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PROMOTING TREATMENT ADHERENCE FOR REFUGEES AND PERSONS OF CONCERN IN HEALTH CARE SETTINGS

Tips for health workers

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Cover photo: Gynaecologist, Dr. Nagham Nawzat, visits Yazidi women at a settlement n the Dohuk Governorate of northern Iraq. ; When ISIS militants seized control of the city of Sinjar, northern Iraq in 2014, killing and enslaving thousands of Yazidis, Dr. Nagham Nawzat, a Yazidi gynaecologist who was herself displaced from her home in Bashiqa, near Mosul, began providing life-saving support and counselling to over a thousand Yazidi women taken captive and subjected to sexual violence. In 2015, she joined the Duhok Survivors' Centre, whose volunteers provide healthcare and psychological support for Iraqi women who survived the brutality of ISIS. Funded by the United Nations Population Fund (UNFPA), the centre is the only facility in Iraq that specialises in gender-based violence. © UNHCR/Claire Thomas

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FOR PATIENTS CONSIDERED TO BE AT RISK OF NON ADHERENCE

- Schedule frequent appointments
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- Actively trace defaulters and e.g. send personalized reminders for appointments through SMS
- Introduce the use of simple diaries and tools to facilitate adherence (i.e. pharmaceutical pictograms for illiterate populations, alarms on phones, automated SMS messages)

ABBREVIATIONS

AIDS	Acquired Immuno-deficiency Syndrome
ART	Antiretroviral Therapy
DOT	Directly Observed Therapy
HAART	Highly Active Antiretroviral Therapy (HAART)
HIS	Health Information System
HIV	Human Immunodeficiency Virus
LMIC	Low- and Middle-Income Countries
MDR-TB	Multidrug-resistant Tuberculosis
MNS	Mental, Neurological and Substance Use (disorders)
NCD	Non-Communicable Disease
PLHIV	People living with HIV
POC	Point of Care
PWP	Prevention with Positives
WH	World Health Organization


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1. BACKGROUND

Adherence is *the extent to which a person follows a treatment plan agreed with a health care provider*. This document provides tips to improve adherence to treatment for:

1) Chronic communicable diseases such as TB and HIV;
2) Non-communicable diseases (NCDs) including diabetes, chronic respiratory diseases such as bronchial asthma and cardiovascular diseases such as hypertension;
3) Mental, neurological, and substance use (MNS) disorders such as epilepsy, chronic psychosis, bipolar disorder and depression.

These health conditions require long-term, often life-long, treatment to reach symptom control, avoid complications, increase life expectancy, and enhance overall quality of life. For such disorders a strict adherence to treatment is a major factor for successful treatment outcome. However, adherence among patients with chronic conditions is notoriously low, with dropout rates drastically increasing after the first six months of therapy.

Due to shifting epidemiological patterns of global morbidity, the relative importance of chronic communicable disorders, NCDs and MNS disorders is increasing and health workers in all part of the world will have to increase their engagement with these problems.

Some **communicable diseases** such as HIV have undergone a transition from being terminal illnesses to a becoming chronic conditions for which a lifelong commitment to adhering to treatment and strong motivation is necessary to achieve and maintain viral load suppression. **NCDs** are an increasingly important cause of morbidity and mortality globally.[1, 2] NCDs kill 41 million people each year, equivalent to 71% of all deaths globally. Each year, 15 million people die from a NCD between the ages of 30 and 69 years; over 85% of these "premature" deaths occur in low- and middle-income countries.[3] Improving adherence to long-term treatment is therefor an increasingly important public health goal. The burden of **mental and substance use disorders** has increased globally from an estimated 6.6% of the total burden of disease in 1991 to 9.4% in 2016.[4] Many people with **epilepsy** lack access to information about their condition and the necessity to continue treatment.[5]

1.1 AIM

UNHCR supports primary health programmes in refugee settings and has identified promotion and monitoring of adherence as a neglected component of service delivery. The aim of this short guide is to provide practical recommendations to improving adherence to treatment for chronic communicable diseases, NCDs and MNS disorders for refugees and other persons of concern to UNHCR.

1.2 AUDIENCE

UNHCR Public Health Officers and health partners in countries hosting refugees and other persons of concern.

1.3 DEFINITION OF ADHERENCE

The World Health Organization (WHO) *defines* adherence as:

> *The extent to which a person's behaviour – taking medication, following a diet, and/or executing lifestyle changes – corresponds with agreed recommendations from a health care provider.*[6]

Adherence includes a wide range of therapeutic behaviours such as attending screening and follow-up appointments, improving personal hygiene, self-management of asthma or diabetes, giving up smoking or unhealthy diets, increasing physical activity as well as taking prescribed medications. Adherence can be thought of as a spectrum from low to high. Patients may adhere to some parts of their treatment but not to others.

Adherence is different from *compliance* which is "*the extent to which the patient follows medical instructions*". This insufficiently captures the range of interventions used to treat chronic disorders, and, moreover, implies that patients would be passive recipients of expert 'instructions' rather than active collaborators in their own treatment process.[6]

1.4 POOR ADHERENCE

Causes of non-adherence fall into two categories:

- **Unintentional non-adherence** occurs when patients wish to follow an agreed treatment plan but are not able to do so because of factors beyond their control. Examples include poor recall or difficulties in understanding the instructions (e.g. language barriers), problems with using equipment and tools related to the treatment, inability to pay for the treatment or simply forgetting to take medications or to follow the instructions.

- **Intentional non-adherence** occurs when patients decide not to follow the treatment recommendations. This is often related to the beliefs and preferences that influence the person's perceptions of the treatment and their motivation to start and continue with it.

1.5 SCALE AND CONSEQUENCES OF POOR ADHERENCE

In Low-and Middle-Income Countries (LMIC) adherence rates are lower than 50%. Poor adherence may occur in all situations where patients are required to self-administer treatment. Low adherence rates have been reported for all **chronic disorders** including diabetes, hypertension, asthma, depression, chronic psychosis and epilepsy.[6, 7]

Poor adherence to treatment increases morbidity and mortality. It causes medical and psychosocial complications, reduces quality of life, and wastes health care resources, e.g. by increased secondary and tertiary referral costs.[8]

- Poor adherence in the context of **communicable diseases**, e.g. HIV, TB, and common bacterial ones (such as streptococcal pneumonia) can contribute to drug resistance which may require a switch to more expensive second and third line treatment regimens, and facilitate the development of opportunistic infections, rapid health deterioration, and increased cost (due to more complex treatment, if available), and continued transmission of resistant micro organisms.

- Poor adherence in **non-communicable diseases** can lead to a rebound of symptoms, increasing risks of complications, death and disability and also increasing secondary and tertiary referral costs. Management of these diseases often involves lifestyle changes (stopping to smoke, adhering to diet, regular physcial exercise) that patient find hard to realize and require a strong motivation and supportive environment.
- Poor adherence in **mental, neurological and substance use disorders** can lead to complications and an increased burden on patient, family and community. Adherence to treatment for mental, neurological and substance use disorders is often compounded by different explanatory models (the patient may not agree with the diagnosis) and alternative treatment preferences. Adherence to treatment is particularly challenging if people are dependent on a substance (drugs, alcohol or tobacco) and develop uncomfortable cognitive, behavioural and physiological symptoms in its absence, prompting them to continue using the substance. Beliefs of people with epilepsy about medication influence adherence and consequently seizure control, and health workers need to develop strategies to increase adherence.

1.6 FACTORS AFFECTING ADHERENCE

Poor or non-adherence should not be seen as a problem of patients, but is better viewed as a problem in the *interaction* between patients, health care providers and healthcare systems.

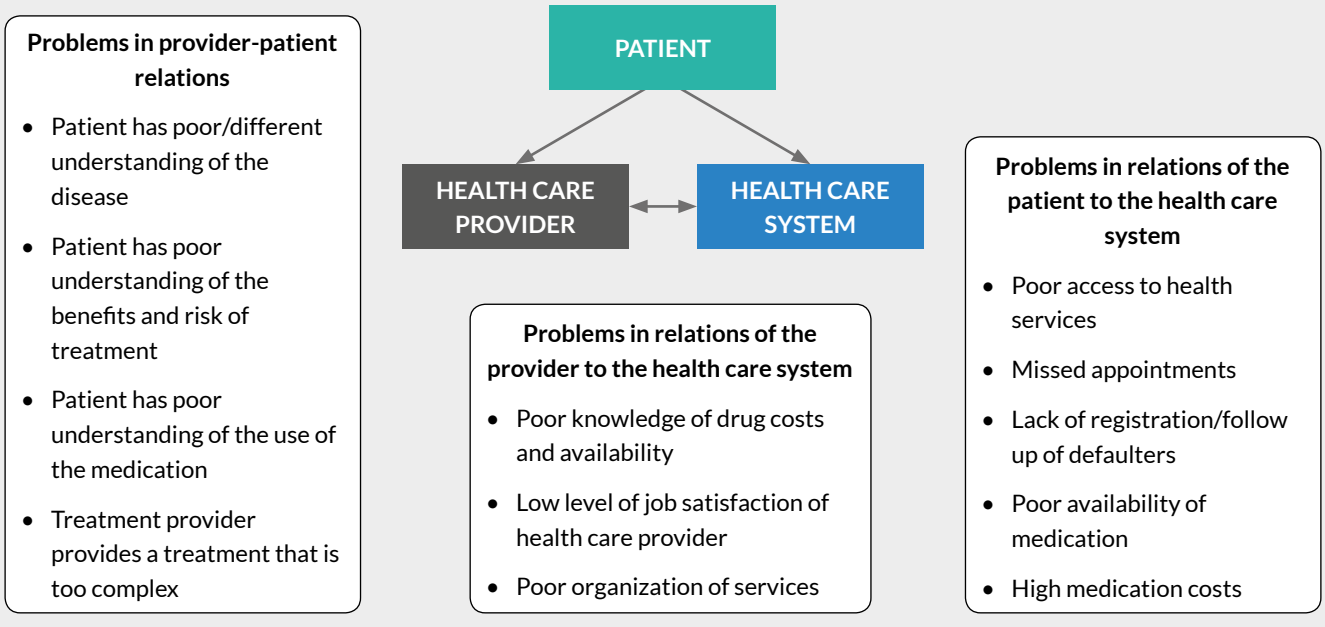
The factors that may constitute barriers to adherence are outlined below in Fig. 1:

1.7 SPECIFIC FACTORS AFFECTING ADHERENCE IN REFUGEES

In refugees and other persons of concern various factors influence treatment adherence.[9-12] These include:

- Lack of clear information or instructions on medications from health professionals
- Language barriers when provider and patient do not speak the same language
- Cultural barriers such as using explanatory models of illness that are unfamiliar to the service providers or vice versa

Fig. 1: Barriers to adherence (adapted from Osterberg & Blaschke, 2005)



- Discontinuity of drug supply leading to treatment interruptions
- Lack of adequate nutrition (e.g. insufficient access to food for TB medication and Antiretroviral Therapy (ART) and/or dietary restrictions
- Financial constraints to access healthcare (e.g. requiring patients to bear the direct/indirect cost of care (i.e. cost of drugs, cost of travel)
- Legal aspects such as fear of encountering law enforcement officials while in transit to health services
- Unfamiliarity with the health system in the host country (refugees might have different experiences, understanding and expectations of healthcare)
- Stigma, discrimination and xenophobia
- Inadequate planning for the return phase of the displacement
- Non-disclosure: Keeping secret for loved ones/ household members that one has a disease (for example in case of stigmatizing conditions such as HIV, TB or mental health conditions)
- High prevalence of comorbid mental health conditions such as depression, stress related disorders or psychosis that can affect memorory and motivation to adhere.

Despite these additional challenges for refugees, it is often possible to adopt effective stratgies to improve adherence. Studies on adherence to anti-retroviral treatment among refugees have shown that, with enabling access and adapting service delivery, it is possible to reach adherence rates for refugees that are equal to or even better than that of the host population.[10, 11, 13] See Box 1 and 2.

BOX 1: EFFECT OF CONFLICT ON DISEASE MANAGEMENT OF SYRIAN REFUGEES

In an assessment of health access for Syrian refugees in Jordan conducted by UNHCR and partners, Syrian refugees reported that the psychological distress associated with the conflict and subsequent displacement made it more difficult to adhere to a strict treatment plan regimen. This was exacerbated by the rapid deterioration of family and social networks upon displacement.

BOX 2: A CASE EXAMPLE OF SUCCESSFUL IMPROVEMENT OF TREATMENT ADHERENCE FOR HIV

Medecins Sans Frontieres in South Africa implemented a successful intervention to improve the provision of HIV care to displaced populations and reached virus suppression in 92% of clients.[14] This intervention adopted the following measures:

- Patient-held health record (health passport). This passport is provided to HIV positive patients and it documents their current treatment and health status.
- Identification of an alternative transit site, the so called “Road Map”. For patients who start ART treatment an alternative treatment site is identified close to their homes and the contact details of the site is recorded in the patient’s passport.
- Anticipation of onward movement at regular clinic visits. Patients are asked about their travel plans at every visit from the day of the diagnosis. These plans are also documented in the patients’ files.
- A safe travel pack (including buffer stocks of ARVs, a washout regimen, and a transfer letter)
- Treatment counselling adapted to migrants and refugees
- Questionnaire for returning patients. Patients coming back to the MSF mobile clinic will have to inform the clinician/counsellor that they have returned and will be invited to compile a short questionnaire of their behaviour while away.
- Migrant-adapted monitoring of retention in care. This refers to a classification system to follow mobile patients.

2. MEASURING ADHERENCE

Adherence is not a matter of 'yes' or 'no' but a continuum from low to high adherence.

Rates of adherence to medication in individual patients can be reported as the percentage of the prescribed doses of the medication taken by the patient over a specified period, and can thus vary from 0–100%. For convenience, medication non-adherence is sometimes defined as taking less than 80% of prescribed doses[13]. Full adherence over long periods of time by any patient is rarely achieved. E.g. a patient who takes their tablets five days out of seven days would have a adherence rate of 5/7 x 100% = 71%.

Adherence can be measured directly or indirectly (Box 3).

BOX 3: METHODS TO MEASURE ADHERENCE[8]

Methods to measure adherence

Adapted and simplified from Osterberg & Blaschke (2005).[8]

Test	Advantages	Disadvantages
Direct methods		
Directly Observed Therapy (DOT)	Most accurate	Resource intensive and therefore often impractical for routine use.
Measurement of the level of medicine or metabolite in blood or saliva	Objective	Expensive and rarely availbale in refugee settings. Variations in metabolism and "whitecoat adherence" can give a false impression of adherence;
Measurement of the biologic marker in blood (i.e. HIV viral load and CD4 count)	Objective	Requires expensive quantitative assays and collection of blood; not always available in resource limited settings
Measurement of indicators of micronutrient status, such as haemoglobin concentration, indicators of iron, vitamin A, and iodine status and indicators of infection and inflammation	Haemoglobin concentration is easy to measure as it responds to changes in iron	Many measures of micronutrient status are not readily available
Indirect methods		
Patient questionnaires, patient self-reports (e.g. when the patient is a child or unable to fill in questionnaires: questionnaire for caregiver or teacher)	Simple; inexpensive; the most useful method in the clinical setting	Susceptible to error with increases in time between visits; results are easily distorted by the patient
Pill counts	Objective, quantifiable, and easy to perform	Data easily altered by the patient (e.g. pill dumping)
Rates of prescription refills	Objective; easy to obtain data	A prescription refill is not equivalent to ingestion of medication; requires a closed pharmacy system
Assessment of the patient's clinical response	Simple; generally easy to perform	Factors other than medication adherence can affect clinical response
Measurement of physiologic markers (e.g. heart rate in patients taking beta-blockers)	Typically easy to perform	Marker may be absent for other reasons (e.g. increased metabolism, poor absorption, lack of response)
Patient diaries	Help to correct for poor recall	Easily altered by the patient

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3. PRACTICAL TIPS TO PROMOTE ADHERENCE IN REFUGEE SETTINGS

3.1 For everyone

1. **Train health care providers to actively discuss adherence with patients to ensure they understand and agree with the treatment plan, to explore potential barriers to adherence and to develop plans to overcome these**

Proper health information and education is important particularly in the beginning of the treatment. This is best done in a tailored way with active engagement of the patient and the family or caregivers (Box 4 and 5).

The most simple and practical suggestion to improve adherence is for health workers to ask their patients about their experiences with the agreed treatment. It is important that this is done in a non-judgmental way (Table 3). Patients often want to please their health worker and will say what they think their health worker wants to hear. To encourage an honest answer, the healthcare provider could introduce the topic in the following way:

- *I know that sometimes it is difficult to take all your medications regularly or to follow the exercises regularly. Can you tell me how this was for you in the last weeks?*

- *How often did you miss doses? Can you give me an example? Why do you think you were unable to take your pills on time?*

BOX 4: HEALTH EDUCATION TIPS AT INITIATION OF TREATMENT

Health education tips on promoting adherence in clinical consultation

Before prescribing medication or advising treatment, the health care provider (which could be a physician, clinical officer, nurse, health counsellor or a health educator) should:

- Provide clear information about the disease. Use simple terms and visual aids, if available.
- Explain the goals of therapy to the patient, possibly using pictorials and/or flip charts that are culturally relevant and contextually appropriate.
- Prepare the patient for possible side effects and instruct the patient on how to manage them.
- Discuss reasons why adherence is important – explain the positive consequences of adherence and outline the risks of non-adherence.
- Explain to the patient and the family what to do if a dose is missed.
- Identify with the patient (and his/her family or other social support) what potential barriers for adherence could exist and create plans for successful adherence.
- Provide a non-judgmental, trusting environment and create an atmosphere where patients feel comfortable to ask questions.

BOX 5: HOW TO ASK ABOUT ADHERENCE DURING FOLLOW UP VISITS

How to ask about adherence during follow-up visits

- Discuss adherence at each visit.
- Ask specifically about new symptoms or a change in health status.
- Reinforce education on the disorder and the treatment.
- Assess adherence using standard checklists – do pill identification (ask the patient when he/she takes which pill).
- Recognize and acknowledge the difficulty of adherence.
- If the patient frequently misses doses, determine with the patient what challenges they face.
- Identify with the patient which strategies might enable him/her to achieve better adherence. For example, think of using a treatment supporter, or more home visits by the community health workers.
- Help the patient identify reminders and strategies (e.g. daily activity link, pill box, diary, calendar, telephone reminder, and/or directly observed therapy (DOT)).
- Plan ahead for changes in routine, such as travel.
- Discuss the role of social support, including participation in a disorder-specific support group, involvement of a treatment supporter, and home visits by community health workers.

2. Facilitate appropriate use of interpreters and cultural brokers

Health care providers should speak the same language as the patient and have a good understanding of the patients' culture and background. In refugee settings, this is not always possible. Use of community or family members as **interpreters** should be avoided as the patient may not be comfortable sharing personal information in front of others. Trained interpreters, including appropriately trained refugee workers, should be used. In some cases, the interpreters can be also used as **cultural brokers**. A cultural broker is a person who serves as intermediary between patients and health care providers and also one that is knowledgeable of the health values, beliefs, and practices within his/her own cultural community and has good knowledge of the local health care system.

3. Whenever possible simplify dosing medication and tailor treatment to the lifestyle and daily routines of the patient

Patients can be confused by the number and variety of medicines they need to take. Adherence has long been known to be inversely associated with the complexity of the regimen. Simplified dosing helps to maximize adherence, particularly when combined with frequent reinforcing visits (although it is important to note that sometimes providing several months of medication supplies may be relevant in fragile conditions where supplies or services may be interrupted). For example once daily dosing of long acting medications is preferable to three times or twice daily medications with a short half life. Fixed dose combinations should be considered when possible rather than multiple tablets as these have been shown to improve adherence in some circumstances.[15] Tailor treatment to the lifestyle and daily routines of the patient. For example, schedule dosing according to regular daily events such as meals or prayer or designate specific places and times for taking medications or doing exercises.

4. Adapt the organization of primary health care to improve adherence in chronic and non-communicable disorders

The organisation of care may have to be adapted in order to improve adherence. For instance, organizing specific consultations for chronic disorders at times when the patient load is less heavy could foster adherence. Some refugee settings have good experiences with organizing consultation hours for people with diabetes, mental health disorders, etc. Avoid actions that might increase stigma (e.g. signs such as 'mental health OPD' or 'HIV clinic' or ART clinic). A cross-sectional study conducted in 2011 in the Kakuma refugee camp in Kenya suggested that, despite various barriers at community and facility level, some promotion measures such as Prevention with Positives (PwP) support for defaulter tracing, linking nutrition supplementation with ARV drug collection and improving staffing capacity and adherence counsellors, had an impact on improving adherence (See Box 6).

5. Encourage the establishment of support groups for people with chronic and non- communicable disorders

Support groups led by a trained facilitator can be instrumental in improving adherence and in promoting a sense of community among people affected by a specific disease. Support groups can be set up by community health workers or by community workers in programmes for community-based protection. Peer support groups, such as groups of PLHIV, have also been proven beneficial in fostering adherence.

3.2 For patients considered to be at risk of non adherence

1. Schedule frequent appointments

Adherence to medication and recommended lifestyle changes usually increases the days before patients have a scheduled appointment with a health worker. This is called '**white coat adherence**'. This phenomenon can be used therapeutically by setting up more frequent appointments instead of long-term refills for patients with conditions that require long-term treatment.

2. Use community health workers and volunteers to improve adherence (e.g. reinforce adherence during routine visits, highlight the need for medications during community meetings, trace defaulters)

Community health workers and volunteers may play a key role in improving adherence. In their training the following elements can be included:

- Non-intrusive, non-judgmental approaches to patients.
- Reinforcing adherence during routine home visits.
- Visits to trace and ways to talk to defaulters.

3. Introduce the use of simple diaries and tools to facilitate adherence (i.e. pharmaceutical pictograms for illiterate populations, alarms on phones

Diaries for medication use and level of symptoms are an effective and simple tools to monitor adherence in epilepsy (see box 7).[2]

Reminder packaging e.g. dose administration aids, which incorporate a date or time for a medicine to be taken may be considered for patients that struggle to manage complex medicine regimens that cannot be simplified. Dose administration aids could also be considered for patients who tend to forget whether or not they have taken their medications and who require visual cues.

4. Send personalized reminders through SMS

Reminding patients of treatment may positively reinforce treatment adherence. Many of the technically advanced methods such as sending automated reminders by SMS or smartphone may be difficult to achieve in low resource settings but can be helpful in urban contexts where mobile coverage is high, and where confidentiality can be guaranteed. This measure should be voluntary and can be done only with the consent of the patient to share contact details. Personalized reminders can also be conveyed through home visits by community health workers but this should also be after the consent of the patient.

BOX 6: CASE STUDY FROM HIV: PROGRAMME-RELATED MEASURES TO IMPROVE ADHERENCE TO ART AT KAKUMA REFUGEE CAMP IN KENYA

In 2011, a cross-sectional study on ART adherence in refugee settings and the host community was conducted by UNHCR, National AIDS and STI Control Programme (NASCOP) and London School of Hygiene and Tropical Medicine (LSHTM). The study aimed at delineating social factors influencing adherence. The study found that using the viral load detection limit of <400 copies/ml, only 7 out of 141 patients of those who had been on treatment for more than 15 weeks had achieved viral suppression (i.e. about 5% of patients). Using a higher threshold of >1000 copies used to define treatment failure, 88% for 15 weeks or more had not achieved viral suppression. Measures identified to improve adherence and create a greater impact on viral suppression included:

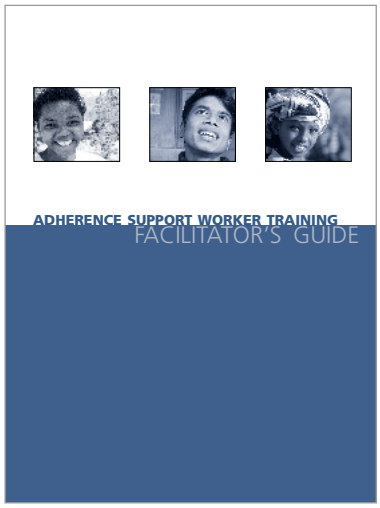
- **Streamlining and standardizing ART administration** (i.e. clinical staff trained on revised Kenya Guidelines for ART and the adoption of a web-based pharmaceutical management programme for online requisition, reporting of drug consumption and projection of need)
- **Provision of comprehensive client support** through the PwP programme targeting people living with HIV (PLHIV). The programme consisted in the creation of 30 support groups, each group consisting of 10 PLHIV. 18 facilitators were recruited to report to a prevention officer and trained on the minimum package. The **minimum package** included how to support the formation of PLHIV support groups, convene support groups meetings and conduct regular visits, provision of adherence counselling and support for PLHIV, tracing patients and providing referrals for family planning, enrolment into care and treatment services, providing condom education, promotion and distribution, delivering risk reduction counselling and the provision of a basic care package.
- **Nutritional assessment interventions:** client appointments were synchronised with supplementary food distribution days.
- **Assessment of adherence and monitoring measures, including:**
  - Pre-ART assessment and counselling of eligible clients
  - Defaulter tracing and active referrals in the community for care and treatment
  - Daily appointment diary
  - Routine adherence counselling of clients
  - Pill count/Pill identification
- **CD4 testing for regular monitoring at 6 months intervals**
  Challenges included:
  - A good tracking system to track patient adherence
  - Language barriers
  - Lack of Point of Care (POC) CD4 testing
  - Difficulties in providing follow up to cross-border clients
  - Transportation costs
  - Alcohol and drug use

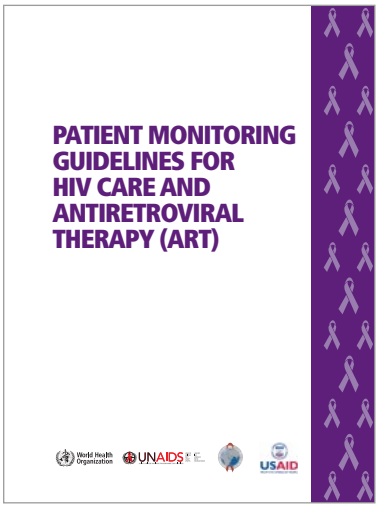
Source: UNHCR, DPSM, Public Health Section, Geneva. Adherence to Antiretroviral Therapy at Kakuma Refugee Camp, 2014.

BOX 7: EXAMPLE OF A SEIZURE DIARY

When the seizure occurred		Description of seizure (including body parts affected and duration of seizure)	Medications that were taken	
Date	Time		Yesterday	Today

ANNEX 1: USEFUL TOOLS TO PROMOTE GOOD PRACTICES





1. Facilitator's guide for adherence support worker training

FHI 360 published a facilitator's guide for adherence support worker training which gives a practical guide for training for community-based workers with thirteen different modules on topics such as roles and responsibilities and building helpful relationships.[16]

2. WHO patient monitoring guidelines for HIV care and ARV

The 2006 WHO patient monitoring guidelines for HIV care and Antiretroviral therapy gives detailed information intended for those involved at various levels of the development or revision of patient monitoring tools such as HIV care and ART patient and facility records, registers and reports, or electronic systems, including national AIDS programme managers, ministries of health, and monitoring and evaluation officers. These patient monitoring tools assist those primarily at district and national levels implement systems to improve patients' follow up.[17]

ANNEX 2: TIPS TO INCREASE PAEDIATRIC ADHERENCE TO ANTIRETROVIRAL THERAPY IN LOW-AND MIDDLE-INCOME COUNTRIES

CAREGIVER EDUCATION

How to give medicines to babies and toddlers (ages birth through 2 years).

- Use a sterile syringe or soft plastic dropper, or a spoon for medicine mixed with food.
- Carefully label dose on syringe.
- With the baby on your lap, brace the baby's head close to your body so the head stays still. Tilt the head back a little. Put the medicine in the corner of the baby's mouth toward the back, along the side of the tongue. This makes it more difficult for the baby to spit it out. Give the baby a little at a time to prevent choking and spitting.
- Gently keep the baby's mouth closed until he or she swallows.
- Never yell or show anger. Speak softly and say kind things.
- When all the medicine is finished, keep the baby sitting upright for a few minutes and cuddle or comfort him or her. Offer water or juice only after the procedure is finished.

Tips for giving medicines to children over age 2 years:

- Keep trying different foods to cover the taste (such as juices, sweets, or porridge).
- Offer your child choices (such as types of food, spoon, or drink).
- Never ask children if they want to take the medicine.
- Some children do best when encouraged to take a deep breath and drink fast.
- Others take medicine one step at a time with a drink in between. Sometimes it helps to count for your child while he or she takes it.
- Offer praise afterward.
- Connect the medicine to the children's feeling better, their bodies working better, or another desired activity or outcome.
- Involve children in their medication administration as appropriate for their levels of understanding.

TROUBLESHOOTING FOR PARENTS OR CAREGIVERS

- Vomiting the medicine: Repeat the dose if the child vomits within two hours of taking the medicine.
- Missing a dose: If the child misses a dose, give it as soon as he or she remembers (up to six hours after the missed dose time for a twice per day medicine) and continue on the regular schedule. Do not give two doses at the same time.
- Refusing the medicine: Let the child know that you understand that taking medicine is not fun.
- Do not threaten, punish, or scold the child. This will only make the situation worse and could make the child feel bad.
- Mix medicine with a small amount of food or liquid (such as porridge, clean water, or juice). Do not mix medicine with food that is essential to the child's diet (like milk); the child may associate the bad taste with milk and stop taking it even if it does not contain medicine.
- Keep trying new methods and don't give up.

Source: Vreeman et al (2008).[18]

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