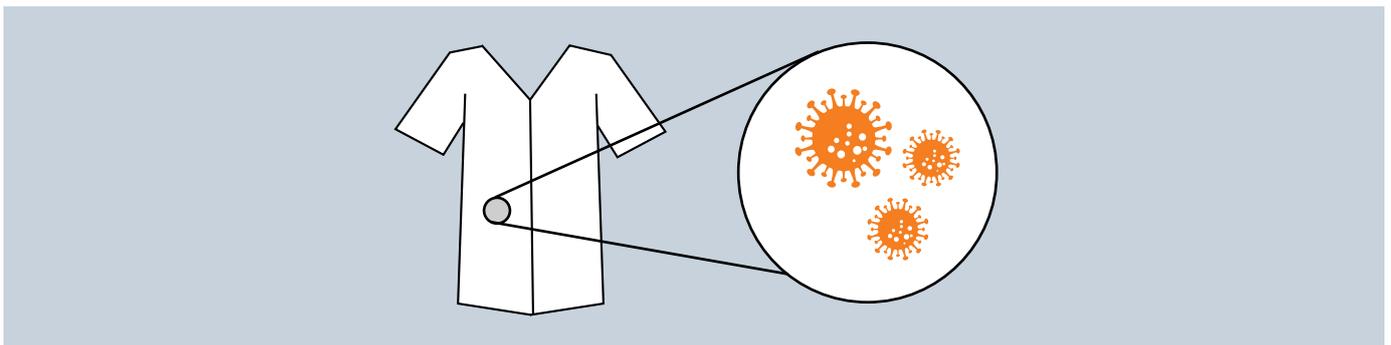


Polytex's full cycle solution for medical workwear management:

A crucial step in the fight against spread of infection

Medical Workwear Contamination

A growing body of evidence shows that medical workwear is commonly contaminated with micro-organisms that can cause infections or illnesses. It is well reported that micro-organisms are able to survive on surfaces, including textiles, for extended periods [1-8]. Consequently, textiles play an important role in the acquisition and transmission of pathogens in healthcare [9-15].



Specifically, medical workwear is a vehicle for cross-contamination and transmission of multi drug resistant organisms (MDROs) [15-28] as well as viruses that can survive for hours or days on surfaces. Workwear worn in the healthcare environment is likely to afford an ideal environment for pathogen growth.

The US Centers for Disease Control and Prevention (CDC) and other government agencies provide guidance for laundering contaminated textiles. Nevertheless, achieving optimal water temperature, drying time and dedicated process flow can be difficult to achieve in healthcare facilities, and nearly impossible in homes.

The US CDC recommends that contaminated laundry should be washed at water temperatures of at least 160°F (70°C), using 50e150 ppm of chlorine bleach to remove significant quantities of micro-organisms from grossly contaminated linen [29]. This may be possible in healthcare laundry services; however, most scrubs are washed at home where typical temperatures of domestic washing machines do not exceed 110°F (45° C) due to child safety laws to prevent scalding and burns.

One study reports that 39% of nurses' uniforms laundered at home were contaminated with MDROs at the beginning of the work shift [16,17,22,25]. Another report indicated that 100% of nurses' gowns were contaminated within the first day of use [22].

There is clear evidence that contaminated medical workwear poses a significant workplace safety issue.

Controlling the Spread of Infection

Globally, many healthcare facilities work to ensure consistent hygiene levels by industrially laundering scrubs for all healthcare staff. The USA falls behind many other countries, especially those in Europe, as only isolation gowns and apparel worn in the operating room are industrially laundered by the healthcare facility.

Efforts in controlling the spread of infection related to contaminated HCW's apparel are not complete with effective laundering alone. As Fijan et al. discovered, no procedure is foolproof, and even if the laundering process itself produces nearly sterile garments, post laundering practices (e.g. sorting, folding and stacking) can recontaminate clean laundry unless a high level of vigilance is maintained during these procedures [30-32].

The correct hygienic management of hospital textiles conditions as defined in the U.S. recommendations of C.D.C. and Healthcare Infection control practices Advisory Committee [5] include the following measures:

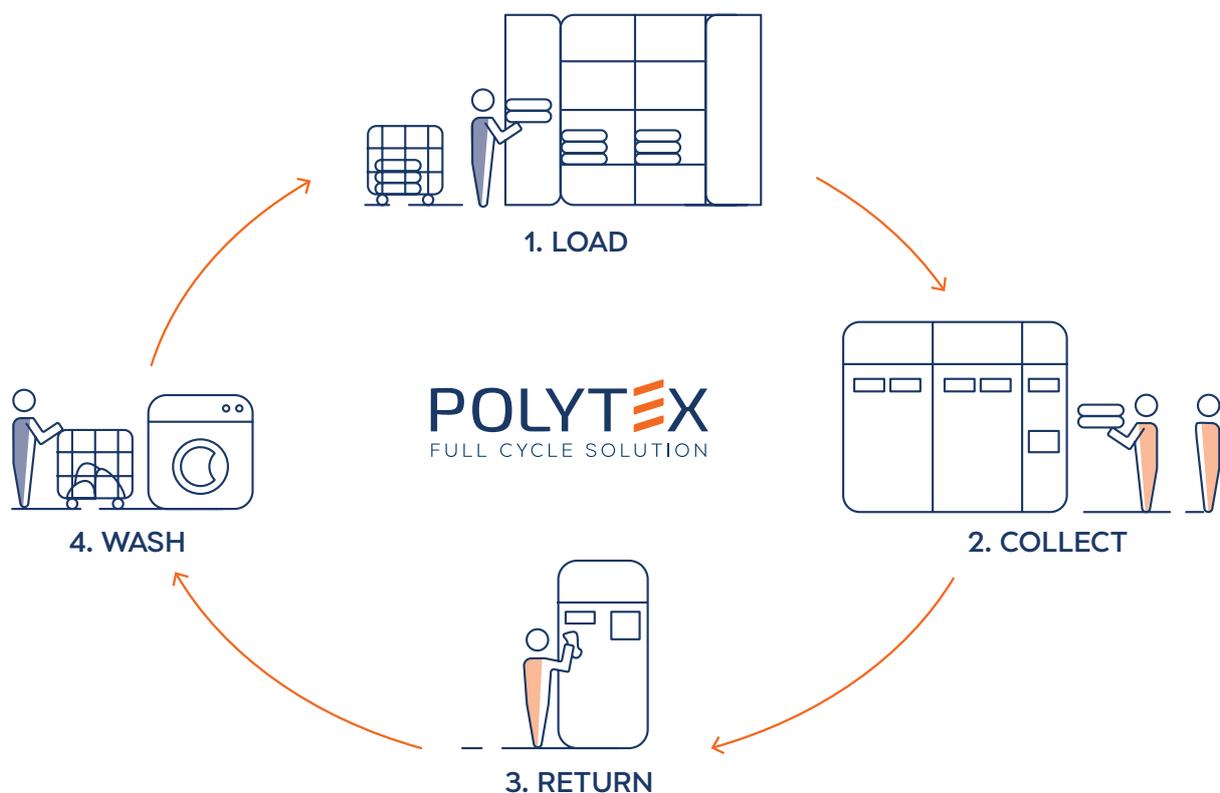
1. Correct collecting and sorting of contaminated hospital textiles;
2. Correct transporting of contaminated hospital textiles;
3. Correct division of clean and unclean area in laundry;
4. Correct sorting, laundering, drying and ironing of hospital textiles;
5. Correct transport and storage of clean hospital textiles.

With today's COVID-19 outbreak, not only are more hospitals providing scrub laundering for HCW's who care for COVID-19 patients but they are also looking to create strategically located personal protective equipment (PPE) distribution centers in house to quickly deliver equipment, including medical workwear.

Polytex Full Cycle Solution

Polytex provides a complete solution to address these needs, with reliable, industry-proven automated solutions for workwear collection and dispensing that reduce the likelihood of spreading disease, with over 2000 installed machines worldwide.

Polytex's automated system promotes higher standards of hygiene in medical facilities by supporting the entire workwear laundry lifecycle with a range of automated machines backed by centralized cloud management and monitoring applications.



The system minimizes the risk of infection from contaminated items of clothing and prevents further germ and virus transmission:

- **Effective infection prevention:** A fully automated closed system enables hands-free dispensing and collecting of uniforms. Garments are kept in a clean environment and delivered individually.
- **24/7 availability:** Easy access and constant availability encourage frequent replacement of workwear, with no need for dedicated manpower to handle distribution.
- **Flexible deployment:** Polytex systems can be installed at strategic locations within the medical facility for fast, on-demand workwear supply, while avoiding unnecessary congregation and crowding together of medical personnel.

Adapting solutions such as Polytex's, is an important and crucial step in the fight against spread of infection.

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