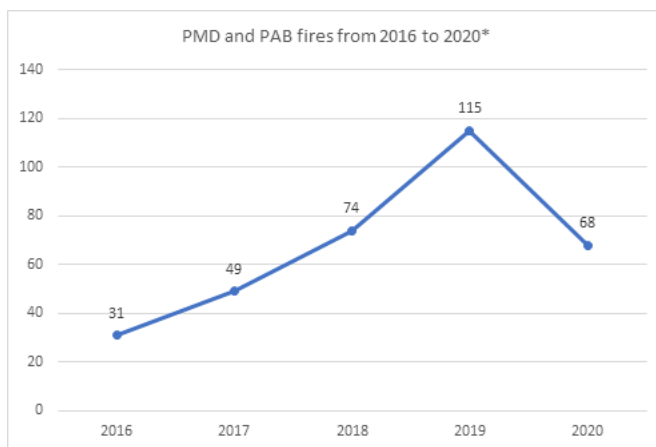


6 August 2021, Ref: 2122031

Rechargeable Battery Safety

Fires caused by Personal Mobility Devices (PMDs) and Power-Assisted Bicycles (PABs), commonly equipped with rechargeable batteries such as lithium-ion batteries or lead acid batteries, have escalated in recent years up to 2019. Although such fires were reduced in 2020 with greater public awareness and less use of PMDs, they still remain a concern. These fires had occurred in residential as well as non-residential areas, including workplaces.



Dangers of PMD/PAB Rechargeable Batteries

These battery-powered PMDs and PABs could pose fire risks if they do not conform to reliable safety standards or are not used properly. Some dangerous situations and conditions that could lead to fire risks include:

- Charging of batteries beyond the time required as recommended by the manufacturer;
- Overheating of PMDs/PABs;
- Damaged or deformed batteries e.g. bloated, corroded or powdery residue on batteries; and
- Modified batteries or PMDs/PABs.

Safe Use of Rechargeable Batteries

To prevent fires and/or explosions caused by rechargeable batteries, the following measures are recommended:

- Purchase and use only PMDs/PABs that comply with device criterion set by authorities e.g. PMDs that are UL2272 certified, and PABs that are EN15194 compliant.
- Ensure that the PMDs/PABs can dissipate heat effectively when charging e.g. charging in a cool and shady area away from heat sources.
- Do not charge PMDs/PABs immediately after use, and only use original power adaptors which carry Enterprise Singapore's Safety Mark.
- Avoid charging PMDs/PABs or batteries for extended durations or overnight.
- Do not modify or tamper with the PMD/PAB battery. Do not replace or upgrade parts with third party components as this may pose fire risks.
- Examine batteries regularly to check for deformities such as bloating, corrosion or

powdery residue.

- Store batteries at room temperature away from combustible or flammable materials.

This advisory is developed by the Workplace Safety and Health Council, Land Transport Authority and Singapore Civil Defence Force.

* Singapore Civil Defence Force's Annual Statistics for Fire, Emergency Medical Services and Fire Safety Enforcement Checks 2020

Raising workplace responsiveness to cardiovascular emergencies

Ensuring health and safety in the workplace has always been important. According to a Global Workforce Survey conducted by Cisco, 97% of workers want to return to a safer office when Singapore reopens fully. Companies should take a holistic approach and enhance their safety practices beyond COVID-19 measures, such as ensuring that their workplace is heart safe too.

There are around 6,200 cardiovascular deaths in Singapore every year, with an increasing number classified as work-related by the Workplace Safety and Health Institute. An example of a work-related cardiovascular death is when a worker died at the workplace while carrying out strenuous work that triggered a heart attack. Work Injury Compensation records showed 68 such deaths in 2017, up from 26 in 2012. With these statistics in view, companies should consider what they would do if an employee were to face a life-threatening cardiovascular event such as a sudden cardiac arrest.

Appropriate and swift emergency responses matter in these moments. If CPR+AED is applied immediately after a sudden cardiac arrest, the victim's chance of survival reaches close to 50%.

To raise workplace responsiveness to cardiovascular emergencies, companies should encourage their team to learn CPR and install an Automated External Defibrillator (AED) in highly visible, easy-to-access common areas. Registering the company's AED in the national AED registry will also increase its visibility to other building occupants and community first responders who use myResponder app. This allows bystanders to retrieve AEDs quickly and help with CPR till emergency medical services arrive.

To create a heart-safe workplace, here is a list to check off:

1. [Equip your workplace with an AED](#)
2. [Get your team CPR certified](#)
3. [Register your AED](#)

Find out more about [work-related cardiovascular deaths](#).

Download [myResponder app](#).

Read the [Global Workforce Survey: The Rise of the Hybrid Workplace Report](#).

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