



International Network for the Rational Use of Drugs
Initiative on Adherence to Antiretrovirals

International Network for the Rational Use of Drugs Initiative on Adherence to Antiretrovirals (INRUD-IAA)

**Promoting adherence to antiretroviral therapy
through system interventions
– The INRUD-IAA experience**

ICIUM 2011

John Chalker



Adherence- What to Measure?

- In Feb 2009, the UNAIDS indicator registry website for monitoring HIV/AIDS programs identified 350 indicators
 - Not a single indicator referred to adherence
- The WHO Patient Monitoring Guidelines for HIV Care and Antiretroviral Therapy (ART) 2006 (page 29)
 - “It is essential for each ART programme to **decide how adherence will be measured** and to develop and monitor its own **site-specific indicators** that are both **practical** and **feasible**.”
- This lack of standardized guidance has opened the door for a wide variety of indicators to be developed

East African Survey: Findings

- Teams from INRUD and NACPs in 5 East African countries (Feb/Mar 2006 -USAID Funding) found:
 - **Definitions** of adherence and defaulters or drop outs are **very variable**
 - **Measurement** at individual or facility level is **haphazard**
 - **Much data are recorded** at both the clinic and pharmacy but with different frequencies
- **Current reports on adherence rates are not to be trusted!**

Development of Adherence Indicators

- Entebbe stakeholder meeting (2006)
 - Suggest indicators and survey methods
 - Feasibility trial in 4 countries
 - Narrowed feasible indicators and tested clinical validity
- Developed survey methods manual and spreadsheets (Published by WHO and on-line:
 - <http://www.inrud.org/ARV-Adherence-Project/Adherence-Survey-Tools-and-Manual.cfm>
- Indicator development and validation
 - Discussed in the Methods Session on Friday morning
 - Details in INRUD-IAA publications

Core Indicators of Adherence

■ Self-report adherence

1. % patients who self-report full adherence over the last three days

■ Days covered by dispensed ARVs

2. % days covered by ART dispensed over 6 months
3. % of patients with a gap in medicines dispensed of 30 or more days over the last 6 months

■ Attendance

4. % of patients attending appointment on or before the day scheduled
5. % of patients attending appointment within 3 days of the day scheduled

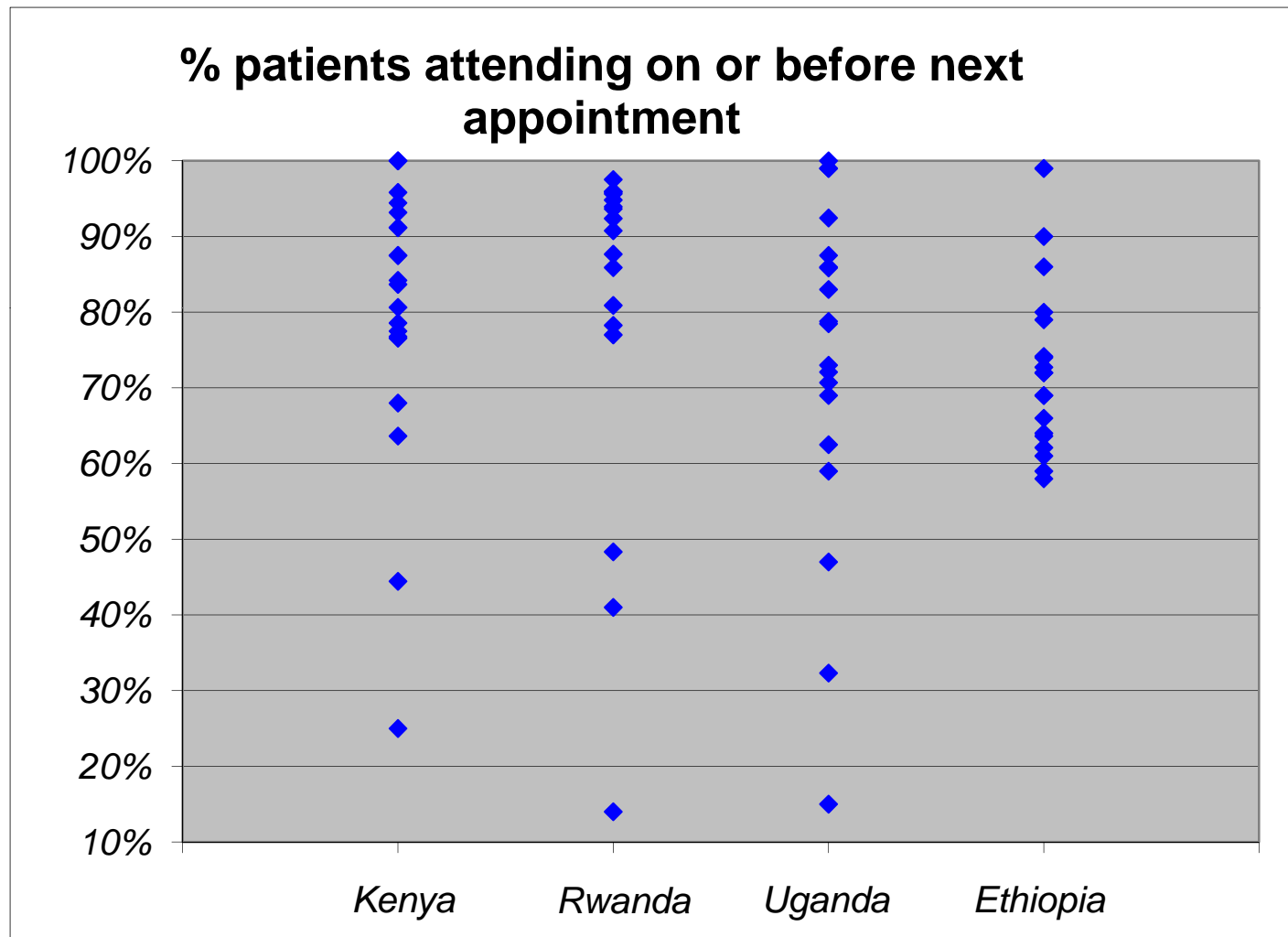
Patient Performance or Facility Performance?

- Patient performance
 - Indicators estimated across all patients
- Facility Performance
 - Indicators estimated separately for patient population of each facility
 - Allows comparison of facilities
 - Helps target and evaluate health system interventions

Patient Attendance-based Measures

	<i># records checked</i>	<i>% attended on or before next appointment (+/- 1.96*SE)</i>	<i>% attended within 3 days of appointment (+/- 1.96*SE)</i>
<i>Kenya</i>	1,998	78.3 (1.8)	-
<i>Rwanda</i>	2,609	78.4 (1.6)	93.4 (1.0)
<i>Uganda</i>	1,693	71.7 (2.2)	76.3 (2.0)
<i>Ethiopia</i>	1,982	73.5 (1.9)	87.9 (0.1)
TOTAL	8,282	75.8 (0.9)	87.1 (0.7)

Facility-level Attendance-based Measures



Qualitative Study of Determinants of Adherence: Survey in Uganda and Ethiopia

HELPFUL	HARMFUL
<ul style="list-style-type: none">- Staff teamwork / spirit- Stable staff- Appointment scheduling- Good record keeping- Sensitive counseling with confidentiality- Community linkage- Tracing patients- Good supply of medicine	<ul style="list-style-type: none">- Poor moral- High staff turnover- Long waiting time- Short opening time/ non availability of services- Poor quality and content of counseling- Non availability of laboratories- High patient load- Poor supply of medicines

Qualitative Study of Determinants of Adherence: Survey in Uganda and Ethiopia

HELPFUL	HARMFUL
<ul style="list-style-type: none"> - Staff teamwork / spirit - Stable staff - Appointment scheduling - Good record keeping - Sensitive counseling with confidentiality - Community linkage - Tracing patients - Good supply of medicine 	<ul style="list-style-type: none"> - Poor moral - High staff turnover - Long waiting time - Short opening time/ non availability of services - Poor quality and content of counseling - Non availability of laboratories - High patient load - Poor supply of medicines

INRUD-IAA Trial Interventions In Uganda, Tanzania, Rwanda, and Kenya

- Aims
 - Low cost and widely implementable
 - Increase rates of appointment attendance
 - Reduce clinic congestion and patient waiting time
 - Improve record keeping and patient tracking
- Methods
 - Each country tailored intervention to its setting
- Results
 - All had positive impact on attendance rates
 - Each intervention presented in other ICIUM sessions

Summary

- **Primary focus**

- Improve facility performance in patient attendance and adherence rather than individual patient adherence
- Build evidence base of effective interventions

- **Monitoring tools facilitate**

- Continuous quality improvement
- Assessing impact of interventions
- Comparing performance across programs/ regions/countries
- Published by WHO and available on-line

<http://www.inrud.org/ARV-Adherence-Project/Adherence-Survey-Tools-and-Manual.cfm>

Conclusions

- Feasible to collect valid adherence indicators from all facilities using routine data
- Adherence levels mostly good but facilities varied
- Managers can focus on low performance facilities
- Small but growing evidence base on interventions to improve adherence at facility level
- Future challenges
 - Integrate indicators into **routine self-monitoring**
 - **Adapt approach to manage other chronic diseases** in African health facilities (e.g., hypertension, diabetes)

Acknowledgements

- This work was made possible through a grant provided by the Swedish International Development Cooperation Agency
- Additional funding for specific tasks was provided by the World Health Organization and by the Rational Pharmaceutical Management Plus Program, which was funded by the U.S. Agency for International Development
- I would like to acknowledge the other members of INRUD-IAA:
 - Staff at the national AIDS control programs
 - Local INRUD groups, and local Management Sciences for Health offices in Ethiopia, Kenya, Rwanda, Tanzania and Uganda
 - Harvard Medical School and Harvard Pilgrim Health Care Institute, Boston, USA
 - Division of Global Health IHCAR, the Karolinska Institutet, Stockholm, Sweden;
 - Center for Pharmaceutical Management, Management Sciences for Health, Arlington, USA
 - Department of Essential Medicines and Pharmaceutical Policies, World Health Organization, Geneva
- And of course we thank all patients and staff in the respective health facilities

Publications

- Chalker J, Wagner A, Tomson G, Laing R, Johnson K, Wahlstrom R, and Ross-Degnan D, on behalf of INRUD-IAA. ***Urgent need for coordination in adopting standardized antiretroviral adherence performance indicators. Journal of Acquired Immune Deficiency Syndromes*** 2010.**53(2):159-161,**
- Chalker J, Wagner A, Tomson G, Laing R, Johnson K, Wahlstrom R, and Ross-Degnan D, on behalf of INRUD-IAA. ***Urgent need for coordination in adopting standardized antiretroviral adherence performance indicators. Journal of Acquired Immune Deficiency Syndromes*** 2010.**53(2):159-161**
- Chalker J, Andualem T, Gitau L, Ntaganira J, Obua C, Tadege H, Waako P, Ross-Degnan D. ***Measuring adherence to antiretroviral treatment in resource-poor settings: The feasibility of collecting routine data for key indicators. BMC Health Services Research*** 2010 **10**:43. <http://www.biomedcentral.com/1472-6963/10/43>
- Ross-Degnan D, Pierre-Jacques M, Zhang F, Tadege H, Gitau L, Ntaganira J, Balikuddembe R, Chalker J, Wagner A. ***Measuring adherence to antiretroviral treatment in resource-poor settings: The clinical validity of key indicators. BMC Health Services Research*** 2010 **10**:42. <http://www.biomedcentral.com/1472-6963/10/42>
- Gusdal AK, Obua C, Andualem T, Wahlström R, Chalker J, Fochsen G, on behalf of the INRUD-IAA project. ***Peer Counselor's role in supporting patients' adherence to ART in Ethiopia and Uganda. AIDS Care***, June 2011 **23**:6, 657-662
Gusdal AK, Obua C, Andualem T, Wahlström R, Tomson G, Peterson S, Ekström AM, Thorson A, Chalker J, Fochsen G, on behalf of the INRUD-IAA project. ***Voices on adherence to ART in Ethiopia and Uganda: A matter of choice or simply not an option? AIDS Care***, 2009, **21 (11)**:1381 – 1387,
- Gusdal AK, Obua C, Andualem T, Wahlström R, Tomson G, Peterson S, Ekström AM, Thorson A, Chalker J, Fochsen G, on behalf of the INRUD-IAA project. ***Voices on adherence to ART in Ethiopia and Uganda: A matter of choice or simply not an option? AIDS Care***, 2009, **21 (11)**:1381 – 1387,
- Obua C, Gusdal A, Waako P, Chalker J, Tomson G, Wahlström R, and The INRUD-IAA Team. ***Multiple ART Programs Create a Dilemma for Providers to Monitor ARV Adherence in Uganda. The Open AIDS Journal***, 2011, **5**, 17-24.