

Covid 19 IDF MC Vaccination Plan – Supply Chain principles towards a successful campaign

Background: SARS-CoV-2 virus, first reported in December 2019, has rapidly spread worldwide and declared a pandemic by the World Health Organization, with tremendous medical, social and economic consequences. BNT162b2 anti Covid-19 mRNA vaccine manufactured by Pfizer, and BioNTech, was the first vaccine authorized for emergency use by the Food and Drugs administration in December 2020. Shortly After It's approval, Israel and the IDF started a quick and effective vaccination campaign, resulting in high vaccination percentages and an impressive decrease in morbidity. The Israeli vaccination campaign had one of the world's fastest rollouts, thereby creating valuable information and lessons to be learned. The new Pfizer vaccine works in a new mRNA based technique, which required very unique storage conditions such as deep freeze storage, and very short shelf life of 120 hours once thawed. As IDF units are scattered in many auster areas, and due to the low vaccines supply, at the time these special storage and usage conditions raised many pharmaceutical and logistical challenges.

Method: The military vaccination campaign was based on 3 planning principles: First we built the complete supply chain, monitored and equipped in order to provide good storage and distribution practice and ensure safety and efficacy. The vaccines rout was carefully planned starting from central freezing storage, GDP approved daily distribution to dozens of remote unites and valid and monitored storage in our units until actual administration. Second – we took a comprehensive supply approach - provided all medical supplies needed to prepare, with an extra 10% and administer the vaccines in a "one stop shop" – all were provided automatically in planned amounts according to vaccines amount in order to prevent shortage that could delay the campaign. Third we planned the personnal to vaccinated each day carefully, and made quick adjustments when needed in order to ensure use of all vaccines and minimizing vaccines expiry due to low use. Prior to the opening of the vaccination site, an instructional seminar on means and protocols was given to the site staff by the regional command pharmacist.

Results and Discussion: During 10 weeks starting from early January 2021, the IDF has executed a highly effective Covid vaccinating campaign. During the operation over 85% of IDF soldiers were successfully vaccinated, and morbidity declined rapidly, what allowed for return to almost normal operational duty. Controlled and monitored supply chain was kept

throughout all sites and units, and no wastage of vaccines due to expiry was reported. Valuable lessons were learned, some also applied during the booster vaccine campaign, such as the use of low dead volume syringes that allowed for extraction of 6 vaccine doses out of each ampule, thereby allowing to vaccinate more soldiers. A lesson that was crucial during the stages where vaccines supply was in high demand and low supply .