HEALTH PROTECTIVE TEXTILES: BRIDGING THE DISPOSABLE/REUSABLE DIVIDE
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OBJECTIVES

• to determine and create the most effective, multi-functional (biocidal and water-repellent) materials for medical applications;
• to quantitatively assess the economic and environmental impact and risk reduction of using the new multi-functional textiles in the healthcare industry;
• to determine the social and psychological factors affecting the acceptance of the new technology by healthcare workers; and
• to educate healthcare workers, the public, and students about the consequences of using disposable and reusable materials, and about the potential benefits of employing new materials and technologies.

PROGRESS

• Has developed several biocidal technologies for medical use textiles
• Established connections with healthcare facilities, laundry provider associations, and medical device suppliers
• Conducted surveys with healthcare workers on use of disposable and reusable textiles and antibacterial fabrics
• Conducted a separate surveys with hospital administrators on acceptance of both disposable and reusable textiles
• Studied government regulations, international standards, political and economic contexts
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PLANNED ACTIVITIES

• To continue development of novel materials for better protection for healthcare workers
• To complete a study on medical textiles waste disposal technologies and waste reduction processes
• To complete life cycle assessment of both biocidal reusable and disposable fabrics
• Marketing and economic analysis of reusable and disposable textiles
• Market study of reusable and disposable textiles in developing and developed countries
• To work with manufacturers and laundry providers on reduction of medical wastes and waste water

IMPACTS

• Improved protection to healthcare workers and patients
• Improved healthcare quality and reduced cost and solid waste from healthcare service
• Promotion of new materials that are environmentally friendly, biologically protective and multi-functional
• Environmentally friendly laundry services for both woven and nonwoven materials
• Environmentally friendly user pattern of medical textiles
• Use of environmentally sustainable materials