The background is a green chalkboard. In the lower-left quadrant, two pieces of pink chalk are lying on the surface. Scattered across the board are various white chalk drawings, including a large 'V' shape, a curved line, and some scribbles. The lighting is soft, creating a slight shadow for the pink chalk.

Challenges in Burn Mass Casualty Incidents

Krissie Stiles

Network Lead Nurse

London and South East of England Burn Network

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Burn disaster geography 1990-2000

Casualties 1990-2000



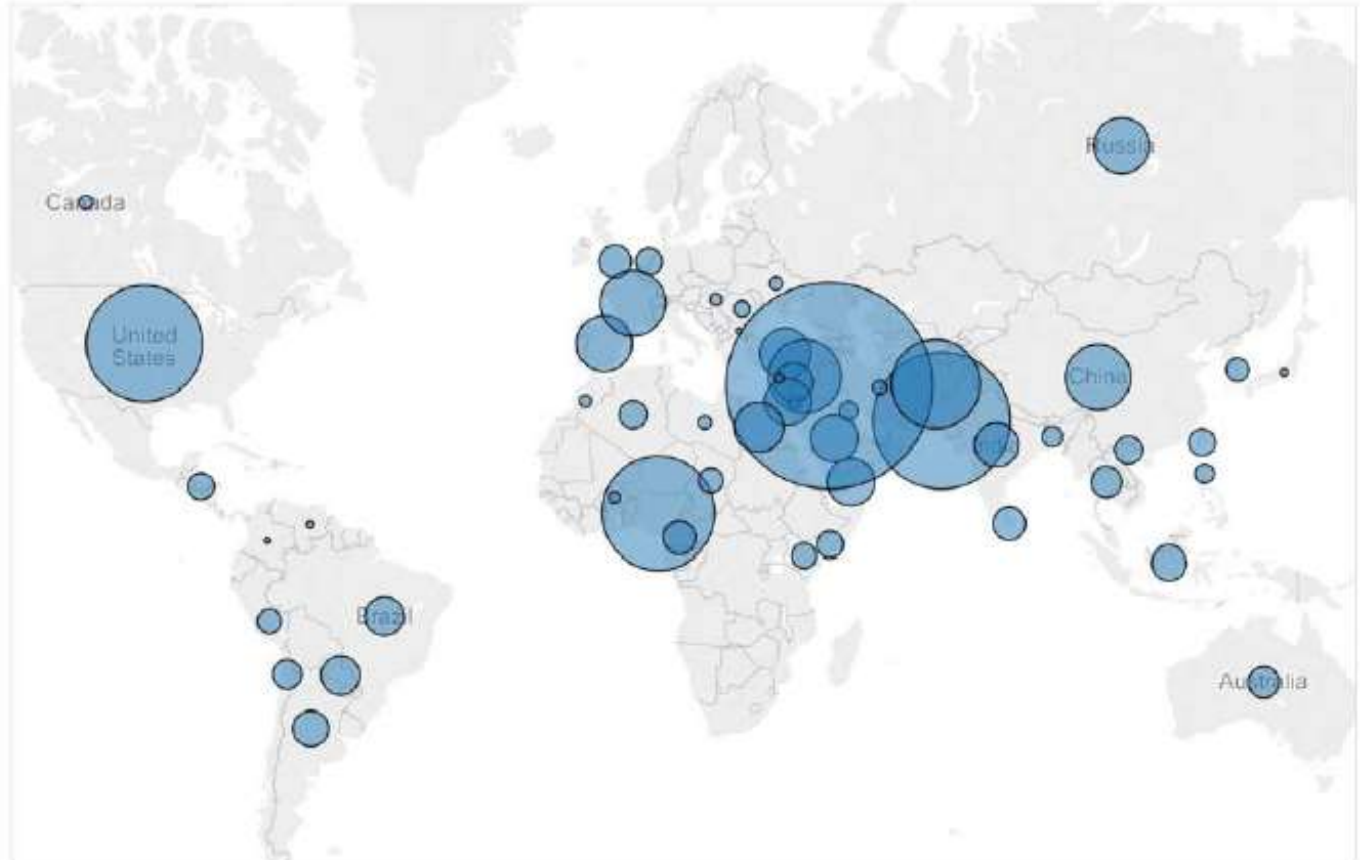
Map based on Longitude (generated) and Latitude (generated). Size shows sum of Casualties. Details are shown for Country.

Casualties



Burn disaster geography 2001 - 2015

Casualties 2001-2015

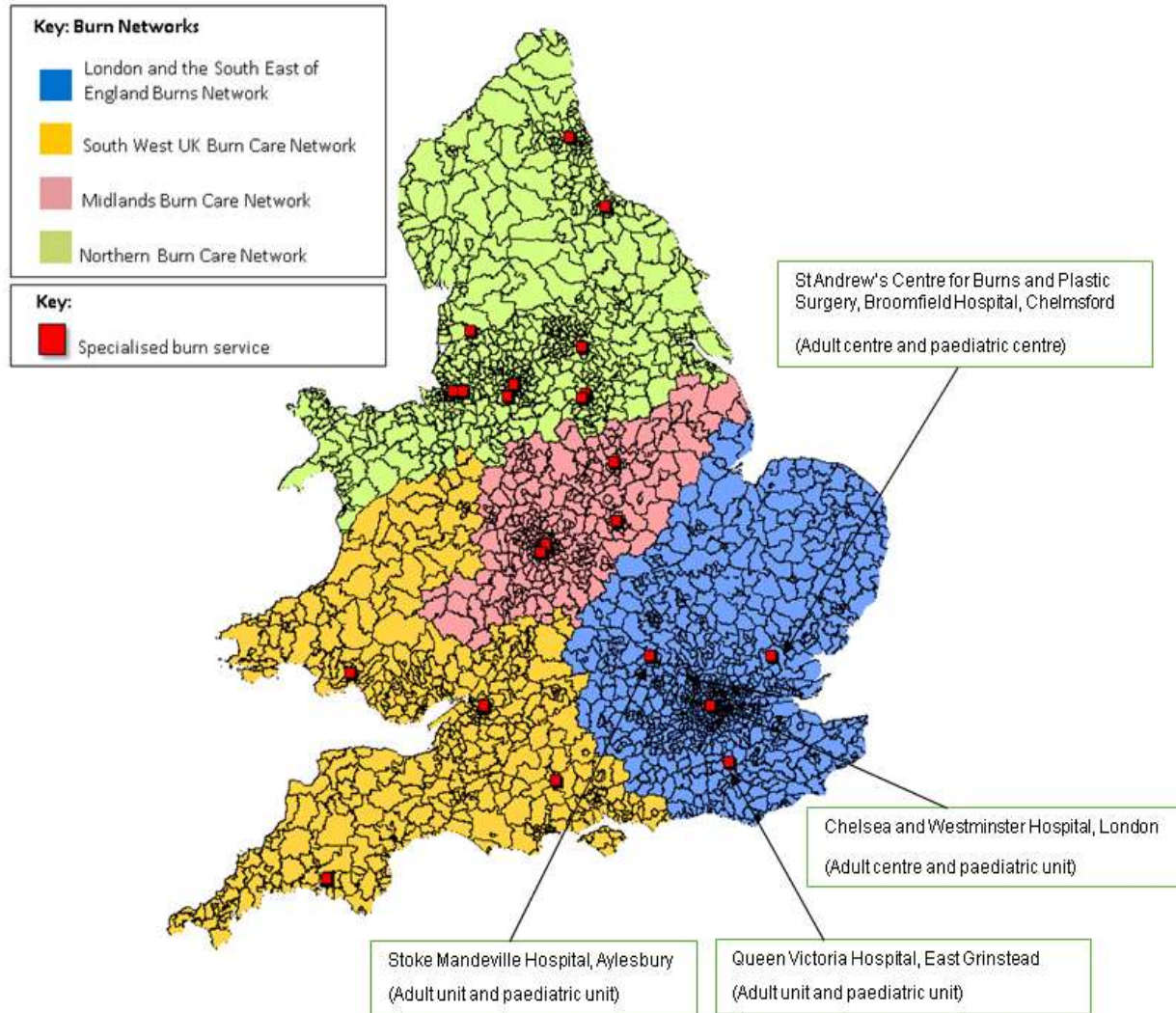


Map based on Longitude (generated) and Latitude (generated). Size shows sum of Casualties. Details are shown for Country.

Casualties

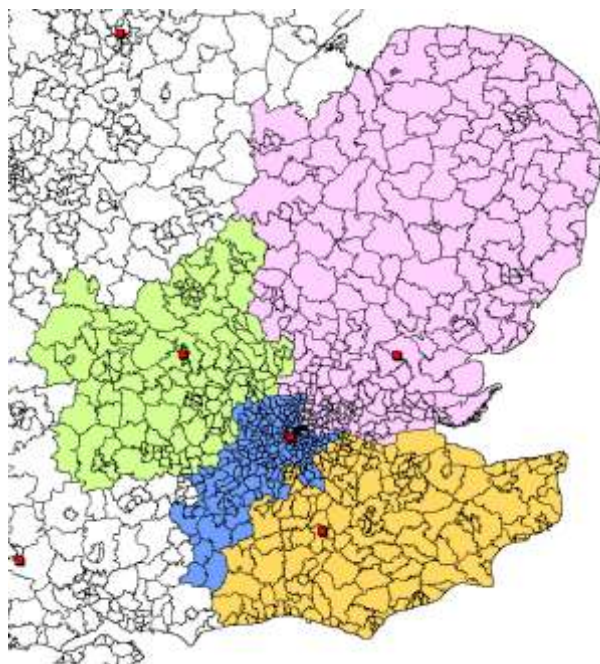


Burn Networks



London and South East of England Burn Network: Surge Capacity Vs Capability

OFFICIAL



NHS England

Emergency Preparedness, Resilience and Response

Concept of Operations for the management of Mass Casualties (Burns Annex)



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Challenges of trauma burn care

Burn Mass Casualty Incidents

- Trauma
- Burn
- CBRN
- Trauma + Burn
- Trauma + Burn + CBRN



Factors known to influence patient outcome

- %Total Burn Surface Area
- Depth of injury
- Anatomical location of injury
- Age of the patient
- Hypothermia
- Co-morbidities and associated injuries

Ryan et al. 1998. Objective estimates of the probability of death from burn injuries. *N Engl JMed* 338:362-6.

Bloemsma et al. 2008. Mortality and causes of death in a burn centre. *Burns* 34:1103-7.

Pereira et al. 2004. Outcome measures in burn care: is mortality dead? *Burns* 30:761-71.

Muehlberger et al. 2010. Emergency prehospital care of burn patients. *The Surgeon* 8: 101-4

Airway and intubation



Challenges to assessment



Airway Assessment

Position patient to reduce swelling

Sit Patient UP

“Triage” use of intubation, anaesthetic drugs & MV



Suxamethonium
.....mg/ml



Intubate early

based on progression of fluid resuscitation and
extent of facial/oral oedema

Commence active **warming**

A decorative vertical strip on the left side of the slide, featuring a green chalkboard background. It includes two pieces of pink chalk, one standing upright and one lying horizontally. There are also white chalk markings, including a curved line and a large, stylized letter 'Y' or '4' shape.

Consider the consequences

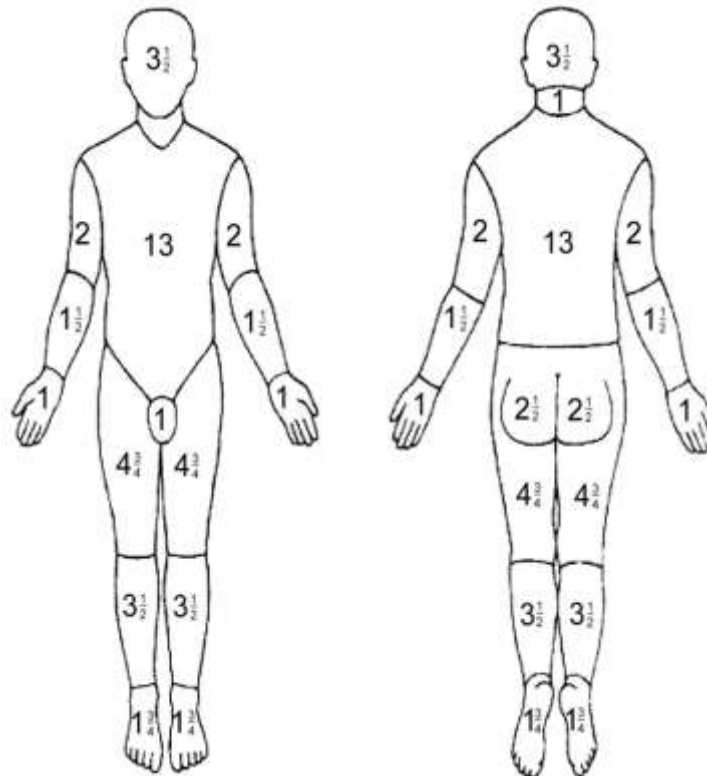
Don't cut the tube

Give IV Analgesia



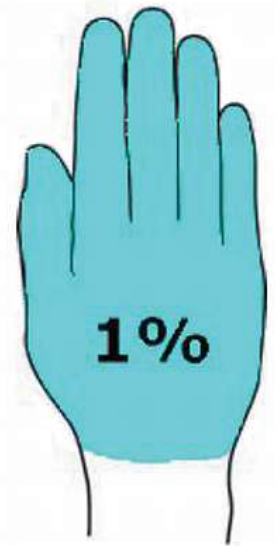
Without delay, generously & often

Burn Size Estimation



Challenges to assessment

Palmar Surface



Fluids and formulas



Challenges to calculation

Fluid resuscitation options

- IV crystalloid
 - *Restrict to survivable burns >40%*
- Oral resuscitation
 - *For burns up to 40%*
 - *Oral rehydration therapy with clean water, glucose and electrolytes (accept nausea and vomiting)*
 - *Free water is toxic to patients in burn shock*
 - Hyponatremia, leading to cerebral oedema and death
- Rectal infusion therapy

Administer Burns First Aid



Effective within 3 hours of injury

Chemical Burns to Eyes



- **Do not delay irrigation** for examination, contact lens removal, or sterile fluid
- **Prioritise eyes in immediate and copious irrigation** with an amphoteric solution, or Hartmann's, NaCl 0.9%, tap or bottled water



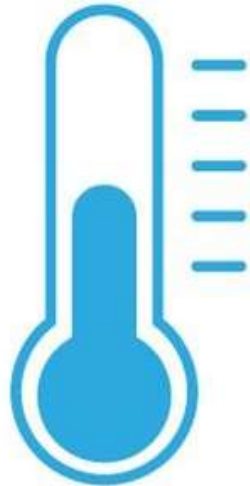
- **Encourage eye opening and blinking** during irrigation
- **Discourage eye rubbing** as this will embed the chemical further

Cover the wound with cling film



**Use cling film in a single layer
over the burn**

Warm the patient



Aim for 38°C – 39°C

Early Contact with Specialist Burn Service

Adult 01342 414440

Child 01342 414469



In Summary

- Burn services are not near & have **limited capacity**
- **Intubate** if signs of airway oedema present
- Give **IV analgesics** generously and often
- **Use most familiar method** to measure %TBSA
- **Avoid formulas** for fluids & consider oral hydration
- **Clingfilm** is best wound cover
- Keep casualty **warm** and sat **up**

Patient Centred Approach



**Importance of looking at the
outcomes of what we do**



“Every intervention from the point of injury will influence the scar worn for life.”

Fiona Wood

“What you do makes a difference, and you have to decide what kind of difference you want to make.”

Jane Goodall



Thank You!

