

IN THE CORONERS COURT  
OF VICTORIA  
AT MELBOURNE

Court Reference: COR 2010 4545

**FINDING INTO DEATH WITHOUT INQUEST**

*Form 38 Rule 60(2)*

*Section 67 of the Coroners Act 2008*

I, Heather Spooner, Coroner having investigated the death of MOHAMED ABDELMEGEED

without holding an inquest:

find that the identity of the deceased was MOHAMED AHMED ABDELMEGEED

born on 14 August 2004

and the death occurred on 27 November 2010

at Royal Children's Hospital

from:

1 (a) HYPOXIC BRAIN INJURY IN THE SETTING OF IMMERSION

Pursuant to section 67(2) of the **Coroners Act 2008**, I make findings with respect to **the following circumstances:**

1. Mohamed Ahmed Abdelmegeed was 6 years old at the time of his death. He resided at 16 Maxia Road, Doncaster with his parents and two younger siblings in a rental property.
2. A police investigation was conducted into the circumstances of his death.
3. The Abdelmegeed family lived next door to a couple in their sixties, Raymond and Jean Lord, who lived at 18 Maxia Road. There was a pool at the rear of the Lords' property.
4. At about 6:30pm on 22 November 2010, Mohamed asked his father if he could go for a swim. Mohamed's father said no because he knew that Mohamed could not swim. Mohamed's mother was inside the house. About ten minutes after Mr Abdelmegeed spoke to his son, he heard his wife shouting that Mohamed was in the neighbours' swimming pool.
5. Mr Abdelmegeed jumped over the fence and pulled Mohamed from the bottom of the Lords' pool. Mr Lord and a resident from 14 Maxia Road assisted with resuscitation. The

4. The ambulance arrived and took Mohamed to the Box Hill Hospital. Mohamed was later transferred to the Royal Children's Hospital, where he died on 27 November 2010.

6. Mohamed's four-year-old brother, Mahmoud, told his parents that he had seen Mohamed climb over the fence into the Lords' back yard. Mahmoud also climbed over but was too afraid to enter the water. Prior to his death Mohamed had participated in approximately ten water discovery classes, designed to provide students with confidence around water, but which did not involve swimming.

7. In accordance with the family's wishes, an internal examination was not conducted. A forensic pathologist determined Mohamed Abdelmegeed's cause of death as 'Hypoxic brain injury in the setting of immersion.'

### ( ) Coroners Prevention Unit Review

8. I directed the Coroners Prevention Unit (CPU)<sup>1</sup> to review the incident in light of the current law and standards for swimming pool safety in Victoria, and to identify potential improvements.

9. In Victoria, pool fencing requirements are designed to prevent children aged 5 years or under from accessing pools. The fencing requirements vary depending on the year that the pool was installed.

10. The Abdelgemeeds had been renting the property at 16 Maxia Road for approximately seven months prior to Mohamed's death. Mr and Mrs Lord had owned their property at 18 Maxia Road for approximately 16 years and the pool on their property was built in approximately 1973.

11. A municipal building surveyor with Manningham City Council, Russell Mills, inspected the pool fencing at 18 Maxia Road on 23 November 2010. He found that the pool barriers were:

- On the South side - a 1.9 – 2.0 metre high paling fence, with rails on the pool side of the fence.
- On the east side - a 1.6 – 1.65 metre high paling fence with rails on the 16 Maxia Road side of the fence.

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<sup>1</sup> The Coroners Prevention Unit is a specialist service for coroners created to strengthen their prevention role and provide them with professional assistance on issues pertaining to public health and safety.

- On the west side – the side wall of a building and adjoining fence.
- On the north side – an approximately 1.3 metre high aluminium pool fence and gate.

12. Mr Mills found that the pool barriers generally complied with the legislated requirements but noted the following issues:

- The small section of the fencing situated on the west boundary between the garden shed and rear paling fence boundary is required to be upgraded to ensure that the fence is a paling or imperforate fence and is at least 1.5m in height measured above ground level on the approach side.
- The rear paling fence is required to be strengthened, maintained or replaced, as it is structurally unsound and has a number of broken palings; and
- The vegetation and wire situated on the eastern paling fence is required to be removed on the approach side of the pool fence for a minimum horizontal distance of 1.2m.

13. Mr Mills issued a building order to rectify the above items. Mr Mills also suggested to the Lords that they consider *'providing palings or other means to render the rails non-climbable from the neighbour's side of the eastern boundary fence. To be effective the paling should extend 1.2 m beyond the pool area and be beyond the rear corner of the fence.'* These works were not legally required, rather suggested as a best practice measure.

14. It is understood that the extension is required to prevent a child climbing the rear fence of number 16 Maxia Road and then going over the fence between the two properties

15. There are more onerous standards for newly built pools compared to older existing pools. The legislative standards that apply to newly built pools in Victoria is the Building Code of Australia 2010 (BCA2010). One of the major improvements in the BCA2010 compared to the AS 1926 Part 1 1993 is that the BCA2010 requires the pool to be physically separated from a building on the property. The AS 1926 Part 1 1993 allowed a house door to form part of the pool barrier, therefore provided children access to the pool through the house door.

16. The most relevant aspect of the BCA2010 for the circumstances of Mohamed's death is the requirement for a Non-Climbable Zone (NCZ). The NCZ is defined in the standard as a zone consisting of a barrier as well as the associated space within 900 mm of the barrier,

intended to inhibit the climbing of the barrier by children. This includes any point along the length of the barrier and its associated space.

17. Under the BCA2010, pools are required to have a permanent barrier that is at least 1.2 metres tall with a continuous NCZ, with a space no greater than 100mm from the ground to the bottom of the barrier. In regards to horizontal rails, the Building Regulations 2006 (Vic) require, for new pools, that if a fence is less than 1.8 metres tall any horizontal member on the outside of the fence must be at least one metre below the top of the fence or be angled, such that they do not provide a comfortable foot or hand hold.
18. If the fence between 16 and 18 Maxia Road was required to comply with the same standards that apply to newly built pool fences then the horizontal beam would not have been permitted to be as close to the top of the fence or would have had to have been angled.
19. It should be noted that the Building Regulations 2006 do provide that pool barriers must be upgraded to the current building standards when the fence is replaced. This means that when owners re-fence a boundary, if the boundary fence is a pool barrier, the new fence must comply with the current pool barrier standards. Attached to this finding is the new practice note from the Victorian Building Authority on swimming pools, which outlines the revisions to the standard, including in relation to boundary fencing.
20. Some Australian jurisdictions have introduced laws that require older pools to be updated to comply with the most recent standards. This is relevant to the death of Mohamad in that if these arrangements existed in Victoria, the pool would have been required to have a barrier with a NCZ.
21. Queensland has the most extensive pool safety laws in Australia. In Queensland, the Building Act 1975 (Qld) provides for pool safety measures for existing pools to be upgraded if:
  - the property on which the pool is situated is sold; or
  - the property on which the pool is situated is newly leased, or a lease is extended; or
  - by 30 November 2015, whichever occurs first.
22. The system is based on a certification and registration process. Prior to a property with a regulated pool being leased or transferred, the owner must be issued with a pool safety certificate by a licensed pool inspector. This arrangement does not place any additional responsibility on a person that owns property adjoining a property that has a pool.

23. In South Australia, pool owners are required to upgrade pools built prior to 1993 to comply with the standard for new pools prior selling their land. Unlike Queensland, South Australia does not have a requirement for pool inspections. Furthermore, South Australia does not require pools to be upgraded at the time of leasing.
24. Arguably in order for pool safety laws to be effective, there needs to be compliance checks. Victorian pools are inspected for the purposes of issuing a building permit when they are newly constructed but there are no mandatory inspections for pools post-construction. Local Councils have the authority to conduct inspections but are not required to do so. Queensland and Western Australia have mandatory pool safety inspections.
25. South Australia has released a discussion paper in 2013 canvassing reforms to their pool barrier laws.
26. In Western Australia, local governments are required to inspect pools at least every 4 years if they have enacted local regulations for swimming pools. A pool inspector has a power to inspect, issue a notice of direction and if the occupier does not comply with the notice, the inspector may enter and take measures to protect the public. This scheme is funded by an annual fee payable by pool owners.
27. Queensland has an extensive regulatory and enforcement regime for swimming pool barriers and has introduced a state wide register of pools. Owners were required to ensure that their pool was on the pool register by 4 November 2011. The pool safety register is administered by the pool safety council. Pool safety certificates are valid for 2 years from the date of issue, which means that a pool owner must have their pool inspected at least every two years for compliance with pool safety standards. The pool safety council may use the register to perform compliance checking if a pool is registered but does not have a valid pool safety certificate. Local governments may be obliged in certain circumstances to inspect a pool and to issue show cause notices to pool owners. Local councils also have the power to cancel safety certificates. Inspections are carried out by private licensed pool inspectors and cost approximately \$200.
28. In South Australia, despite requiring pools to be upgraded, there are no mandatory inspections of pool safety compliance.
29. Mohamed Abdelmegeed used horizontal beams on the Abdelmegeeds' side of the boundary fence to climb over and access the pool on his neighbours' property. Preventing a similar incident would require that a NCZ be established. Only minor additions would be

necessary to modify the type of fence involved in this incident. An additional angled component could be added to horizontal beam to eliminate hand and foot holds for the options available to make a fence similar to the boundary fence between 16 and 18 Maxia Road compliant with the latest pool barrier standard.

30. The upgrade of existing boundary fences to meet the requirements for NCZs raises issues of boundary fencing. The Queensland pool legislation provides that a pool owner who wishes to use a boundary fence as a pool barrier is liable to pay for the cost of the upgrading an existing fence or installing a new fence to the extent that the cost is attributable to compliance with the pool safety legislation. However, if the work is solely on one side of the fence, the person on that side of the fence is liable for the cost in its entirety. The Building Act 1975 (Qld) provides for a notice procedure and a dispute resolution process where neighbours can not agree on the cost or use of boundary fences as pool barriers.
31. In January 2012, the New South Wales Government released a discussion paper on a review of the Swimming Pools Act 1992. The proposed reform was prompted by Deputy State Coroner MacMahon's 2010 finding into the drowning deaths of eight young children. The NSW government proposed the following main changes to the Swimming Pool Act 1992:
- A mandatory state-wide register for pools
  - Pool owners to self certify their own pools as compliant with the Swimming Pool Act 1992 using a government produced safety checklist
  - Local Councils to conduct mandatory inspections for tourist and visitor accommodation
  - Local Councils to conduct ad-hoc pool safety checks for private residential swimming pools - Local Councils are currently permitted but not required to inspect private pools
  - To require owners to obtain a compliance certificate (on a fee for service basis) at the time of selling or leasing their property.
32. The NSW Government considered that it would be too expensive to require local councils to periodically inspect all pools. The consultation period on the discussion paper closed in February 2012, the government has not yet announced its intentions.

33. The options considered in the NSW discussion paper would be significantly cheaper than those implemented in Queensland. However there is the risk that without mandatory inspections, non-compliance will continue to be high. The NSW Government has stated that any implemented changes would be monitored to assess the level of compliance and if necessary they would consider further regulation. The proposal for law reform in NSW is similar to the current law in South Australia; however the proposed changes in NSW would require a certificate of compliance at the time a property is leased. Further, the NSW legislation would require pool owners to register their pools, which would allow the NSW government a greater opportunity to monitor compliance than is currently possible in South Australia.
34. In 2013 legislative reforms have been implemented in NSW including a pool registrar.
35. In March 2011 the Australian Capital Territory (ACT) government released a discussion paper to consider amendments to ACT's swimming pool laws. The discussion paper provided an overview of legislation in other states but did not make recommendations. The ACT government has not yet publically released any outcomes from its discussion paper. It is unlikely that any changes will be implemented prior to the ACT election at the end of 2012.19

### **Finding**

After considering all the material before me, I find that Mohamed died from Hypoxic Brain Injury in the Setting of Immersion. The varied pool barrier requirements for swimming pools built over the years in Victoria are of great concern. Although the pool barrier at 18 Maxia Road was largely compliant with the relevant legislative requirements, it would not have been compliant with the standards for pool barriers for pools built after 1 May 2010. The pool barrier was inadequate to prevent access to the pool by Mohamed and his four year old brother and this fact contributed to his death.

### **Comments**

Pursuant to section 67(3) of the **Coroners Act 2008**, I make the following comments connected with the death:

1. Victorian pool safety laws incorporate the leading pool safety standard for new pools, but do not have a mechanism for updating older pool barriers. In Victoria, local councils have responsibility for inspecting pool safety barriers for legislative compliance; however there is no mandatory requirement for them to do so. Victoria does not have a state-wide pool register unlike Queensland.

2. The NSW and ACT Governments are considering amendments to their pool legislation. The NSW government noted that some of the changes implemented in Queensland were considered too expensive to be implemented in NSW. They have prioritised a pool register and self-certification over mandatory compliance inspections. The NSW government also endorsed the idea of upgrading older pools at the time of sale or lease.
3. There is currently no data available comparing the effectiveness of different legislative models. In Queensland, there is still some time to comply with the newer requirements and it will be some time before their effectiveness can be properly evaluated. However, it is widely reported that voluntary compliance with pool safety legislation is poor.
4. Swimming pool safety barriers have been shown to reduce the risk of drowning in young children; however, it is not the only prevention strategy. Other prevention strategies include adult supervision; and water familiarisation
5. No one other than Mahmoud, Mohamed's four year old brother, was aware that Mohamed was playing in or near water; therefore, supervision as a prevention measure would have unlikely affected the circumstances of Mohamed Abdelmegeed's death. The benefits of supervising children in the pool are widely publicised. There are a number of public awareness campaigns for supervision of young children near pools, for example, the Royal Life Saving Society's 'keep watch' campaign.
6. Water familiarisation programs, also called water awareness programs, differ from swimming lessons in that they assist children to feel confident in the water rather than learning to swim. Swimming lessons are usually more likely to be offered to children over 5 years of age. Mohamed Abdelmegeed participated in a developing water discovery program through his school. He attended approximately ten lessons where he was taught to:
  - enter and exit the water safely and confidently. May be assisted;
  - swirl, pull and push the water to feel resistance;
  - get the face wet;
  - with assistance submerge in waist depth water, open eyes and blow bubbles;
  - float to stand. Holding a buoyant aid recover from a face down float or glide; and
  - hold a flotation aid to the chest and allow feet to float from pool bottom.



7. The efficacy of water familiarisation classes as a drowning prevention strategy has not yet been determined. Some studies have identified that some parents consider that parental supervision is less important for a child that has participated in water familiarisation classes. There is conflicting evidence in the research about whether water familiarisation classes contribute to overconfidence in young children.
8. In America, the American Academy of Paediatrics recommends swimming lessons for children aged four years and older but does not recommend for or against swimming lessons for children aged between one and four years. They recommend that children be taught to never swim alone, and never swim without adult supervision. In Australia, the Royal Life Saving Society advocate water familiarisation lessons as part of their 'keep watch' strategy but warn that 'Water familiarisation is no substitute for adult supervision'.
9. Mohamed Abdelmegeed asked his father if he could go to his neighbours' pool, his father told him he was not allowed to because he could not swim. Both Mohamed and his four year old brother, Mahmoud, climbed over the fence into the neighbours' yard, however, Mahmoud decided not to enter the pool whereas Mohammed did. It is unclear whether Mohamed's level of confidence with water contributed to his death.
10. The pool barrier laws in Victoria are more extensive than many Australian jurisdictions; however, they are not as comprehensive as Queensland. The main differences between Victoria and other leading states are:
  - Victoria does not require pool owners to update the pool barriers for existing pools (on either lease, sale or a specified date)
  - Victoria does not require pools to be periodically inspected
  - Victoria does not maintain a state-wide register of pools
11. Mohamed Abdelmegeed accessed a pool situated on his neighbours' land due to the boundary fence being climbable. It should be noted that the pool safety legislation is targeted to protecting children under the age of 5 years old and Mohamed falls outside of that target age group.
12. Supervision and water familiarisation classes have also been identified as preventative strategies. Mohamed had undertaken water discovery classes through school, but was not yet competent in the water. One of the most common criticisms of water familiarisation classes are that they may cause parents to over-estimate their children's abilities and not

supervise sufficiently. Mr Abdelmegeed had told Mohamed that he was not to swim, because he was not able, therefore it is unlikely that the water discovery classes had this adverse effect on Mohamed's parents.

### **Recommendation**

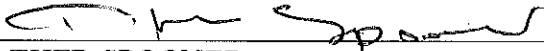
Pursuant to section 72(2) of the **Coroners Act 2008**, I make the following recommendations connected with the death:

That the Minister for Planning and the Building Commissioner review the legislative framework for swimming pools with a view to undertake any necessary reforms to ensure that pool barriers for older pools are updated to the most recent standard for pool standards.

I direct that a copy of this finding be provided to the following:

Mr Ahmed Abdelmegeed  
Leading Senior Constable Ross Timms, Investigating Member, Victoria Police  
Minister for Planning  
Building Commissioner  
LifeSaving Victoria

Signature:



HEATHER SPOONER  
CORONER  
Date: 16 January 2014

