

The urgency of creating an extemporaneous antiseptic gel

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The microflora of the skin is of particular importance as a link that connects the outside world and the internal environment of the human body, because the fecal-oral and contact mechanisms of infection are often associated with contamination of the skin of the hands. Contaminated hands are the most active factor in the transmission of pathogenic microorganisms in the home. The most important for the implementation of the contact and household path are utensils, linen, care items in medical institutions, toys in children's groups, door handles in public places, etc. Good hand hygiene can break the path of transmission of pathogenic microorganisms from the source of infection to a healthy person, which contributes to the prevention of diseases caused by nosocomial infections. The use of alcohol-based hand antiseptics is generally recognized as the least harmful to the skin, easy to use, and reliable from the standpoint of non-resistance [Klim]. The best antimicrobial activity can be achieved with ethanol (60-85%), isopropanol (60-80%), and n-propanol (60-80%).

WHO recommends alcohol-based handrubs based on the following factors:

1. evidence-based, intrinsic advantages of fast-acting and broad-spectrum microbicidal activity with a minimal risk of generating resistance to antimicrobial agents;
2. suitability for use in resource-limited or remote areas with lack of accessibility to sinks or other facilities for hand hygiene (including clean water, towels, etc.);
3. capacity to promote improved compliance with hand hygiene by making the process faster and more convenient;
4. economic benefit by reducing annual costs for hand hygiene, representing approximately 1% of extra-costs generated by HCAI
5. minimization of risks from adverse events because of increased safety associated with better acceptability and tolerance than other products

Alcohol-based antiseptics for hand treatment are recommended for use in the home, especially in places with large crowds of people who do not have a sink with water and soap. It is recommended to use these means in the train, the bus, at stations, before eating in crowded places for the purpose of prevention of distribution of the infections which are transferred by the contact and fecal-oral mechanism. Therefore, research on the development of antiseptics for the treatment of hands for use outside the medical field is relevant.