# Public swimming pools and spa pools

Health Protection Programs
SA Health





Ultraviolet light (UV)



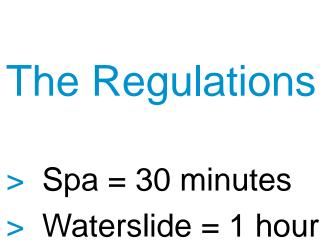
- > Not a strange concept
- Chloramine reduction vs Cryptosporidium inactivation
- > Partial/side flow vs full flow
- > On when the pool is in use vs 24/7



- > Chloramine reduction test combined chlorine
- Cryptosporidium inactivation received dose through a meter or delivered dose and UVT
  - EOLL dose 30mj/cm<sup>2</sup> at;
     643m<sup>3</sup> with 95% UVT
     529m<sup>3</sup> with 91% UVT



Filtration rate and turnover



- > Wading or hydrotherapy pool = 2 hours
- > Any other case = 6 hours

> What do you need to work this out?

#### **Turnover**

- > Pool volume 725m<sup>3</sup>
- Specifications (best case scenario, not necessarily accurate)
  - Filter specifications
    - 3 filters have a flow rate of 115m<sup>3</sup>/hr-192m<sup>3</sup>/hr
    - Combined maximum flow rate 345m³/hr-576m³/hr
    - Design flow rate (given by engineer) of 441m<sup>3</sup>/hr
    - Turnover = 1.63hours
- > Flow meter!



- > Quicker turnover generally means;
  - Better water quality
    - Less turbidity
    - Less pH and disinfectant variation
  - More rapid response to shock loading



Indoor pools and combined chlorine

#### Combined chlorine control

- > Bather education
- > Ventilation
- No pool blankets
- > Breakpoint chlorination

### Thank you!



## Government of South Australia

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