**Background, Problem Statement and Goal Statement:**
Contact dermatitis is a common occupational skin disease, which has significant associated costs and impact on patient quality of life. Allergic contact dermatitis (ACD) presents as a delayed reaction occurring only after the skin has been sensitized to the allergen in question and typically develops over the course of 12-72 hours. ACD accounts for approximately 20% of occupational contact dermatitis. In healthcare workers, ACD is commonly seen in association with the use of medical exam gloves due to the presence of rubber accelerators. Allergen avoidance, following identification via patch testing, is the mainstay of allergic contact dermatitis treatment and prevention.

**Problem:** Patients diagnosed with allergic contact hand dermatitis (ACHD) to rubber accelerators face barriers to eliminating glove-related allergens. This may lead to multiple trials of various gloves, negatively impacting patients’ symptoms, quality of life, functionality, and work ability, thereby resulting in a significant personal and health system burden.

**Baseline Data:**
1. No structured approach for Dermatologists to promote adherence and advocate for the use of appropriate gloves in patients with ACHD related to gloves worn in the workplace.
2. An estimated majority of patients do not return after patch testing for follow up with a Dermatologist

**Aim:** 95% of ACHD patients are followed up after patch testing and are offered a structured approach to promote adherence regarding the use of appropriate gloves, thereby promoting allergen avoidance and aiding disease management.

**Process Assessment:** Project team reviewed literature and current best practices to develop a standard approach, a cross functional process map, and a cause and effect analysis to determine current process strengths and opportunities. Also, partnered with a glove vendor regarding glove availability.

**Collaboration & Communication Strategies:**
Physicians representing dermatology, occupational medicine and patch testing collaboratively developed a standard algorithm approach.

**Communication Approach:**
1. To ensure patient awareness of dermatology appointment follow up - rebook form was developed
2. Supporting patient advocacy - standard letter developed

**Improvement Selection and Implementation Plan:**

<table>
<thead>
<tr>
<th>Gaps</th>
<th>Intervention</th>
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<tbody>
<tr>
<td>Dermatologist- No standard approach to identifying appropriate gloves based on allergy</td>
<td>Developed an algorithm-patch testing identifies main allergens which then identifies appropriate gloves</td>
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<tr>
<td>Not all appropriate ACD patients post patch test are followed by a dermatologist</td>
<td>Develop a dermatology rebook form</td>
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<tr>
<td>No access to free-gloves</td>
<td>Partnered with a glove vendor-PIM to provide free gloves for patient trial</td>
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<tr>
<td>No Glove trial</td>
<td>All appropriate ACD patients will be offered a glove trial</td>
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<tr>
<td>Patients advocate without support</td>
<td>Developed a standard letter in E-clinician to support patient advocacy with employer</td>
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**Reinforce Ownership, Measurement, & Continuous Improvement:**
Sustaining improvement involves dermatologists employing a standard approach (patch testing, appointment follow up, and glove trial with patient advocacy) and measuring patient outcomes to track the impact of the intervention. To support dermatologists, the patch test referral guidelines will include a section on ACHD along with the algorithm.

**PDSA - Preliminary data indicated a Dermatology Life Quality Index and Hand Eczema Score Index improvement.** Subjectively, one patient noted that when he wore the provided appropriate gloves in the workplace, his ACHD cleared, but then quickly returned in the week he ran out of these gloves.

**Lessons Learned:**
- Gloved-induced ACHD requires education for the dermatologist, the patient, and the patient’s employer
- To the best of our knowledge, no such algorithm is currently available for dermatologists to efficiently select gloves, and avoid possible trials with multiple different gloves, for their patients with glove-induced ACHD
- Advocacy to help patients establish, and maintain, access to appropriate gloves in the work place has previously been absent