

# Annual Report 2021

Tokyo Fire Department (TFD)

# Annual Report 2021

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The **Annual Report 2021** is a summarized translation based on the White Paper on TOKYO Fire Service 2021.



# TFD DIARY 2020

# Diary

### New Year's Fire Review 2020 (Jan.)



### TFD HQ Rescue Operation Forces (Apr.)



- ★ New Year's Fire Review 2020
- ★ The 40th Anniversary of the Tokyo Junior FD Association
- Senju First Aid Team
- ◆ COVID-19 Prevention  
(Transporting the returners from Wuhan, Hubei, China)

- TFD HQ Rescue Operation Forces

- ★ Hazmat Safety Week



Jan.  
2020

Feb.  
2020

Mar.  
2020

Apr.  
2020

May  
2020

Jun.  
2020

- ★ Spring Fire Prevention Campaign

- Electric Ambulance

### The 40th Anniversary of the Tokyo Junior FD Association (Jan.)



### Transporting the returners from Wuhan, Hubei, China (Jan. & Feb.)



### Senju First Aid Team (Jan.)



### Spring Fire Prevention Campaign (Mar.)



# Dia

# ~Looking Back on 2020~

**HIBARI IV (Jul.)**



**TMG-Kita Ward Disaster Prevention Drill (Nov.)**



**Jul.  
2020**

- HIBARI IV
- Animal Crossing, Safety Tips

**Aug.  
2020**

- Live 119

**Sept.  
2020**

- First-line Safety Command Unit
- ★ RISON TOKYO 2020

**Oct.  
2020**

- ★ Autumn Fire Prevention Campaign
- ★ TMG-Kita Ward Disaster Prevention Drill

**Nov.  
2020**

**Dec.  
2020**

**MARKS**

- ◆ Disaster
- ★ Prevention
- Policy

**Electric Ambulance (May)**



**RISON TOKYO 2020 (Oct.)**



**First-line Safety Command Unit (Oct.)**



**Autumn Fire Prevention Campaign (Nov.)**



# The Latest Vehicles



The articulated ladder is effectively used to have a wheelchair victim in the rescue basket attached to its end. The truck is approximately 3.2m high for safe driving under low elevated areas.





The "Toilet Car" truck serves as an on-scene restroom for the firefighters engaged in prolonged operations. Additionally, it broadly serves the convenience of female fire department members and volunteer fire corps members as well.



# Sanitation at the Disaster Scene

# HIBARI III

(2001-2020)



Response: 1,382 times



# HIBARI IV Comes Now



Navigation: Approx. 100,000 km

Topics

**Fireship**  
**SUMIDA**  
(2000-2020)



**SUMIDA Goes with a**  
**21-year Achievement**





**Safety Tips**  
(along with COVID-19 prevention)

BOSAITO in *Animal Crossing* (for Nintendo Switch)... That's where the TFD has its members stay as life safety professionals! For safety tips, please visit the TFD Official Twitter and Facebook.

# ICT Helps Children Learn about Life Safety

**Shibuya Fire Station**

The Shibuya FS came up with and offered the "computerized disaster prevention education program" to Shibuya Ward elementary and junior high schools. It is the overall learning system optimized for school tablets.



# You Answer. You Learn.

- ① Wisdom
- ② Quiz
- ③ Action

Example

# FIRE

## 1. Outline

In fiscal 2020, the number of fires within the TFD's jurisdiction was 3,694, down 395 from the previous year. The number of fires is showing a decreasing trend. Until 2013, the number of fires was just over 5,000 annually, which decreased to between 4,000 and 5,000 in 2014. This number then fell to around 4,000 in and after 2015.

The burnt floor area was 16,136m<sup>2</sup>, down 2,159m<sup>2</sup> from the previous year, and has been decreasing over the last 10 years.

The number of fire deaths is 86, down 22 from the previous year.

Chart 1-1. Fires and Burnt Floor Areas (2011-2020)

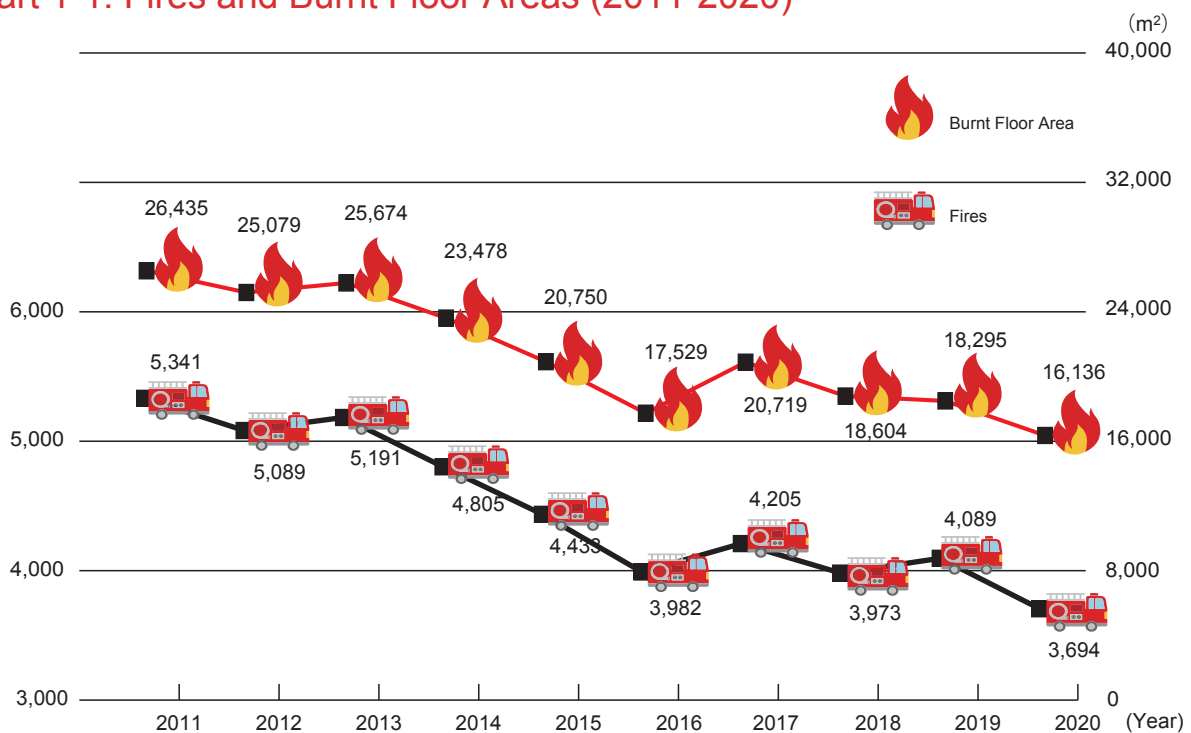
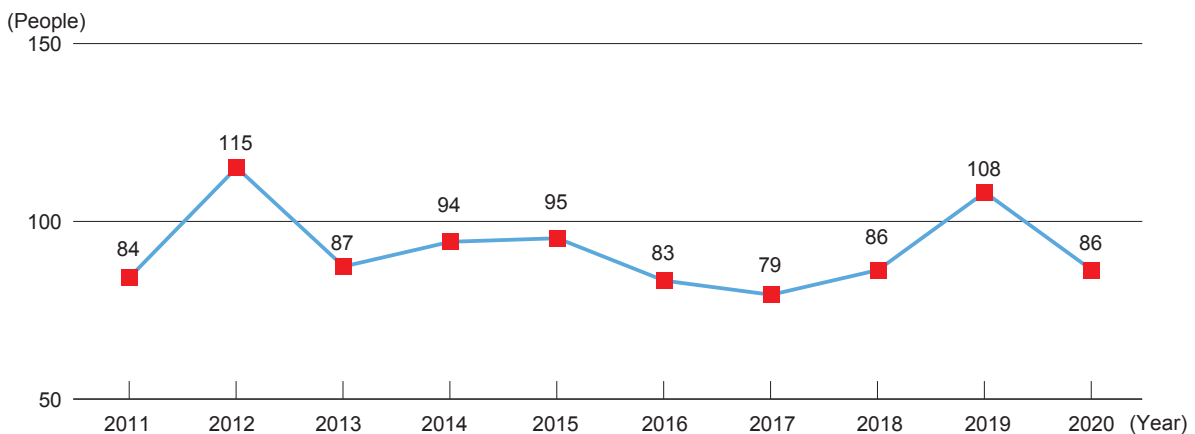


Chart 1-2. Fire Deaths over 10 Years (2011-2020)

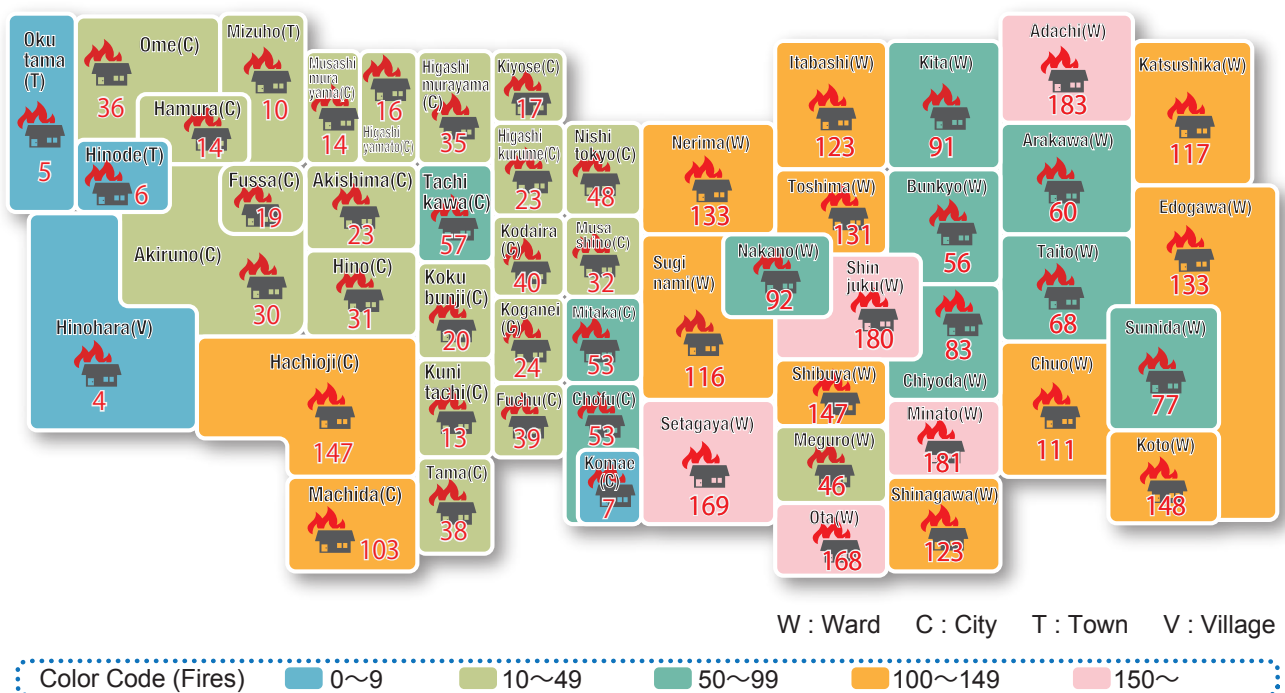


In terms of fire type, there were 2,667 building fires, a decrease of 237 from the previous year, which accounted for more than 70% of all fires. There were 809 other types of fires, a significant decrease of 160 from previous years.

Chart 1-3. Details

		2020	Change from 2019
Fires		3,694	▲ 395
Type	Buildings Fires	2,667	▲ 237
	Wildland Fires	1	▲ 4
	Vehicle Fires	216	10
	Ship Fires	0	▲ 1
	Aircraft Fires	0	—
	Others	809	▲ 160
Extraterritorial		1	▲ 2
Outside Jurisdiction		0	▲ 1
Fire Deaths		86	▲ 22
Fire Injuries		710	5
Burnt Floor Areas		16,136m <sup>2</sup>	▲ 2,159m <sup>2</sup>
Burnt Buildings		3,028	▲ 256
Affected Households		2,239	▲ 96
Damage		¥5,601,522,177	¥2,087,419,243

Chart 1-4. Fires by Municipality (2020)



# 2. Fire Deaths and Injuries

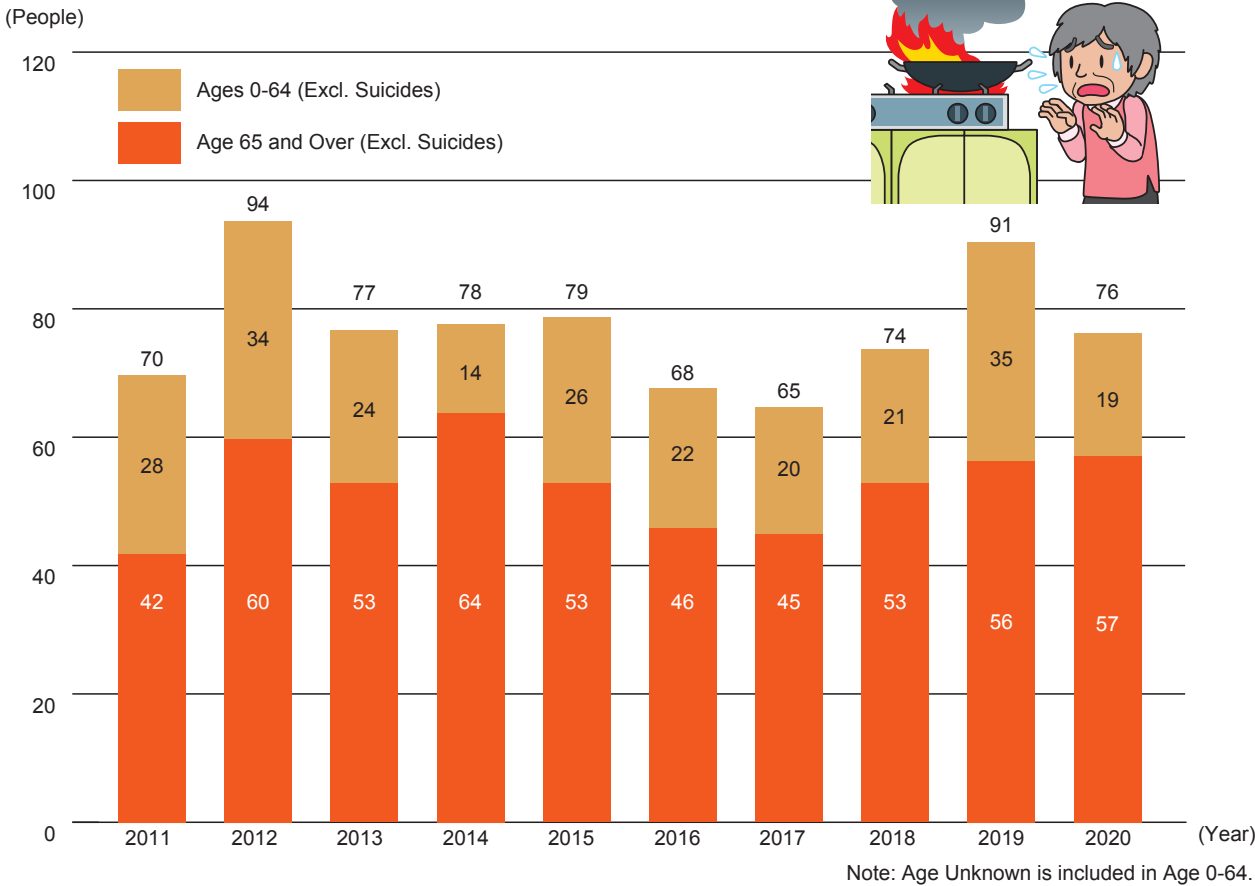
## (1) Fire Deaths

The number of fire deaths excluding self-inflicted loss in 2020 was 76, down 15 from the previous year. In terms of the occurrence of death by age group, the number of the elderly aged 65 and over was 57, which accounted for 75% of total fire deaths.

Chart 2-1-1. Fire Deaths

	2020	Change from 2019
Fire Deaths	86	▲22
Excluding Suicides	76	▲15
Age 65 and Over	57(75.0%)	1
Ages 0-64	19(25.0%)	▲16
Suicides	10	▲7

Chart 2-1-2. Fire Deaths by Age Group



## (2) Fire Injuries

There were 710 fire injuries, up 5 from the previous year.

In terms of the degree of the 710 injuries, people with minor injuries accounted for nearly 60% of the total. However, the number of the people with critical injuries accounted for 17 (2.4%), those with severe injuries accounted for 68 (9.6%), and those with moderate injuries accounted for 190 (26.8%).

### Chart 2-2-1. Number of Fire Injuries

		2020	Change from 2019
Fire Injuries		710	5
Degree	Critical Fire Injuries	17( 2.4%)	▲12
	Severe Fire Injuries	68( 9.6%)	▲15
	Moderate Fire Injuries	190(26.8%)	22
	Minor Fire Injuries	435(61.3%)	10

The first major cause of fires in 2020 was arson (incl. suspected arson), followed by cigarettes and gas ranges and similar devices. The previous first place Cigarettes and second place Arson (incl. suspected arson) in 2019 have inverted in ranking.

Gas ranges and similar devices stayed the third as in the previous year. There has been no change in ranking since 1995.

There were 641 cases of arson (incl. suspected arson), which accounted for the number one cause, the same number as the previous year. The second major cause was cigarettes, which accounted for 508 cases, down 181 from the previous year. The third major cause was gas ranges and similar devices, which accounted for 399 cases, up 52 from the previous year.

### Chart 2-2-2. Major Fire Causes (Top 10 in 2020)

Year / Change from 2019	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Change from 2019
Arson (Incl. Suspected Arson)	1,657	1,507	1,622	1,381	1,027	881	896	705	641	641	—
Cigarettes	794	709	737	710	664	586	691	651	689	508	▲181
Gas Ranges	427	441	418	415	457	363	360	305	347	399	52
Large Gas Stoves	98	92	102	110	118	110	95	98	110	72	▲38
Electric Heaters	115	118	105	104	75	85	100	71	85	69	▲16
Plugs	38	56	69	59	47	64	64	64	85	62	▲23
Cords	48	77	49	45	57	61	74	57	62	60	▲2
Outlets	74	70	66	48	53	59	59	56	56	59	3
Fluorescent light	45	37	45	42	42	41	35	35	43	41	▲2
Welders	57	46	42	43	35	33	46	33	43	35	▲8

### 3. Structure Fires by Type

The number of the fires that broke out from “structure themselves” in 2020 was 2,598, down 213 from the previous year.

There were 1,553 fires that broke out from detached houses and apartment buildings, accounting for more than half of the fires from structures themselves.

The breakdown shows 989 apartment building fires (up 29 from the previous year) and 564 detached house fires (down 19) . There were 1,045 structural fires from buildings other than those for residential housing, down 223 from the previous year. By type of use, the number of restaurant fires was 244, which was the largest (down 124 from the previous year), followed by 155 office fires (down 20) and 116 fires from department stores and shops (up 4).

\* “Structure Fires” refers to the fires from structures themselves. “Structure Fires” differs from “Building Fires” which includes the fires from articles inside buildings.

**Chart 3. Structure Fires by Type (Top 8, excl. home fires in 2020)**

Year	Home Fires	Breakdown		Restaurants	Offices	Department Stores and Shops
		Houses	Apartment Buildings			
2011	1,864	721	1,143	288	129	104
2012	1,916	724	1,192	295	144	116
2013	1,777	680	1,097	311	130	130
2014	1,694	634	1,060	296	123	113
2015	1,675	615	1,060	339	121	87
2016	1,497	539	958	345	126	103
2017	1,597	579	1,018	318	151	110
2018	1,484	539	945	330	142	94
2019	1,543	583	960	368	175	112
2020	1,553	564	989	244	155	116
Change from 2019	10	▲19	29	▲124	▲20	4

Year	Factories	Hospitals	Railroad Stations	Schools	Hotels and Inns	Structure Fires (Total)
2011	107	25	25	35	16	3,098
2012	101	19	32	37	17	3,206
2013	113	19	32	38	25	3,127
2014	84	13	22	27	33	2,878
2015	95	20	18	29	26	2,827
2016	89	17	21	33	37	2,681
2017	84	24	14	31	36	2,730
2018	90	21	16	40	19	2,609
2019	85	20	20	51	30	2,811
2020	64	27	27	25	21	2,598
Change from 2019	▲21	7	7	▲26	▲9	▲213

# 4. Home Fires

## (1) Number / Causes

In 2020, there were 3,694 fires of which 1,553 were caused in the home. The number of home fires is up 10 from the previous year. The total number is down 363 compared to 1,916, the biggest number in 2012, of the 10-year change in home fires.

Chart 4-1-1. Structure Fires (2020)

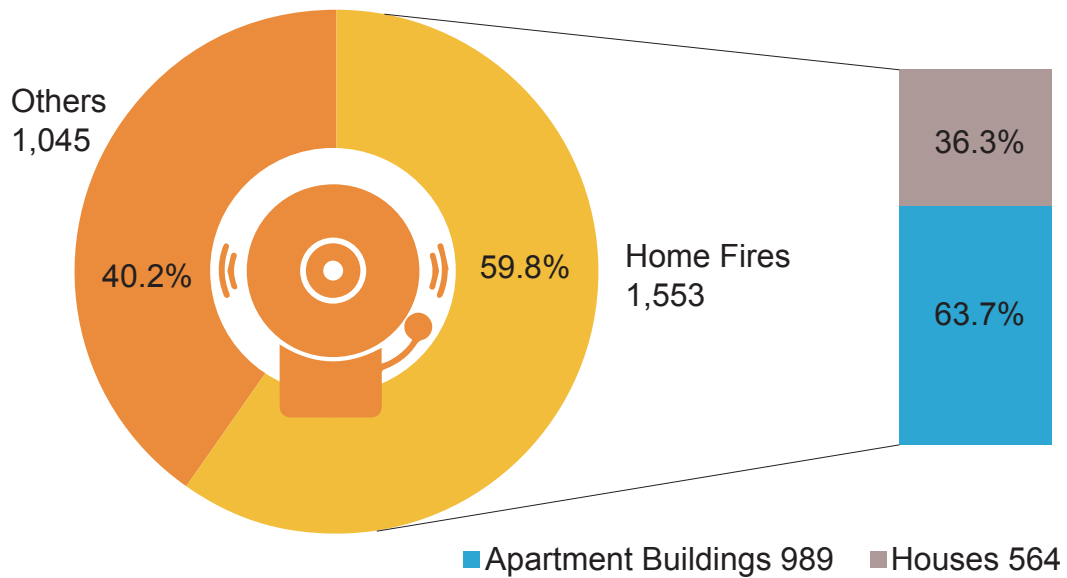
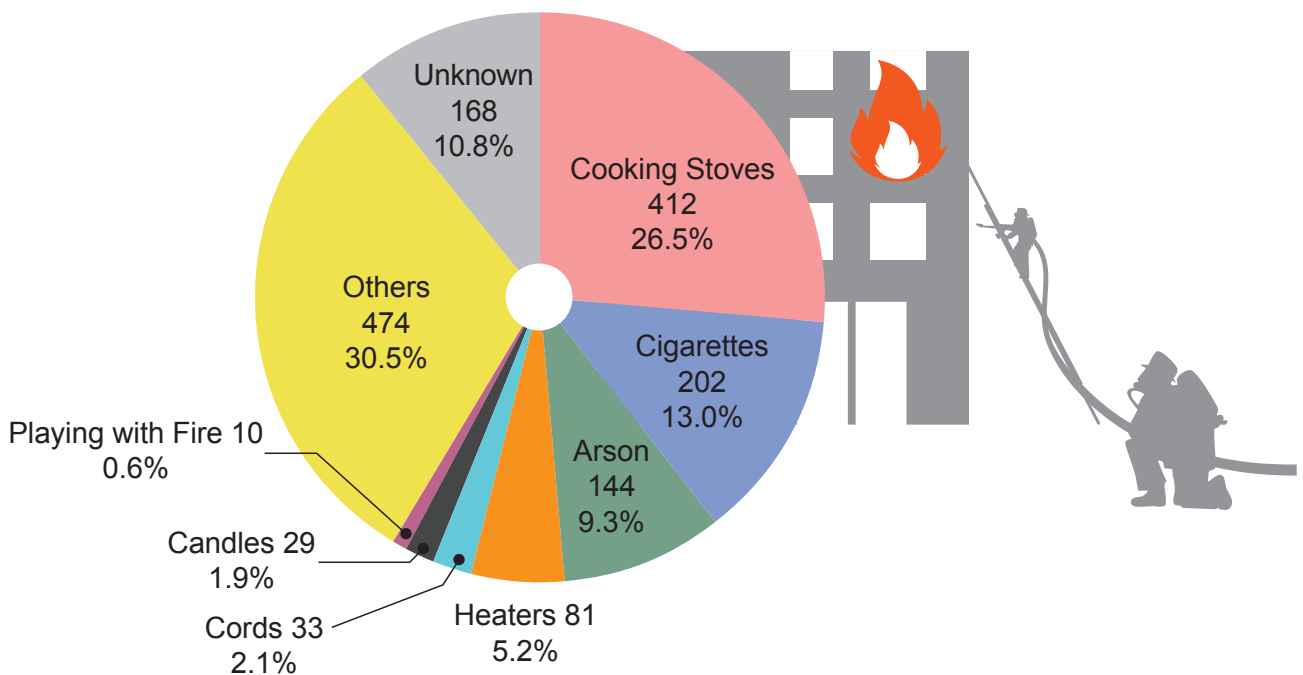


Chart 4-1-2. Home Fire Causes (2020)



## (2) Home Fire Deaths

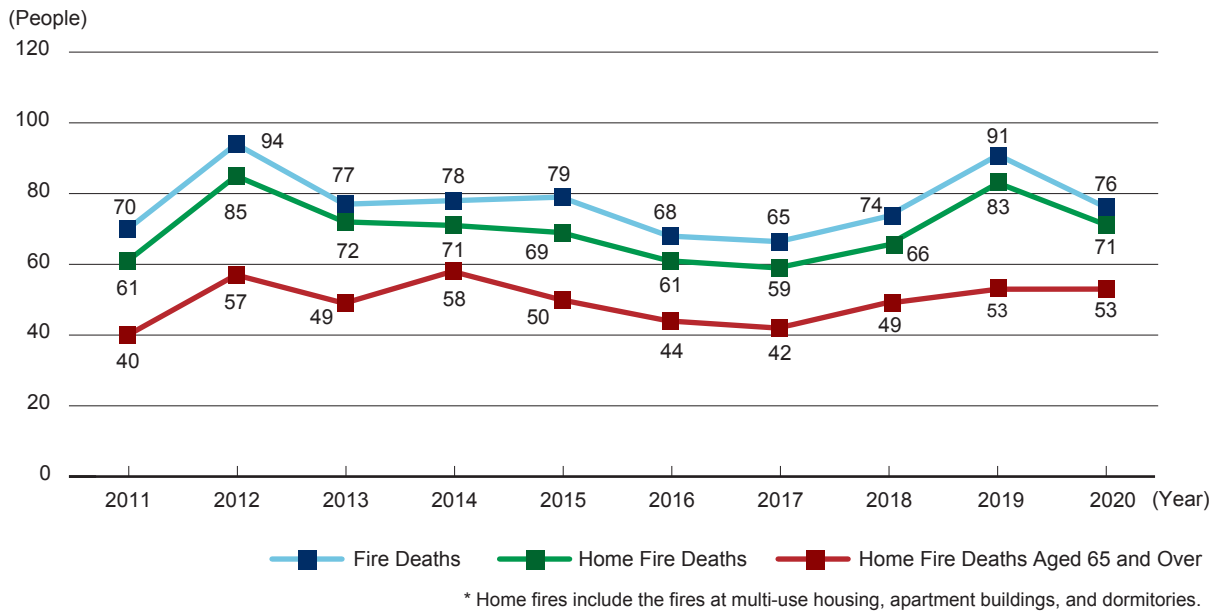
Protect Your Loved Ones from Home Fires



The number of the fire deaths excluding self-inflicted loss in 2020 was 76, down 15 from the previous year. Of these, 71 died in home fires, down 12 from the previous year. The rate of deaths due to home fires except self-inflicted loss was about 90%.

In terms of housing type, 50 people (70.4%) died in detached house fires, and 21 people (29.6%) died in apartment building fires, which means the rate of detached house fires is high.

### Chart 4-2-1. 10-year Change in Home Fire Deaths (2011-2020)

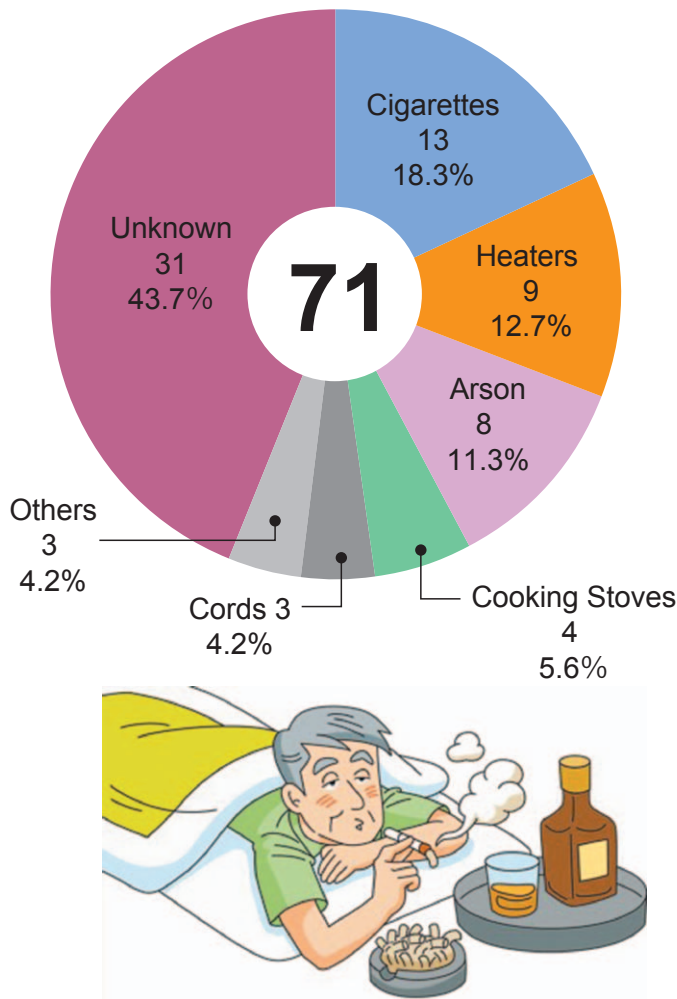


### Chart 4-2-2. Home Fire Deaths by Gender

Age	Gender		Total	Rate
	Male	Female		
Infants (Age 0-5)	0	0	0	0%
Underages (Age 6-19)	0	0	0	0%
Adults (Age 20-64)	12	6	18	25.4%
Seniors (Age 65 and Over)	31	22	53	74.6%
Total	43	28	71	100%
Rate	60.6%	39.4%	100%	—



Chart 4-2-3. Fire Deaths by Cause (2020)



### (3) Home Fire Alarm

The installation rate of residential fire alarm (incl. automatic fire alarm systems and sprinklers) in 2020 was 86.0%.

As the home fire alarm installation became mandatory in 2010, the installation rate has dramatically increased. Currently, the rate has been stayed around 80%.

Home fire alarms may not be able to detect fires due to their lifespan or failure of electronic components, battery exhaustion, etc., so conduct a regular inspection by pressing the button on the main unit or pulling the string. In addition, the main unit needs to be replaced about every 10 years.

Chart 4-3. Home Fire Alarm Installation Rate (2006-2020)

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
19.3%	24.3%	33.8%	48.1%	79.4%	80.6%	79.3%	81.5%	79.2%	87.3%	88.5%	86.9%	85.2%	89.4%	86.0%

# OPERATIONS

## 1. Fire

### (1) Responses / Scene Personnel / Operation Hours

Fire units were dispatched to 7,117 fires in Tokyo in 2020, including false reports. The number of dispatched fire vehicles was 60,289 and that of personnel was 275,027. On average, nine vehicles with about 39 firefighters responded to each fire.

Chart 1-1-1. Responses (Vehicles) /  
On-Scene Personnel and Operation Hours

	2020	Change from 2019
Responses (Vehicles)	7,117 (60,289)	▲ 528 (▲ 12,030)
Personnel	275,027	▲ 23,569
Operation Hours	(Average) 1 hr 7 min	▲ 5 min

Chart 1-1-2. Fire Apparatus to Fire Scenes

Classification	Total Dispatch	Classification	Total Dispatch
Fire Engines	40,132	Command Vans	7,254
Foam Trucks	3,320	Ladder Trucks	5,361
Rescue Trucks	4,188	Helicopters	34

## 2. Rescue Scene

### (1) Responses (Vehicles) / On-Scene Personnel

In 2020, the number of the people rescued from incidents was 23,856, down 471 from the previous year. Both the number of the people rescued and that of the rescue teams dispatched decreased.

Chart 2-1-1. Responses (Vehicles) / Personnel / Operation Hours

	2020	Change from 2019
Responses (Vehicles)	23,856 (78,152)	▲ 471 (▲ 706)
Rescued People	18,197	▲ 1,238
On-Scene Personnel (Incl. DMAT)	319,565	▲ 1,205

\* DMAT (Disaster Medical Assistance Team): A specially trained doctor-nurse team responds to a disaster with medical equipment, and performs life-saving treatment on the spot.

Chart 2-1-2. Responses by Incident Type

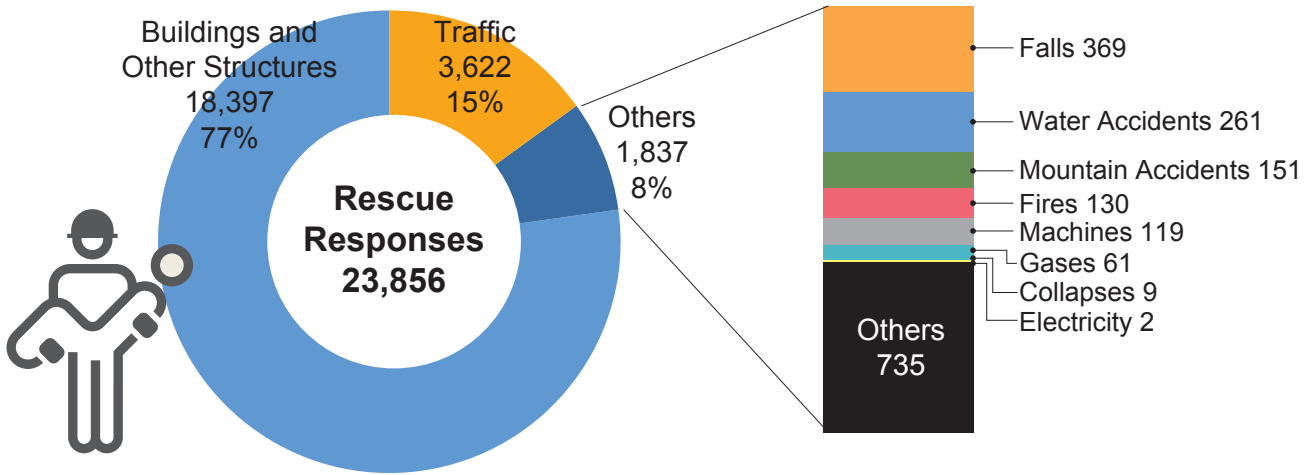
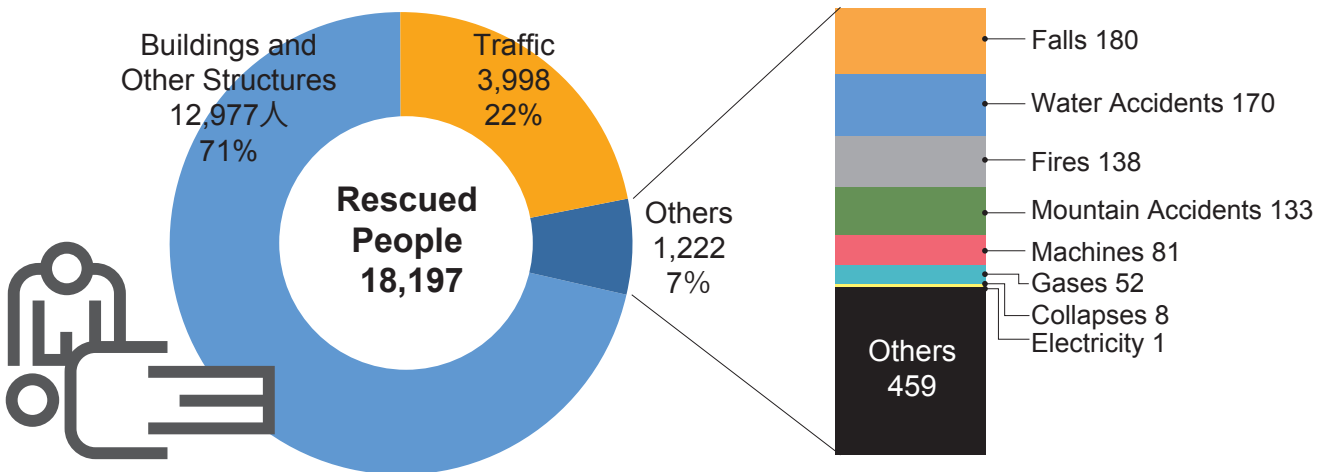


Chart 2-1-3. Rescued People by Incident Type



### 3. HAZMAT Scene

HAZMAT removal responses are the activities as the necessary measures to prevent fires and reduce human damage in the event of HAZMAT leakages. The measures include the removal of the dangers caused by natural phenomena. The purposes of these activities are classified into the elimination of dangers, first aid, warnings, etc.

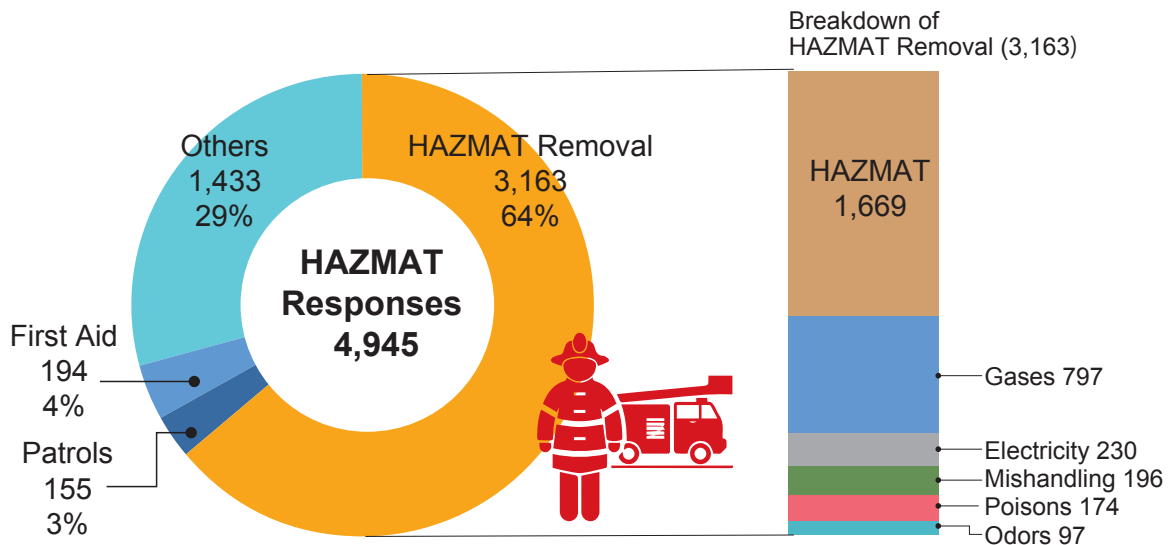
The following table shows the number of dispatches for HAZMAT removal responses in 2020.

The number of the cases where gasoline leaked in traffic accidents falls under elimination of danger, and so the statistics resulted in a higher number.

Chart 3-1. Responses (Vehicles) and Personnel

	2020	Change from 2019
Responses (Vehicles)	4,945 (13,025)	▲822 (▲1,698)
On-Scene Personnel	56,853	▲7,717

Chart 3-2. Responses by Activity



## 4. Emergency Checking

Emergency confirmation responses are the activities to make on-site checks urgently in response to the reports on suspected fire or smoke or the activation of automatic fire alarms. (*i.e.*, the ringing of alarm bells)

Chart 4-1. Emergency Checking by Cause

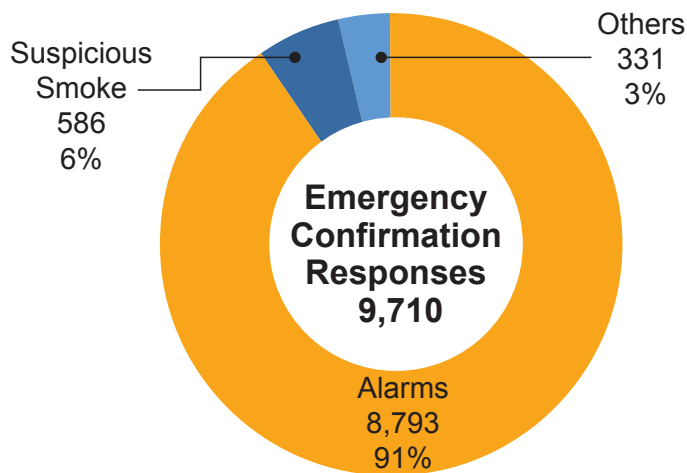


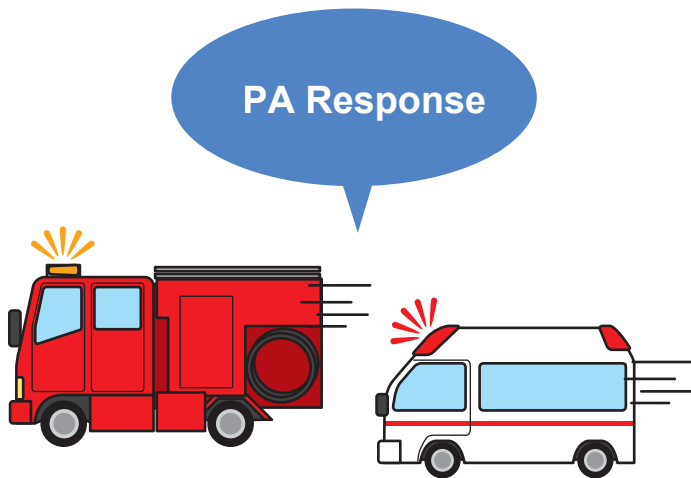
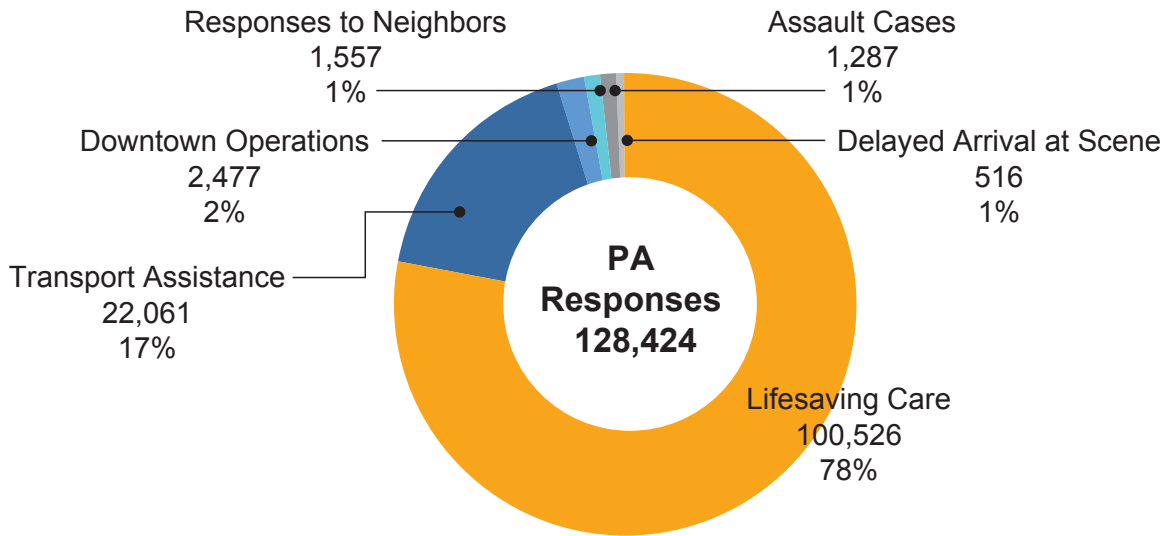
Chart 4-2. Responses (Vehicles) and Personnel

	2020	Change from 2019
Responses (Vehicles)	9,710 (15,789)	▲ 1,224 (▲ 1,155)
On-Scene Personnel	72,775	▲ 5,314

## 5. PA Responses

The “PA” responses are the activities in which fire engines, pumpers, or other fire vehicles are dispatched to emergency scenes as needed, and they cooperate with the EMS crew to rescue victims. PA cooperation is required if the transportation of people to save their lives is difficult.

Chart 5-1. PA Responses by Activity



\* “PA” stands for “Pumper and Ambulance.” Both of them are dispatched simultaneously. With consideration of the situations where critical patients treatment is difficult for the ambulance crew or victim transportation is difficult through narrow stairways or passages, pumpers or other vehicles are dispatched from the nearest fire station at the same time to conduct cooperative activities.

Chart 5-2. Responses (Vehicles)

	2020	Change from 2019
Responses (Vehicles)	128,424 (130,259)	▲ 23,745 (▲ 23,193)

# EMERGENCY MEDICAL SERVICE (EMS)

## 1. Ambulance Runs

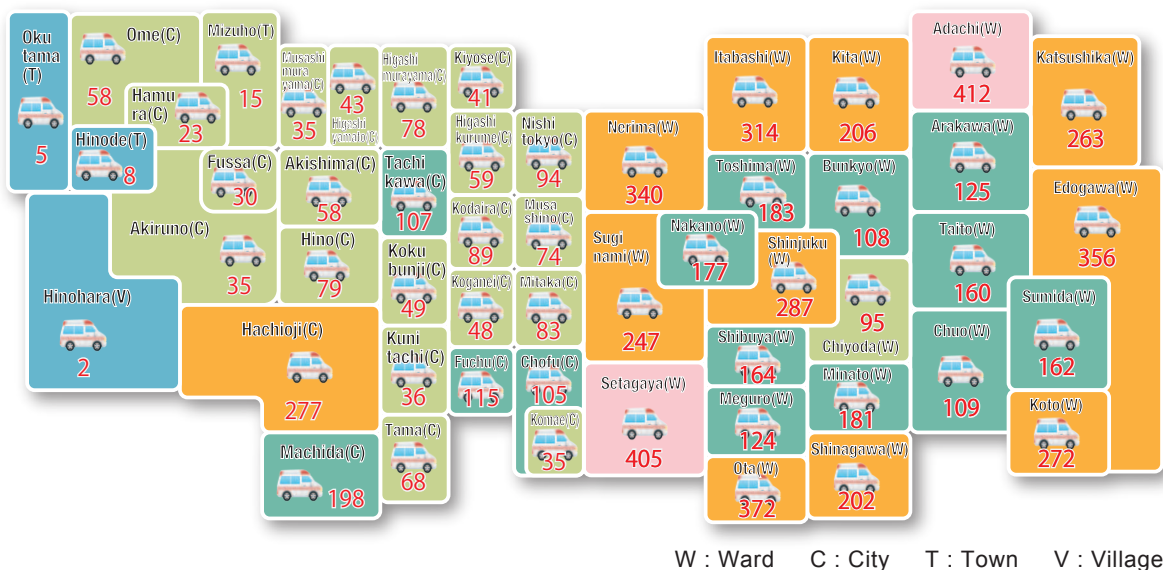
### (1) EMS Summary

The 5-year, (2016-2020), change in the number of ambulance runs and the nationwide dispatch number in 2020 are as follows. The number is as of April 1, 2020. The number of nationwide ambulance units is 5,270, and that of ambulances, including back lines, is 6,443.

Chart 1-1-1. 5-year Change in Ambulance Runs (2016-2020)

Types	2016	2017	2018	2019	2020	Nationwide (2019)
Number of Responses	777,382	785,184	818,062	825,929	720,965	6,639,767
Average Response per Day	2,124	2,151	2,241	2,263	1,970	18,191
Dispatch Frequency (Seconds)	41	40	39	38	44	4.7

Chart 1-1-2. Ambulance Runs by District (Round figures in 2020)



Color Code (Ambulance Runs) 0~9 10~99 100~199 200~399 400~ (Unit: 100)

Acute illness, General Injuries and Traffic Accidents account for about 90% of all the causes of ambulance runs.

Chart 1-1-3. Ambulance Runs by Accident Type

Accident Types	Number	Rate
Acute Illness	476,455	66%
General Injuries	133,902	19%
Traffic Accidents	38,829	5%
Others	71,779	10%
Total	720,965	100.0%

Other Breakdown	Number	Rate
Transportation between Hospitals	38,980	5.4%
Assaults	5,223	0.7%
Sports Accidents	2,933	0.4%
Worksite Accidents	4,535	0.6%
Self-injuries	5,700	0.8%
Fire Accidents	3,209	0.4%
Water Accidents	730	0.1%
Equipment Transportation	503	0.1%
Doctor Transportation	160	0%
Natural Disaster Accidents	7	0%
Others	9,799	1.4%

## (2) Activity Time / Distance

In 2020, the average time required for emergency activities—from the moment ambulance teams were dispatched until their return to the fire station— was 88 minutes and 29 seconds, and the average running distance was 10.4 km. Compared to the previous year, the average time for emergency activities was 2 minutes and 50 seconds longer, and the average running distance was 0.1 km longer.

Chart 1-2-1. EMS Activity Time / Distance

(m: minute / s: second)

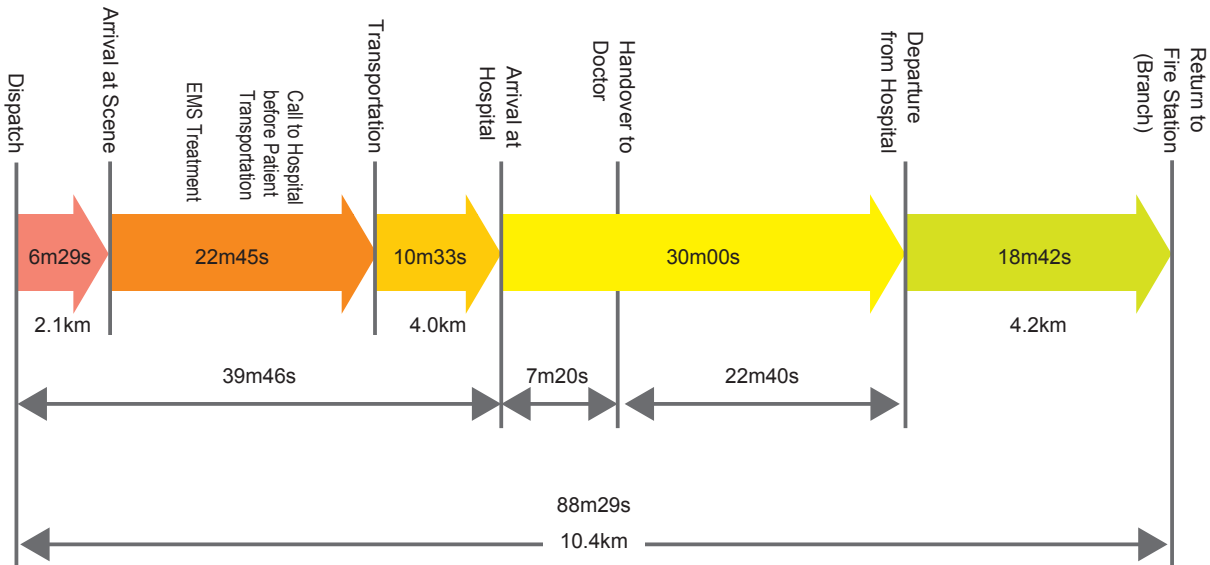


Chart 1-2-2. Ambulance Run per Month

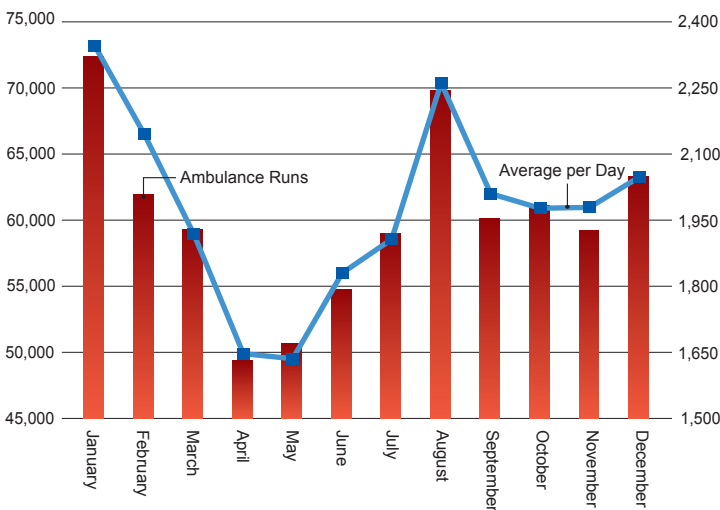
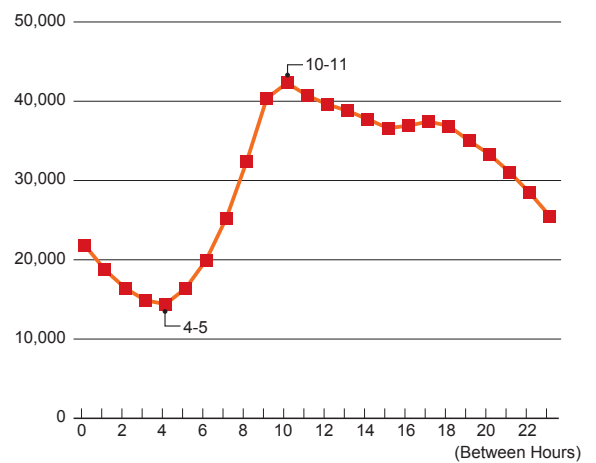


Chart 1-2-3. Ambulance Runs for the day

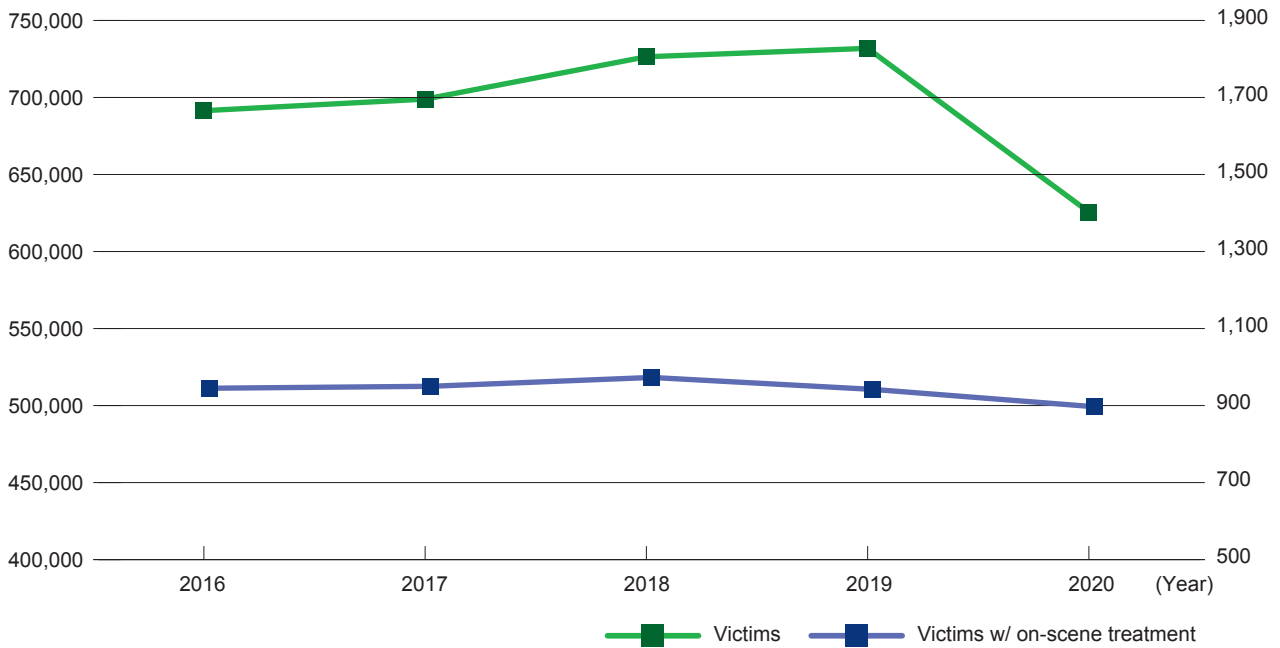


## 2. PATIENT TRANSPORT

### (1) 5-year Change in EMS Transportation (2016-2020)

The number of people transported by ambulances (the patients transported to medical institutions) was 625,639 in 2020, and the number of people treated at incident scenes (the patients who received first-aid treatment but were not transported to medical institutions) was 897. This means EMS teams attended to a total of 626,536 people.

Chart 2-1. Change in EMS Transportation

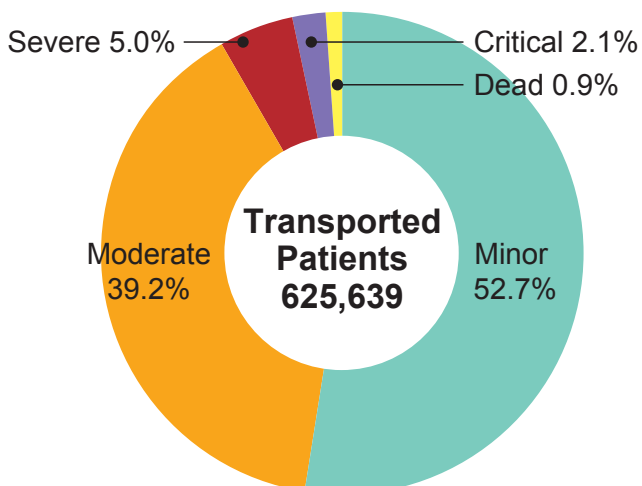


### (2) Transported Patients

#### 1 Degree of Severity at Primary Diagnosis

More than half the people transported in “minor” conditions, and “minor” and “moderate” conditions accounted for more than 90% of the total.

Chart 2-2-1. Transported Patients by Degree

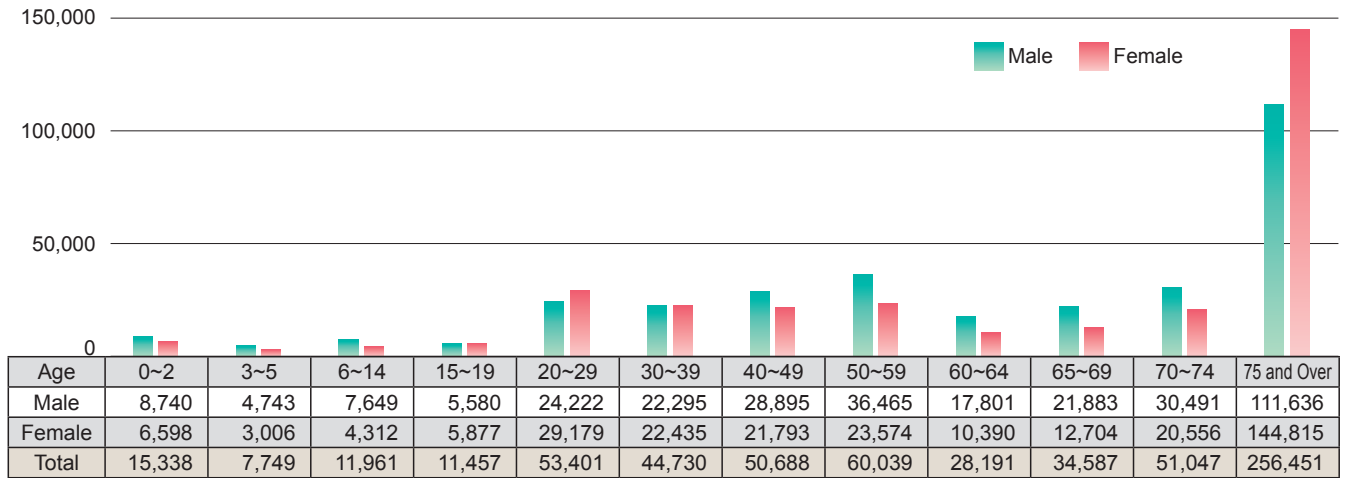




## 2 Age Group

In terms of age group, the rate of the transported people aged 75 and over was the highest in 2020.

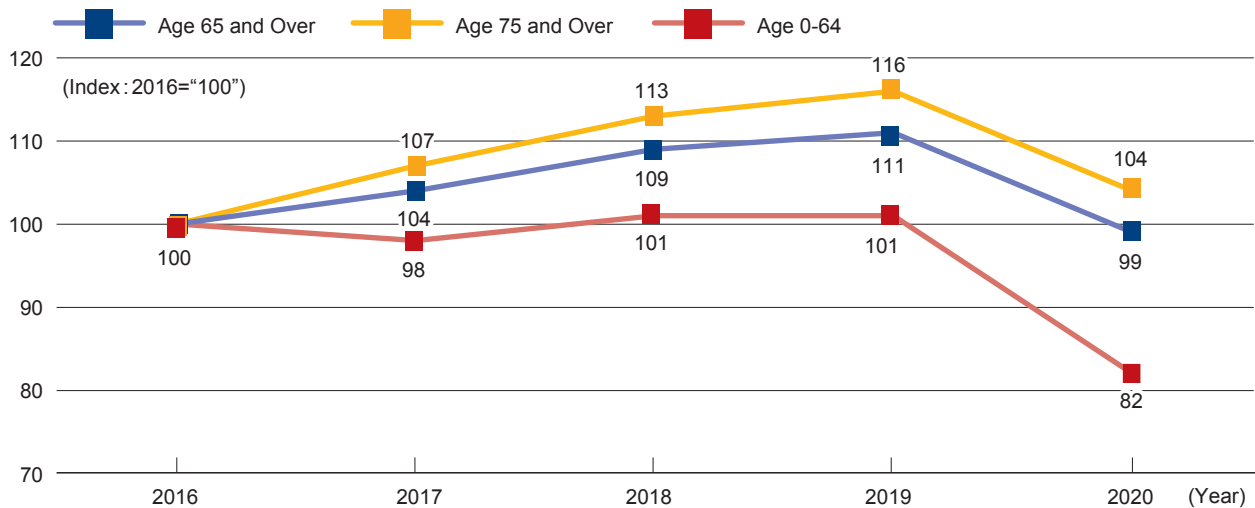
### Chart 2-2-2. Transported Patients by Age Group / Gender



## 3 5-year Change in Number of Transported Elderly Patients (2016-2020)

A total of 342,085 elderly people aged 65 and over were transported in 2020, which accounted for 54.7% of the total.

### Chart 2-2-3. Change in Transported Elderly Patients



	2016	2017	2018	2019	2020
Total Transported Patients	691,423	698,928	726,428	731,900	625,639
Age 65 and Over	346,703	361,734	378,314	383,856	342,085
Age 75 and Over	246,301	262,828	278,019	286,061	256,451
Age 0-64	344,720	337,194	348,114	348,044	283,554
Rate of Age 65 and Over	50.1%	51.8%	52.1%	52.4%	54.7%

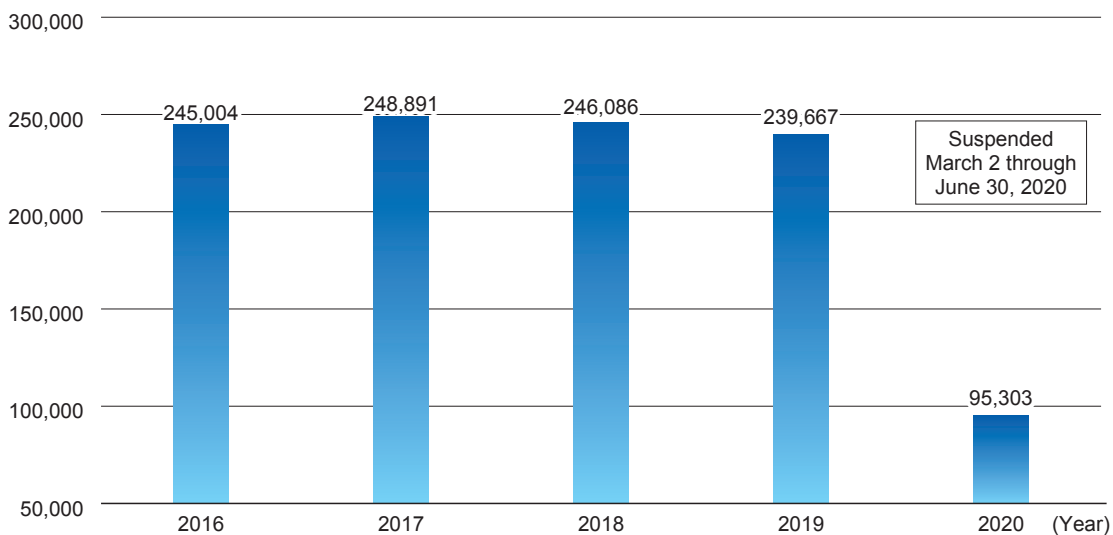
### 3. BYSTANDERS FIRST AID

#### (1) Change in Lifesaving Course Trainees

Due to the COVID-19 spread, first-aid courses have temporarily suspended. Therefore, the number of the participants in lifesaving courses (standard lifesaving courses, advanced lifesaving courses, and first-aid courses) accounted for 95,303 in 2020. The total number of participants, including those in emergency relief courses, accounted for 151,660.

There were cases where people with cardiac arrest received first-aid treatment, such as chest compressions or AEDs, from bystanders (13.0%) on the spot and those who did not receive treatment (3.5%). The survival rate of those who received first aid was approximately more than three times higher one month later than those who did not (in 2020). It is recommended to take lifesaving courses and learn first aid.

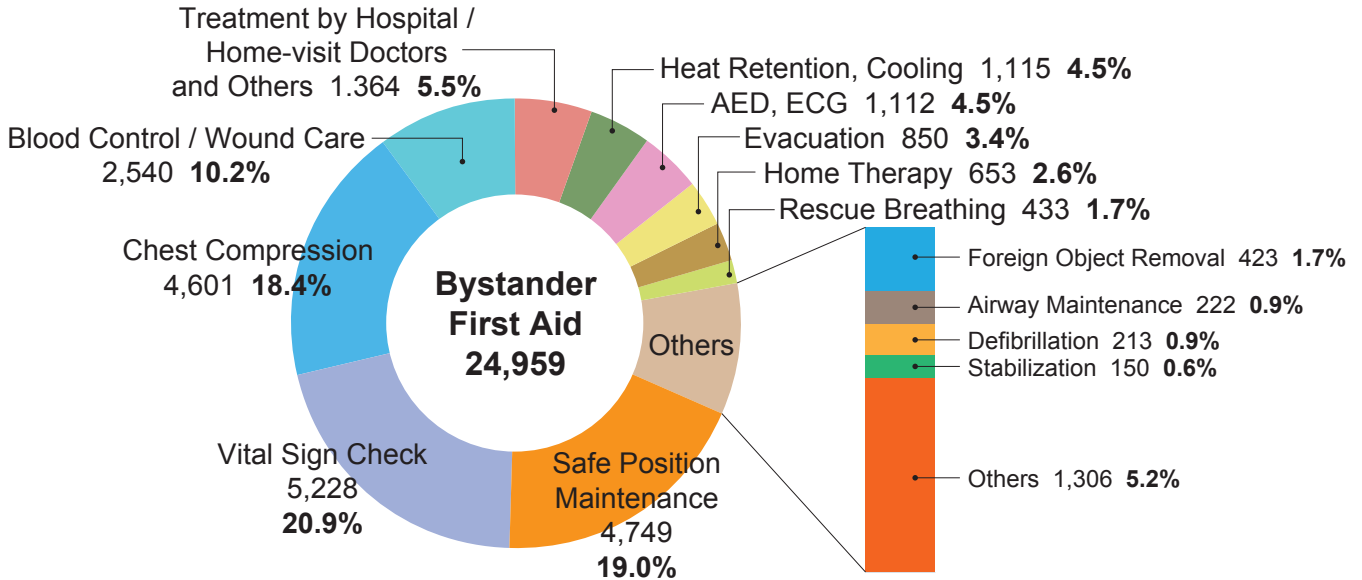
Chart 3-1. Lifesaving Course Trainees  
(Standard\*, Advanced\* and Instructor\* Courses)  
\*With retrainees included



## (2) First Aid

Before the arrival of EMS crews, there were 24,959 cases of first-aid treatment by family members, friends, neighbors, etc.

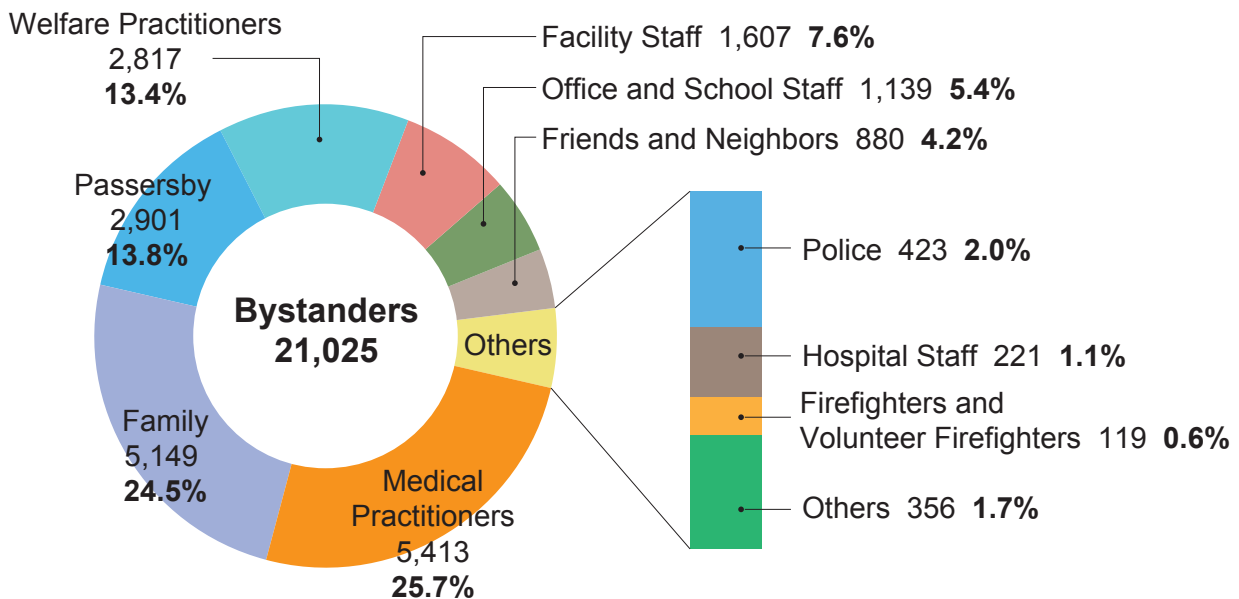
Chart 3-2. Bystander-Initiated First Aid



## (3) Bystander-initiated First Aid

A breakdown of residents, etc. who performed first-aid treatments shows that medical practitioners accounted for the highest number, followed by family members. It is recommended to take lifesaving courses for saving the lives of your loved ones.

Chart 3-3. Bystander-initiated First Aid



## 4. #7119 Emergency Telephone Consultation Center



The “#7119” TFD Emergency Telephone Consultation Center gives advice on the phone to sick / injured people about what to do — to call an ambulance or go to the hospital or not, which hospital is most suitable, and so on.

### (1) Telephone Consultation

The following table shows the responses of the Emergency Telephone Consultation Center for the past two years, classified by consultation content.

Chart 4-1. Consultation Details

Year	Total	Hospital Information Guidance	Emergency Medical Consultation	Forwarded to "119" (EMS Request) after talking	Forwarded to "119" (EMS Request) in no time	Others
2020	362,454	140,261	221,379	34,392	664	150
2019	417,013	184,425	231,686	31,412	717	185

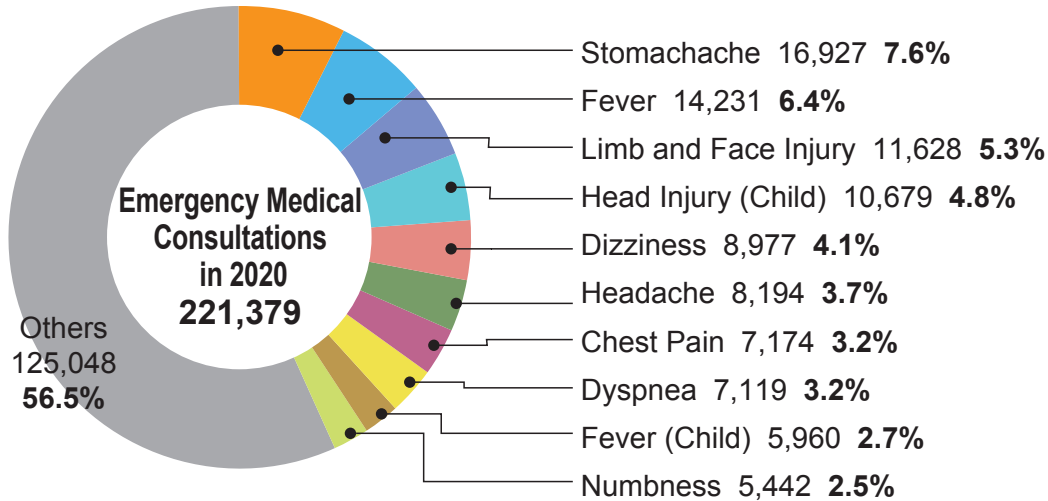
\*Number of emergency requests transferred to the Fire Department (dial 119) before connecting the calls to emergency consultation nurses based on the callers' requests or the contents of the calls.

## (2) Consultation Details

The graph below shows a breakdown of the emergency consultations out of the calls that the Center received in 2020.

The percentage of the consultations on stomachache and fever resulted in high numbers.

Chart 4-2. Details



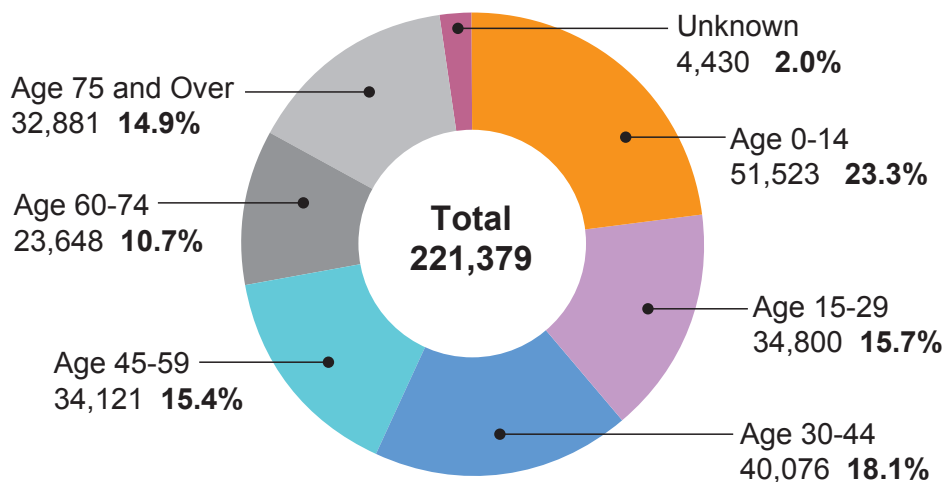
## (3) Health Consultation by Age Group

The following graph shows the age structure of the people that callers consulted about in 2020. The percentage of those who consulted about children aged 0 to 14 is increasing.

The age structure of the people aged 75 and over, as the subjects of consultation, was 14.9%. In terms of the rate of the people transported by ambulances, those aged 75 and over accounted for 41.0% of the total.

Dial “#7119” if you are not sure whether or not to call an ambulance.

Chart 4-3. Health Consultation by Age Group



# Disaster Preparedness Activities

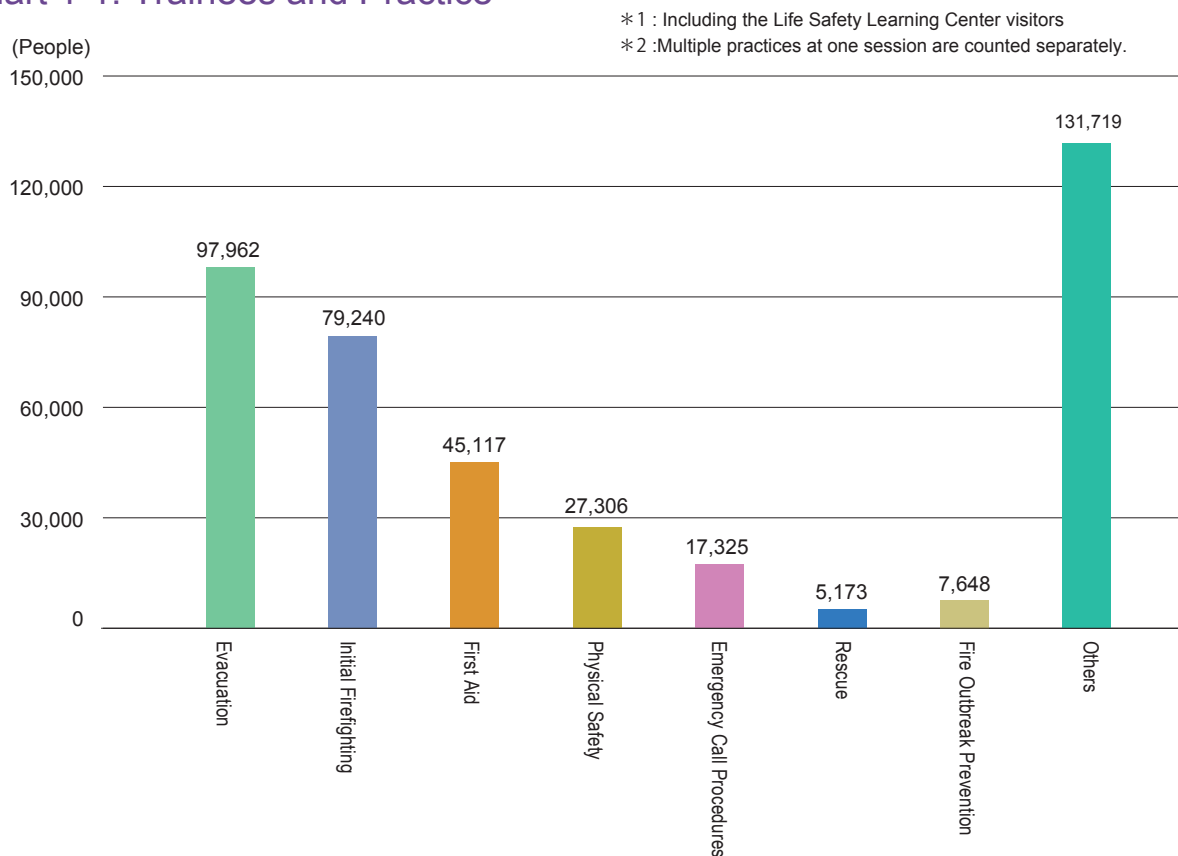
## 1. Training for Fire Safety and Disaster Preparedness

### (1) Fire Safety Practices

Within the TFD’s jurisdiction, 3,872 drills were conducted in 2020, with 317,292 people participating. Evacuation drills were the most common, followed by initial firefighting drills and first aid training.



Chart 1-1. Trainees and Practice



### (2) Comprehensive Life Safety Education Sessions

Within the TFD’s jurisdiction in 2020, 2,108 sessions of “comprehensive life safety education” were held, and 225,947 people participated. The TFD collaborates with educational institutions to provide comprehensive life safety education that takes advantage of all opportunities, including child pick-up training and community events.

\* “Comprehensive life safety education” is the disaster preparedness education provided according to the developmental stage of children to protect them from various disasters and accidents.

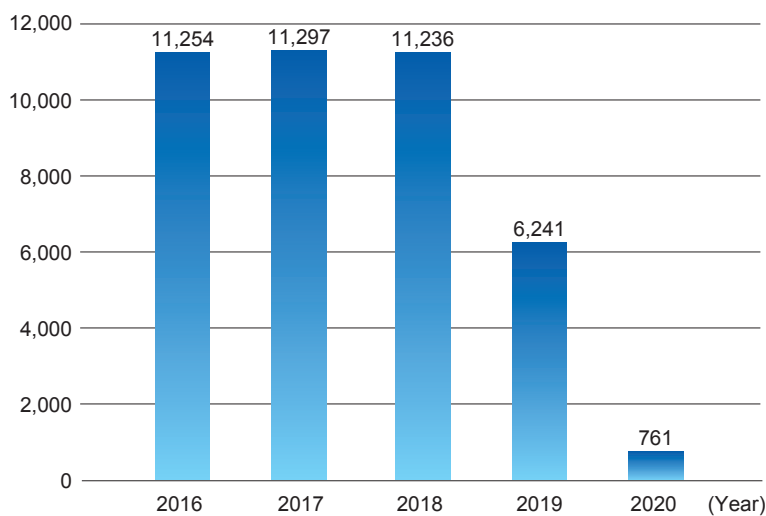
Chart 1-2. Participants in Comprehensive Life Safety Education Sessions

	Sessions	Participants
Preschools/ Kindergartens	675	45,585
Elementary Schools	667	103,611
Junior High Schools	224	31,282
High Schools	115	27,386
Universities	40	3,164
Special Education Support Schools	19	3,069
Others	368	11,850
<b>TOTAL</b>	<b>2,108</b>	<b>225,947</b>

## 2. Inspections for Fire Safety and Disaster Preparedness

In order to reduce any damage of elderly and disabled people in case of disasters, the TFD has been conducting comprehensive home inspections for fire safety and disaster preparedness in the jurisdiction of all fire stations since 2013. Fire personnel visit homes of people in need of assistance to check any possible dangers of fire breakout, earthquake damage and home accidents, etc., and they give advice. In fiscal 2019 and 2020, the number of inspections by fire stations decreased due to the COVID-19, and so the TFD conducted 761 inspections, down 5,480 from the previous year.

Chart 2. Inspections for Fire Safety and Disaster Preparedness



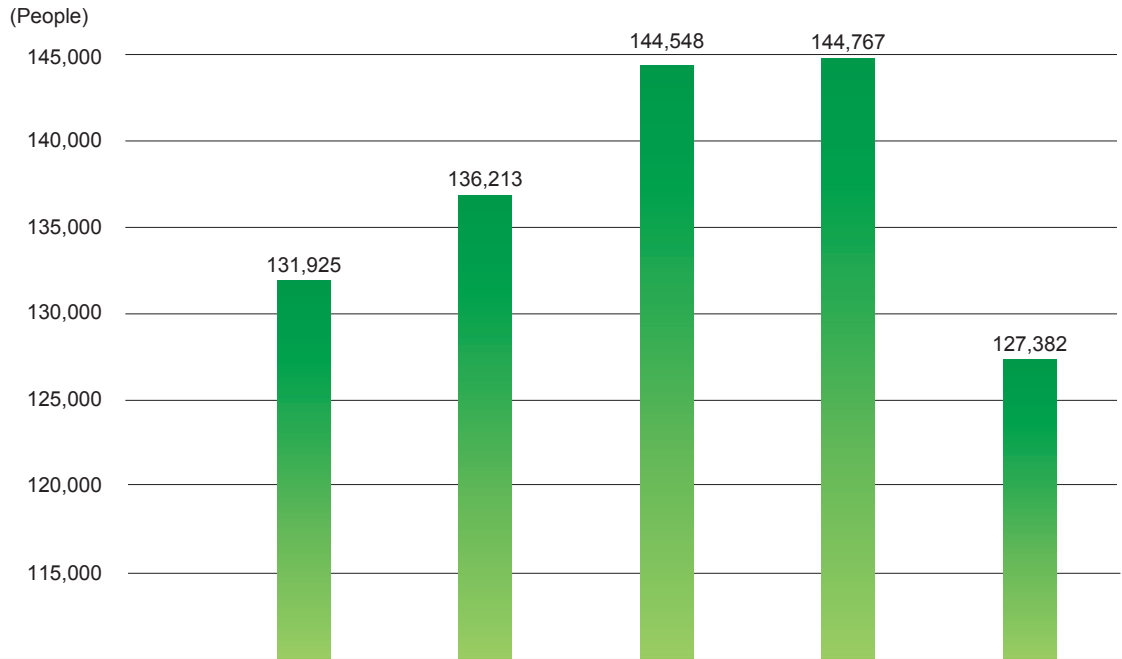
## 3. Daily Accidents

### (1) Outline of 2020

#### 1 Transported Patients by Year

Within the TFD’s jurisdiction, 684,835 people were transported by ambulance due to daily life accidents during the five years from 2016 to 2020. The number of transported patients has been increasing; however, it decreased in 2020 to 127,382.

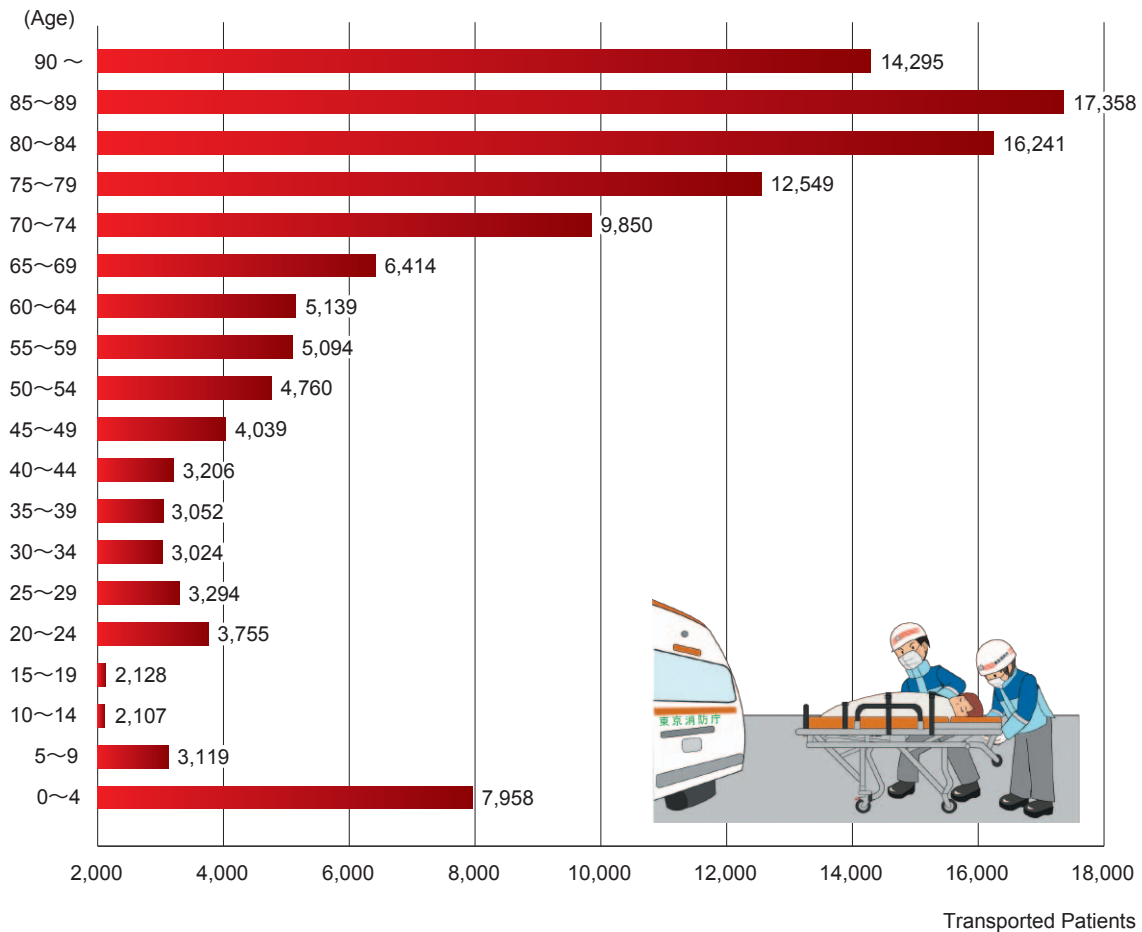
### Chart 3-1-1. Transported Patients by Year



Year	2016	2017	2018	2019	2020
Transported Patients	131,925	136,213	144,548	144,767	127,382
Change from Previous Year	102.6%	103.3%	106.1%	100.2%	88.0%

Average over past 5 years 136,967

### Chart 3-1-2. Transported Patients ( Due to Daily Accidents) by Age Group





## (2) Daily Accidents by Infant (Age 5 and Under)

(Japanese Tip)  
Avoid Daily Life Dangers!  
Protect Infants

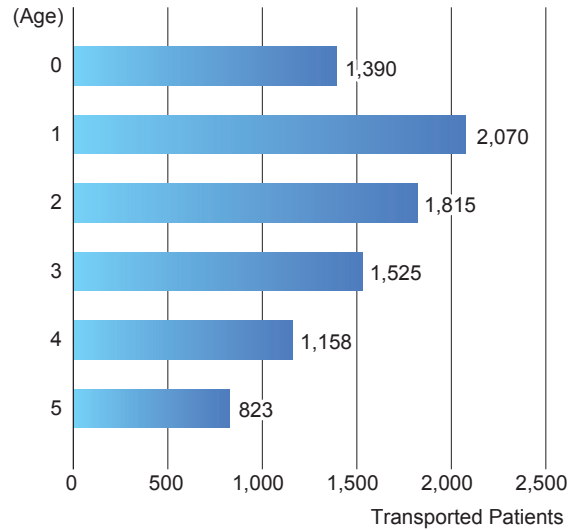


### 1 Transported Infant Patients

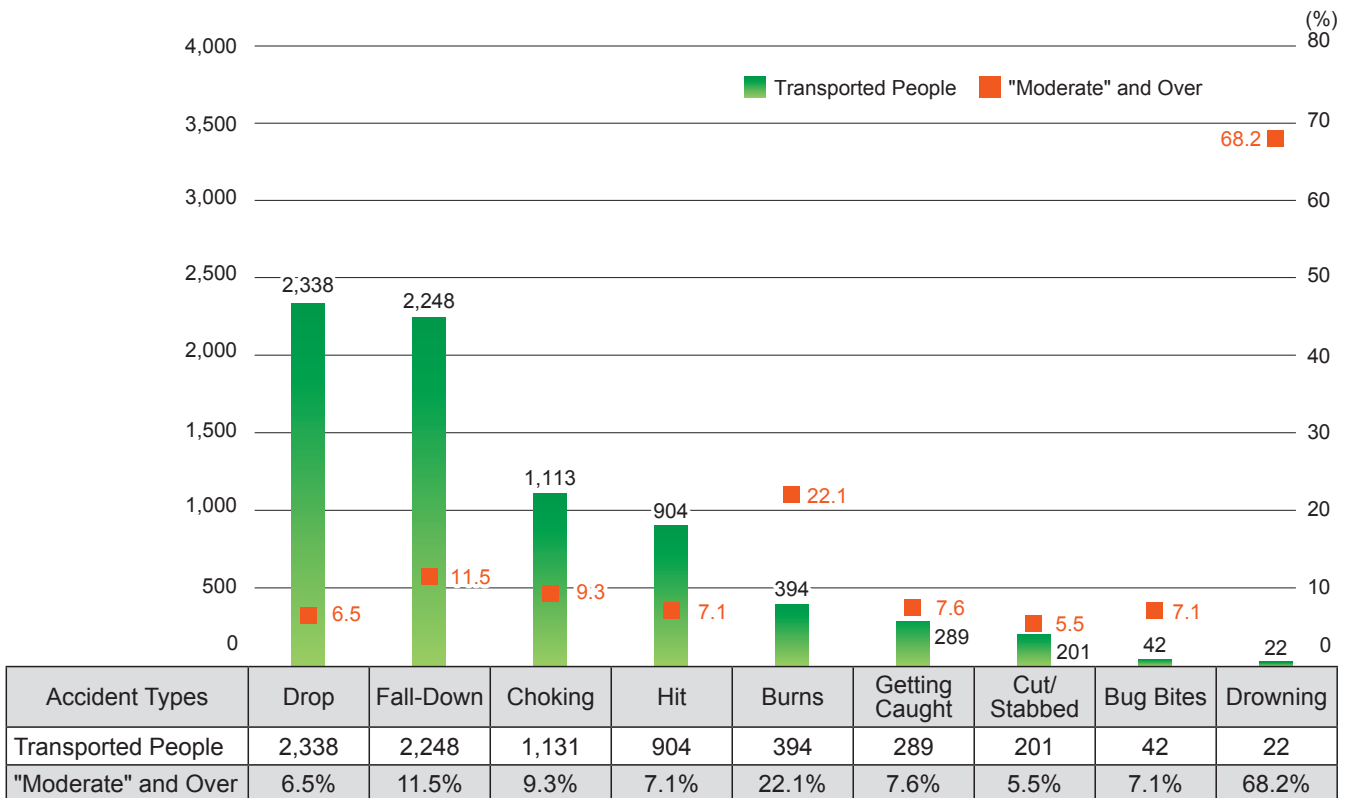
The number of the one-year-old infants transported by ambulance reached 2,070 (the largest number), which was followed by 1,815 as the number of two-year-old infants.



### Chart 3-2-1. Transported Infant Patients (Due to Daily Accidents) by Age



### Chart 3-2-2. Transported Infant Patients by Accident



\*Excluding "Others" and "Unknown"

\*\*"Moderate": No acute danger to life but hospitalization needed

### (3) Elders' Daily Accidents (Age 65 and Over)

(Japanese Tip)  
Avoid Daily Life Dangers!  
Protect Elders 【Outdoors】



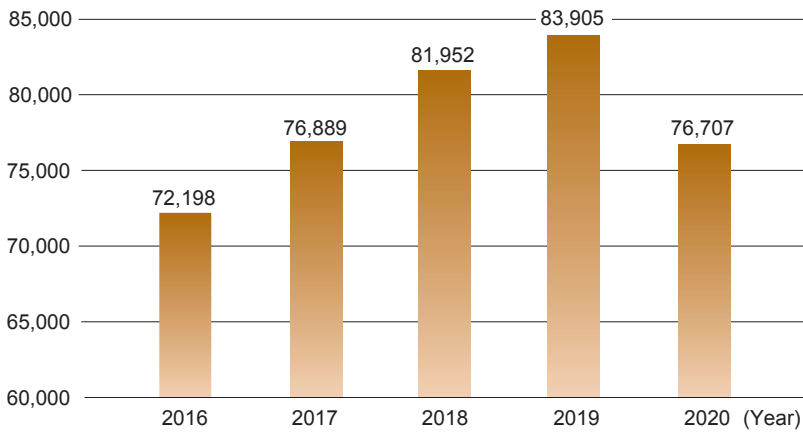
(Japanese Tip)  
Avoid Daily Life Dangers!  
Protect Elders 【Indoors】



#### 1 Transported Elderly Patients by Age

Elderly people's accidents are increasing year by year. The number of ambulance-transported elderly people in 2020 was 76,707, up 4,509 from 2016.

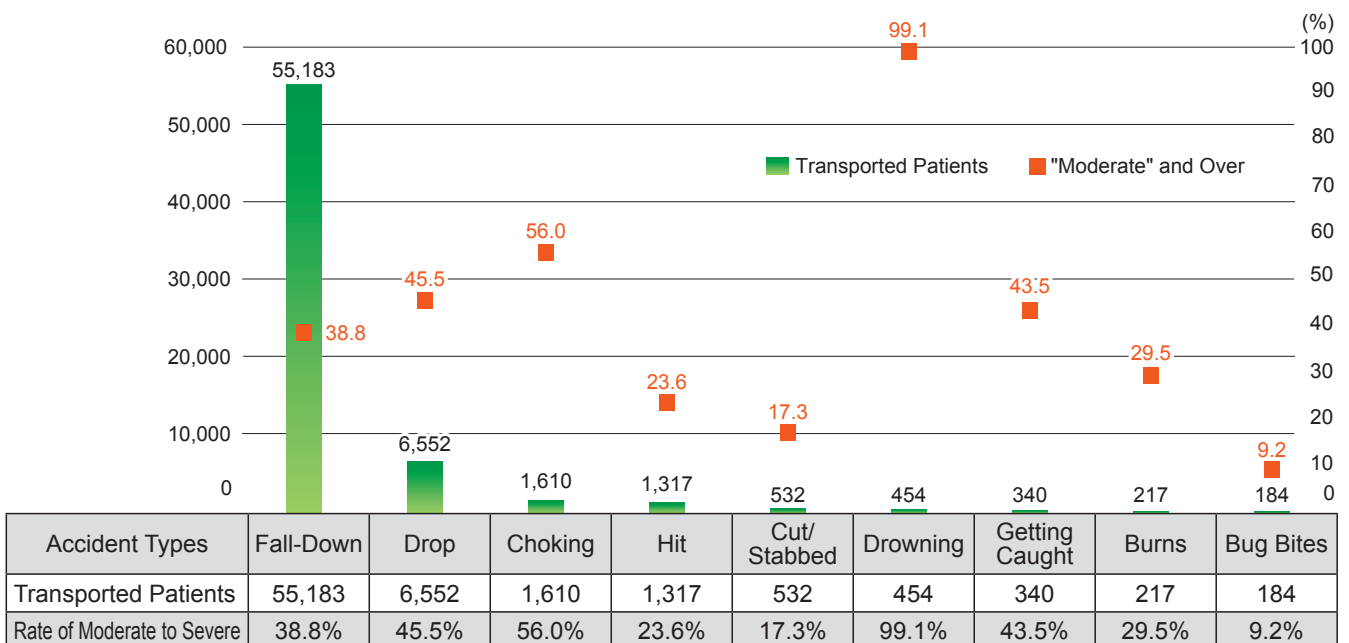
Chart 3-3-1. Transported Elderly Patients by Year



#### 2 Transported Elderly Patients by Accident

The most common accidents of elderly people were Fall-Down as 55,183, which accounted for about 70% of all ambulance runs. Drowning, e.g. in baths, had a high rate in moderate to severe, and the rate stands as high as 99%. The elderly are likely to suffer more than the young.

Chart 3-3-2. Transported Elderly Patients by Accident



\*Excluding Others and Unknown

\*Moderate: No acute danger to life but hospitalization needed

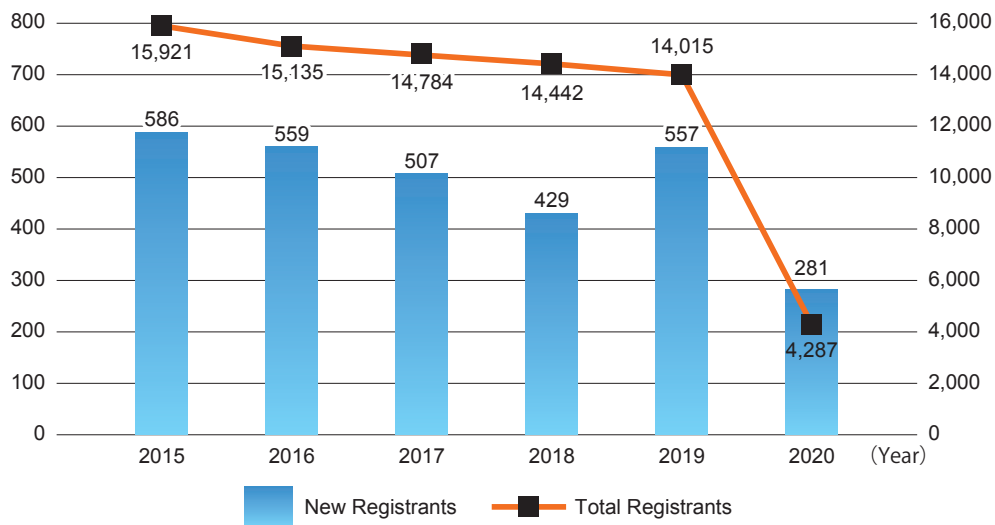
# 4. TFD Volunteers

## (1) Membership

As a result of the overall updating of membership registration, the number of the registrants as of December 2020 proved to be 4,287. The renewal was conducted after the deliberations of issues by the TFD Volunteer System Review Committee.

The number of new registrants decreased by 281 because of the continued difficulty in PR activities due to COVID-19.

Chart 4-1-1. Total Membership and New Registrants



## 1 Registrations by Gender and Age

In terms of the number of registrants per gender, 69% were male and 31% were female.

Also, taking a look into the number of registrations by age, the rate of Age 60 or older is as high as 46% of the total. The Elderly are also actively participating.

Chart 4-1-2. Registrants by Gender

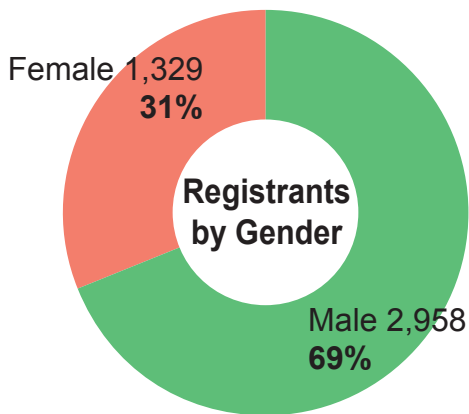
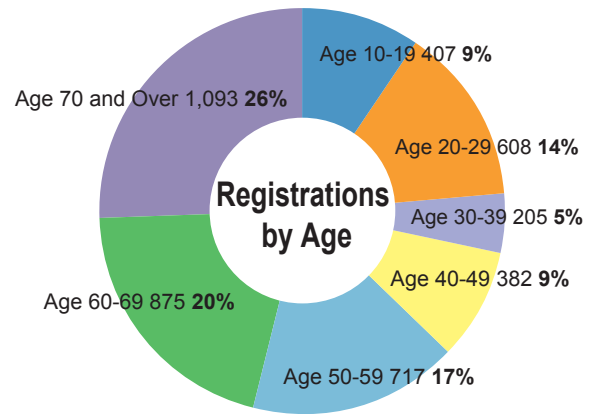


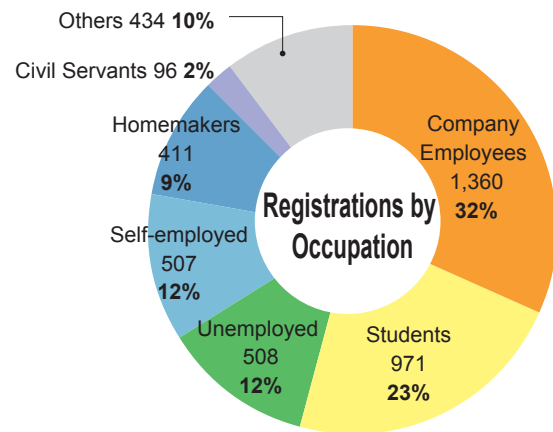
Chart 4-1-3. Registrants by Age Group



## 2 Registrants by Occupation

In registrations, the highest number is company employees at 32% followed by students, 23%, and self-employed, 12%. For students' registrations, there are many cases of recruitment during comprehensive life safety education and first aid courses. As an aside, some schools take bulk registrations for club activities/circle members as a group.

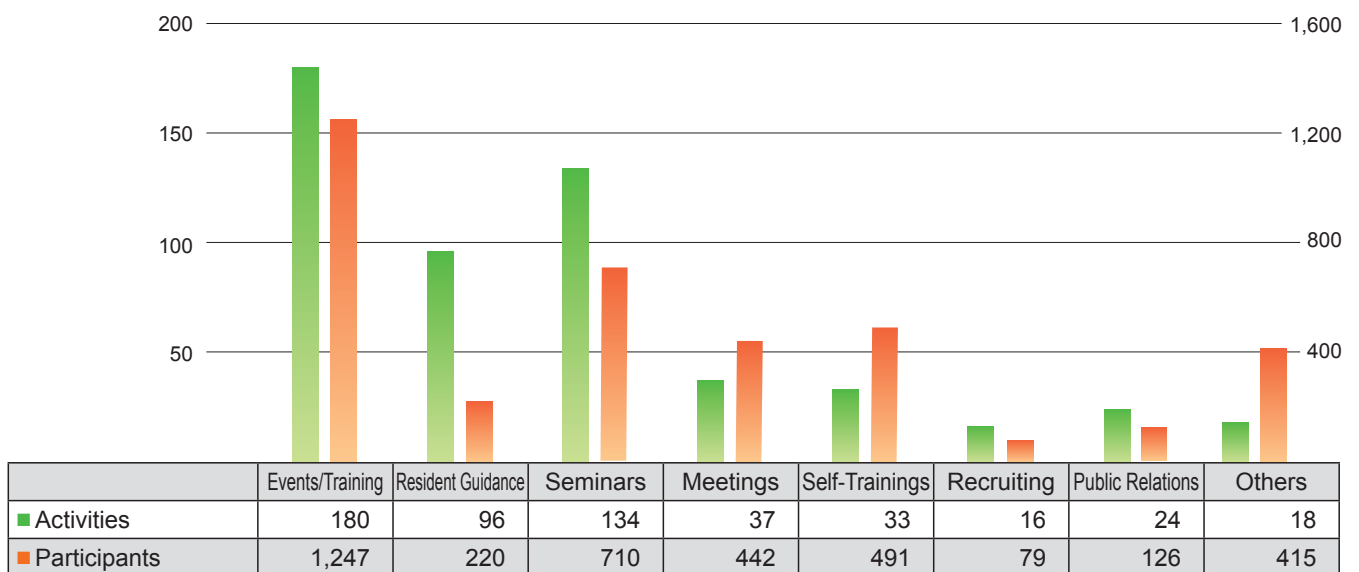
Chart 4-1-4. Registrants by Occupation



## (2) Participants by Event and Activity

The total number of the events/activities that volunteer members participated in 2020 was 538, with 3,730 volunteers. Also, *Events / Training* accounted for the largest number in terms of activities and the number of participants.

Chart 4-2. Participants by Event and Activity in 2020



# Fire Prevention

## 1. Fire Prevention Inspection

### (1) On-site Inspections

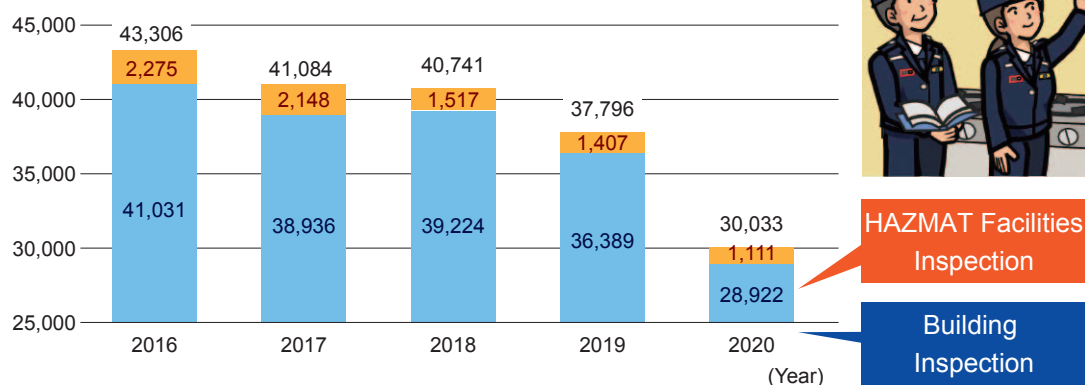
On-site inspections are based on the Fire Service Act. Firefighters visit buildings and HAZMAT facilities to conduct inspections from the viewpoint of fire prevention.

The number of on-site inspections conducted at buildings (excluding residences and tenements) and HAZMAT facilities (e.g., gas stations) was 30,033 in 2020.

The inspections such as post-firefighting operations, 8,917, confirmation, 1,503, downtown, 1,477, and venue management (e.g., events), 37, were conducted.

On-site inspections were conducted by 804 inspectors and 1,210 pumper teams.

Chart 1-1. On-site Inspections



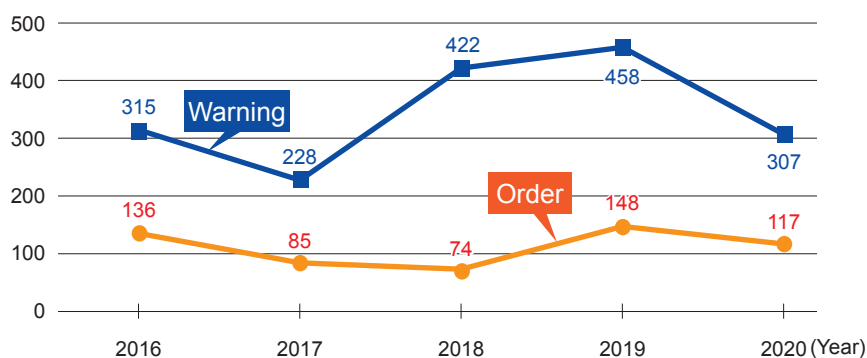
### (2) Issued Warnings and Orders

When the TFD confirms the violation of the Fire Service Act at the buildings or HAZMAT facilities that have undergone on-site inspections, the TFD instructs the violators to correct the buildings or facilities.

The TFD strongly instructs and warns the violators who are not willing to refurbish their buildings or facilities as necessary, and issues orders in accordance with the Fire Service Act.

The graph below shows the changes in the number of warnings and orders issued. In 2020, the TFD issued 307 warnings and 117 orders.

Chart 1-2-1. Issued Warnings and Orders

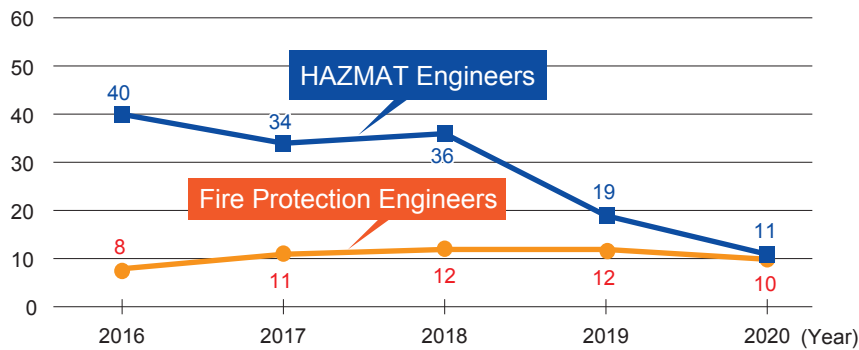


## 1 Licensed HAZMAT and Fire Protection Engineers in Receipt of Violation Notifications

If the TFD has confirmed that licensed HAZMAT / fire protection engineers engaged in acts in violation of the Fire Service Act, the TFD shall notify them of the violations and instruct them not to reoccur.

The graph below shows the changes of the licensed engineers in receipt of violation notifications.

Chart 1-2-2. Licensed Engineers in Receipt of Violation Notifications

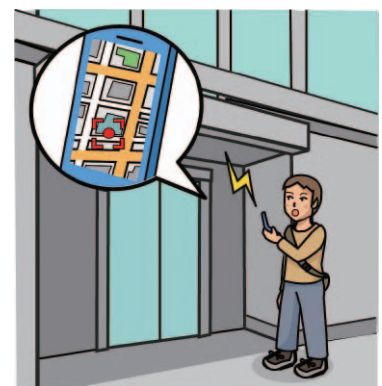
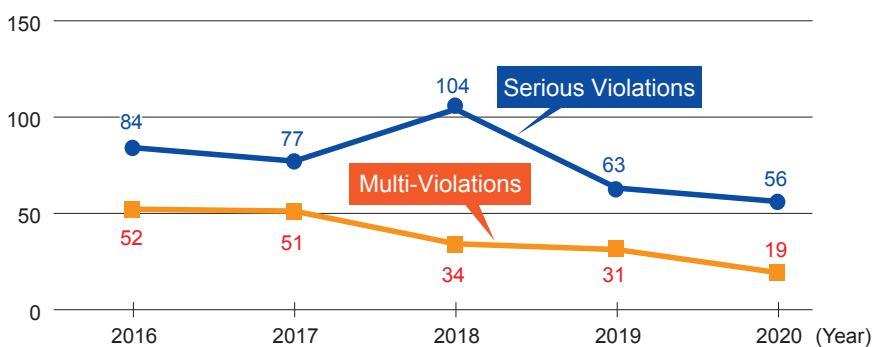


## 2 Buildings with Publicly Announced Violations

The public announcement system provides information on the violations that the TFD found through on-site inspections so that the people who will use the buildings (excl. residences and tenements) can obtain safety information and see their safety before its use. The violations subject to public announcements are serious violations and multiple maintenance obligation violations. Serious violations are violations of installation obligations such as the absence of indoor fire hydrants, sprinklers, or automatic fire alarms. Multiple maintenance obligation violations are repeated violations for building and fire equipment maintenance by building owners.

The graph below shows the changes in the number of the buildings publicly announced each year. The TFD provides thorough guidance to urge quick correction of the announced violations, and the number of buildings in violation is decreasing.

Chart 1-2-3. Change in Number of the Buildings with Publicly Announced Violations



### (3) Fire Safety Building Certificate (Excellence Mark)

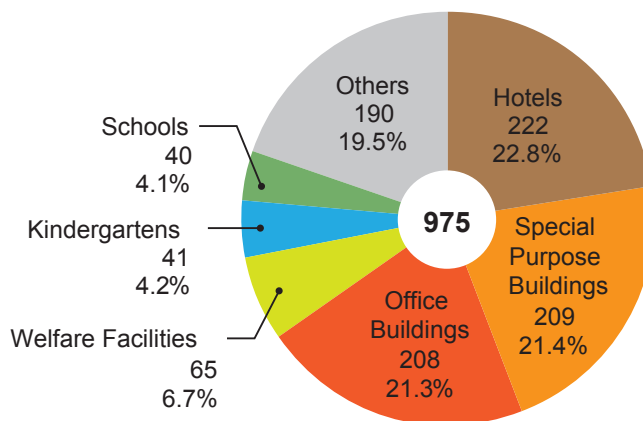
The fire safety building certification (Excellence Mark) system issues a fire safety building certificate to be displayed on a building. It can be issued if Fire Station Chief recognizes the high fire safety level of the building based on the application from the party concerned with the building.

As of December 31, 2020, there were 975 buildings with certification, and the graph below shows a breakdown of the buildings classified by usage.



Fire Safety Building Certificate

Chart 1-3. Fire Safety Buildings



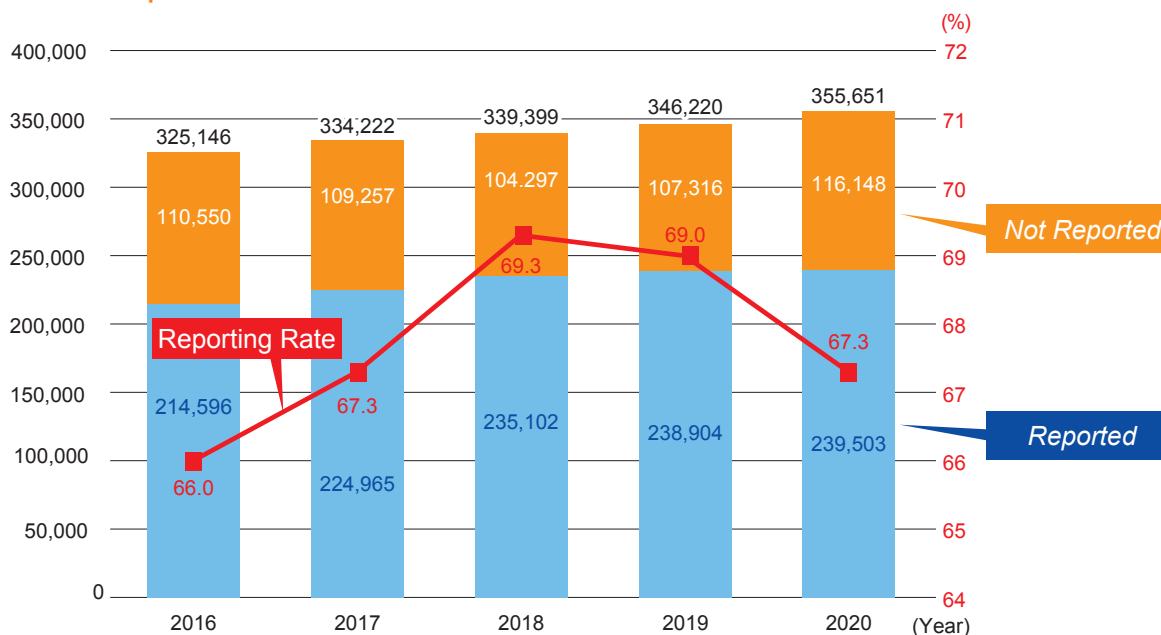
### (4) Inspection Reporting

#### 1 Fire Protection Equipment Inspection Report System

The inspection reporting system for firefighting equipment obligates the parties concerned with buildings to inspect or have qualified personnel inspect firefighting equipment, such as fire extinguishers, automatic fire alarms, and the sprinklers installed in the buildings, and to report the results to the Fire Station Chief.

As of the end of December 2020, the number of buildings inspected was 355,651, and the number of reports was 239,503 (with a reporting rate of 67.3%). The number of buildings in need of inspection is increasing year by year.

Chart 1-4. Report Results

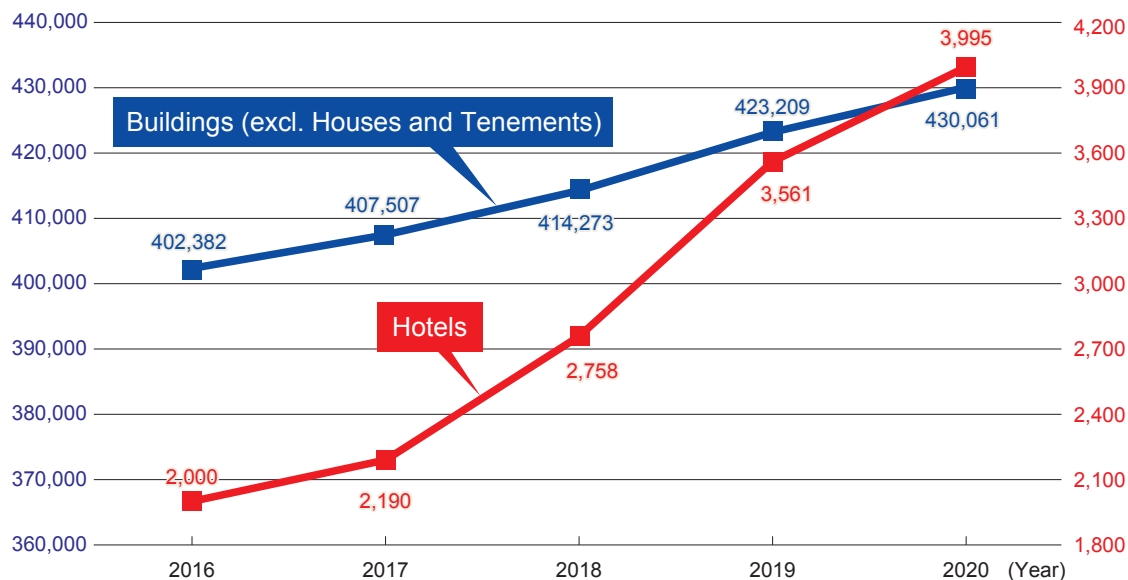


## 2. Change in Number of Buildings and Fire Prevention Managers

### (1) Change in Number of Buildings

As of the end of December 2020, there were 430,061 buildings (excl. houses and tenements) and 3,995 hotels within the TFD's jurisdiction. Compared with 402,382 buildings and 2,000 hotels in 2016, the number of buildings, 27,679 (6.9%), and that of hotels, 1,995 (99.8%), are both increasing.

Chart 2-1-1. Buildings (excl. Houses and Tenements) and Hotels



\*The hotels are counted under Table 1, Fire Service Ordinance.

Chart-2-1-2. Building Use

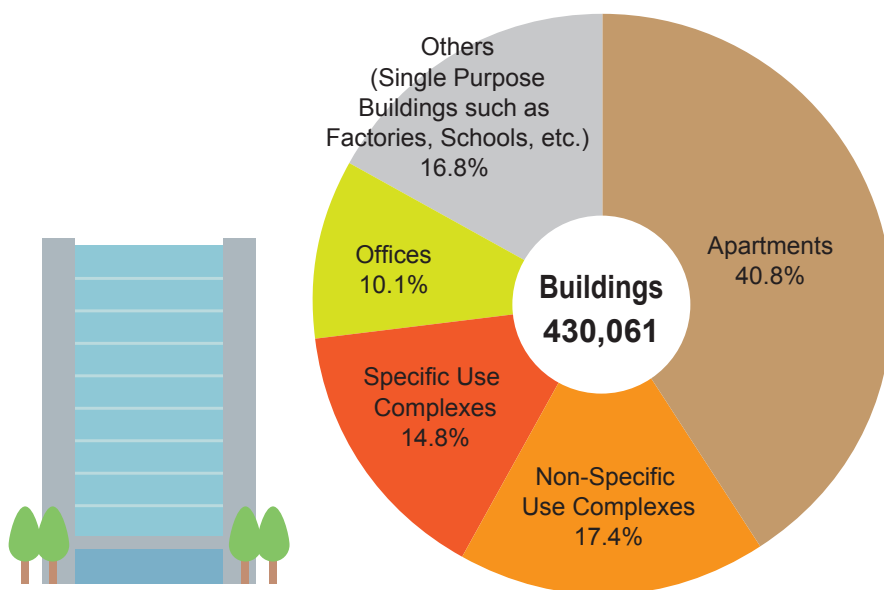
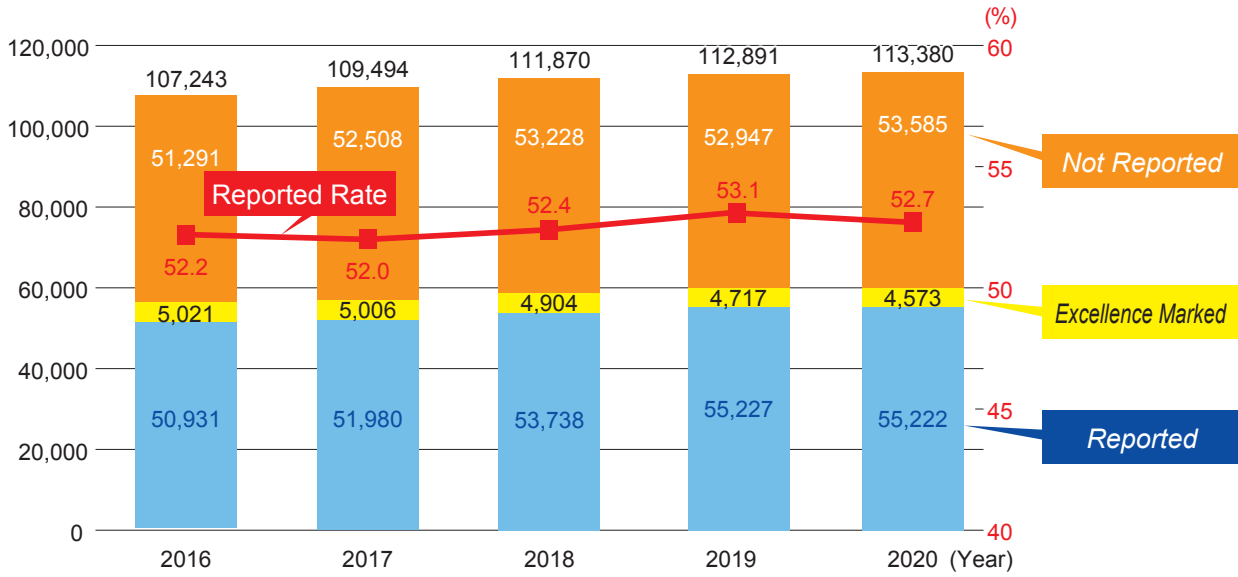


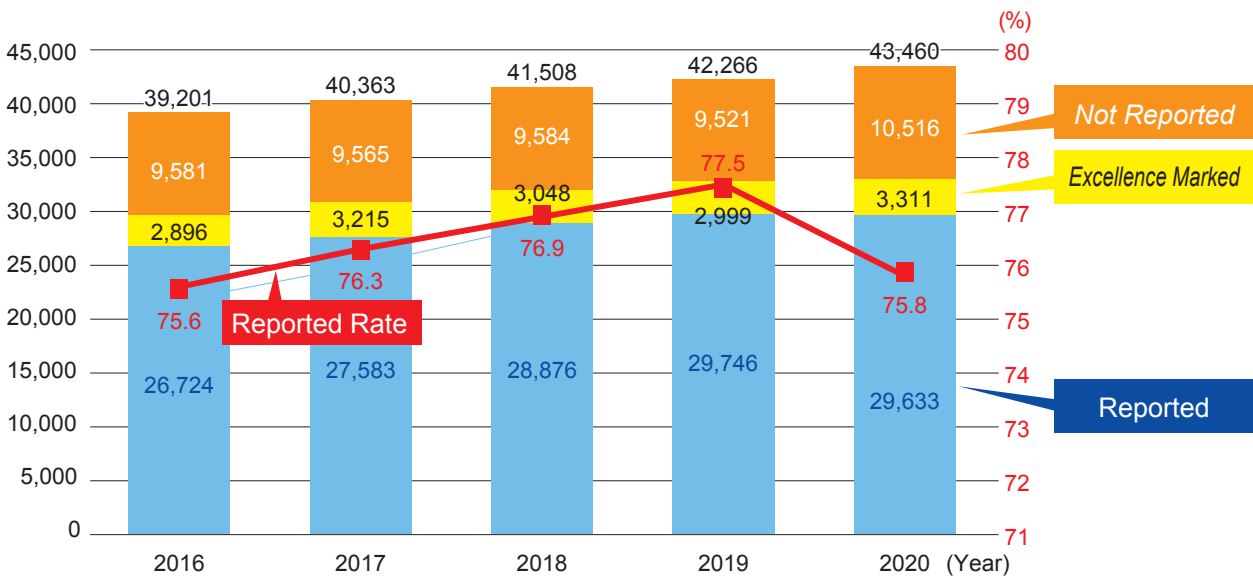


Chart 2-1-3. Building Inspection Reporting



\*Reported Rate includes *Excellence Marked*.

Chart 2-1-4. Disaster Protection Management Inspection Reporting



\*Reported Rate includes *Excellence Marked*.

Chart 2-1-5. High-Rise Buildings (F21 and Above) and Buildings with Basement Floors (B4 and Below)

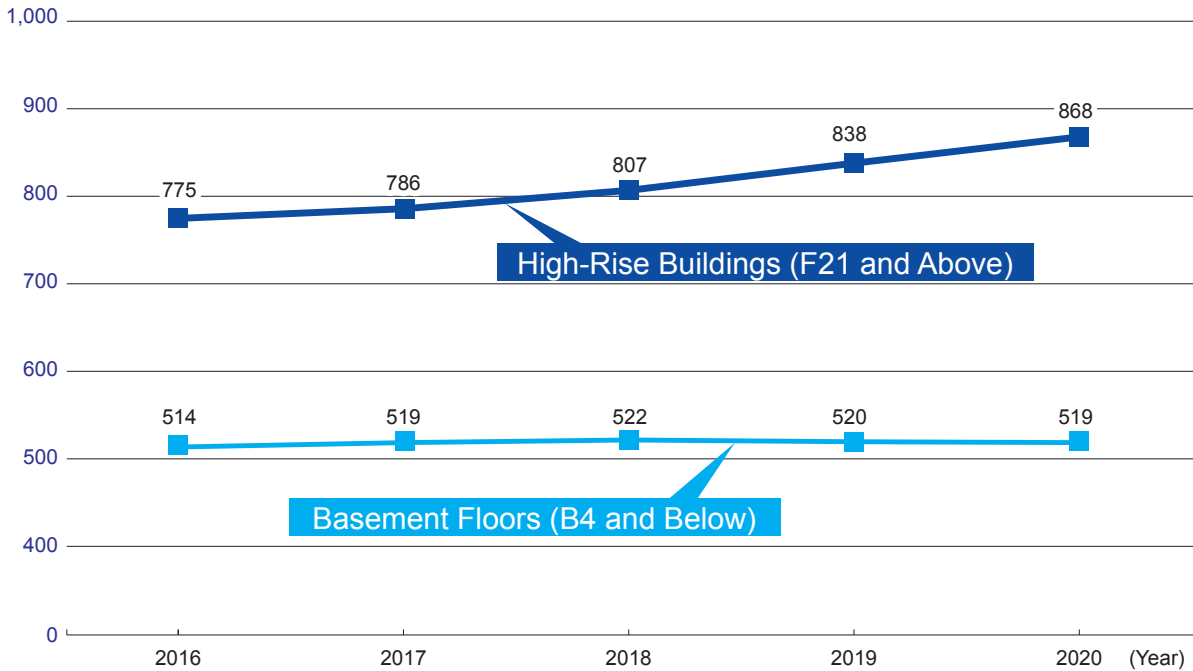


Chart 2-1-6. Buildings with Sprinklers and Automatic Fire Alarm Systems

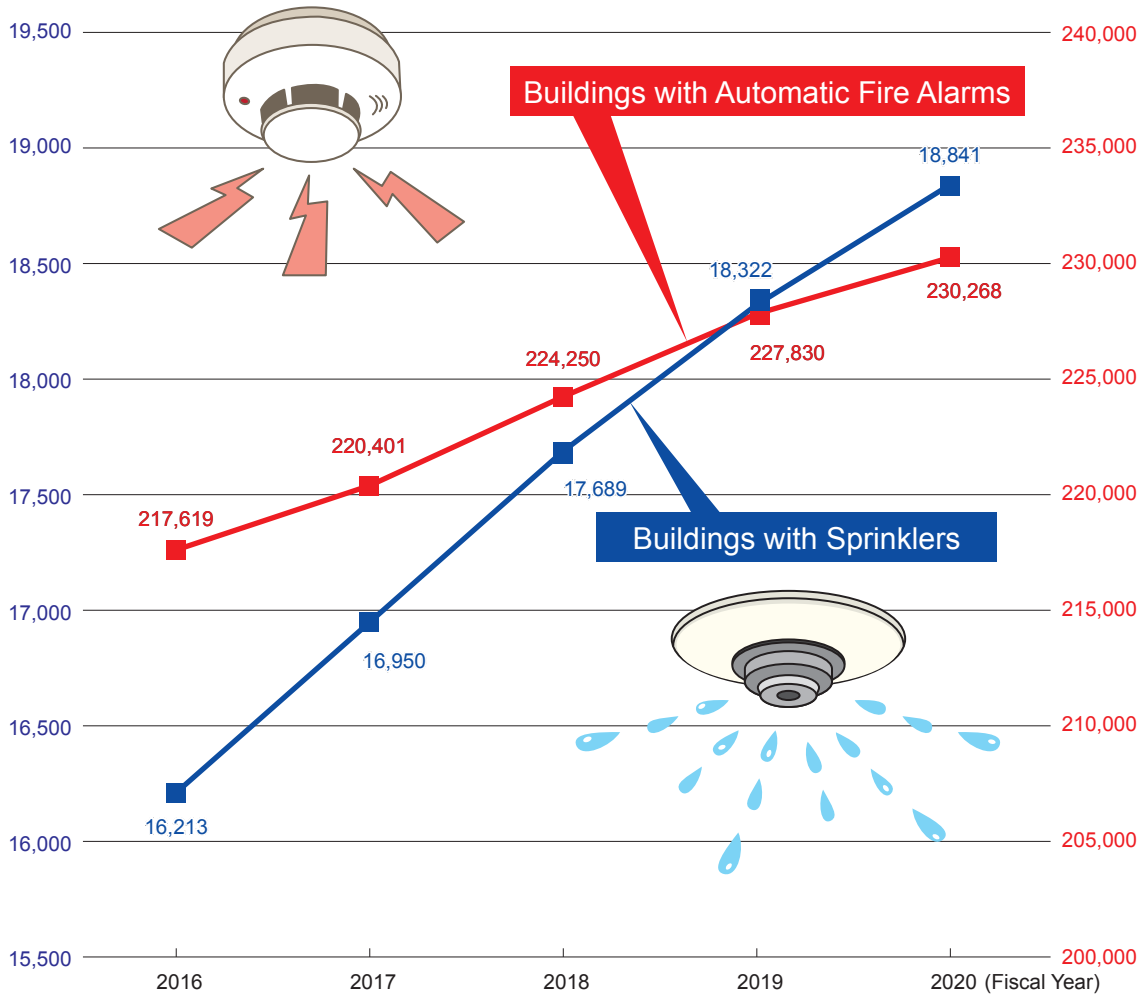
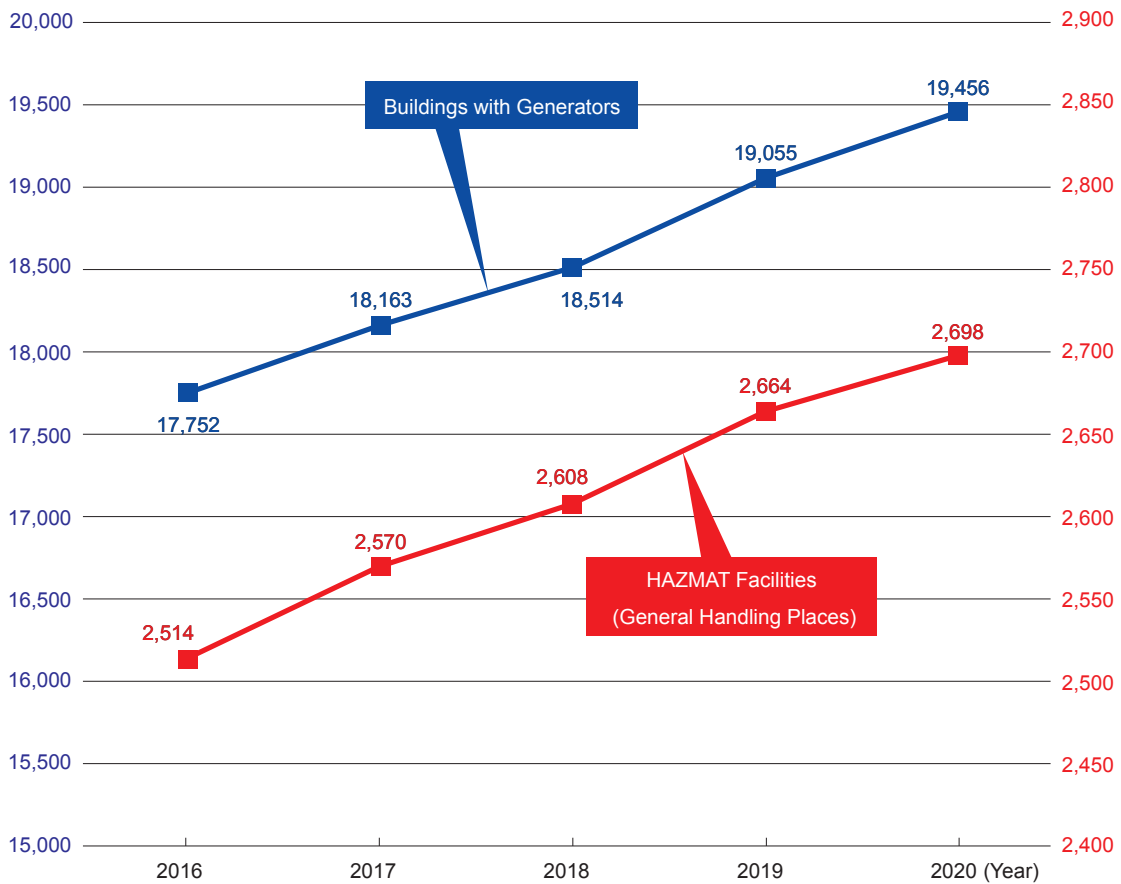


Chart 2-1-7. Buildings with Generators and HAZMAT Facilities (General Handling Places)

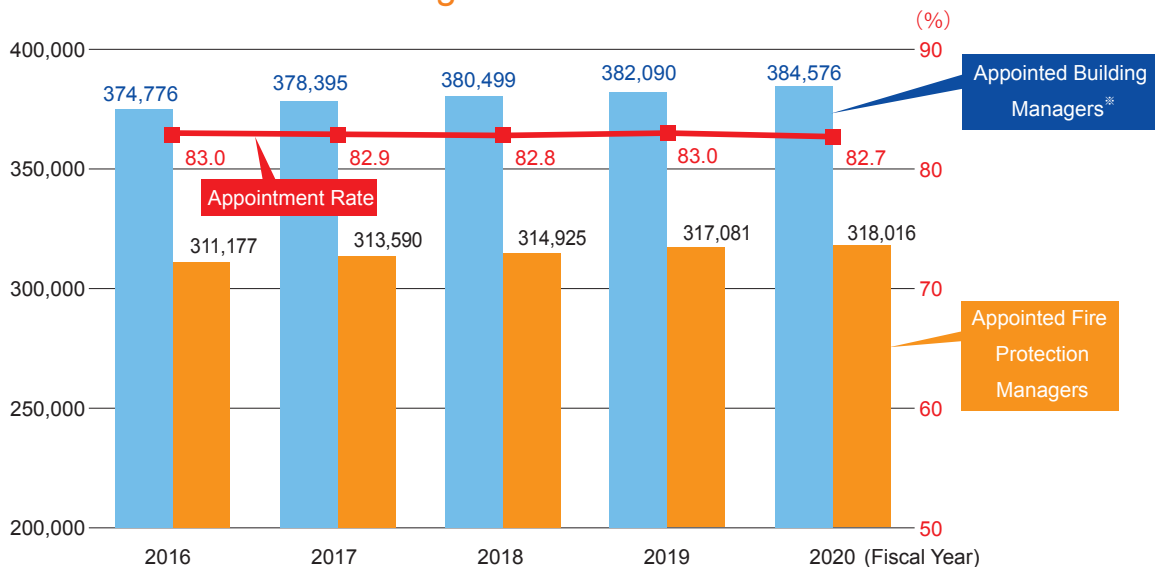


\*The number of HAZMAT facilities (General Handling Places) are as of the end of each year.

## (2) Fire Protection Managers

As of the end of fiscal 2020, there were 384,576 establishments obligated to appoint fire protection managers. In recent years, the number of establishments has been increasing. The rate of the appointment of fire protection managers at the end of fiscal 2020 was 82.7%. Compared to the previous year, the number of those establishments increased by 2,486, and the appointment rate decreased by 0.3%. In recent years, the appointment rate has been around 83%.

Chart 2-2. Fire Protection Managers



\*Appointed Building Managers have authority over the buildings under Article 8 of the Fire Service Law.

### 3. Private Fire Brigade Training

Private Fire Brigade training is mandatory at least twice a year at business establishments where an unspecified number of people visit, such as department stores, hospitals, hotels, theaters and underground station buildings.

The number of active private brigade drills increased with fewer fire station personnel giving on-site advice due to the increase in practice numbers. This can be attributed to the increased awareness of business establishments after their repeated experiences in coping with various disasters. The decrease in number may be caused by COVID-19 in 2020.

Chart 3. Private Fire Brigade Training

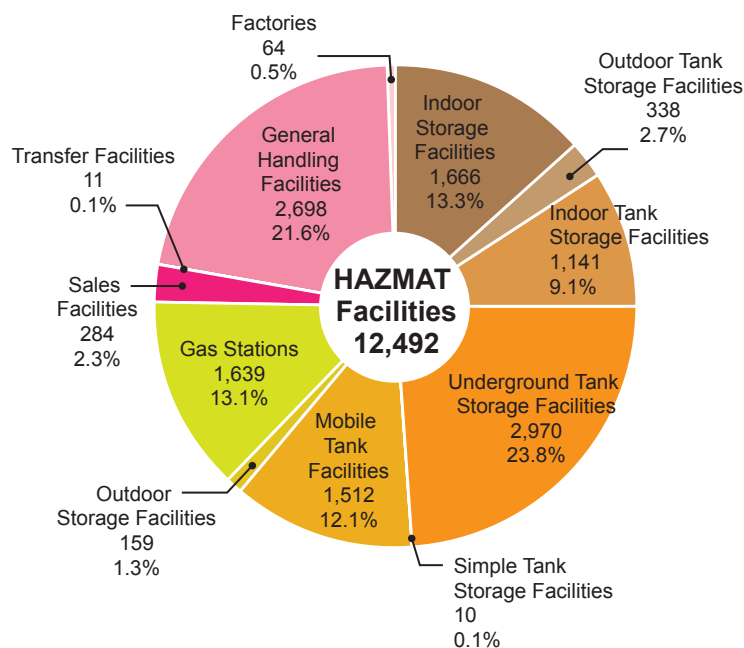
	Total (Cumulative Number of Times)	Comprehensive Training	Partial Training			Others	Training Participants (Hundred)	Trainers (People)
			Emergency Call Procedures	Firefighting	Evacuation			
2016	135,287	90,499	2,426	9,897	20,690	11,775	79,650	56,412
2017	137,723	94,792	2,713	10,800	21,335	8,083	81,668	45,631
2018	144,096	99,515	2,781	11,572	22,159	8,069	84,740	45,287
2019	151,860	105,656	2,397	11,191	21,714	10,902	86,205	40,611
2020	134,831	91,987	2,306	10,375	20,680	9,483	68,200	10,956

### 4. HAZMAT Administration

#### (1) HAZMAT Facilities by Category

HAZMAT facilities are classified according to each facility type. In terms of each facility type, the number of underground tank storage facilities was the largest with 2,970 facilities, followed by 2,698 general handling facilities and 1,666 indoor storage facilities as of the end of fiscal 2020.

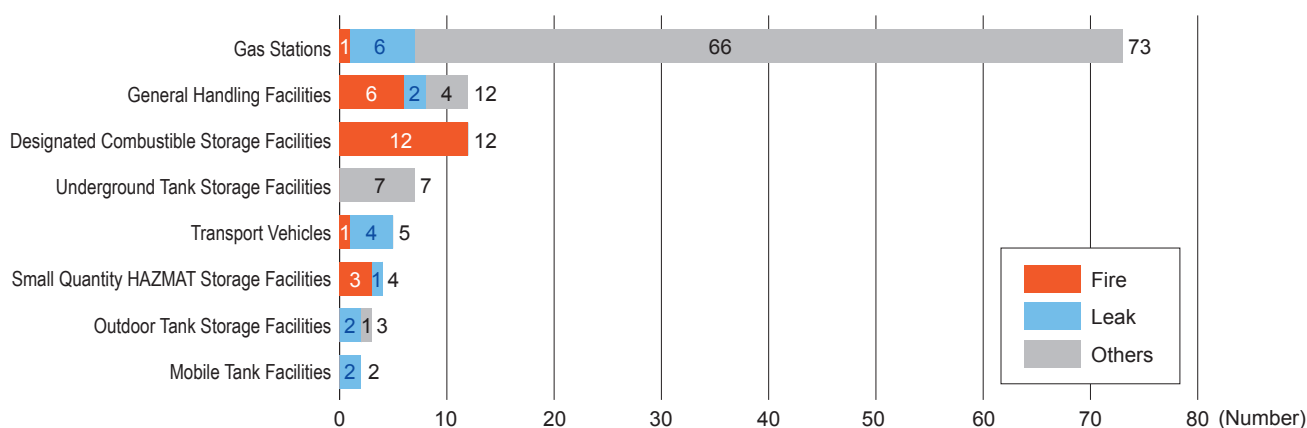
Chart 4-1. HAZMAT Facilities



## (2) HAZMAT Facilities Accidents

In terms of the occurrence of accidents by facility types in 2020, there were 73 gas stations, which accounted for about half the total (59.3%, up 10 from the previous year), followed by 12 general handling facilities (9.8%, down 6 cases), 12 designated combustible storage facilities (9.8%, up 3 cases), and 7 underground tank storage facilities (5.7%, up 4 cases). Many accidents at gas stations are caused by property damage accidents caused by driving mistakes. Be sure to drive safely on the premises of gas stations.

Chart 4-2. HAZMAT Facilities Accidents



## (3) HAZMAT Accidents by Category

The number of HAZMAT accidents was 123 in 2020, up 1 from the previous year. There were 24 fires (19.5%, down 4 from the previous year), 19 leaks (15.4%, down 4 from the previous year), and 80 other accidents (65.0%, up 9 from the previous year). Although there were no deaths in these HAZMAT accidents, 11 people were injured (down 5 from the previous year).

Chart 4-3. HAZMAT Incidents by Incident Category

Year	Total	Fires	Leak	Others	Deaths	Injuries
2016	105	42	25	38	0	17
2017	107	21	20	66	0	9
2018	114	30	32	52	0	16
2019	122	28	23	71	0	16
2020	123	24	19	80	0	11
Change from 2019	1	▲4	▲4	9	0	▲5

## (4) HAZMAT Accidents by Factor

Chart 4-4-1. Accidents

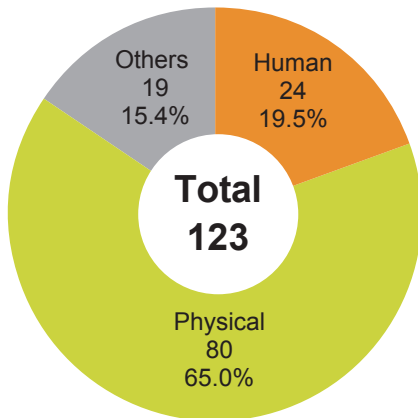


Chart 4-4-2. Fires

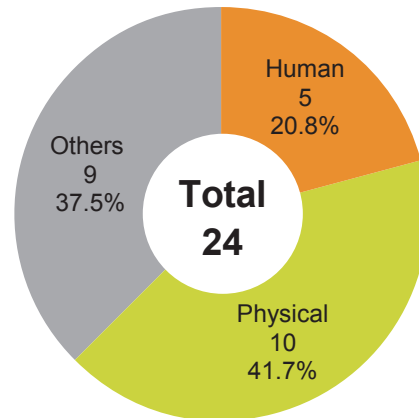


Chart 4-4-3. Leaks

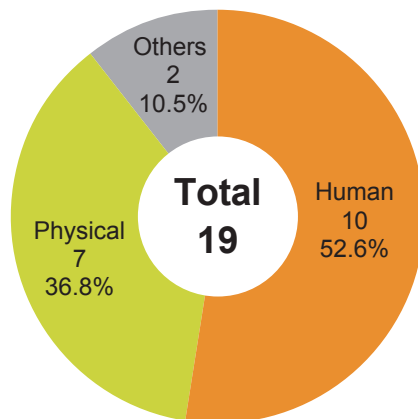
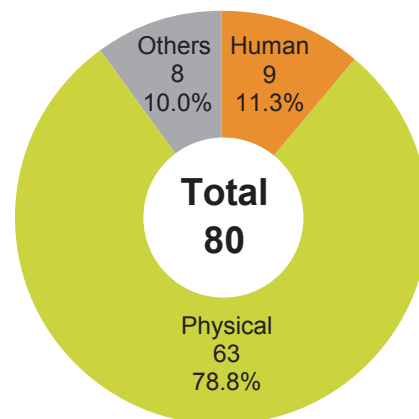


Chart 4-4-4. Other Accidents



# ORGANIZATION

## 1. Resources

### (1) Personnel • Ranks

Chart 1-1. Personnel by Rank

(As of April 1, 2021)

Rank	Fire Chief	Deputy Fire Chief • First Assistant Chief	Assistant Chief • Battalion Chief	Fire Captain
Fixed Number of Personnel	1	21	413	1,537
Rank	Fire Lieutenant	Fire Sergeant	Firefighter	Others
Fixed Number of Personnel	4,601	5,321	6,344	423
<b>Total</b>	<b>18,661</b>			

### (2) Apparatus

The TFD has 2,075 fire apparatus including fire engines, foam trucks, ladder trucks, and others (excl. the vehicles owned by other organizations). Deployment of major fire vehicles is as below.

#### In the TFD Area (As of April 1, 2021)

Fire Engines .....	489
Ladder Trucks .....	86
Foam Trucks .....	48
Fireboats .....	9
Ambulances .....	270
Rescue Trucks .....	29
Earthquake Rescue Trucks .....	4
Rescue Trucks (for aircraft loading) .....	2
Water Rescue Trucks .....	4
Mountain Rescue Trucks .....	5
Special Incident Trucks .....	18
Special Rescue Trucks .....	6
First Arrival Vehicles .....	3
Motorcycles .....	20
Helicopters .....	7
Heavy Vehicles (for rescue) .....	8
Heavy Vehicles (for road clearance) .....	6

## Chart 1-2-1. Planned Revenue

(Unit: 1,000 yen)

Category Subsection	2021	2020	Increase/Decrease	
			Amount	Rate of Change(%)
Contribution	—	14,194	▲ 14,194	▲ 100.0
Commission and Royalties	370,036	378,272	▲ 8,236	▲ 2.2
National Treasury Disbursements	1,013,833	689,059	324,774	47.1
Property Income	763,556	672,798	90,758	13.5
Balance Carried Forward	6,255,908	16,629,251	▲ 10,373,343	▲ 62.4
Other Income	45,275,186	45,066,912	208,274	0.5
Tokyo Metropolitan Government Credit	10,542,000	1,345,000	9,197,000	683.8
<b>Total</b>	<b>64,220,519</b>	<b>64,795,486</b>	<b>▲ 574,967</b>	<b>▲ 0.9</b>

## Chart 1-2-2. Planned Expenditure

The supplementary budget is not included in the Tokyo Metropolitan Government's General Account for fiscal 2020.  
The simultaneous supplementary budget is not included in the Tokyo Metropolitan Government's General Account for fiscal 2021. (Unit: 1,000 yen)

Category		2021	2020	Increase/Decrease	
Subsection	Item			Amount	Rate of Change(%)
Fire Service Cost		251,067,000	255,623,000	▲ 4,556,000	▲ 1.8
	Fire Management Cost	199,615,000	200,533,000	▲ 918,000	▲ 0.5
	Fire Activity Cost	23,368,000	24,137,000	▲ 769,000	▲ 3.2
	Volunteer Fire Corps Cost	3,900,000	3,942,000	▲ 42,000	▲ 1.1
	Retirement Bonus and Pension	7,845,000	8,539,000	▲ 694,000	▲ 8.1
	Construction Cost	16,339,000	18,472,000	▲ 2,133,000	▲ 11.5
Metropolitan Government's General Account		7,425,000,000	7,354,000,000	71,000,000	1.0

$$\frac{\text{Fire Cost}}{\text{Metropolitan Government's General Account}} = \frac{¥2,510,670,000}{¥74,250,000,000} \times 100 (\%) = 3.4\%$$

## Chart 1-2-3. Planned Expenditure by Category

(Unit: 1,000 yen)

Classification	2021		2020		Increase/Decrease	
	Budget Amount	Component Ratio	Budget Amount	Component Ratio	Amount	Rate of Change(%)
Payroll	196,808,995	78.4	196,992,195	77.1	▲ 183,200	▲ 0.1
Salary Payment	123,405,819	49.2	123,744,583	48.4	▲ 338,764	▲ 0.3
Retirement Bonus	7,722,220	3.1	8,382,615	3.3	▲ 660,395	▲ 7.9
Other Personnel Payments	65,680,956	26.2	64,864,997	25.4	815,959	1.3
Project Cost	54,258,005	21.6	58,630,805	22.9	▲ 4,372,800	▲ 7.5
<b>Total</b>	<b>251,067,000</b>	<b>100.0</b>	<b>255,623,000</b>	<b>100.0</b>	<b>▲ 4,556,000</b>	<b>▲ 1.8</b>



# TOKYO FIRE DEPARTMENT'S MAIN POLICIES

## **POLICY 1** Enhancement of Fire Department Strategy and On-scene Operations

### 【On-scene Safety Management】

- Developing hazard awareness and disaster management with lessons learned from past incidents

### 【Earthquake and Typhoon Management / Fact-finding System】

- Promoting practical training / Understanding the efficient management of the fire station control point (for on-scene firefighters)
- Understanding computerized systems, equipment characteristics and proper handling
- Understanding local disaster preparedness plans

## **POLICY 2** Enhancement of Emergency Medical Services

### 【Ambulance Service】

- Following EMS operations standards
- Transporting victims to the hospital quickly yet safely
- Preventing infection

### 【Citizens' Proper Use of Ambulance Service】

- Promoting the #7119 system

### 【Citizen-initiated First Aid】

- Developing first aid advice knowledge and know-how
- Encouraging public first aid course programs

## **POLICY 3** Enhancement of Citizens' Interest and Skills in Disaster Preparedness

### 【Community Fire and Emergency Drills】

- Increasing disaster preparedness knowledge / Understanding training purposes
- Developing advice know-how for every citizen

### 【Volunteer Fire Corps and Improved Conditions】

- Working with volunteer firefighters to raise public interest in volunteer fire corps and increase the membership
- Developing volunteers' capabilities and leadership

## **POLICY 4** Promotion of Fire Prevention Tasks for Greater Safety

### 【Entertainment Areas' Fire Safety】

- Giving specific yet easy-to-understand advice on fire-safe conditions for each building
- Giving administrative guidance with sufficient knowledge about laws and regulations

### 【Building Managers' Fire Safety Awareness and Fire Protection Support】

- Giving guidance and making sure every new/existed building has its own fire protection managers
- Promoting image-assisted training support systems

## **POLICY 5** Improvement of Fire Service with DX and Other Renovations

### 【Digital Shifting and Improved Public Service】

- Observing work rules and guidelines
- Reviewing and improving work processes
- Making advantage of new systems

### 【Strategy for Impressive Fire Department PR】

- Meeting public requests with specific "citizens-friendly PR"
- Learning about and downloading useful official app.

## **POLICY 6** Protection of Lives and Property at the Tokyo 2020 Games

### 【Fire Department Assistance and Guard】

- Understanding basic event terminology, the guarding system and the overall guarding plan (ex., missions, venue details, emergency cooperation, etc.)

## 2. International Cooperation

### (1) IRT (International Rescue Team)

The IRT was formed on April 1, 1986 by the Fire Defense Agency, the Home Affairs Ministry (presently, the Fire and Disaster Management Agency, the Ministry of Internal Affairs and Communications) with the cooperation of other related authorities. This team system came forth with lessons learned from the Mexico City Earthquake on September 19, 1985 and the Eruption of Nevado del Ruiz in Colombia on November 14, 1985. The team members have achieved their missions 21 times out of Japan so far.

#### Chart 2-1. IRT's Achievement

	DATE	PLACE	DAMAGE	TFD MEMBER
1	Aug. 27, 1986 (11 days)	Republic of Cameroon	Death: Over 1,700	1
2	Oct. 11, 1986 (10 days)	Republic of El Salvador	Death: 1,226	5
3	June 22, 1990 (11 days)	Islamic Republic of Iran	Death: Over 80,000	5
4	July 18, 1990 (9 days)	Republic of the Philippines	Death: Over 1,600	2
5	May 15, 1991 (23 days)	People's Republic of Bangladesh	Death: 130,000	17
6	Dec. 13, 1993 (8 days)	Malaysia	Death: 48	6
7	Oct. 30, 1996 (8 days)	Arab Republic of Egypt	Death: 64	3
8	Oct. 22, 1997 (21 days)	Republic of Indonesia	Burnt Area: 18,000 ha	19
9	Jan. 26, 1999 (10 days)	Republic of Colombia	Death: 1,171	8
10	Aug. 17, 1999 (8 days)	Republic of Turkey	Death: 15,370	12
11	Sept. 21, 1999 (8 days)	Taiwan	Death: 2,333	18
12	May 22, 2003 (8 days)	People's Democratic Republic of Algeria	Death: 2,266	8
13	Feb. 25, 2004 (6 days)	Kingdom of Morocco	Death: 628	4
14	Dec. 29, 2004 (23 days)	Kingdom of Thailand	Death: 229,866	23
15	Oct. 9, 2005 (10 days)	Islamic Republic of Pakistan	Death: 73,338	6
16	May 15, 2008 (7 days)	People's Republic of China	Death: 69,227	6
17	Oct. 1, 2009 (8 days)	Republic of Indonesia	Death: 1,117	6
18	Feb. 22, 2011 (19 days)	New Zealand	Death: 181	16
19	Apr. 26, 2015 (14 days)	Federal Democratic Republic of Nepal	Death: 8,896	6
20	Sept. 21, 2017 (8 days)	United Mexican States	Death: 369	6
21	Feb. 8, 2018 (3 days)	Taiwan	Death: 17	2

In 2017, the TFD sent its members as part of the Japan Disaster Relief Team (JDR) to the earthquake scenes in Mexico and Taiwan.



▲ Meeting in Mexico

▲ Quake scene in Mexico (Photo by JICA)

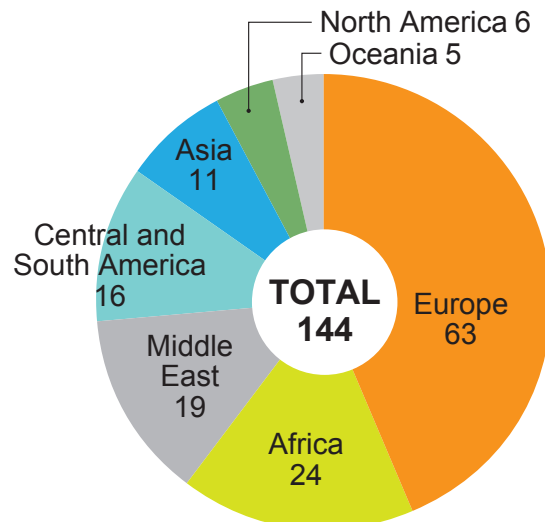
## (2) Relations with Foreign Fire Departments

The TFD, as the "lifesaver of Japan's capital Tokyo," attracts foreign countries' attraction, accepting a lot of overseas emergency responders every year. They share information, promote friendship, learn rescue skills, and so on.

Notably, the daily contact and network with foreign fire departments can lead to the immediate teamwork in emergencies, and help the TFD raise its international communication capabilities.

In 2020, the TFD welcomed in 144 foreign fire service members, and meanwhile had its six members achieve their missions abroad. The TFD thus continues interchanges and exchanges with various countries in Europe and other parts of the world.

Chart 2-2. Visitors in 2020



## 3. Relations with Foreign Residents and Visitors in Tokyo

### (1) Safety Information

#### 1 Pamphlets and Leaflets

The TFD Website presents 5-language pamphlet/leaflet tips to foreign residents and visitors in Tokyo. It tells, in English, Chinese, Korean, Thai and Filipino, how to make an emergency call (1-1-9), how to protect yourself from an earthquake, and so on.



#### 2 Tips for Embassies

In Tokyo, 159 embassies and other related establishments are found. They protect their own nations. After the start of the Mail Magazine system for them, the TFD has 101 subscribers now (as of April 2021). This periodical tells about Japan's fire service, the TFD's measures, the events by the local fire station, local area disaster facts, and more.

In receipt of favorable feedback from embassies in the past, the TFD will continue to contribute to the safety of foreign people.

### (2) English Language EMS Responders

In April 2014, the English Language EMS Responder system was introduced at eight fire stations with 13 units placed in service. (73 units in 26 fire stations since Oct. 2020)

The members have the multilingual translation app., *EMS VoiceTra*, as their support tool.

\* The members, with a sufficient command of English, also understand the differences in culture and behavior.

Chart 3-2. Transported Foreign Patients

	2016	2017	2018	2019	2020
Victims	11,033	11,636	12,936	14,096	10,752

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