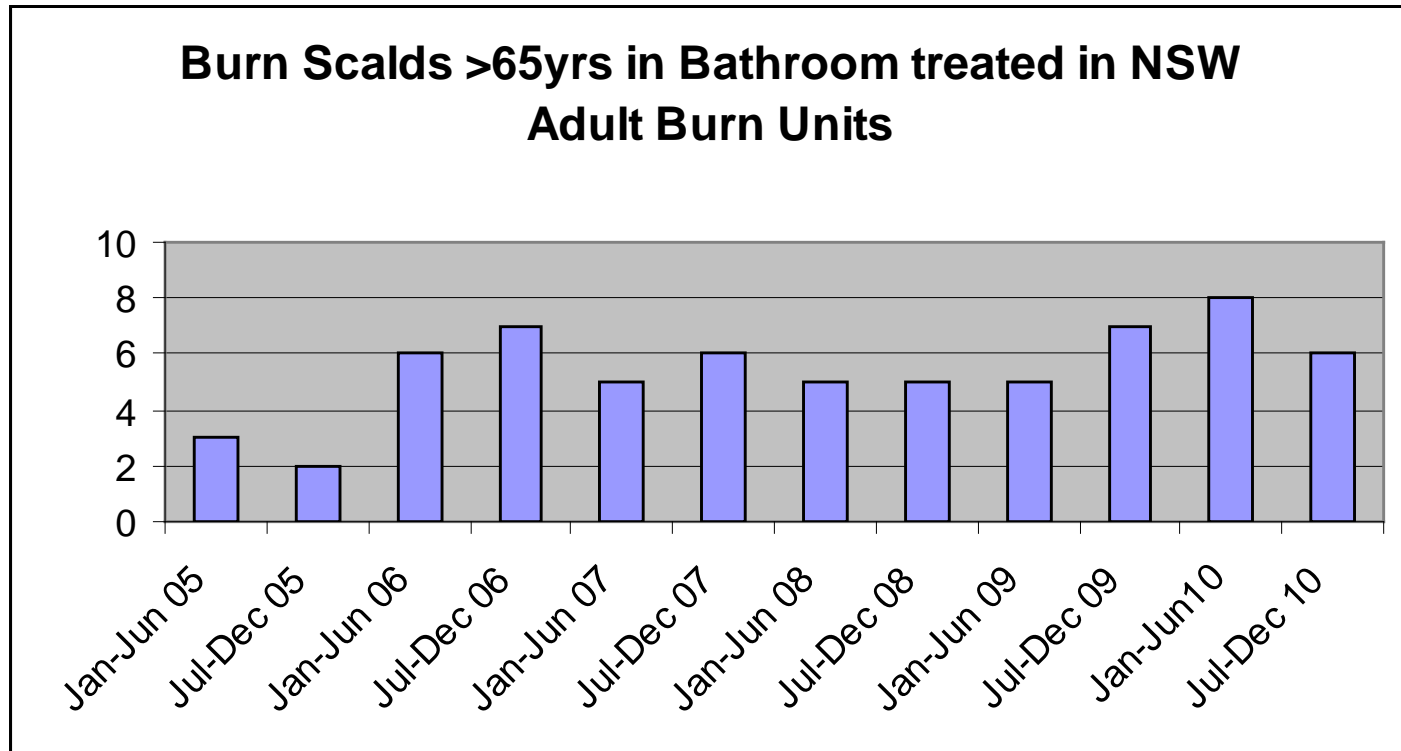


Prevention of Hot Water Scalds in the Elderly



Prevalence

Graph and Statistics supplied by NSW SBIS with thanks.



Full thickness burns

- Scald burns are life threatening and result in lengthy hospital stays.
- Infection and sepsis increase the mortality rate.
- Anatomic areas requiring grafting are commonly feet, buttocks and back.



The higher the water temperature , the shorter the exposure time required to develop a full thickness burn injury.

Moritz and Henriques 1947

Type of Liquid	Temperatures	Time
Boiling water from a kettle	100°C	Under 1 Second
Cup of hot tea/ coffee	70-75°C	Under 1 second
Hot water from a non-regulated tap	60°C	1 second
Hot water from a kettle 5-10 minutes after boiling	55°C	10 seconds
Hot water from a tap with a temperature regulator.	50°C	5 minutes



The water temperature has *a degree of importance*

Prevention

- **How can we improve outcomes for the elderly?**
- Installation of a tempering valve or thermostatic mixing valve to lower water outlet temperature to 50°C
- See the handout provided.
- Avoid use of baths and shower cubicles with fixed screens.
- Recommend a hob-less shower recess with shower curtain.
- This allows room to move away from the hot water source when able e.g. following an epileptic seizure



Occupational Therapy Intervention

- Consider installation of water tempering devices as part of your home visit check list and risk management strategy.



References

1. Australian Bureau of Statistics: 1301.0 – Year Book Australia, 2004: Injuries (internet). Canberra (Australia): Australian Bureau of Statistics; c2004 (updated 2004 February 27: cited 2011 April 22). Available from: <http://www.abs.gov.au/Ausstats/ABS@nsf/Previousproducts/1301.0/>
2. Rao K, Ali SN, Moiemmen N.S. Aetiology and Outcome of Burns in the Elderly. Burns 32(2006)802-805
3. Keck M, Lumenta DB, Andel H, Kamotz LP, Frey M. Burn Treatment in the Elderly. Burns 35(2009),1071-1079
4. Public Health Association of Australia Inc. Hot water temperature and scald burns (internet). C2008 (updated 2008). Available from: <http://www.phaa.net.au/documents/policy/20081002revisedHOTWATERTEMPERATUREANDSCALDBURNS.pdf>
5. Redlick F, Cooke A, Gomez M, Banfield J, Cartotto RC, Fish JS. A survey of risk factors for burns in the elderly and prevention strategies. J Burn Care Rehabilitation. 2002 Sept-Oct;23(5):351-6; discussion 341.
6. Moritz A.R.,Henriques F.C.,Studies of Thermal Injury 11. The Relative Importance of Time and Surface Temperature in the Causation of Cutaneous Burns. Am. J.Pathol.1947 Sept, 23(5): 695-720.
7. Alden NE, Bessey PQ, Rabbitts A, Hyden PJ, Tap water scalds among seniors and the elderly: Socio-economics and implications for prevention. Burns. 2007; 33: 666-669.
8. Your Sydney Plumber: Tempering Valves (internet). Sydney (Australia): Your Sydney Plumber; c2010 (updated 2010; cited 2010 August 23. Available from: <http://www.yoursydneyplumber.com.au/tag/tempering-valves/>
9. The University of Sydney – Faculty of Health Sciences and Architecture: Home Modification & Maintenance: Information Clearing House Project. Thermostatic Mixing Valves: Summery Bulletin. (Internet). Sydney (Australia): The University of Sydney; c2004 (cited 2011 April 22). Available from: <http://www.homemods.info/files/TmvSummBullNov04.pdf>
10. Build: Home Building, Renovation & Repair: What regulations apply to hot water systems (Internet). Sydney (Australia): Build: Home Building, Renovation & Repair; c2011 (cited 2011 April 22). Available from: <http://hotwater.build.com.au/regulations-and-rebates/hot-water-system-regulations>
11. Parliament of Australia – House of Representatives. Submission for parliament – Burn Prevention; Submission No. 004. Canberra (Australia): Parliament of Australia 2010 April 9.