One of the greatest achievements of 20th - century medicine was the global eradication of smallpox. In 1966, the WHO set a ten - year goal for the eradication of smallpox worldwide. By infecting children with cowpox, a relatively minor disease, Jenner found they developed immunity to smallpox By 1853, infants in the UK were required by law to be vaccinated against smallpox, though the vaccines used were not always effective Cloppe Further advances were made in the 1920s with development of dried vaccines in France and the Netherlands . Considerable resources were devoted to the development of mechanisms for reporting and monitoring the disease Improved technology and better vaccines also helped By 1980, the WHO could formally declare smallpox eradicated worldwide. An outbreak of smallpox in New York City in 1947 led to the development of a freeze - drying technique which meant the vaccine could be stored for months without refrigeration, even in tropical climates. The disease is one of the most devastating known to mankind In 1967, it was estimated by the World Health Organization (WHO) that two million people died of smallpox that year Smallpox is caused by the variola virus and is most often transmitted by inhaling the virus . Vaccination involves the administration of a preparation that allows the body to develop resistance to a disease without having to be exposed to it . A significant feature of the disease is the development of blisters on the upper part of the body, which eventually scab over and leave scars when the scabs fall off .Dried scab tissue from victims of smallpox was used to deliberately infect young people. Its symptoms develop quickly, making those infected aware of the disease at an early stage and reducing the possibility them unknowingly transmitting the disease to others . Around 30 per cent of those infected with smallpox die, usually within two weeks of symptoms appearing.