A dedicated calculator for determining correct burns fluid resuscitation which improves speed, reduces human error and provides an audit trail.

Developed in collaboration with the Dept. of Anaesthetics & Welsh Centre for Burns, Morriston Hospital, ABM UHB, Swansea.

- PARKLAND and MUIR & BARCLAY formula support
- Touch screen input with input error validation
- Administered fluid error correction
- Printed output for patient notes
- Keystroke data logging

The clinical requirement for such a device comes from the error prone methods currently used such as hand calculation, nomograms, or Apps, and their lack of accountability. Protocols such as ‘PARKLAND’ and ‘MUIR & BARCLAY’ for defining fluid resuscitation rates are well established but this new device has the ability to validate the user inputs, select the regime, compensate for fluids already administered, and importantly the device issues a paper printout detailing the calculations, what the workings are, and requiring a qualified clinician to sign them off.

Having a paper trail provides a clear statement of what’s been done, and is clearly set out for a registrar or clinician to verify. The paper copy can be included in the patient notes.

The design uses a touch screen with sound and pictures as the human interface, utilising error checking input routines to avoid any false data entry. Clinical evaluation work by Dr D. Williams and Dr J.Dingley, Consultant Anaesthetists at the Welsh Centre for Burns, Morriston Hospital, ABM UHB, Swansea, has confirmed that the electronic device has both speed and accuracy improvements over conventional methods.
The Burns Fluid Resuscitation Calculator has undergone extensive testing and is a certified Class I medical device. It has the capability of handling both PARKLAND and MUIR & BARCLAY formulae and has input validation and evidence based error checking regimes and alerts.

**Its main functional features are:**

- PARKLAND or MUIR & BARCLAY formulae
- Selectable dosage rate, child or adult regimes, maintenance fluid calculations
- Compensation for fluids already administered
- All calculations, input data and methods used, printed out on 53mm hardcopy
- All printouts requested checking and signing off by a qualified clinician
- Key-press datalogging in the event of clinical inquiry
- In-field upgradable software
- Full colour 80mm LCD screen with touch input and audio feedback
- Cleanable with alcohol based wipes.
- Suitable for hospital use
- Contemporary designed desktop case with non-slip feet. 210mm x 140mm x 80mm
- Power supply 110 to 240V A.C.