

Smartphones in Sterile Bags to Help Plastic Surgeons in Telemedicine

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Thanks to the introduction of telemedicine, the plastic surgeon in a highly complex center helps colleagues from different hospitals scattered throughout the area in the diagnostic process and in the evaluation of transfers to centers of greater complexity.¹ Telemedicine makes use of high-resolution images that are increasingly often produced and received by smartphones; it is often difficult for a nonspecialist colleague to provide a detailed description of trauma without the aid of images.¹ Inaccurate diagnoses are associated with suboptimal trauma management. On the one hand, some traumas risk being underdiagnosed with a worsening of the prognosis that can lead to late interventions. On the other hand, the overestimation of trauma leads to an overload of the reference centers and an increase in the costs of the national health system.^{1,2}

In this context, the smartphone has established itself as an increasingly relevant aid in plastic surgery. The doctor feels the need to have this tool always accessible to provide adequate service in case of surgical emergencies. Often, however, the surgeon is busy in the operating room with another trauma and is unlikely to find himself in situations in which to pause the surgery and leave the operating room for a long enough time to provide comprehensive answers to colleagues and consult the images sent.

To try to overcome this problem, the surgeon can use the nursing staff who answer the phone and collect and report clinical data, or he can take the smartphone with sterile gauze to see the images sent by the colleague.³ However, these methods are more intrusive than necessary and can further distract the surgeon.

In our center, we have developed a simple, reproducible, and cost-effective method that allows the implementation of the smartphone in the operating room, always available to the surgeon. The use of a plasticized and transparent sterile bag, sealed in order to have the screen completely available, allows you to always have it available, and to be able to provide adequate assistance to

colleagues even in sterile conditions. The sterile bag also has the undoubted advantage of isolating the smartphone, which, in the operating room, is among the most contaminated objects because it is transported from the external environment from the room which is not subjected to standard cleaning with disinfectant products established according to guidelines on the sterility of operating theaters.⁴ For this purpose, we used an instrumental pouch which is routinely used in the operating room and is easily available (Fig. 1). Thanks to this implementation, the doctor on call can easily access their smartphone, consult the images, and call up colleagues, in perfect autonomy and reducing contamination of the operating field.

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DISCLOSURE

The authors have no financial interest to declare in relation to the content of this article.

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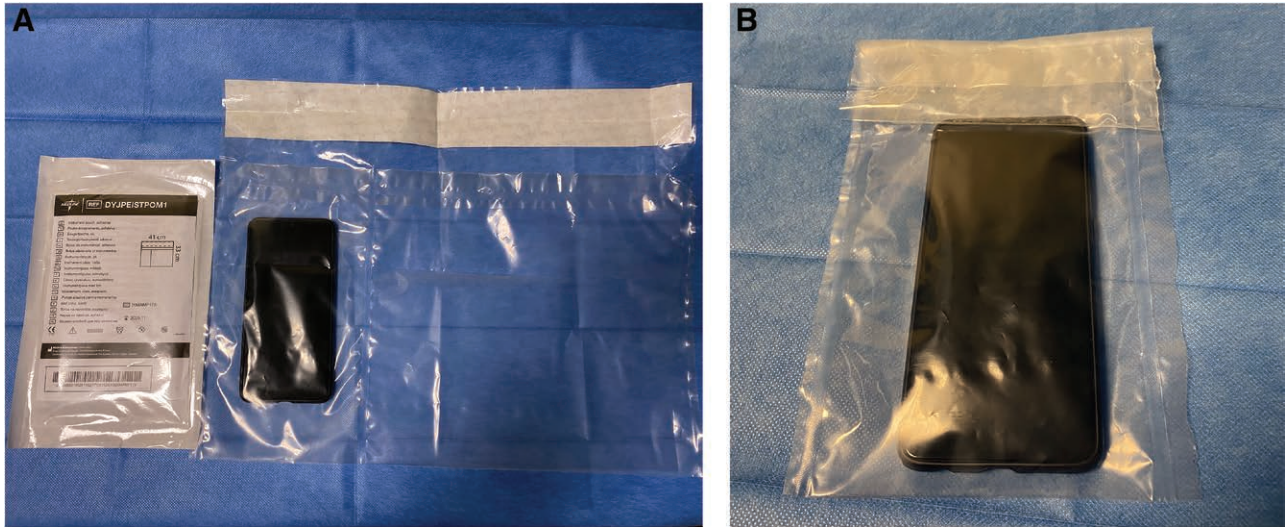


Fig. 1. Instrumental pouch used. A, The image shows the whole instrumental bag with a commercial smartphone inside one of its pockets. On the side, there is the package showing the maximum dimensions (41 cm × 35 cm). B, The smartphone sealed in the smaller pocket of the cut-out bag, easily usable in the operating room.