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Functional Shawl Apron

Sherry Schofield, Ph.D., Florida State University

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The designer was approached by the Senior Care Institute, a group of women who created a non-profit organization developed to assist institutionalized patients and their loved ones. The Institute was looking for design guidance on developing a pattern for a scarf with multiple pockets that would be worn by individuals in skilled nursing facilities to assist in organizing and keeping safe their personal items as well as providing hand warmth. Their intent is to distribute the pattern to charitable organizations throughout the country so that scarves could be made for individuals in skilled nursing facilities throughout the country. They gave me a sketch of what they were thinking and sent me on my way. My goal was to create a garment that not only met the needs of storage and hand warmth, as requested by the Institute, but also to provide a garment that was so much more than just a scarf. The designer accepted the challenge, not only to help this deserving population, but as an extension of her research on serviceable garments that explore the synergies of apparel embedded with functionality that greatly enhances the uses of the end product.

There are currently around 15,500 skilled nursing facilities in the United States providing care for more than 1.35 million people in the United States who need some form of assistance (Laes-Kushner, 2018). To assess what is important to incorporate, or not incorporate, into a "scarf" for patients in these types of facilities, it is first important to more fully understand this diverse population. Almost half of all people who live in SNF's are 85 years or older, 72% are women, over 80% need help with 3 or more daily activities, about 67% have problems with mobility so need to use a walker or wheelchair, and more than 33% have difficulty with hearing or seeing (HealthInAging.org). Nearly three-quarters (70.8 %) of these residents have some form of short-term or long-term memory loss, have problems with orientation, resulting in residents wandering throughout the facility and appropriating or mishandling other's personal items (Krauss & Altman, 2004). Arthritis is one of the most common chronic diseases, affecting 50% of individuals over the age of 65, and limiting their ability to walk, bend and kneel ("Healthy Aging Newsletter," n.d.). Depending on the severity of this disability, it can also limit the ability to complete relatively simple tasks such as fastening buttons. As the musculoskeletal system shifts with age, the back tends to curve forward resulting in an increasingly stooped posture ("Healthy Aging Newsletter," n.d.). The skin becomes thinner, more fragile, and there is a decrease in the amount of fat below the skin, making it harder to stay warm ("Aging changes in vital signs," n.d.).

With the multitude of above design criteria/restrictions in mind, the ideation of the garment began. The initial consideration was for fabric fabrication. To provide support for the apron, it was determined that a dual layer garment was required. In addition, by having the garment constructed with two layers, the pockets can be applied to a single layer for ease in construction, then sandwiched afterwards. A fleece inner layer was determined to be optimal to

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provide warmth and softness to the wearer, and a sturdy woven exterior layer. Both of these fabrics are durable and washable, requirements for a garment that will require frequent laundering. Although for this prototype a polyester sateen suiting was chosen for the exterior layer, for many clients a waterproof exterior layer might be better so that soils can be easily wiped away minimizing the number of required washings.

The second concern was the overall shape. Although a long rectangular shape with 2 button closures and a curved neckline was requested, the concern was that it would not stay in place during ambulation, particularly once the pockets were weighted. As such, it was determined that a more solid shape that would fit over the head would be preferential and would eliminate the shifting of sides associated with a scarf. To counter the effects of the weight in the front pockets, a curved and cupped shawl shape was added to the back to provide stability for the garment and add warmth for the client. Since many of the clients may be wheelchair bound, the length of the shawl did not extend too deep as to interfere. For shorter clients, the shawl could fall over the back of the wheelchair, so that sores would not form from leaning against an additional seam in that area. For those still able to walk, particularly if the client is walking with a curved posture, an adjustable waist belt was added to secure keep the apron secure next to the body. The solid front also eliminated the need for closures, which might be difficult for many of the clients to close easily.

Once the overall shape was determined, pockets and security of items within the pockets were considered. Although cargo pockets or accordion pleated pockets would provide increased capacity for holding personal items, they require a secured flap which could be difficult for the client, plus they are more difficult to construct for novice sewers often available in charitable organizations. A deep welt, created with a fold in the fabric rather than an additional stitched welt, would provide the most pocket security while providing ease in construction. Two sets of these welts were applied, the upper with a 1½" welt, and the lower with a 2" welt. Flat patch pockets were applied below these flaps, aligning with the exterior edges of the apron as much as possible. The upper pocket did need to be stitched in place along its lower edge. Additional transparent patch pockets were applied to the upper portion of the apron for smaller items and name tag, which are often used to identify the clients by the staff. Additional stitching was added to bisect the larger pockets; placement could vary dependent on the needs of a specific end user. Finally, a kangaroo pocket was added near the hemline of the inner layer to provide warmth for the hands.

Once the two layers were completed, they were sandwiched together, inserting the waist belt, during the stitching. Top stitching was added around the exterior to further control the layers. Finally, the layers were further controlled by re-stitching over the welt folds. The finished seven-pocket, multi-layer, customizable shawl apron provides a highly functional garment with fabrication methods that can be completed by even the most novice sewer at a very reasonable cost. (See Figure 1.)



Figure 1. Functional Apron

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