Developing an Indigenous process to identify and respond to community fire safety and prevention knowledge that translates into a research framework

Prepared by:

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National Indigenous
Fire Safety Council Project

Projet du conseil national
autochtone de la sécurité-incendie

BC INJURY research and prevention unit

The British Columbia Injury Research and Prevention Unit (BCIRPU) was established by the Ministry of Health and the Minister's Injury Prevention Advisory Committee in August 1997. BCIRPU is housed within the Evidence to Innovation research theme at BC Children's Hospital (BCCH) and supported by the Provincial Health Services Authority (PHSA) and the University of British Columbia (UBC). BCIRPU's vision is *to be a leader in the production and transfer of injury prevention knowledge and the integration of evidence-based injury prevention practices into the daily lives of those at risk, those who care for them, and those with a mandate for public health and safety in British Columbia.*

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Preface

Developing an Indigenous process to identify and respond to community fire safety and prevention knowledge that translates into a research framework has been undertaken according to the direction of the National Indigenous Fire Safety Council (NIFSC) Leadership. This project, has been divided into two parts:

> Part 1 entailed the development of a framework with sufficient flexibility to be implemented at the community level according to the needs and capacity of each community.

> Part 2 entailed a review of the findings of Part 1 with the NIFSC Leadership and incorporating feedback into this report, and initiating the process of piloting the framework in two Indigenous communities, as available.

This report draws on data currently in place that were available for First Nations Populations on Reserve. There is a goal in moving beyond this current state and wherever possible by implementing new forms of data collection, drawing upon different data sources, and framing research questions that include Inuit and Métis populations and communities and First Nations residents off reserve.

A companion project is identifying and assessing evidence-based fire safety programming and resources appropriate for use in communities. These two projects together are intended to be used in a gap analysis of the current program menu offered by the NIFSC, and the development of a full toolkit for implementing fire safety programming in community.

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Introduction

Community-based fire research and knowledge generation offers useful insights into the challenges associated with conducting research, and ensuring that it generates both strong knowledge and evidence, and positive impacts in the communities where the research takes place. This depends on two important variables: the capacity to generate good information, and the extent to which information is understood and constructed as a two-way relationship that includes a set of responsibilities for both researchers and communities.

This project documented the process of gathering information regarding Indigenous community needs concerning fire safety knowledge and research needs. The overall purpose in gathering this knowledge was to inform a community process to advance fire safety and prevention in communities.

The goal of this project was to work closely with the National Indigenous Fire Safety Council (NIFSC) Leadership and key participants to create and implement a framework to inform the knowledge and research needs gathering process. It is anticipated that an Indigenous sensitized approach developed by communities will create better community-level decisions and results, specific to fire safety and prevention knowledge and translation.

Under O.C.A.P. principles (ownership, control, access, possession), all data from this study belong to the NIFSC, to be shared at their discretion.

The Framework

The Fire Safety and Prevention Knowledge and Translation Framework guides the process to identify and respond to Indigenous community fire service safety and prevention needs (Figure 1).
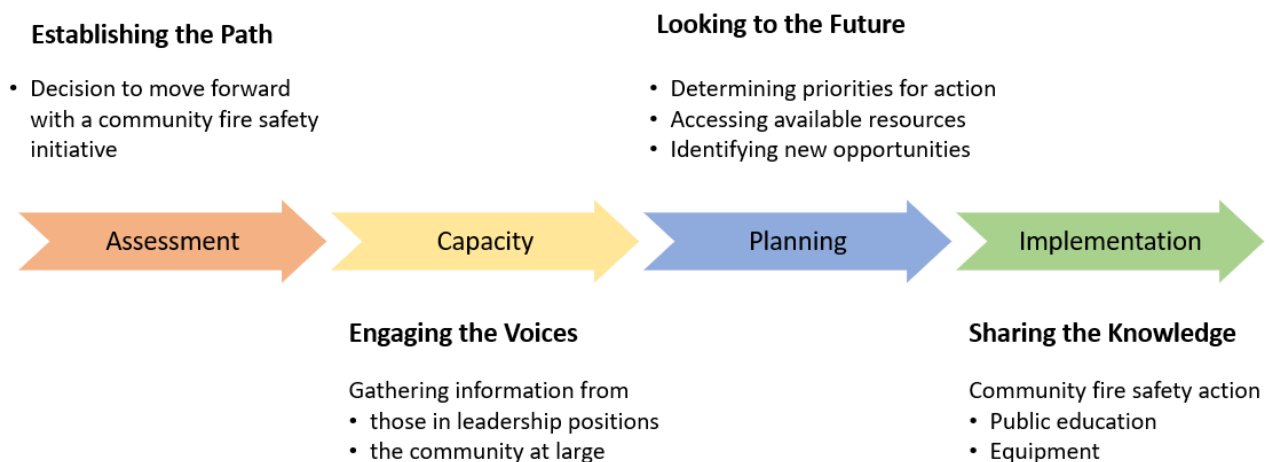

Figure 1: Fire Safety and Prevention Knowledge and Translation Framework

- Establishing the Path (Assessment), looks to understand the existing situation, highlighting both issues and positive factors, and the related behaviours regarding fire safety in community, prioritize problems, and assess risk and protective factors as foundational situational knowledge. Establishing the Path also describes the ways in which the situational knowledge will be used to engage and integrate communities in the process ahead. Knowledge gathered (by Managers, Directors, Fire Chiefs, Operations and Maintenance of programs, etc.) at this stage will come from the Community Leadership, in their decision to move forward with a community fire safety initiative.

- Engaging the Voices (Capacity), looks to engage community stakeholders, understand community priorities, develop and strengthen prevention capacity, and raise community awareness. Knowledge gathered through the use of a community survey or community gathering, with refreshments or a meal, will come from those in leadership positions and from the community at large.

- Looking to the Future (Planning), looks at determining priorities for action, accessing available resources and management positions, and identifying new opportunities.

- Sharing the Knowledge (Implementation), looks to develop a community fire safety plan, and its key components: public education and equipment. Inherent in the implementation is the development of a sustainability plan to ensure sufficient funding, and an evaluation to monitor how well the fire safety plan is functioning.

Potential target audiences

Potential target audiences in community include both those in leadership positions and the community members at large.

Leadership:
- Chief and Council (e.g., Senior Administrative Officer, Council Technical Expert)

Key Participants:
- Fire Prevention Officer / Fire Chief
- Emergency Response Network
- Housing (e.g., Manager / Director for Operations and Maintenance)
- Insurance Agency
- Police Chief / RCMP
- Justice
- Others, as identified by the community

Community at large:
- Local champions
- Health centre
- Recreation Youth Workers
- Schools
- Elders
- Parents
- Others, as identified by the community

Tools

Tools developed for gathering information on fire and burns concerns at the community level, as well as fire and burns safety resources, are provided in Appendix A:

- Draft Fire Safety Key Participant Interview Guide
- Draft Fire Safety Leadership Survey
- Draft Fire Safety Community Survey

A template for a community presentation is anticipated to be developed in Part 2 of this project.

Further, it was identified that a Safety Plan should be developed in community prior to implementing data collection. Participants may have experienced trauma or loss from fire or burns, and may need support if feeling distressed during this information gathering process.

Ways of Gathering Information

Several ways of gathering fire safety information in community were identified, including:

- Key Participant Interviews
- Community Gatherings
- Online survey via websites, distribution lists
- Hardcopy surveys via mailout, public locations, community gatherings

Key participant interviews and communities gathering, although more resource intensive, were considered to be the more successful means of information gathering rather than survey. Challenges with surveys include low response rates due to survey fatigue, and limited internet access in some communities. The option to enter a draw upon survey completion is highly encouraged to increase the response rate.

The suggested format for community gatherings is to bring the community together to introduce the project, including the goals and the importance of fire safety. Following an open discussion, everyone gathered is invited to fill out a survey (hardcopy or online) prior to serving refreshments or a meal. Small group discussions could also be utilized to gather information while sharing a meal together. Food is an important part of gatherings, offering a way to continue the dialogue "at the same table, as equals", and shows respect for those in attendance.

Development Process

This project adapted a framework previously developed for engaging with First Nations communities in community-based and -paced research (Pike, 2019):

Establishing the Path: Working with the NIFSC Leadership to establish the foundation and process
(Assessment)

Engaging the Voices: (Capacity)	Listening to Key Participants[1] on their perspectives for advancing community fire safety
Looking to the Future: (Planning)	Describing and demonstrating an Indigenous-sensitized framework and approach for communities to create knowledge- and research-informed decisions that advance fire safety and prevention
Sharing the Knowledge: (Implementation)	Summarizing and documenting the Indigenous framework and approach to share with Indigenous communities and others as determine by the NIFSC Leadership

The process included the development of information gathering tools with input by the NIFSC research team members and key participants, both in terms of the content and the potential delivery methods to engage with communities. A modified-Delphi approach was taken, developing and refining the tools via a series of steps.

Establishing the Path:
- The BCIRPU research team members drafted an interview guide and consent form to be used for the Key Participant study.
- The BCIRPU research team presented to the NIFSC leadership regarding the proposed approach to the project and the drafted materials.
- The NIFSC research team members reviewed and provided feedback on the draft key participant interview guide and consent form.
- The NIFSC research team identified potential key participants.

Engaging the Voices:
- The BCIRPU research team mounted the draft community fire safety survey and the key participant questionnaire as online surveys using the secure REDCap platform at the BC Children's Hospital Research Institute.
- Ethics approval was attained for the Key Participant project (UBC C&W Research Ethics Board: H21-03082).
- The BCIRPU research team reached out to the potential key participants by email, inviting their participation, and scheduled Zoom meetings / telephone calls with those who responded.
- Each Key Participant received electronic copies of the consent form, the draft community fire safety survey, and the key participant questionnaire, as well as links to the online survey and online questionnaire, to review, complete as desired, and provide feedback on.
- Key participants were invited to (Figure 2):
  - Assessment 1: review and/or complete the online draft community fire safety survey from a community perspective;
  - Assessment 2: review and/or complete the online questionnaire about the draft community fire safety survey; and
  - Feedback: participant in a secure Zoom / telephone interview to review the draft community fire safety survey and provide feedback, as a group session or an individual call.

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[1] The commonly used research term "key informant" was changed to "key participant" at the direction of a NIFSC research team member, as it was considered to be more acceptable in an Indigenous context.

- o Endorse: key participants will be invited to review and provide feedback on this report (Part 2).
- Information gathered at the key participant interviews was compiled and used to further develop the draft community fire safety survey, and to further envision additional tools.

1. Complete the Community Fire Safety Survey
- Consent to your participation in the Community Fire Safety Survey Project
- Consult with your organization or community members about fire safety and burn prevention
- You are only expected to answer the questions for which you have information

3. Participate in a Zoom Feedback Meeting
- Discuss your review and provide feedback on the Community Fire Safety Survey
- Meet individually or in a group session with other participants

Assessment 1 → **Assessment 2** → **Feedback** → **Endorse**

2. Complete the Community Fire Safety Survey Review
- Are the questions in the Community Fire Safety Survey the right questions to ask?
- Would you change the questions or the answer options?
- Are there new questions that should be added?

4. Review and Finalize Community Fire Safety Survey
- Consult with your organization or community members to review and provide feedback on the final draft of Community Fire Safety Survey
- Consult with your organization or community members endorse the final Community Fire Safety Survey
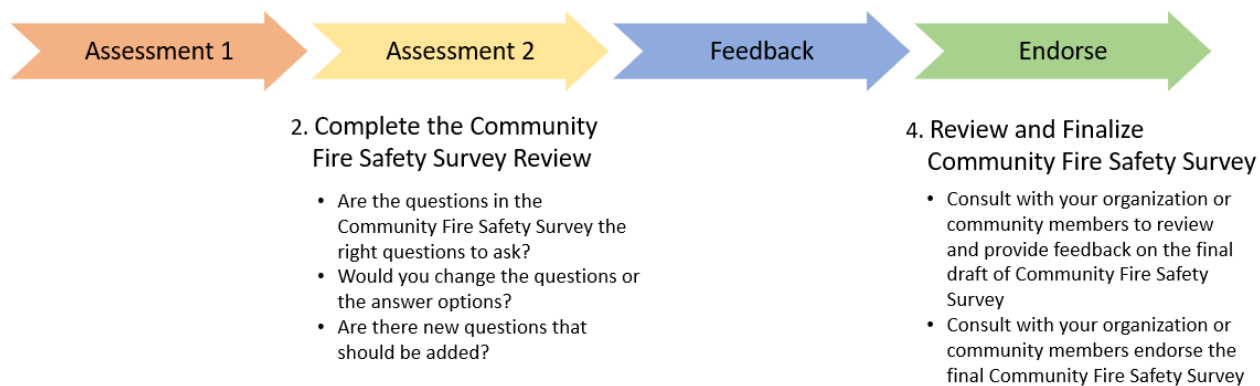
Figure 2: Key Participant study

The first draft of the key participant interview guide was based upon the needs and areas of concern identified by the NISFC leadership using qualitative research methods. This research is situated within the constructivist paradigm (Ponterotto, 2005), and our methodology was phenomenography.This research method is utilized to understand human experience and awareness. It aims to understand the collective meaning of experience from the target group as a whole, and to describe the world as it is understood, with the results focusing on the descriptive level of participant understanding (Barnard, McCosker, & Gerber, 1999).

To better understand the fire safety topics that may be of concern to communities, the following resources were consulted:
- First Nations Emergency Services Society of British Columbia https://www.fness.bc.ca/core-programs/fire-services/tier-1-home-fire-protection

- British Columbia FireSmart https://firesmartbc.ca/resource-types/indigenous-communities/

- Government of Canada FireSmart call for applications: 2021 to 2022 https://www.sac-isc.gc.ca/eng/1565705092824/1565705114188

Three sessions with potential key participants were scheduled. Participants had the opportunity to ask questions about the project as a whole, and about their participation specifically. They were asked to provide verbal consent at the start of the session, and to share guidance on what to ask communities regarding fire safety, who in the communities to ask, and how to ask them.

- The first session was an information session only, held over Zoom. The potential participant (and a colleague) learned more about the study and gained a deeper understanding of the broader scope of the project. This person was unable to participate further in the research project due to time constraints.
- The second session was held over Zoom, with two key participants engaging in the interview and providing information and feedback. One of the two participants also provided feedback on the draft community fire safety survey via email.
- The third session was held by telephone with one key participant engaged in the interview and providing information and feedback.

Overall, Key Participants were asked:
(1) Which community members should be approached to gather insight on fire and burns safety prevention and practices.
(2) The questions these people should be asked concerning this topic.
(3) Ways in which the questions should be structured and asked.

Examples include: "Are the questions in the draft community survey the right questions to ask?", "Would you change the questions or the answer options?", "Are there new questions that should be added?". Key Participants were encouraged to provide feedback on any of the survey questions, even if they did not directly relate to their involvement in or knowledge of fire and burns safety and prevention.

In addition to the information provided regarding gathering fire and burns safety and prevention information from the community, key participants highlighted the following challenges and information.

Fire departments and funding:
- There is a lack of funding structure.
- Fire funding levels by Indigenous Services Canada are 30-years old.
- Flex funding can be spent elsewhere.
- All communities are facing funding issues; small communities will have fewer people wearing more hats.
- A restructure of fire protection program by Indigenous Services Canada is needed from the national level down.
- The list of what is needed is endless, from the basic level of public education resources to the higher end of fire chief, fire hall, fire truck.
- Public education: "Remembering when" for seniors; youth fire prevention programs; home safety inspections (by invitation only). Note: "Learn not to burn" is a free downloadable resource for teachers.
- Current need in communities include: upgrading fire departments (small budget); needing personal protective gear at $4K per set / $13K including self-contained breathing apparatus (need to be replaced every 10 years; using older gear if not damaged). Fire Trucks scheduled to be replaced every 20 years at $589K, yet some trucks have seen little use in 20 years.

- Need to ramp up equipment & gear to meet standards.
- Provide more training for fire officers; more practical training for firefighters; need the support of Community Councils and senior administrative officers.

Community priorities:
- Community priorities generally include: housing, health, education, etc.
- How priorities are established can depend on the topic.
- Many communities have emergency response plans/protocol and 5-10 year strategic plans created at the Band level.
- There are too many barriers to acting on community priorities, including funding. Some barriers may be political.
- Senior Administration Officer and Community Council are responsible for the Fire Department, yet often do not pass important information to their Fire Department. Fire Chiefs now communicate directly with Fire Marshall.
- More Indigenous people are needed in regulatory positions.

Community buy-in:
- Community buy-in is imperative. Show a genuine interest in the community – regional offices need to get out into communities, attend events, supply runs for seniors (e.g., char fishing), connect with elders in community centers, fire staff need to volunteer at events. Engage in Fire Prevention Week activities with open house, BBQ, fire prevention information, volunteers checking emergency exists, etc.
- The volunteer firefighting program is very important. Spend with volunteer firefighters; set them up with proper equipment and training. Aim for a quick response to issues, such as fixing broken down trucks.
- Students taking firefighting courses may need support. It can be a difficult program for volunteers. Language barriers – both for reading and writing – have been identified. One jurisdiction implemented real-time translations for every course, increases both interest in the program, and final course marks.
- Often, members do not want to leave the community for training. In-community training can increase interest among the younger generation to join the Fire Department.
- On-the-job training brings high school graduates into a 3-year program.
- Inspections in community is a big program, typically for businesses, hospitals, schools, daycares.
- Youth fire prevention program – arson investigations can identify youth at risk and inform intervention programs. The intervention team can include representation from many agencies: RCMP, school board, social services, etc.

Review Process

Key participants, including NIFSC Board members, were provided copies of the Part 1 report for review. Feedback was collected and integrated into this report.

Initiating the Pilot Project

NIFSC Leadership initiated efforts to engage with one or two communities to pilot the framework as presented in this report. The First Nations Technical Services Advisory Group was contacted for recommendations of potential pilot communities.

Another source made the following recommendations with regards to pilot communities:

Alberta:

- Treaty 6: Maskwacis Samson Cree Nation https://www.samsoncree.com/, or Paul First Nation https://pfn607.wixsite.com/my-site
- Treaty 7: Ask which of their Bands would be interested https://www.treaty7.org/ (G4, Wesley First Nation, Chiniki First Nation, Bearspaw First Nation, Tsuut'ina First Nation, Blackfoot Confederacy, Piikani First Nation, Siksika First Nation, Blood Tribe)
- Treaty 8: Bigstone Cree Nation https://www.bigstone.ca/, or one of the Athabasca Tribal Council Bands https://www.atcfn.ca/ (Athabasca Chipewyan First Nation, Chipewyan Prairie First Nation, Fort McMurray 468 First Nation, Fort McKay First Nation, Mikisew Cree First Nation)

Saskatchewan:

- Battlefords Tribal Council http://www.igr.ca/btc.html

Next Steps

Next steps for piloting the Fire Safety and Prevention Knowledge and Translation Framework:

- Review the Fire Safety and Prevention Knowledge and Translation Framework with the new NIFSC Board members.
- Seek additional funding to support pilot project activities.
- Engage First Nations communities to participate in the pilot activities.

References

Barnard, A., McCosker, H., Gerber, R. (1999). Phenomenography: A qualitative research approach for exploring understanding in health care. *Qualitative Health Research, 9*(2), 212-226.

Pike, I. (2019) Akwesasne Mohawk First Nation Community Meeting – VOICES – The voices of children and youth: Community Injury Prevention through Visual Storytelling and Intervention (VOICES). Akwesasne Mohawk First Nation, Akwesasne, ON. Aug 21-23, 2019.

Ponterotto, J. G. (2005). Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *Journal of counseling psychology*, *52*(2), 126.

Appendix A: Draft Fire Safety Community Tools

Draft Fire Safety Key Participant Interview Guide

We are gathering information to learn about the community fire safety priorities, resources, and needs. If you have experienced trauma from fire or burns, you may find it difficult to participate in this interview.

We want to talk with you today about learning about fire and burns within the community.

Who can share knowledge about fire and burn prevention, response, and/or risk? These might include community members working in schools or healthcare, elders or other community champions.
- Fire or burn prevention
- Fire response
- Residential fires or burns
- Wildfires and prescription burns
- Fires or burns among older adults, children and youth
- Fires or burns at school or work

Are there any other fire safety topics that should be considered, or community members consulted?

Who can share knowledge about resources for fire or burns safety, such as what is available to fight house fires or wildfires, public safety campaigns, or rehabilitation requirements when a house burns down?

Who can tell us about fire safety resources that are needed?

What are the most effective ways to gather information from the community?
- Previous surveys / existing information (as available)
- Community gatherings (Sharing Circle, Storytelling, etc.)
- Online survey
- Printed survey

Are there other ways to gather information from the community?

Continue with Fire Safety Leadership Survey questions.

We are gathering information to learn about the community fire safety priorities, resources, and needs. If you have experienced trauma from fire or burns, you may find it difficult to complete this survey.

Have you, or other community members, experienced or talked about fire safety or burn prevention concerns for the community?
- o Yes
- o No
- o Don't remember

Does the community have a process to determine or create general health and safety priorities, such as responding to extreme weather or addressing COVID-19 safety measures?
- o Yes
- o No
- o Not sure

How does the community establish health and safety priorities?
[open text response]

Are there known issues to identifying community priorities, or barriers to acting on community priorities?
[open text response]

Is fire and burns safety and prevention one of the topics the community has discussed?
- o Yes
- o No
- o Not sure

If yes, where or when has this been discussed?
[open text response]

What resources are available to address fire or burns situations?
- o Career Fire Services within community
- o Volunteer Fire Services within community
- o Combination Career/Volunteer within community
- o Outside Fire Services from neighbouring municipalities/regions
- o Ambulance / Paramedics within community
- o Outside Ambulance / Paramedics from neighbouring municipalities/regions
- o Health Services
- o Community Fire Safety Programs
- o Youth Groups (such as Junior Fire Brigade, Cub Scouts, Girl Guides)
- o Other: [open text response]

If the community receives services from neighbouring municipalities/regions, what is the average response time?
[open text response]

Are you aware of any community fire or burn safety or prevention programs?
- o Yes
- o No
- o Not sure

If yes, please describe these programs:
[open text response]

Which settings pose the most risk for injuries or death due to fire or burns?
Please rank the top three settings of concern:

Setting # 1 – dropdown list   Dropdown list:
Setting #2 – dropdown list   • Home
Setting #3 – dropdown list   • School
                                     • Work
                                     • Outdoors within community
                                     • Areas surrounding the community
                                     • On the land (hunting, gathering, fishing)
                                     • During ceremonies

Are there other settings you believe are high risk for fire and burns?
[open text response]

Which types of fire or burn incidents are the biggest issues?
Please rank the top three types:

Type # 1 – dropdown list   Dropdown list:
Type #2 – dropdown list   • House fires
Type #3 – dropdown list   • Wildfires
                                     • Cooking indoors
                                     • Cooking outdoors
                                     • Arson
                                     • Fires/burns related to substance use

Are there other types of fire or burn incidents in the community?
[open text response]

What are the major causes of fires in community?
[open text response]

Who are most at risk for injuries or death from fire or burns?
Please rank the top three groups of concern:

        Group # 1 – dropdown list   Dropdown list:
        Group #2 – dropdown list

- Ages <5 years
- Ages 5-12 years
- Ages 13-17 years
- Ages 18-30 years
- Ages 30-55 years
- Ages 56-69 years
- Ages 70+ years
- Elders
- Those experiencing a disability
  (such as physical, mental health, or emotional challenges)

Group #3 – dropdown list

Are there other people who are at risk for injuries or death from fire or burns, such as those in certain occupations or practices?
[open text response]

What are the main risks for fire or burns in the community?
[open text response]

What should be done to reduce injuries and/or deaths from fires and burns in the community?
[open text response]

We are gathering information to learn about the community fire safety priorities, resources, and needs. If you have experienced trauma from fire or burns, you may find it difficult to complete this survey.

Have you, or other community members, experienced or talked about fire safety or burn prevention concerns for the community?
- o   Yes
- o   No
- o   Don't remember

Which settings pose the most risk for injuries or death due to fire or burns?
Please rank the top three settings of concern:

Setting # 1 – dropdown list	Dropdown list:
Setting #2 – dropdown list	• Home
Setting #3 – dropdown list	• School
	• Work
	• Outdoors within community
	• Areas surrounding the community
	• On the land (hunting, gathering, fishing)
	• During ceremonies

Are there other settings you believe are high risk for fire and burns?
[open text response]

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Type # 1 – dropdown list	Dropdown list:
Type #2 – dropdown list	• House fires
Type #3 – dropdown list	• Wildfires
	• Cooking indoors
	• Cooking outdoors
	• Arson
	• Fires/burns related to substance use

Are there other types of fire or burn incidents in the community?
[open text response]

What are the major causes of fires in community?
[open text response]

Who are most at risk for injuries or death from fire or burns?
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      Group # 1 – dropdown list   Dropdown list:
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- Ages 18-30 years
- Ages 30-55 years
- Ages 56-69 years
- Ages 70+ years
- Elders
- Those experiencing a disability
  (such as physical, mental health, or emotional challenges)

Are there other people who are at risk for injuries or death from fire or burns, such as those in certain occupations or practices?
[open text response]

What are the main risks for fire or burns in the community?
[open text response]

Can you tell us about a fire or burn situation that occurred in the community, and how it was handled?
Who was involved?
[open text response]

If a similar fire or burn situation was to happen again, would you like to see something done differently in terms of how it was handled?
- o Yes
- o No
- o Not sure

If yes, what would you change?
[open text response]

What should be done to reduce injuries and/or deaths from fires and burns in the community?
[open text response]

Are you aware of any fire or burn safety or prevention programs?
- o Yes
- o No
- o Not sure

If yes, please describe the fire or burn safety or prevention programs in the community:
[open text response]

Does the Fire Department do Fire Prevention Week activities in the community?
- o Yes
- o No
- o Not sure

Have you every had a home visit from the Fire Department?
- o Yes
- o No
- o Not sure

Do you know the phone number for the community fire department?
- o Yes
- o No
- o Unsure

Thank you for participating in this work!