### Alcohol based hand rub

**Section:** 15. Antiseptics and disinfectants  >  15.2. Disinfectants

**Indication**
- Denatured alcohol  
  - ICD11 code: XM3094

**Medicine type**
- Chemical agent

**List type**
- Core

**Formulations**
- Local > Topical > Solution: 80% v/v ethanol; 75% v/v isopropyl alcohol

**EML status history**
- First added in 2015 (TRS 994)

**Sex**
- All

**Age**
- Also recommended for children

**Therapeutic alternatives**
- The recommendation is for this specific medicine

**Patent information**
- Patents have expired in most jurisdictions
  - [Read more](#) about patents.

**Wikipedia**
- Alcohol based hand rub

**DrugBank**
- Alcohol based hand rub (Ethanol)

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**Summary of evidence and Expert Committee recommendations**

An application was submitted by Dr Benedetta Allegranzi, Service Delivery and Safety, HIS Cluster, WHO, Geneva, for inclusion of alcohol-based hand rub (ABHR) in the EML and EMLc to contribute to the establishment and maintenance of safe essential health services and prevention of infection in both patients and health workers. Comments in support of the application were received from the Infection Control Africa Network, Cape Town, South Africa.

Health-care-associated infections (HCAIs) are infections that patients acquire while receiving treatment for medical or surgical conditions and are the most frequent adverse event during care delivery (1). They are a major problem for patient safety and can result in prolonged hospital stays, long-term disability, increased resistance of microorganisms to antimicrobial agents, an additional financial burden for the health system, high costs for patients and their families, and excess deaths (2, 3). This is a key public health problem, with a disproportionately high burden of disease in low- and middle-income countries (LMICs) (3). Hand hygiene is the leading measure for preventing the transmission of HCAI pathogens and reducing HCAIs (4) and ABHR is considered the gold standard for hand hygiene in most clinical situations. The 2009 WHO guidelines on hand hygiene recommend ABHR for routine hand antisepsis in all clinical situations, except when hands are visibly dirty or visibly soiled with blood or other body fluids or after using the toilet, when they should be washed with soap and water (5). Organisms are removed more effectively and quickly by ABHR than by soap or other antiseptic agents and water (6). Moreover, hand rubbing with alcohol-based products is better tolerated than hand-washing with soap and water. The Expert Committee noted that, during the 2014 west African filovirus disease outbreak, WHO guidelines (7) made a strong recommendation – based on high-quality evidence – for the use of either ABHR or soap and water. The guidelines also recommended that ABHR, as the standard of care, be made available at every point of care. WHO provides a range of tools to support education on the use of ABHRs, to promote awareness of when ABHRs should be used, and for monitoring use of these products in practice (http://www.who.int/gpsc/en/). The main ingredients of the WHO-recommended ABHR formulations are isopropyl alcohol 99.8% or ethanol 96%, formulated to produce final concentrations of 75% v/v and 80% v/v respectively (5). Commercially available products meeting WHO standards are produced mainly in Europe and the USA. Production and availability of ABHRs are lowest in African and southeast Asian regions. When ABHR is made locally, for example in hospitals rather than industrial settings, quality assurance is needed. This requires either that alcoholmeters be available on site or that a sample of the