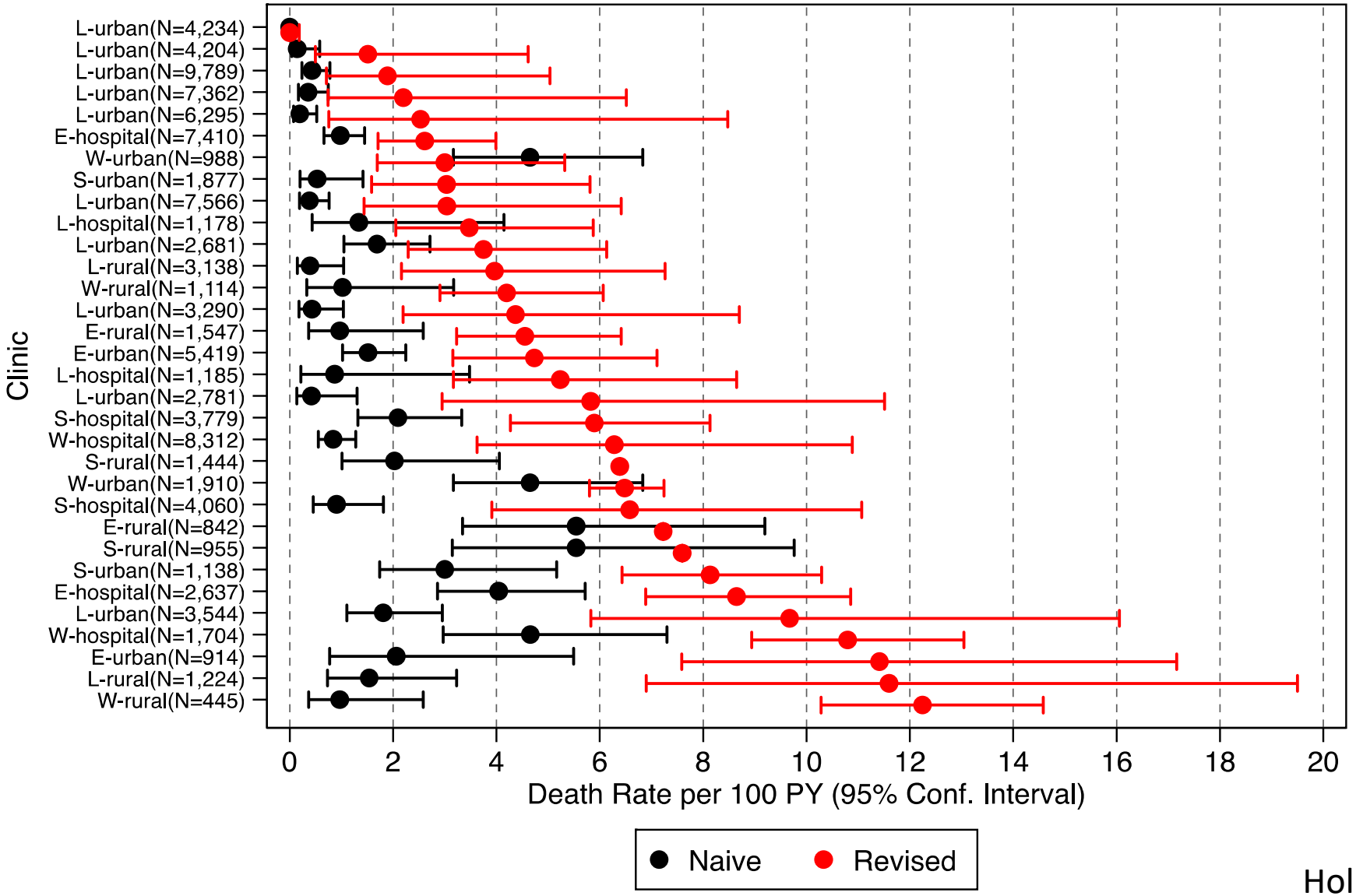
Quality indicators associated w/decreased mortality

Overall, receiving ≥80% of eligible QIs was associated with a **25% decrease in mortality rate** compared with receiving a lower percentage of eligible QIs (age-adjusted hazards ratio, 0.75; 95% confidence interval, .65–.86).



Korthuis et al, CID 2016

Mortality is highly variable across HIV care sites in Zambia



Holmes et al, PLOS Med 2018

WHO advanced care guidelines

- For adults, adolescents, and children ≥ 5 years, advanced HIV disease is defined as a CD4 cell count <200 cells/mm3 or a WHO clinical stage 3 or 4 event at presentation for care
- Estimates of eligibility in LMIC for the advanced care package range from 15-30% depending on the setting

Table 1 Components of the package of care for people with advanced HIV disease

	Intervention	CD4 cell count	Adults	Adolescents	Children
Diagnosis	Sputum Xpert® MTB/RIF as the first test for TB diagnosis among symptomatic people	Any	Yes	Yes	Yes
	LF-LAM for TB diagnosis among people with symptoms and signs of TB	≤100 cells/mm³ Or at any CD4 count if seriously ill	Yes	Yes	Yes[a]
	Cryptococcal antigen screening	≤100 cells/mm³	Yes	Yes	No
Prophylaxis and pre-emptive treatment	Co-trimoxazole prophylaxis[b]	≤350 cells/mm³ or clinical stage 3 or 4 Any CD4 count in settings with high prevalence of malaria or severe bacterial infections	Yes	Yes	Yes For criteria, see Annex 1
	TB preventive treatment[c]	Any	Yes	Yes	Yes[c]
	Fluconazole pre-emptive therapy for cryptococcal antigen–positive people without evidence of meningitis	<100 cells/mm³	Yes	Yes	Not applicable (screening not advised)
ART initiation	Rapid ART initiation (as recommended in Chapter 3)	Any	Yes	Yes	Yes
	Defer initiation if clinical symptoms suggest TB or cryptococcal meningitis (see Chapter 3)	Any	Yes	Yes	Yes

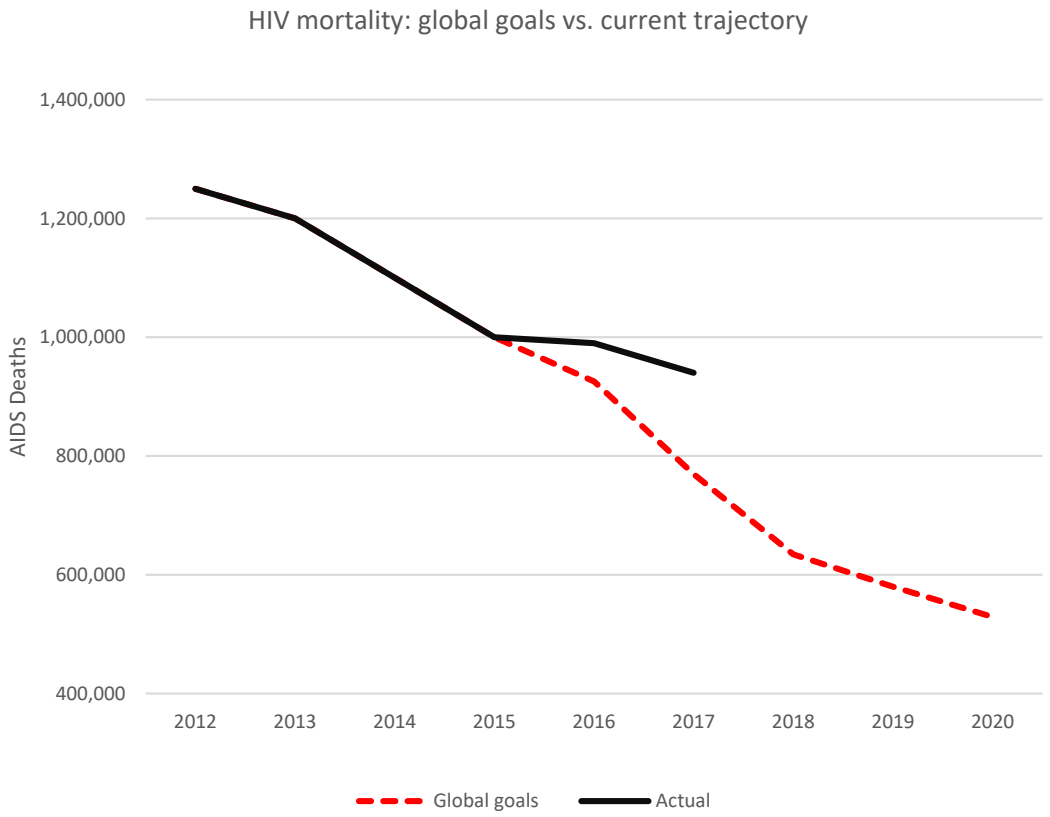
- Show of hands for current coverage of advanced disease package:
  - 10%
  - 46%
  - 81%

- The Answer?
  - We don’t have any idea..

Access (coverage) x quality = impact

Access?

Is our treatment scale-up slowing down?

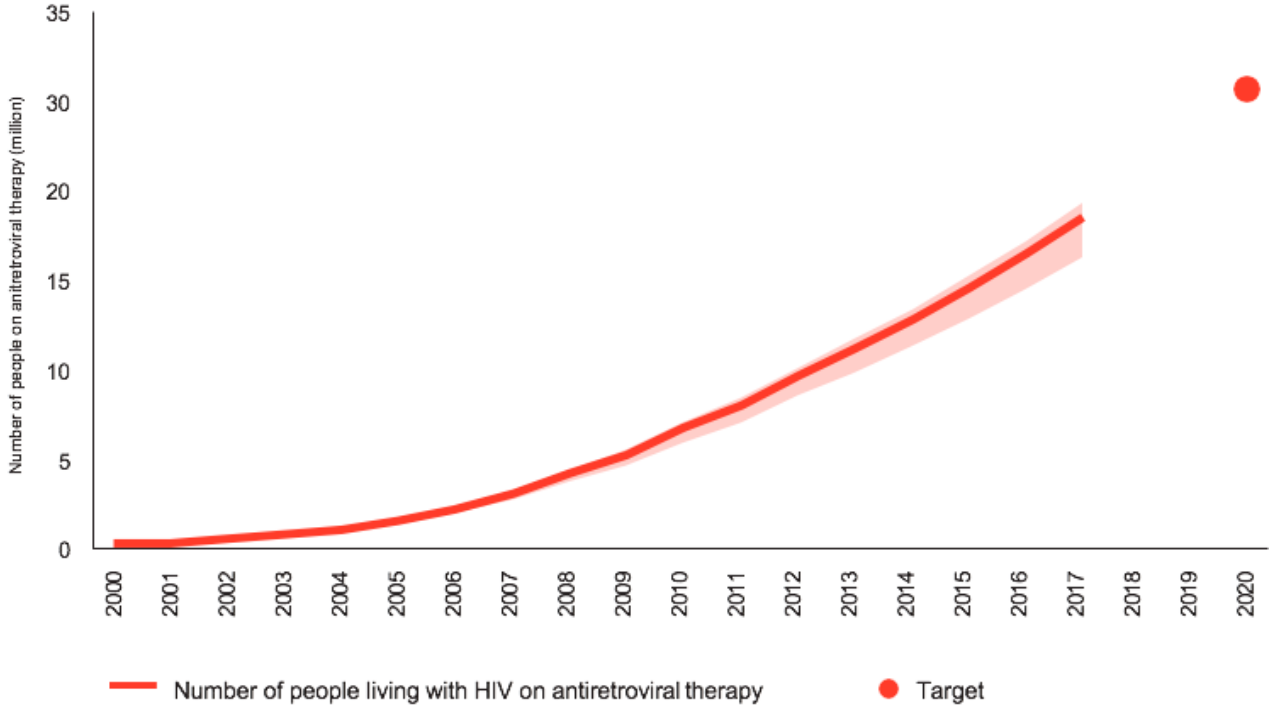


UNAIDS, 2018

Access?

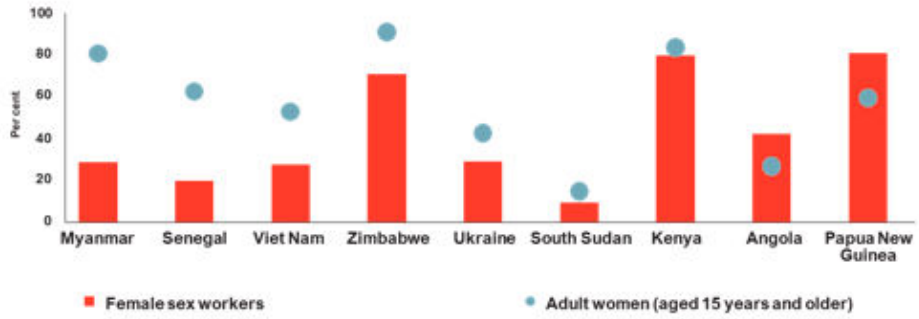
Treatment scale-up is continuing apace

Number of people living with HIV accessing antiretroviral therapy, global, 2000–2017 and 2020 target

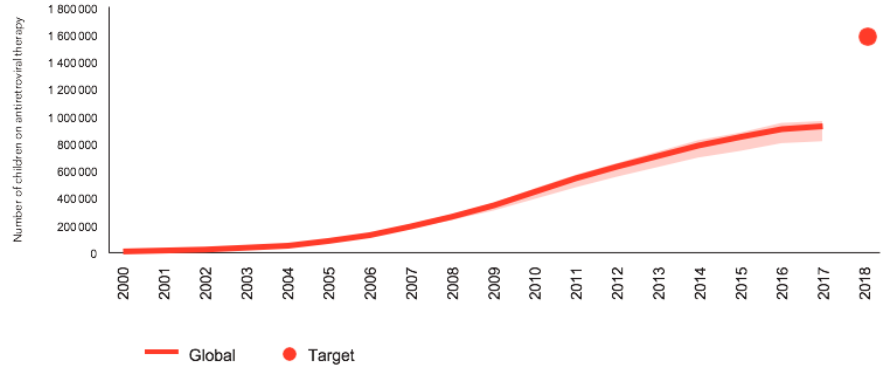


But maybe we're **differentially missing** sub-groups with higher mortality

Female sex workers and adult women
(aged 15 years and older), 2016–2017



Number of children (aged 0–14 years) accessing antiretroviral therapy, global 2000–2017 and 2018 target



UNAIDS, 2018

Upstream quality affects downstream access

- If we're differentially "missing" individuals at high risk for mortality, we have an upstream **quality** problem
- It could be that existing testing programs are settling for numbers or yield, but not effectively reaching the highest risk individuals (a **quality issue in testing program**)
- It could also be that the services for FSW or for children are insufficiently person-centered and do not retain people in care (**a quality issue in the care delivery program**)
- From a public health perspective, ACCESS at any step of the cascade is a partly a function of **upstream QUALITY and ACCESS**

Access (coverage) x quality = impact

Upstream quality affects access and impact

Prevention

Access (coverage) x **quality**

Testing

Access (coverage) x **quality**

Better upstream **quality** in testing programs (e.g., not overlooking those at greatest risk for mortality - or transmission)…

Linkage and treatment initiation

Access (coverage) x **quality**

…results in greater **access** to care and treatment

Advanced care package

Access (coverage) x **quality**

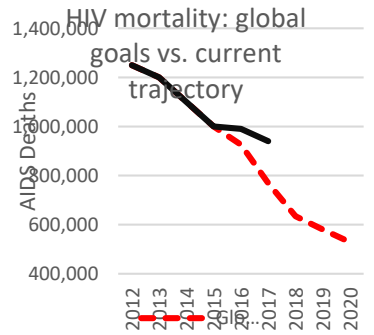
And so on throughout the cascade

Retention

Access (coverage) x **quality**

Virological suppression

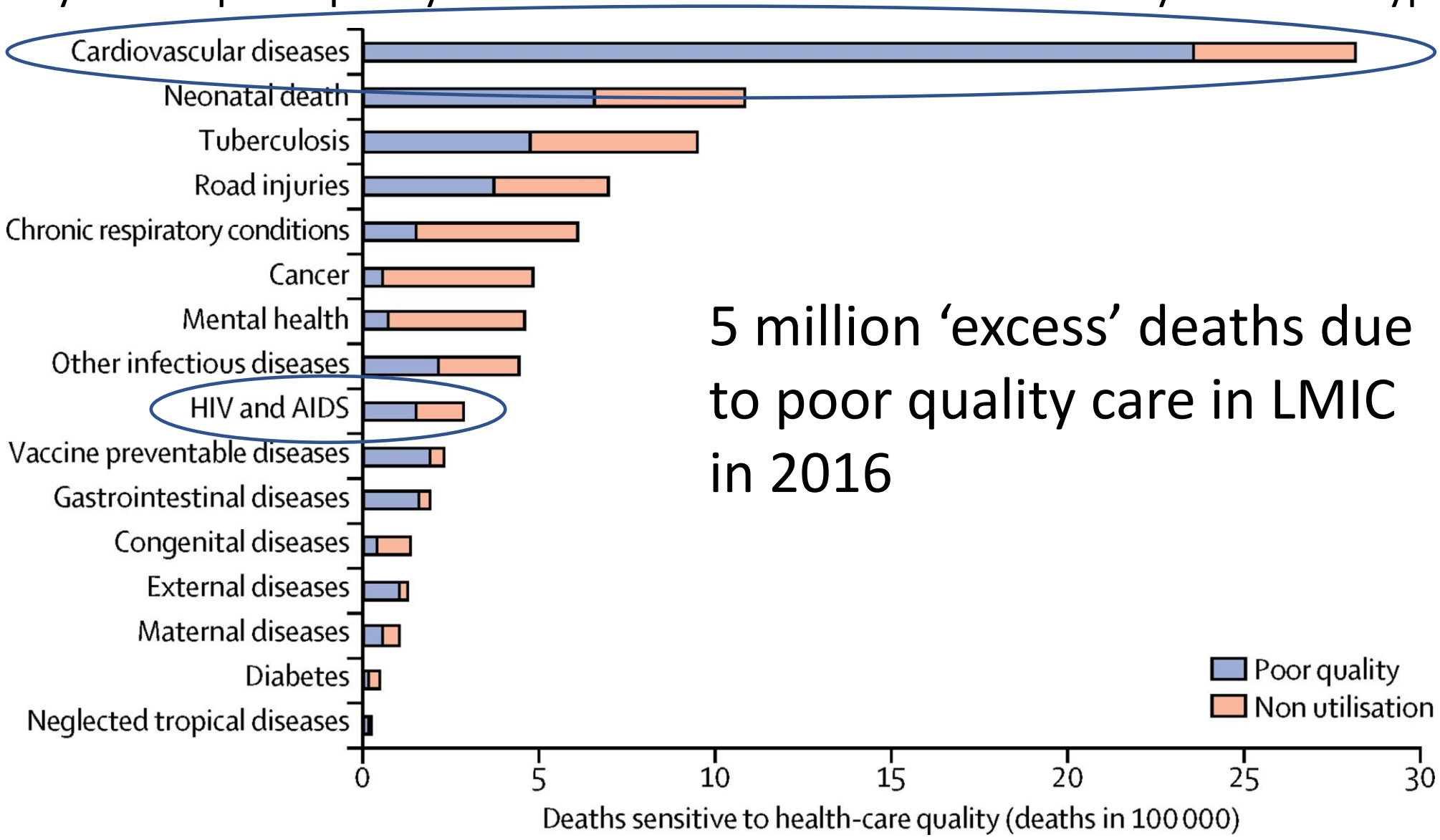
Access (coverage) x **quality**



= **Impact**

Quality upstream in the public health cascade contributes to later access to service

Mortality due to poor quality versus non-utilisation of health care by condition type

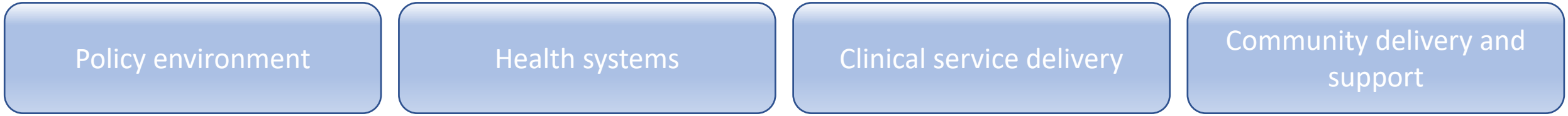


5 million 'excess' deaths due to poor quality care in LMIC in 2016

Kruk et al, Lancet 2018

What do quality HIV services look like?

- Quality HIV services span not only clinical, but health systems and other service delivery components and settings across cascades of HIV prevention, care and treatment services as well as maternal, newborn and child health.



WHO: Enablers of Quality HIV Services

2016 WHO consolidated HIV treatment guidelines

- High quality HIV (Clinical) services should:
  - Provide **people-centered care** that is focused and organized around the health needs, preferences and expectations of people and communities, upholding individual dignity and respect (especially for vulnerable populations); and engage and support people and families to play an active role in their own care by informed decision-making;
  - Offer **safe, acceptable and appropriate** clinical and non-clinical services in a timely fashion, aiming to reduce morbidity and mortality associated with HIV infection and to improve health outcomes and quality of life in general;
  - Promote **efficient and effective use of resources**.

Person-centered care as a driver of quality

“Person-centered health services is an approach to care that consciously adopts the perspectives of individuals, families and communities, and sees them as participants as well as beneficiaries of trusted health systems that respond to their needs and preferences in humane and holistic ways”

- WHO

Measuring the ‘demand-side’ to ensure person-centered quality health services

“Health systems should measure and report what matters most to people, such as competent care, user experience, health outcomes, and confidence in the system”

- Lancet Commission on Quality Health Systems

Kruk et al, Lancet 2018

Understanding patient preferences is important

- This can be done broadly, **or among enriched sub-sets of patients**
- We did a study in Zambia to better understand the health systems **preferences of those who had disengaged from care** - with the **goal of adjusting elements of the health system to better accommodate their needs and improve quality**
- Sought a random sample of HIV patients who were lost to follow-up (defined as >90 days late for their last scheduled appointment) from treatment facilities in Lusaka Province, Zambia.
- We offered the survey to 385 patients, and 280 participated (average age 35; 60% female)

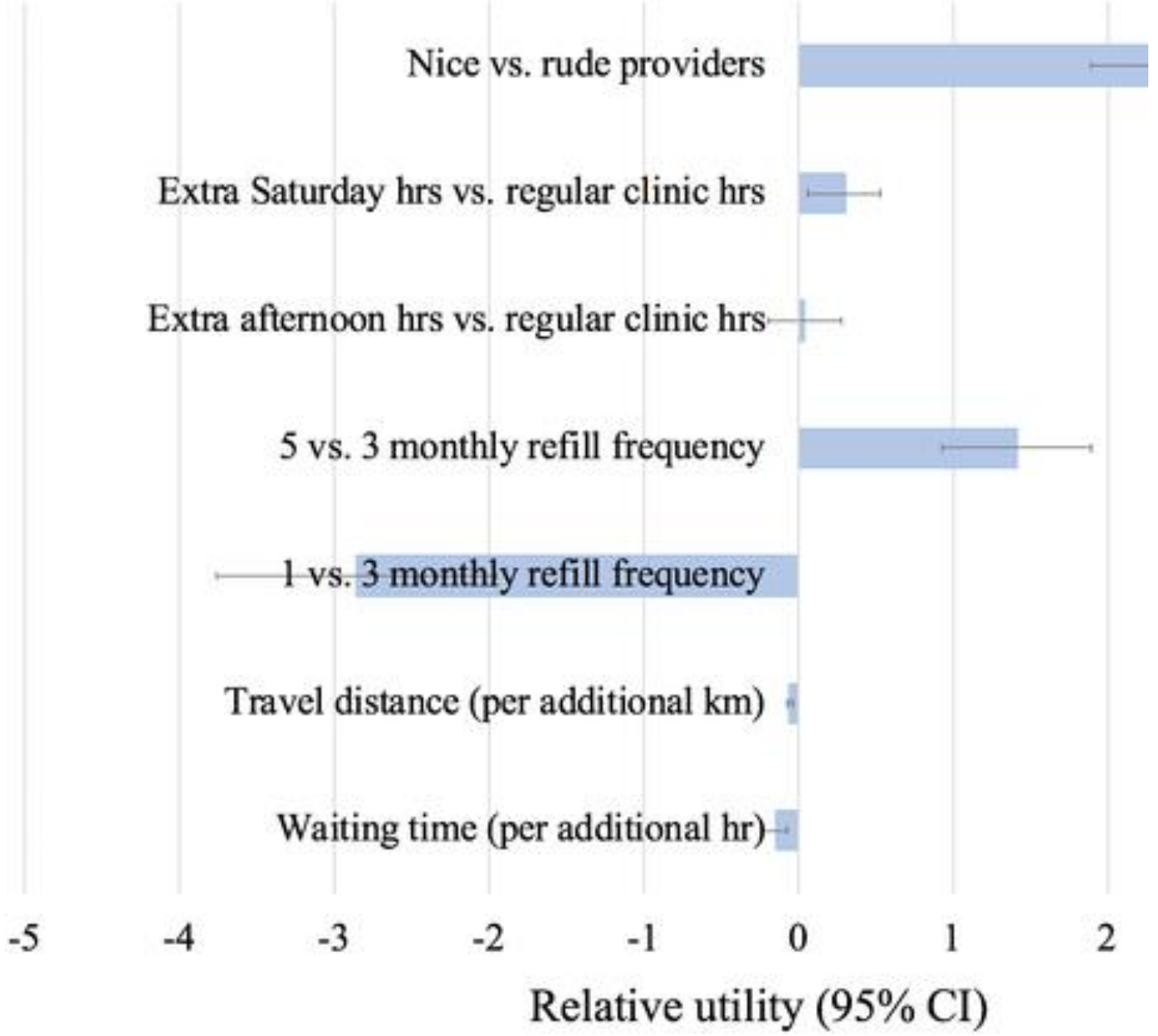
RESEARCH ARTICLE

Understanding preferences for HIV care and treatment in Zambia: Evidence from a discrete choice experiment among patients who have been lost to follow-up

Zanolini, PLOS Med 2018

Preferences for HIV care among the lost

- **Willingness to wait** analysis suggested that patients would trade up to 19 hours of waiting time to access a facility with nice as opposed to rude providers.
- A **willingness to travel** analysis suggested that patients were willing to travel an extra 45 km to see a nice as opposed to a rude provider



Zanolini, PLOS Med 2018

How can we improve the patient experience and ⬆ health outcomes?

- "In addition to current improvement efforts to **increase drug dispensation**, move services **closer to home**, and **extend hours** (through DSD models), **a concomitant effort to improve healthcare worker attitude has not been undertaken but may represent a high priority."**
  - Requires systematic measurement of patient experience, provider morale and satisfaction
  - Likely requires ongoing training and support for providers that enables them to enhance their practice of person-centered care, along with feedback of actionable data to site-and higher level decision-makers.
- Ongoing **Patient-Centered Public Health (PCPH) study in Zambia - a stepped wedge study** testing these combined strategies

Zanolini, PLOS Med 2018

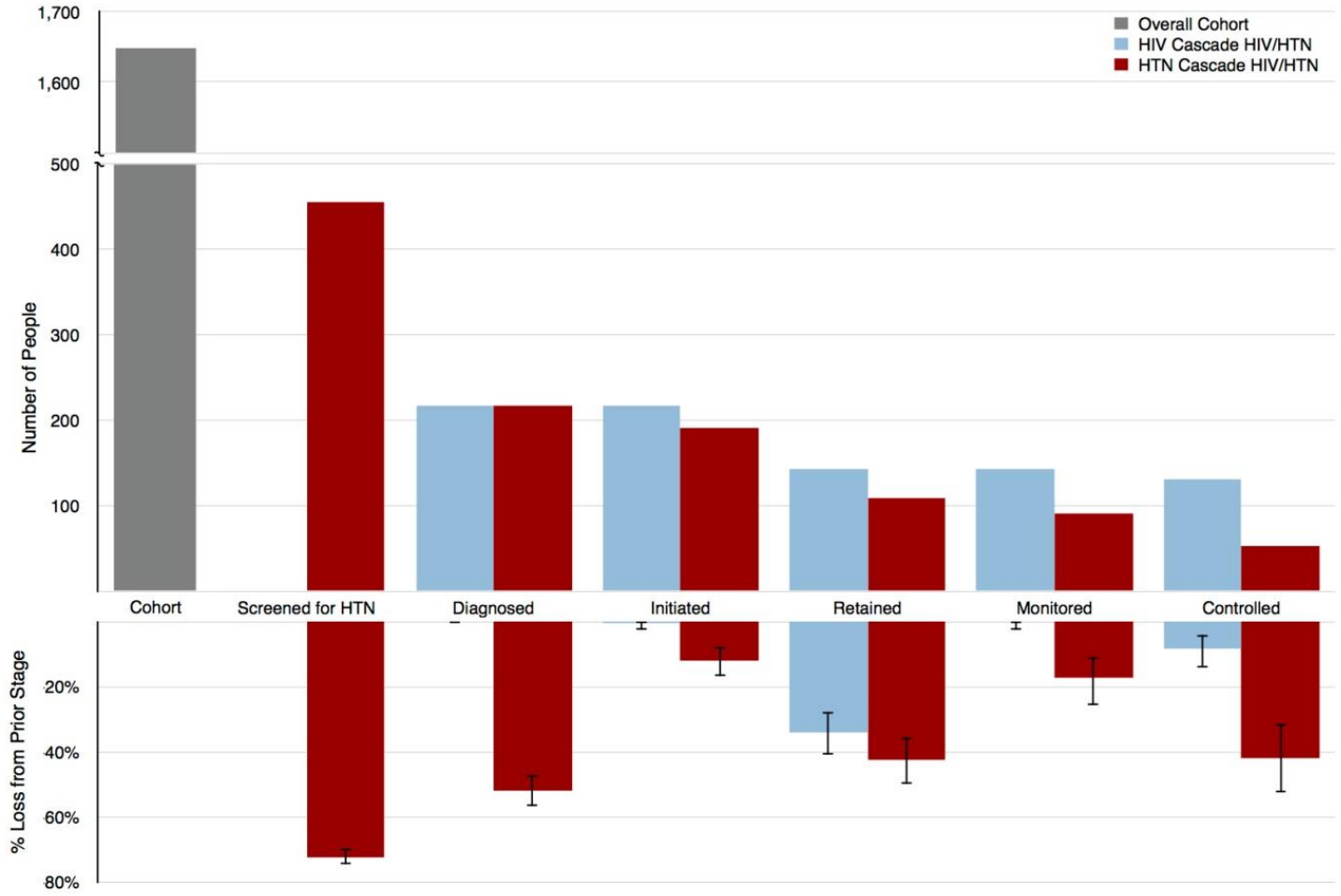
How can efforts to improve HIV quality services contribute to other health services (that these and other patients also need)?

Joint measurement and use of data

- Retrospective cohort study of all PLHIV enrolled in three Ugandan HIV clinics between 2014 and 2017
- Integrated services: NCD screening among patients enrolled in HIV care and clinical integration of HIV and NCD service delivery
- Determined the proportion of patients in the following cascade steps over 12 months: screened, diagnosed, initiated on treatment, retained, monitored, and controlled

- Muddu et al, JAIDS 2019

Integrated care cascades for HIV and HTN



Muddu et al, JAIDS 2019

Joint measurement and data use

Going beyond the vertical: leveraging a national HIV quality improvement programme to address other health priorities in Haiti

Jean Paul Joseph[a], Gregory Jerome[a], Wesler Lambert[a], Patrick Almazor[a], Colette Eugene Cupidon[b] and Lisa R. Hirschhorn[c,d,e]

Joseph et al, AIDS, 2015

"Although the central role of quality to achieve targeted population health goals is widely recognized, **how to spread the capacity** to measure and improve quality across programmes has not been widely studied."

"Although some evidence exists that HIV scale-up improves utilization of care more generally, there is **more limited information on how efforts to introduce systems-based quality improvement processes within a vertical programme can be designed to benefit other clinical areas, such as maternal and child health, inpatient care and management of noncommunicable diseases**."

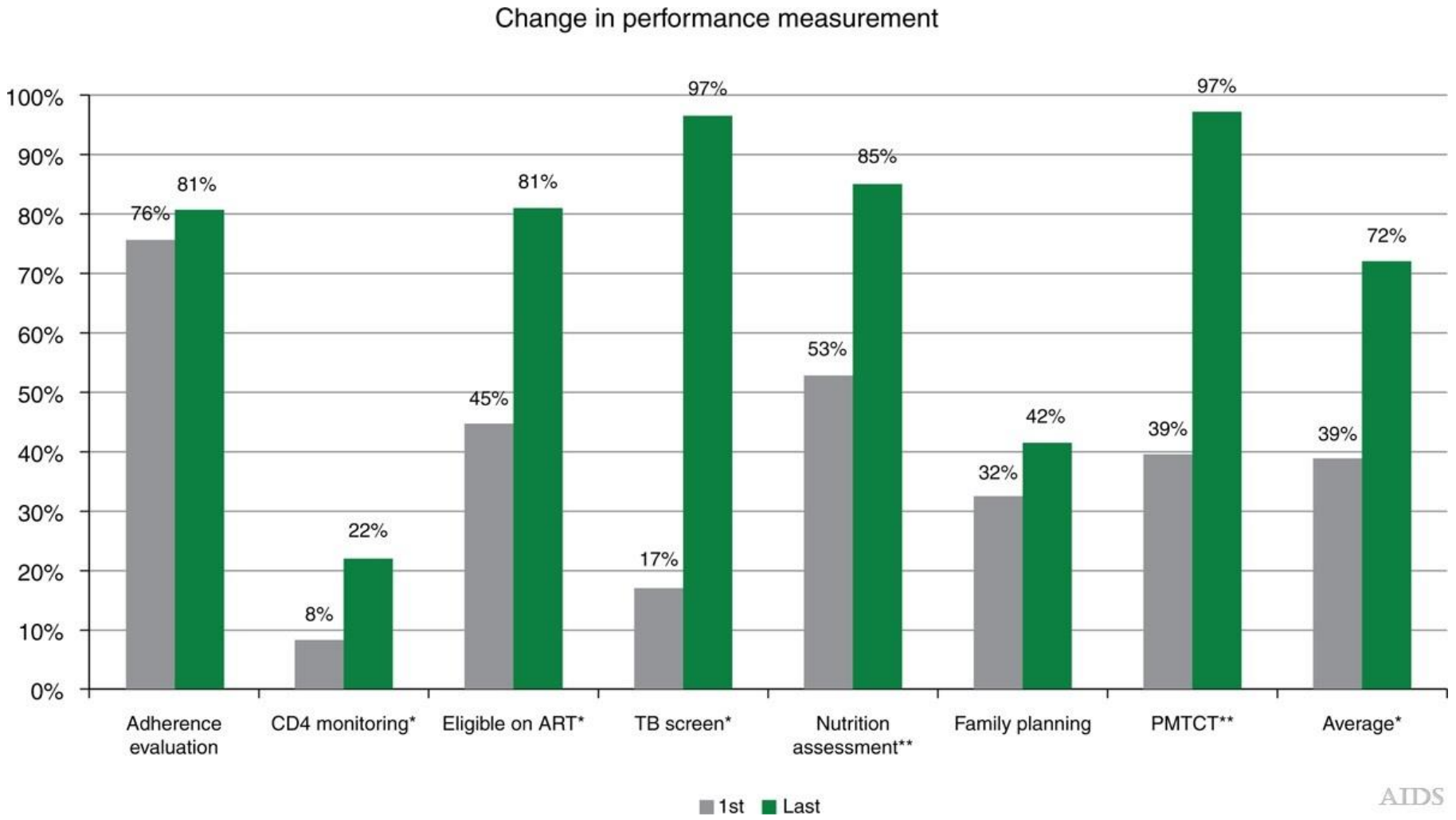
Joseph et al, AIDS, 2015

Elements of QI program in Haiti

- First, established quality committees at each site focused on HIV quality indicators
- Roving coaching teams to facilitate and build capacity for QI activities at sites
- **Included patient involvement in all aspects of QI**
- Developed cross-site meetings to increase peer-to-peer learning and individual motivation (celebration of accomplishments in QI)
- Encouraged QI projects to more holistically meet patient needs
- November 2011 and December 2012, **the number of quality improvement project related to other [non-HIV] clinical areas increased from 0 to 17** by 2012

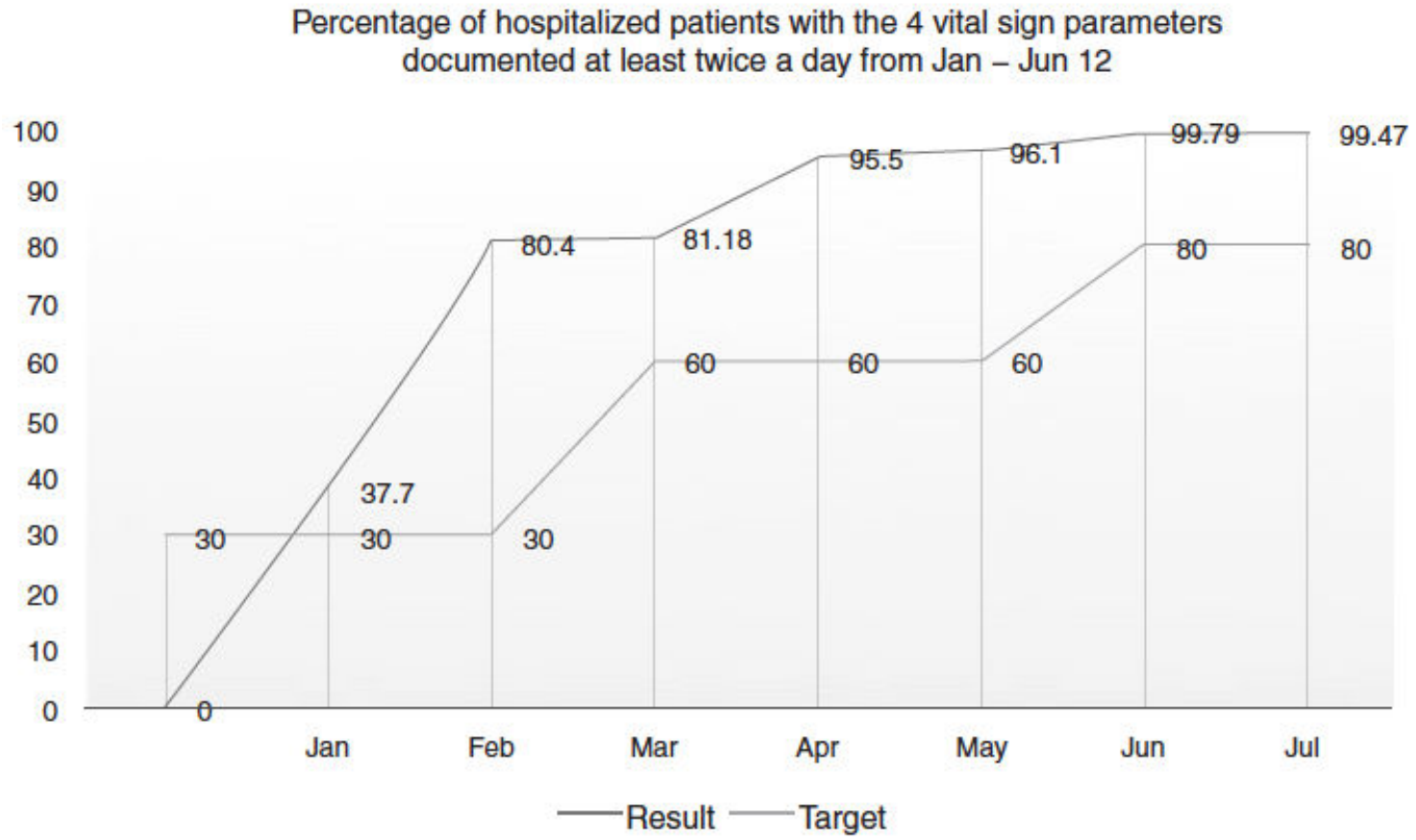
Joseph et al, AIDS, 2015

HIV QI yielded gains in HIV performance indicators



Joseph et al, AIDS, 2015

Began to influence broader gains in health system performance



Joseph et al, AIDS, 2015

What’s the link between quality HIV services and prevention of drug resistance?

ACTION PLAN

GLOBAL ACTION PLAN ON HIV DRUG RESISTANCE 2017-2021

JULY 2017

HIV DRUG RESISTANCE

Global Action Plan on HIV drug resistance (HIVDR) and its five Strategic Objectives

1. PREVENTION AND RESPONSE

Implement high impact interventions to prevent and respond to HIVDR.

2. MONITORING AND SURVEILLANCE

Obtain quality data on HIVDR and HIV service delivery from periodic surveys, while expanding routine viral load and HIVDR testing.

3. RESEARCH AND INNOVATION

Encourage relevant and innovative research which will have the greatest public health impact in minimizing HIVDR.

4. LABORATORY CAPACITY

Support and expand use of viral load testing and build capacity to monitor HIVDR.

5. GOVERNANCE AND ENABLING MECHANISMS

Ensure country ownership, coordinated action, awareness/advocacy and sustainable funding are in place to support action on HIVDR.

“Preventing HIV drug resistance is critical for the success of any HIV treatment programme and is achieved by optimizing the quality of antiretroviral therapy services and eliminating programmatic gaps along the cascade of HIV treatment.”

The HIVDR agenda is a quality agenda

- “Actions to prevent HIVDR in people on ART should be intensified to minimize the emergence of HIVDR and its transmission to others”
  - **Procurement and supply chain systems for ARV drugs and viral load testing reagents** should be strengthened … and the risk of stock-outs is avoided.
  - Continued efforts to **expand access to viral load** … and **turnaround time to return viral load test results** to providers should be minimized, and **viral load results effectively used to inform decisions** for the management of HIV infection.
  - Individuals **failing first-line ART should be promptly switched to second-line** ART to obtain viral load suppression and **avoid accumulation of resistance mutations**

The HIVDR agenda is a quality agenda

- Poor performance on these quality metrics → drop-offs in cascade performance, larger numbers of people out of care with potential for greater mortality, unsuppressed VL with greater HIV transmission, and development of drug resistance
- Development of drug resistance (transmitted or acquired) threatens virological suppression and further worsens cascade performance
- Quality is at the root of preventing these outcomes- measurement, use of data and QI

2018 Year 1 update of the HIVDR GAP – how are we doing?

Programme quality indicators associated with HIV drug resistance (HIVDR) and associated targets

Programme quality indicator for HIVDR	Indicator target	Proportion of focus countries achieving indicator target as of 2017[a]
Antiretroviral drug stock-outs	**Zero** antiretroviral drug stock-outs during a 12-month period	14 of 27 (52%)
Retention on antiretroviral therapy[b]	**≥85%** of people living with HIV retained on antiretroviral therapy 12 months after initiation	8 of 26 (31%)
Viral load testing coverage[c]	**≥90%** of people on antiretroviral therapy receiving at least one routine viral load test in a year	3 of 31 (10%)
Viral load suppression[d]	**≥90%** viral load suppression among people on antiretroviral therapy with a viral load test result available	4 of 14 (29%)
Use of second-line antiretroviral therapy regimens	At least **5%** of people receiving second-line antiretroviral therapy	13 of 28 (46%)

What are your quality blind spots?

What are your quality blind spots?

- Are there above site-level factors that are leading to suboptimal quality at the site level?
  - Frequent rotation of HCW, stock-outs of OI prophylaxis and STI drugs
- Are patients and communities providing systematic feedback about the quality of services provided?
  - Has your program ACTUALLY responded to community/patient preferences? How?
- Is your care person-centered?
  - e.g., are you judging quality solely based on HIV metrics, or incorporating cardiovascular/TB/SRH/other services that are important to the same patients?
  - Are patients involved in your QI meetings? They may be critical for achieving spread of service improvement w/in and beyond HIV
- Does your quality focus need to be *refocused*? What are your CURRENT priorities?
  - For example, your linkage rates from testing to starting therapy have come up, but overall mortality in your clinic is three times that of a neighboring clinic. Are advanced care services being consistently provided?
  - Are you applying quality practices to your prevention programs? If not, why not?

Conclusions

- Quality upstream in the public health cascade helps to determine later access to service- quality is therefore an essential part of access and impact
- Promotion of person-centered care is central to improvements in quality
- Patient preferences/experience should be measured among those in HIV services (or those targeted, or among those who have been lost), and are essential to tailoring services to become more person-centered
- HIV programs can be leveraged to improve systems quality and related health services through joint measurement and holistic QI
- Prevention of HIV drug resistance relies on quality delivery of health services (and there is a long way to go)


Thanks!