INTRODUCTION

Cancer Risk and Firefighters
- Previous studies show that firefighters (FFs) have an increased risk for certain cancers, compared to the general population.
- However, most research has focused on paid FFs
- Volunteer FFs, who make up the majority of the US fire service, are understudied

New Jersey Firefighter Cancer Assessment & Prevention Study (CAPS)
- CAPS is an integrated research program that focuses on assessing cancer risk and related risk factors in NJ volunteer FFs
- Partnership between academic researchers and the fire service
- Created in response to community concerns about cancer risk among members of a large, suburban volunteer fire department in NJ

Decontamination
- FFs should perform a decontamination process after a live fire response to clean off hazardous chemicals from their gear and bodies
  - This process is known as “decon” and can vary significantly between fire departments
  - Decon occurs both on-scene and at the fire station
  - Decon is an important cancer prevention strategy, since it removes carcinogens from FF’s bodies and gear
- The National Fire Protection Association (NFPA) sets standards for the selection, care, and maintenance of FF’s gear to reduce health and safety risks associated with the response-associated contamination

Figure 1. National Fire Protection Association (NFPA) Standard 1851 “Approaches for Addressing Specific Types of Contamination”

METHODS

Qualitative Research Approach
- Semi-structured interviews were conducted with a sample of volunteer fire departments across NJ
- Information Collected: Department membership, operations, decon procedures
- Sampling: NJ’s 21 counties were divided into 11 sampling regions, based on shared characteristics
  - One volunteer fire department was interviewed from each region.
  - Due to the COVID-19 pandemic, interviews were conducted remotely over WebEx by the CAPS Project Coordinator
- Interview were transcribed using Temi; transcripts were revised by the student research assistant
- Qualitative data analysis was conducted using Atlas.ti to identify shared themes and key phrases.

RESULTS

Table 1. Common Concerns and Themes Related to Decon Procedures in NJ Volunteer Fire Departments: Preliminary results from six CAPS interviews.

<table>
<thead>
<tr>
<th>DECON SOPs &amp; TRAINING</th>
<th>TURNOUT GEAR</th>
<th>FINANCIAL CONCERNS</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the departments had second sets of turnout gear for their active FFs</td>
<td>Department 4 &amp; 5 do not: Have extraction washers and dryers in every fire station</td>
<td>Departments 1, 2, 3, 4 &amp; 5 discussed the financial barrier to purchasing second sets of turnout gear for active FFs</td>
</tr>
<tr>
<td>Departments 1 &amp; 4 inspect and repair old gear so FFs can use them as second sets</td>
<td>Have FFs doff their gear on-site, bag it, and transport back to the station</td>
<td>Department 4 is in the process of repurposing an older vehicle into a mobile decon unit</td>
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<tr>
<td>Department 6 had showers installed in their station so FFs could “shower within the hour” following a response</td>
<td>Department 4 is in the process of repurposing an older vehicle into a mobile decon unit</td>
<td>Department 1 cited the high cost of extraction washers as the main reason they do not have one at their station</td>
</tr>
<tr>
<td>None of the departments include decon in their regular membership training</td>
<td>None of the departments have extraction washers and dryers in their station</td>
<td>Department 6 strives to fund annual physical exams for their active FFs, right now only available for incoming FFs</td>
</tr>
</tbody>
</table>

DISCUSSION & FUTURE DIRECTIONS

Key Findings: Decon Procedures Among NJ Volunteer Fire Dpts: 33% of department’s interview did not have an extraction washer at their fire station
- This presents a challenge for FFs who need to wash their turnout gear after a live fire response
- All department’s interviewed shared financial concerns over the resources needed to provide each FF with a second set of turnout gear and obtain other equipment needed for adequate decon
- None of the departments interviewed incorporate decon procedures into their regular membership training
- There is significant variation among NJ volunteer fire departments in terms of decon procedures

Future Directions
- The CAPS team will complete the remaining interviews, summarize key findings, and prepare reports to be shared with stakeholders at the local, state, and national level
- The CAPS team will also leverage the connections made through this interview project to enhance their network of NJ volunteer fire departments who may want to participate in future research
- Future research will further explore adherence and barriers to recommended decon procedures among volunteer FFs

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