E-cigarette Battery Incident on Campus

HonCC security staff responded recently to a student’s e-cigarette explosion incident. There was no injury.

What is e-cigarette?
An e-cigarette, or personal vaporizer, is a nicotine delivery unit powered by a lithium-ion battery. The device is available in various battery sizes, liquid capacities and vapor outputs.

A cartridge, heating element and battery are three main parts of an e-cigarette. Like any electric devices, the battery must be charged, posing a fire or explosion risk.

How do they explode?
Lithium-ion batteries are used in cameras, phones and laptops. A lithium-ion battery fire or explosion can be caused by poor design, use of low-quality materials, manufacturing defects, and improper use or handling. (http://pubs.sciepub.com/ajmcr/3/4/1/)

A study conducted by the US Fire Administration, Federal Emergency Management Agency showed that 80% of the e-cigarette explosions occurred during charging. However, explosions while in use or storage have been reported. Most of these incidents also caused ignitions of nearby contents, such as carpets, drapes, bedding, couches or vehicle seats. (https://www.usfa.fema.gov)
**E-Cigarette Battery Safety**

Lithium Ion batteries are an efficient way to store power.

But every lithium battery has the potential to explode. Fortunately, battery explosions are extremely rare (about 1 in 10 million according to Battery University) when correct charging procedures are followed.

**TO CHARGE BATTERIES SAFELY, FOLLOW THESE TIPS:**

**DO**

- Use the correct charging equipment as recommended by your supplier.*
- Buy from a reputable company.
- Charge batteries on a hard surface.
- Turn your battery off when not in use.
- Clean battery and terminal contents with tissue or alcohol wipes (when/if dirty).

**DON’T**

- Over tighten when attaching your battery to your clearomizer.
- Use damaged batteries.
- Expose your battery to extreme heat, cold or direct sunlight.
- Leave charging batteries unattended.
- Allow direct contact between your battery and water**.

*Using the wrong charging equipment, especially iPad and iPhone chargers, is the number one cause of e-cigarette fires

**If there is contact, dispose of the battery safely.