



# SAFETY ALERT

## 110V/220V Power Cable Safety

“Sharing Lessons Learned”

A safety incident was reported for a Power Adapter used with 110 Volt cable for an Electrical Patient Bed to be connected to a 220 Volt power wall outlet. Unfortunately it damaged the bed and burned the fuse; serious consequences could have happened, such as electrical shock, fire, etc...

Upon technical assessment, the following was found:

- Δ The End-User used an adaptor to plug a 110V electrical patient bed to 220V outlet. 110V equipment will not fit into the 220V power outlet for safety reasons. (see Figure 1).
- Δ Power Adapters are not allowed to be used with Medical Equipment as it's not approved by the Clinical Engineering Department.
- Δ The Hospital has three (3) different types of power outlets (US-110V, Schuko-220V and UK-230V). Each type of power outlet has a different shape, which makes it impossible to plug an incorrect cable, unless forced by using an adapter.



Figure 1 A 110V equipment forced to plugged in 220V outlet by using power adapter



Figure 2 Power Cable of US-110V type with Power Adapter with Schuko-220V fitted pins



Figure 3 A label of 110V sticker attached with 110V power cable

## RECOMMENDATIONS:

1. Use only medical-grade power cables as originally received with each new Medical Equipment.
2. Do not use any type of adapters with power cables. (see Figure 2).
3. Plug all Medical Equipment directly into the wall outlets available and be alerted to 110V sticker(s) if it is only for 110V equipment. (see Figure 3).
4. If any additional power outlets are needed, you may request extra power outlets from Engineering, Utilities & Maintenance.

Prepared by Clinical Engineering