

WHO compendium of innovative health technologies for low-resource settings

2016- 2017

Medical devices
eHealth/mHealth
Medical simulation devices
Personal protective equipment
Assistive products
Other technologies



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Surgical gown, self-donning and adjusting

Country of origin | Japan

Primary function | Protection

Health problem addressed

During healthcare delivery, standard surgical gowns often become soiled with potentially contaminated bodily fluids. They are time-consuming to don and remove correctly, and may require the assistance of another staff member to properly secure. The correct use of surgical gowns is critical for the personal protection of healthcare workers. The self-donning and adjusting surgical gown design can be put on and taken off more quickly and safely without requiring assistance. While the gown is suitable for all healthcare delivery environments, its design is particularly useful for improving staff safety in low-resource settings and emergencies.

Disease addressed

The technology does not address a specific disease, but is a crucial component of the equipment used to comply with infection prevention protocols for many health interventions.

Technical descriptions

The innovative design of this gown includes a special spring along the neckline, so that the user can don the gown without the need of an assistant. The spring characteristic of the neckring provides the wearer the flexibility to bend over. The belt is easy to reach and tie. One end of the belt is on the front of the gown. The other end of the belt contains a mild adhesive at the tip so that the wearer can affix it to a surface, such as a wall or table, enabling the worker to simply rotate their body until the second end of the belt is also in front of them. The wearer is then able to self-tie the waist belt and maintain sterility. The sleeves are designed to facilitate the removal of gloves without compromising the protective barrier.

Developer's claims of products benefits

The innovative gown helps to reduce the risk of transmission of infectious pathogens to healthcare personale and also minimizes the onward transmission of infection into the environment. The gown can be removed and folded to contain the outer contaminated surface within the clean inner surface. Used gloves are easily turned inside-out and folded into the gown at the same time.

Operating steps

Wear the gown (insert the arms). Hang the neck wire to your neck. Pass through the arm. Put on the gloves. Peel off the double face tape of string holder and adhere to a table or wall. Turn around 360 degrees. Hold the string. Cut off the string with perforation. Finally tie up the string at the side. (<https://www.youtube.com/watch?v=znpwimlsfj4>)

Regulatory status and standards compliance

In process for CE mark in 2018. ANSI AAMI PB70:2012.

Use and maintenance

User: Self-use and untrained individual

Training: No

Maintenance/Calibration required: No

Environment of use

Setting: Rural settings, urban settings, anywhere.

Facility requirements: None

Energy requirements: None

Product specifications

Weight (kg): 0.1

Dimensions: 250mm x 370mm x 40mm

Lifetime: Single use, shelf life 2 -5 years.

In UN catalog: No

Commercial information

Year of commercialization: 2017

Number of units distributed: 1 001-10 000

Currently sold in: Western Pacific and South East Asia Region



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