

REF ISB2506

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Plug mounted power supply on portable electrical medical equipment: removing the plug from the mains socket

What happened?

A bladder scanner was supplied for hospital use with a plugin transformer. The mains pins were mounted on a slide-in plate which had pins on one side to engage the mains socket and metal contacts on the other to conduct mains electricity to the transformer.

The plate was found in a mains socket with live, visible recessed contacts. This presented a risk of electric shock to anyone who came in contact with it.

There was damage to the lugs used for slide-in connection to the transformer suggesting damage occurred while it was being unplugged or it was tugged abruptly at some point and the user did not notice the separation.

What did we learn?

- Manufacturers supply transformers with multiple plates suitable for mains sockets in different countries.
- Plugin transformers are vulnerable to damage which could result in exposed live parts and staff may not notice when damage has occurred.
- Anyone who touches or attempts to remove a detached plate from a socket is at risk of an electric shock at mains potential.
- Plugin transformers can be supplied with a wide range of portable electrical equipment for use both in hospital and in the community.

How can it be prevented?

1. Specify portable electrical equipment with a separate transformer and heavy-duty, moulded 3-pin plug for future procurement conforming to relevant standards and UK regulations.
2. Plugin transformers should be removed from mains sockets with care and immediately after use.
3. If a plugin adapter is found broken in a mains wall socket.
 - switch off at the wall socket
 - do not leave the socket unattended
 - hospital users: raise a call with Estates, highlighting the electrical hazard
 - community users: immediately seek advice from the equipment provider

If you become aware of an adverse incident or near miss, or if you have a safety concern about a piece of equipment, report it to IRIC (details below). Incidents and near misses should also be reported to your local incident reporting and learning system which you might know as InPhase, Datix or Ulyses.

IRIC Incident Reporting & Investigation Centre

To find safety alerts:
scan the QR code or [click this link to visit our website](#)



To report an incident:
scan the QR code or [click this link to visit our website](#)

