Adherence to Standard Treatment Guidelines: crucial for good health outcomes

Investigations of adherence to Standard Treatment Guidelines revealed weaknesses in pharmacotherapy, indicating the need for a comprehensive response

Results
- Complete adherence to STG in only 31% of cases
- Wrong treatment in 30% of cases
- Most prevalent diagnoses:
    - Respiratory infections (including pneumonia)
    - malaria
    - diarrhoea

A full stock promotes adherence to STG
(K. Wiedenmayer)

What is needed to improve quality of treatment and patient outcomes?
- Pharmacotherapy knowledge and skills: Pre-service training, problem-based training, continuing education, supportive supervision, motivation
- Diagnostic skills: availability of diagnostic equipment and competence to interpret results
- STG: availability of updated and user-friendly copies in local language together with in-service training and effective supportive supervision
- Medicines: availability of medicines required based on STG

Inappropriate use of medicines is a global problem with serious consequences for patients in terms of poor health outcomes, increased adverse medicine events, accelerating antimicrobial resistance, spread of blood-borne infections due to non-sterile injections, and waste of scarce health resources.
Tanzania as well as many other countries, has adopted National Medicines Policies and Essential Medicines Programmes that include components to promote more appropriate use of medicines. However, these efforts are often insufficient and hampered by system constraints, priority setting and limited resources.

STG adherence research
The adherence study in 2013 by the HPSS project focused on the quality of pharmacotherapy in terms of adherence to standard treatment guidelines (STG) with regard to the medicines prescribed for a given diagnosis. In total, the diagnoses of 2886 patient cases were recorded and analysed. The top ten diagnoses as established by clinicians were upper respiratory tract infections (URTI, 25%), malaria (18%), diarrhoea (9.9%), pneumonia (6.1%), skin problems (5.8%), musculoskeletal problems and pain (5.6 %), gastrointestinal diagnoses (5%), urinary tract infections (4%), worm infestations (3.6%) and injuries (3%). There was variation of diagnoses among districts and distinct differences in incidence between women and men as well as between children and adults. Only 1.8% of all diagnoses were non-communicable diseases (NCDs).
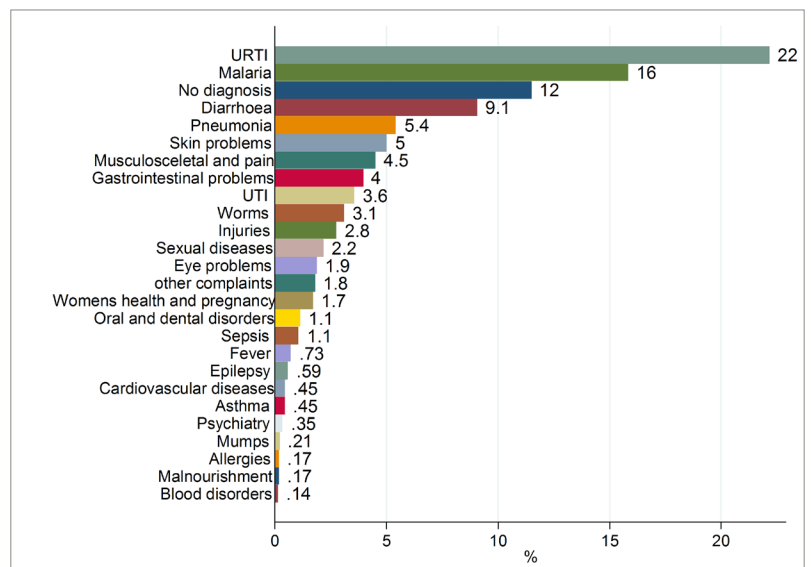

Figure 1: Distribution of all diagnoses as recorded.

Study findings

Complete adherence to the STG (medicines prescribed for a given diagnosis were in full accordance with the STG) was found in 30.8% cases, while wrong treatment was found in 30.7% of diagnoses, which could mean that the patient's condition did not improve, deteriorated or in the best case recovered without treatment. 38% of prescriptions were partially adherent, meaning that the indicated medicine was prescribed but complemented with another either unnecessary or wrong medicine. We classified as partial adherence assuming that the underlying illness might have been cured. For example, in the case of malaria diagnosis, Arthemeter/Lumefantrine (ALu, the medicine of choice) was prescribed with an antibiotic.

Table 1: Level of adherence to STG in primary diagnosis

Adherence level	Adherence rate
Completely adhered	30.8%
Partially adhered	38.0%
Not adhered	30.7%

Complete adherence according to STG was best for the treatment of worm infestations and lowest for diarrhoea treatment. Wrong treatment was prevalent with skin problems. 61% of patients received an antibiotic regardless of diagnoses. This number has been validated in the medicines use indicators study by HPSS (66%).

These results point to seriously poor treatment quality, leading to poor health outcomes. Reasons can be manifold and may include poor or insufficient training, carelessness, and pressure from patients or unavailability of required medicines. Clearly, focused attention must be directed towards improving prescribing and pharmacotherapy in view of improving patient care and health outcomes for the population of Dodoma Region.

A patient at a health facility (T. Schuppisser)

Interventions

This comprehensive study allowed an insight in the use of medicines in Dodoma Region. It can be used to understand gaps and define priority activities for further investigation and action. It can also be used as a baseline for measuring the impact of interventions. In 2018, practical training of health workers in diagnosis and treatment of the most prevalent diseases in primary health care was conducted, using the new national STG of 2017. In addition, supervision and audits will include assessment and support in diagnosing and prescribing. Equally important is availability of both diagnostic equipment and tools at facilities, and required medicines for treatment.