

Minnesota Youth-Set Fires

2011-2015



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Acknowledgements

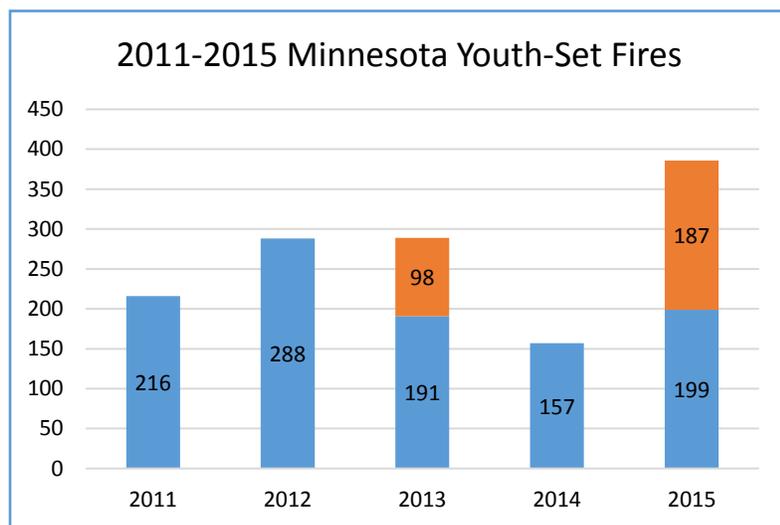
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Report purpose

Since 1989, the Minnesota Department of Public Safety's State Fire Marshal Division has compiled and published an annual report based on data reported by Minnesota fire departments. The report includes a detailed exploration of fire causes, casualties, service calls, property loss and trends. These data are collected from 99 percent of individual fire departments (as of 2015) in the state through the Minnesota Fire Incident Reporting System (MFIRS).

Like other fire causes, youth firesetting activity is traditionally underreported. In some cases a youth-set fire does not result in a fire department response; therefore, it is not included in the MFIRS data. For example, if the police are called to an incident where a child started a fire, but the fire is out, the fire department may not be alerted. Schools often do not report a fire if there is minimal damage. If a parent finds that their child lit a fire and were able to extinguish it, they may not alert the fire department. In these cases, the officer or caregiver can call on the Minnesota Youth Fire Intervention Team.



During the years of 2011 and 2015, Minnesota experienced 1,051 youth-set fires reported by fire departments. Narrative keyword searches conducted in 2013 and 2015 revealed a potential for 98 additional youth-set fires in 2013 and 187 in 2015. Although this chart may seem to indicate an increase in youth-set fires, they may simply be reported more often due to the increased attention paid to the incidence of youth-set fires.

The blue bars above represent the number of youth-set fires reported by age or by the ignition factor of "playing with ignition source" in the National Fire Incident Reporting System. The orange extensions refer to the number identified as youth-set fires using narrative keyword searches.

The purpose for identifying these children is to offer intervention services so that they will learn the dangers of setting fires and stop the behavior. Minnesota has a statewide network of regional youth fire intervention specialists. When a child is referred to one of the regions, the regional program manager initiates contact with the family. A youth fire intervention specialist visits with the family and uses a standard assessment tool to determine the child's risk level of continuing the behavior. High-risk children will often be referred to mental health care. Low-risk children may simply need an education intervention consisting of intensive fire science, prevention and safety topics. Even children who start cooking, smoking or fireworks fires will benefit from fire education.

Reasons for youth-set fires

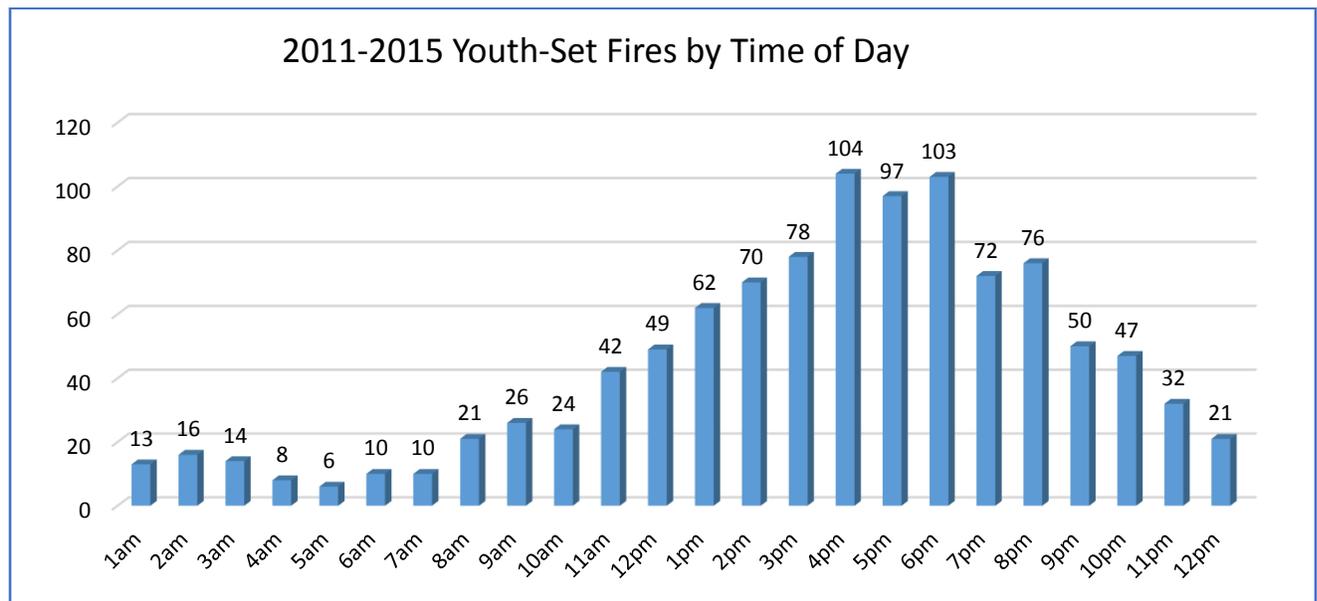
Some children who start fires are seeking attention. Other children may have impulse control issues, trauma history or abusive living situations. These children need more assistance than simply fire education. Mental health professionals can often assist children in managing the disorders affecting impulse control. If a child is lighting fires as a form of maladaptive coping strategies and is left untreated, the behavior will continue and possibly escalate throughout their lifetime, meaning they will start fires later in life that are considered arson, according to Dr. Dian Williams, president and founder of the Center for Arson Research. Social services can help to remedy abusive living situations.

Minnesota youth-set fire data 2011-2015

During the five-year period between 2011 and 2015, Minnesota fire departments reported 1,051 fires as “playing with heat source” or “age as a factor.” The following charts and graphs depict the patterns and demographics of these fires.

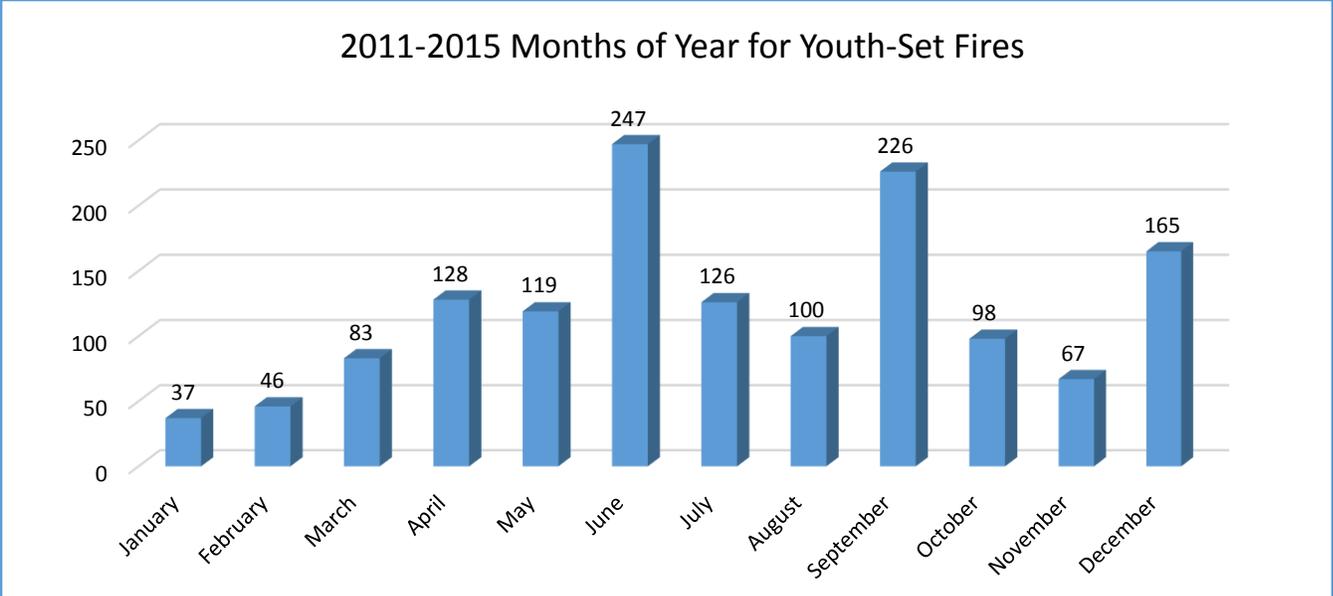
Time of day

Most children start fires when they are unsupervised and have access to ignition devices such as lighters or matches. Other common factors involved in youth firesetting are children’s limited understanding of fire science and the access to media inappropriately representing fire. This chart confirms that most youth-set fires occur between the hours of 4 p.m. and 6 p.m. This is after school when children are likely to be unsupervised and possibly hanging out with friends.



Month of the year

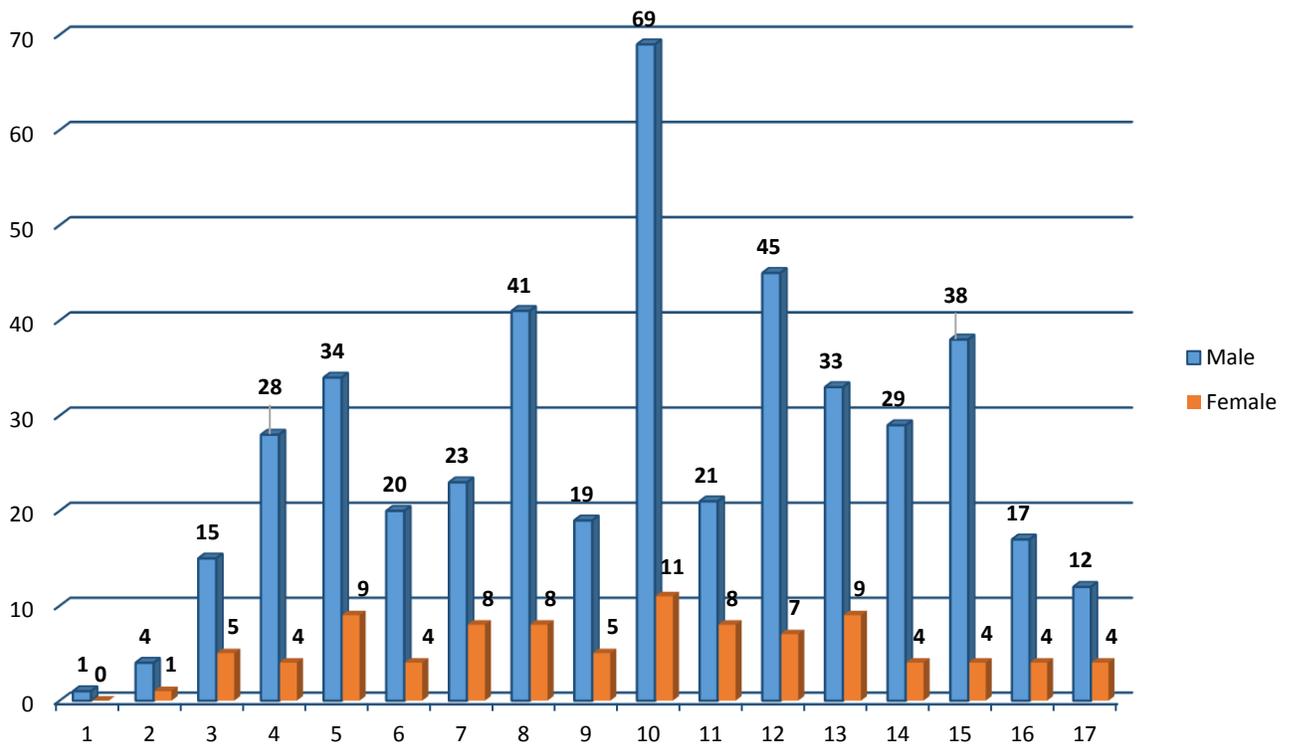
June and September are the months where children start the most fires and are in transition between school and summer vacation. It could be that the transition itself is related to youth firesetting. National data indicate that July is the month when most youth start fires. The United States Fire Administration blames fireworks and irresponsible adult role-modeling during this time as the reason many children start fires in July.



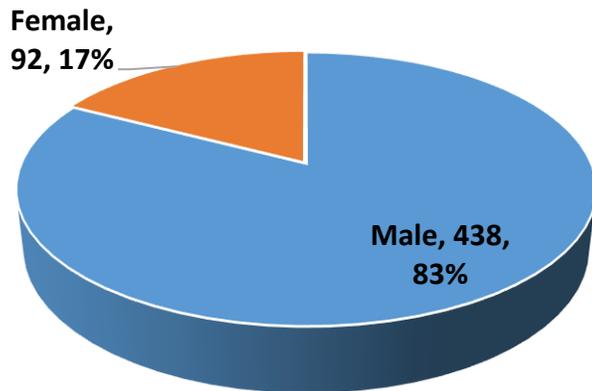
Age and gender

Not all reports of youth-set fires included the child’s age or gender. This is not always possible, since the child or children starting fires are not always caught or identified. These fires should still be reported so that there is a realistic picture of Minnesota youth firesetting. The chart below shows the gender and age for the 585 fire reports where this information was provided. Minnesota has a spike with 10-year-olds starting more fires than any at any other age. This may be because older youth spend more time with social media and other online activities. Ten-year-olds may not have access to their own smartphone or tablet.

2011-2015 Ages of Youth Firesetters



2011-2015 Youth-Set Fire Gender



The 2011-2015 youth-set fire gender chart shows that females are accountable for only 17 percent of youth-set fires. Boys tend to take more risks than girls do across the board. More juvenile males are arrested for various crimes than juvenile females, which is also true for adult arrests.

There are many reasons why children set fires, including peer pressure, thrill-seeking, bullying and delinquency. Firesetting

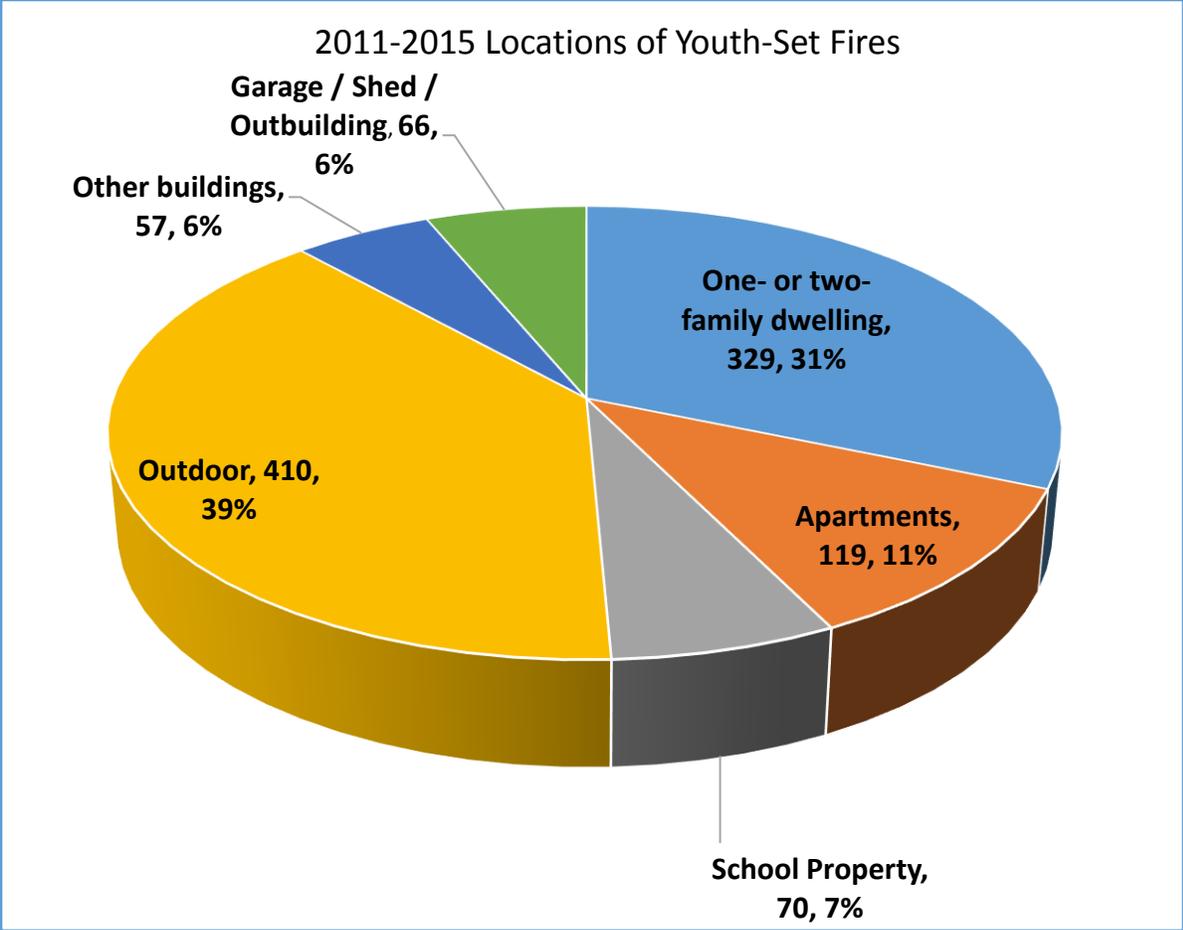
could be revenge or an attempt to eliminate something unpleasant. For example, a child burning his or her bed may be trying to get rid of a place where he or she may have been abused. Females tend to start more symbolic fires. For example, if she starts someone else’s property on fire, it may be symbolically directed towards the individual. She obviously wasn’t attempting to kill the person, but rather to alleviate some of her anger at the individual. The fire may give them a feeling of power where they don’t otherwise feel powerful.

Males tend to start more fires, but females tend to do it at an earlier age. The difference in male and female ages of firesetting is that female firesetters set fires fairly steadily across the ages of 5-13, whereas male firesetters continue further into the teen years. This supports the belief that girls set fires for reasons other than thrill-seeking or curiosity.

Location of youth-set fires

The locations where fires are started can be deceiving. More children tend to be caught starting fires in their homes. Apartments and one- or two-family homes account for 42 percent of youth-set fires overall. This may be because, when children set fires outside, they are often not caught. If the outdoor fire elicits a fire department response, the children may be long gone before the fire department arrives. The fire department may not know that a grass fire was started by children, so would not indicate that in the fire report, and the incident in turn would not make it into this report. Many schools also hesitate to report fires in the building if there is minimal damage.

The chart titled “2011-2015 Locations of Youth-Set Fires” shows the locations of youth-set fires by gender. The percentages for each location may differ from the graph above, because in many fire reports the gender was not identified.

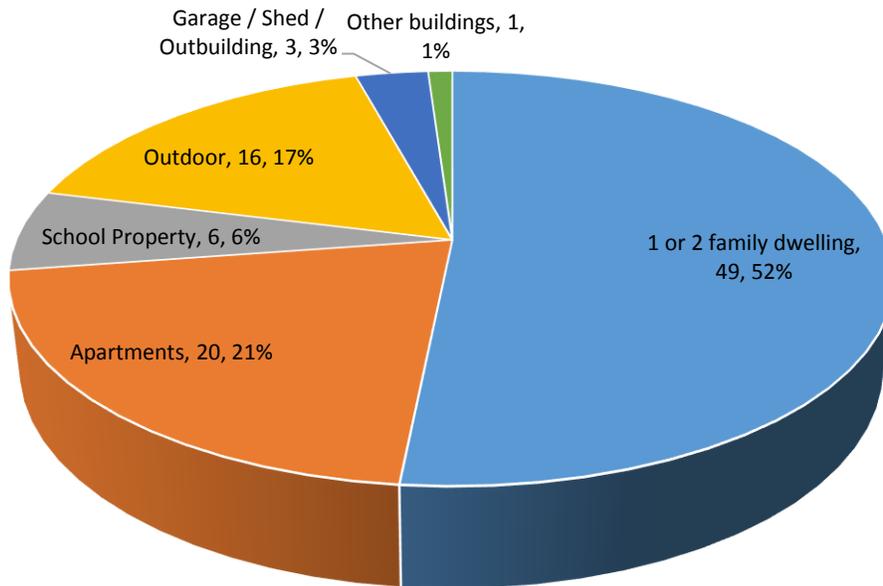


Locations of youth-set fires by gender

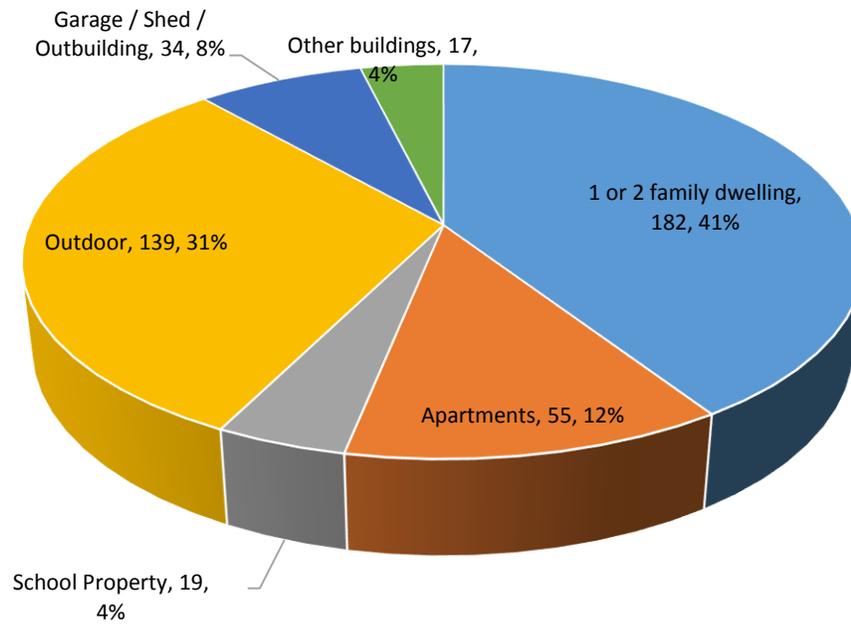
Males and females set fires in very different places. Seventy-three percent of fires set by females occur in the home as compared to only 53 percent of male youth-set fires. Females also are shown to start more fires on school property than males. This supports the available research findings that indicate females and males start fires for different reasons.

Minnesota’s experience has shown that a higher percentage of female firesetters will require mental health assistance during the intervention process. When a female is referred to the Youth Fire Intervention Team (YFIT), the specialists working with the child are aware of the complexities involved and are sensitive to the possible need for immediate mental health intervention.

2011-2015 Female Youth-Set Fire Locations

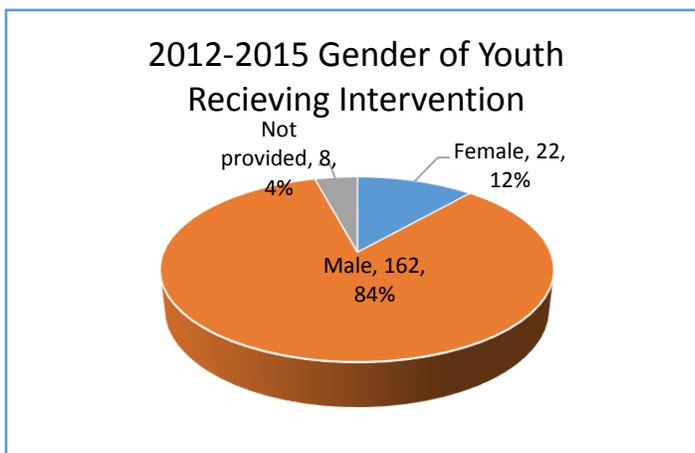
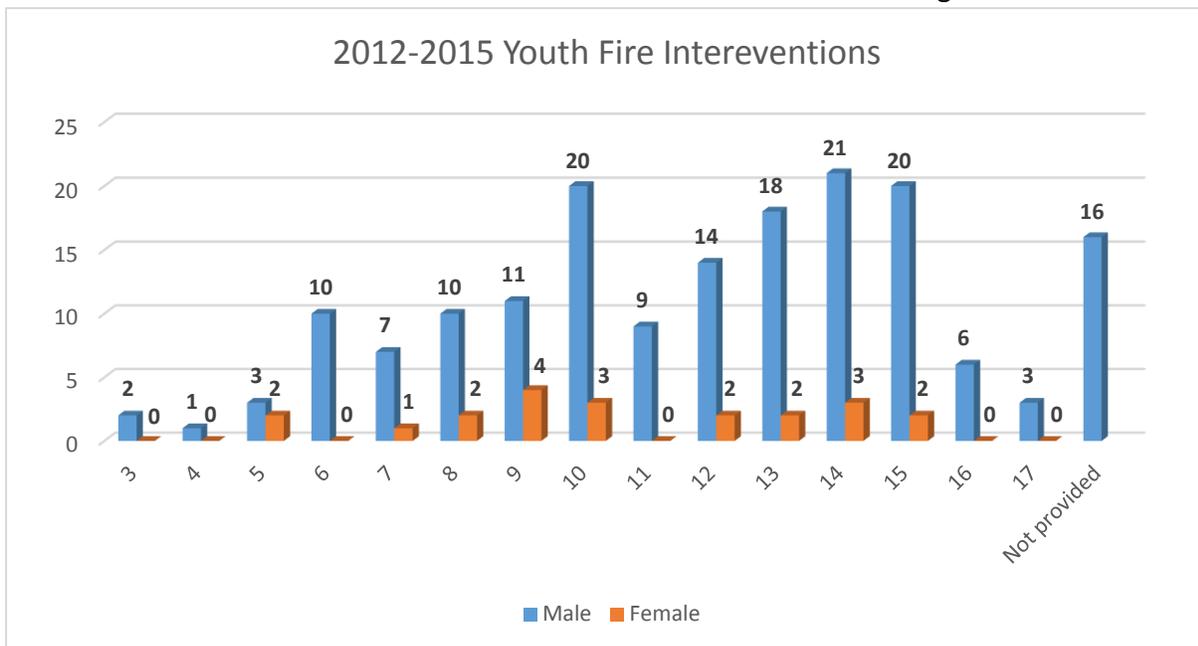


Male Locations



Reported youth fire interventions

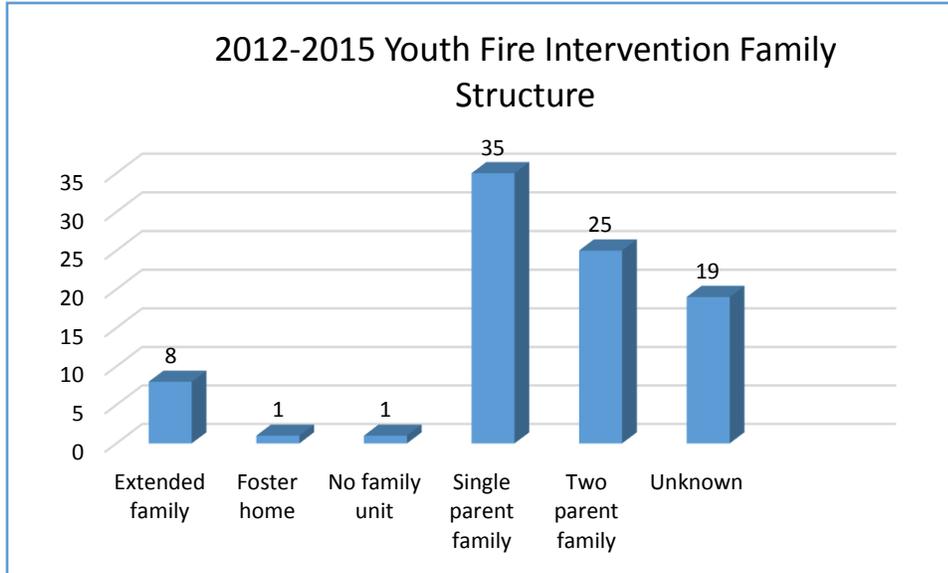
Since MFIRS is collected based on fire incident reports and since not all youth-set fires are reported to the fire department, a “firesetter walk-in” module was developed as part of the state’s reporting system, Image Trend. This module allows fire intervention specialists to report youth-set fires that don’t involve a fire department response. It also allows the youth fire intervention specialist to enter information about the intervention. This module was launched in 2012. Since that time, 192 incidents of youth fire interventions have been reported, involving 138 fires. In many cases, more than one child is involved in a fire. Sixty-seven of these fires did not involve a fire department response. Twenty-three fires involved a fire department response but were not reported as a youth-set fire. The following charts and graphs provide demographic information about the 192 children who received fire intervention during this time.



More teenage firesetters received intervention than the overall demographic of Minnesota’s youth firesetting population. This may be because by the time a caregiver, police officer or child-welfare worker identify these teens, they may have already started many fires. Of the youth receiving, 84 percent were male and 12 percent were female. This is also somewhat different than the overall

demographic.

Family structure



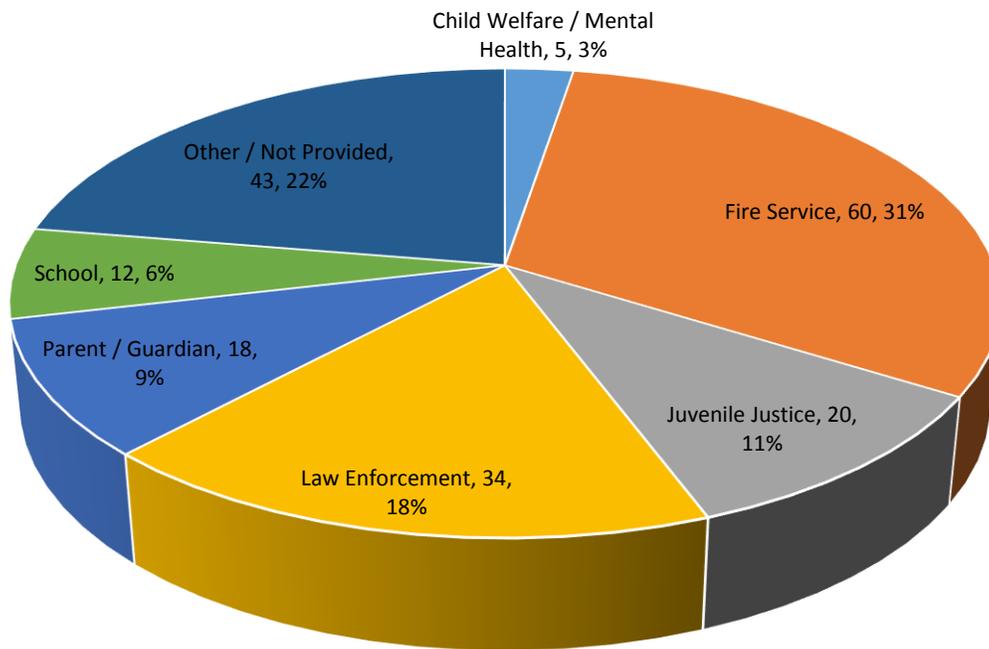
In some cases, data was collected on the family structure of youth involved in fire play. As shown in this chart, the majority of youth who received intervention came from single-parent households. This reinforces the possible lack of supervision contributing to the

incidence of youth firesetting. In addition to the possible lack of supervision, parental fighting during divorce proceedings and beyond may also be a contributing factor. Children from single-parent homes also may have more involvement with law enforcement and the juvenile justice system, who refer a fair percentage of juveniles to the youth fire intervention team.

Referral sources

The 2012 - 2015 Youth Fire Intervention Source of Referral chart shows referrals that were made to the YFIT documented in the “walk-in” module. The majority (65 percent) come from public safety agencies (law enforcement and fire departments). Schools and caregivers are also referring children to the program, which is encouraging.

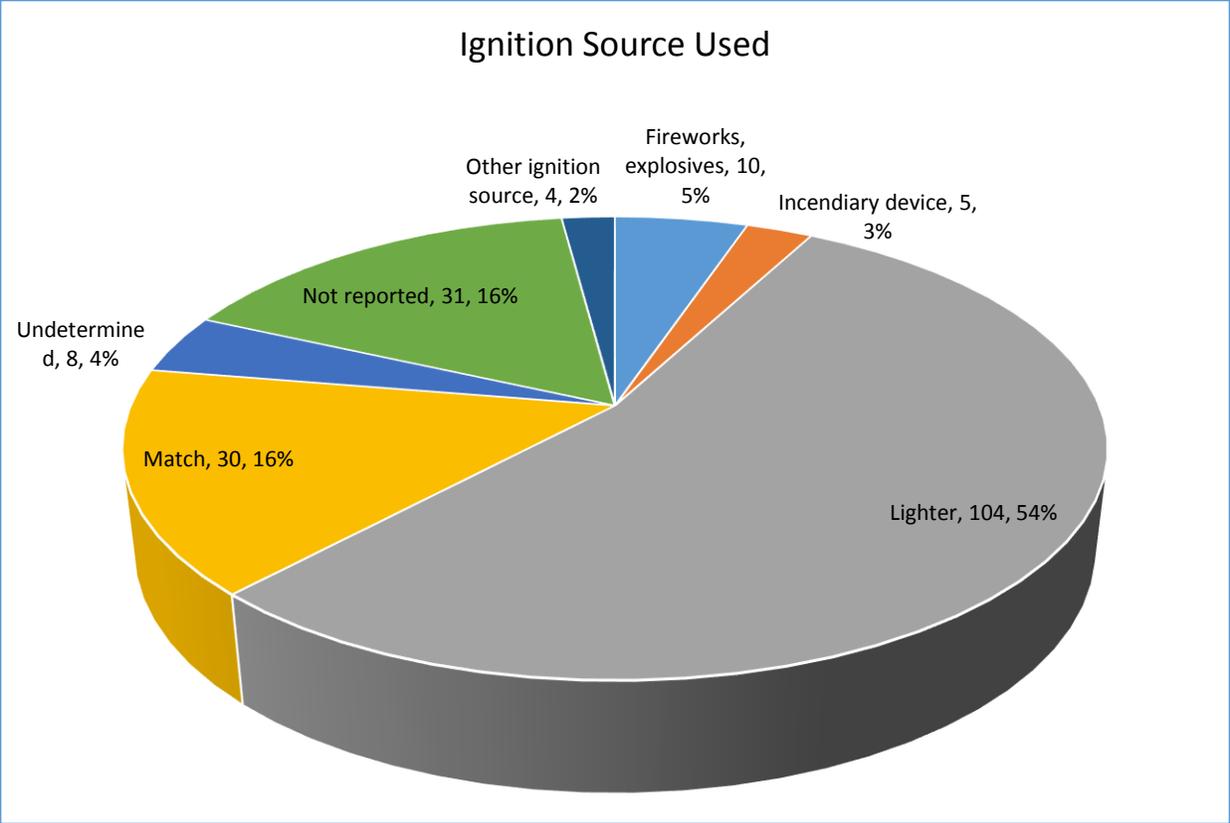
2012-2015 Youth Fire Intervention Source of Referral



Ignition source used

Lighters are the leading ignition source (54 percent) used in youth-set fires. Image Trend does not specify what type of lighter was used, whether the lighters are disposable, barbecue, or novelty lighters. This is important because there has been some controversy around children playing with novelty lighters and starting fires accidentally. There is currently no data to support this concern.

In previous decades, matches were the number one ignition source. People aren't using matches as much anymore in general. Convenience stores and restaurants rarely give out free matches anymore. This has made it more difficult for children to access matches and may be a contributing factor for the reduction in youth set fires over the past few decades overall. Some convenience stores, however, display lighters on their counters where children do have access to them and can possibly steal them.



Although all of the data in this report was extracted from MFIRS and Image Trend, there is a new database option available. In April, 2015, Youth Firesetting Information Repository and Evaluation System (YFIRES), a new national data collection and case management system, was launched. The mission of YFIRES is to act as the central repository for the collection, dissemination, and reporting of data and program experiences generated by youth firesetting behavior.

The project was initiated in 2012 by the International Association of Fire Fighters and funded by the Department of Homeland Security and the Federal Emergency Management Association's Grant Program – Fire Prevention and Safety Grants. A methodical and strategic approach was applied throughout the development phase. A comprehensive assessment was conducted with extensive input from a multidisciplinary and multiagency stakeholder group. A survey was e-

mailed to all of the United States State fire marshals and burn centers. They received responses from 91 percent of the State Fire Marshals and 79 percent of the burn centers. The conclusion was that there was no consistency in the data collected or the collection methods.

The stakeholder group came up with a list of required data elements:

1. Age at the time of incident
2. Gender
3. Race
4. Grade in school at the time of the incident
5. Family type of youth
6. Zip code
7. Primary caregiver's highest level of education
8. Referral to program initiated by
9. Has the youth had previous firesetting incidents (if yes: #10, "how many times" is activated)
11. Incident month (auto-populated from the incident date)
12. Incident year (auto-populated from the incident date)
13. Incident day of the week
14. Incident time of day
15. Incident location
16. Ignition source
17. First item ignited
18. Were there associates involved in the incident
19. Final disposition of case
20. Was an incident report entered into the National Fire Incident Reporting System (NFIRS)

There are more than 150 other optional fields in this database that can be used for complete case management. Some of the optional fields collect very useful information, such as lighter type. This will help us to determine if novelty lighters are a nationwide problem. There are also data on social media that a child uses, and whether they saw something online that gave them the idea to start the fire in the first place. Mental health information can also be collected, including what, if any, diagnoses the child has. This data will be useful for future research into what our national youth firesetting problem is and help to guide our fire prevention messages and efforts to stop youth firesetting.

Not only the fire service, but any other agency involved with youth fire intervention can access this database.

Minnesota State Fire Marshal Division staff assisted in the piloting of this system in 2013 and 2014 and participated as a stakeholder from the beginning. The Minnesota Youth Fire Intervention Team currently uses this database. This is not meant to replace the National Fire Incident Reporting System; rather, it is a supplement filling the gap of inconsistent juvenile data collection that was identified early in the project.

For more information on YFIRES, please visit www.yfires.com

Conclusion

Children start fires for many reasons. A youth firesetting intervention can help to identify a child's risk level for continuing to set fires and also to stop the risky behavior. Many disciplines are involved in a youth fire intervention, including;

- The fire service, to provide fire education.
- Mental health professionals, to identify and treat impulse control issues.
- Law enforcement, to report youth firesetters to YFIT.
- Juvenile justice, to refer adjudicated youth firesetters to YFIT.
- Parole officers, to keep the juvenile on track with the program requirements.

Reporting is paramount. Without accurate reporting, the extent of the youth firesetting problem will not be known, and children may not receive effective intervention services to prevent future firesetting. Effective youth fire intervention services can deter future similar behavior and potentially decrease the number of arsonists in the future.