

Antibiotics as controlled medicines? Lessons from the Single Convention on Narcotics

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Introduction

Antibiotic consumption is a key driver of antimicrobial resistance (AMR). One suggestion for controlling the use of antibiotics has been to treat antibiotics as controlled medicines in line with how the use of narcotics is controlled under the Single Convention on Narcotic Drugs. This study aimed to **identify the relevant lessons from the controlled drug regimen for narcotics**, in order to provide recommendations for what aspects of the current drug control regimen could be applicable for ensuring the appropriate use of antibiotics.

Methods

This qualitative study used a mixed-methods approach:

- Content analysis of the Single Convention to identify control measures for narcotics.
- A literature review of articles on access to and use of opioids.
- 8 semi-structured interviews with government officials, private sector representatives and international drug control experts.
- Evaluation of which control measures could be applicable for antibiotics, taking into account existing measures aiming to achieve the same intent for antibiotics.

Results

- Table 1 provides examples of relevant measures identified in the Single Convention.
- A **classification system for antibiotics** based on the risk of resistance, as opposed to the scheduling of narcotics based on the risk of abuse, could serve as a useful mechanism to facilitate conservation efforts.

- **Prescribing and dispensing:** the Single Convention requires that certain narcotics should only be dispensed with a medical prescription. This could also have relevance for certain antibiotics such as last-resort antibiotics, but not for all antibiotics in all countries. Procedures are often stricter at the national level than required by the Single Convention. Some of these additional measures could be useful for antibiotic stewardship: limiting the validity of antibiotic prescriptions, limiting the prescribing rights for certain antibiotics and using special prescription forms.
- An **international control and reporting system** similar to the one embedded in the Single Convention would risk delaying access to life-saving medicines. Good systems for the monitoring of antibiotic consumption are important, but should be integrated with already ongoing initiatives.
- No relevant lessons related to the use of **licenses** for drug control were identified.
- The Single Convention has been effective in terms of providing strict control over narcotics, but it has **not achieved its main goals of ensuring access and preventing abuse**.

Conclusions

A globally agreed system for controlling antibiotic consumption, similar to the current drug control regimen for narcotics, would allow for stringent controls on sale and consumption. This could be valuable for antibiotics deemed as critical. However, **we rejected this system** as it would likely detrimentally inhibit access, be costly and challenging to implement, and end up no more effective than introducing national stewardship measures already included in many countries' national AMR plans. Yet, several control measures that can be valuable for ensuring the appropriate use of antibiotics were identified, especially in the areas of prescribing and dispensing. It could be useful to formalize these into international principles, where developing countries take leadership.

Table 1: Evaluation of applicability of relevant control measures identified in the Single Convention for narcotics.

Measures in the Single Convention	Applicable to antibiotics?	Measures to achieve the same intent
Drug classification system		
Narcotics are classified according to their abuse potential (Schedule I-IV) that are under different degree of control.	Yes	WHO's Essential Medicines List, WHO's Critically Important Antimicrobials, national treatment and prescribing guidelines and national Essential Medicines Lists.
The Commission on Narcotic Drugs (CND), based on recommendation by the WHO, may amend the drug classification list. A state may propose amendments to the lists.	Yes	
Prescribing and dispensing		
A medical prescription is required when dispensing Schedule I drugs to individuals.	Yes	National regulations, national AMR plans, WHO guidance.
Consumption control and monitoring		
Governments must provide annual estimates of needs. An international control board (INCB) oversees the estimates.	Possibly	Forecasting is performed by procurement systems, but not as a function of the optimal societal use.
If the annual needs change, supplementary estimates must be submitted to INCB.	No, this may delay access.	
Governments must report on how much they have consumed, used for production, imported and exported.	Yes	WHO programme on surveillance of antimicrobial consumption. The European Surveillance of Antimicrobial Consumption programme (ESAC). National surveillance systems for antibiotic resistance. Yet, no surveillance on antibiotic manufacturing to our knowledge.
Governments must report on seizures and stocks by the end of the year.	Possibly	
Countries cannot import or manufacture narcotics beyond their annual estimates. If they do, this will be deducted from the following year's estimates.	No, this may delay access	
Export to countries exceeding their annual estimates is not permitted.		
Licenses		
All persons and enterprises involved in activities related to narcotics must be controlled under government licenses, and have adequate qualifications.	Yes	Most governments already require that activities related to pharmaceuticals are conducted under licenses, but do not require licenses for each import/export.
Import and export licenses are required for each international transaction.	Possibly	