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Health Insights

WA hospital negligent for not recognising sepsis in infant burns patient resulting in irreversible brain damage

Abstract

Western Australian hospital unsuccessful in appealing a finding of negligence based on an alleged failure to suspect, recognise and treat an infant patient for sepsis subsequent to a burn injury, leading to cardiac arrest, multi-organ failure, brain damage and cerebral palsy.[1] Damages yet to be agreed or assessed.

District Court proceedings[2]

Sunday Mabior was 16 months old when she was admitted to the burns ward at the Princess Margaret Hospital ("the Hospital") in Western Australia following a scald injury sustained on 9 December 2005. She had burns to 18% of her body, made up of superficial and partial thickness burns. Two days after her admission, she was transferred to the Intensive Care Unit (ICU) where she suffered cardiac arrest and multi-organ failure, resulting in brain damage and cerebral palsy.[3]

Sunday's family sued the Child and Adolescent Health Service[4] and were successful on the basis that the doctors in the burns ward failed to suspect, recognise and treat her for sepsis and the development of Acute Respiratory Distress Syndrome (ARDS) secondary to sepsis.[5]

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[1] *Child and Adolescent Health Service v Sunday John Mabior by next friend Mary Kelei* [2019] WASCA 151; BC201908706.
[2] *Mabior by her next friend Mary Kelei v Child and Adolescent Health Service* [2018] WADC 12; BC201840304.
[3] Above n 1, at [1]–[2].
[4] As the legal entity responsible for medical and nursing care provided by PMH.
[5] Above n 1, at [2] and see also A Januszewicz and B Schwarer "Duty of care: Failure to consider sepsis in paediatric burns patient — *Mabior by her Next Friend Mary Kelei v Child and Adolescent Health Service*" (2018) 26(4) *HLB* 64.

ARDS is an acute, diffuse and inflammatory lung injury that can lead to hypoxia.[6] This is because fluid collects in the air sacs of the lungs, depriving organs of oxygen. In burns cases, ARDS can be caused by sepsis, but can also be caused by a Systemic Inflammatory Response Syndrome (SIRS) arising from sterile or infected burns (or both).[7] Sepsis itself is a time-critical medical emergency that arises when the body's response to infection damages its own tissues and organs. The risk of mortality increases exponentially if not recognised and treated early.

The body's normal systemic response to trauma (sterile or infective) is to release chemicals (called cytokines) into the blood stream to fight inflammation or infection,[8] in turn setting off "inflammatory cascades"[9] throughout the body (SIRS). These inflammatory cascades disrupt the function of the immune regulatory system, fluid levels across blood vessels and organs, including the lungs which are particularly susceptible to assault.[10] Depending on the intensity of the systemic response and the severity of infection, a person's body may not cope with these multifactorial changes and will progress to developing ARDS, as in fact happened in this case.

The critical question for the trial judge however, was not whether Sunday developed SIRS or ARDS (or both as she did),[11] rather whether these conditions were consequential solely to her burns, or whether they were also the result of her having sepsis.[12] The defendant maintained there was no "good evidence" to invoke sepsis as a cause for her deterioration and instead characterised her deterioration as having a respiratory basis.[13]

The trial judge disagreed and made a crucial threshold finding that Sunday had sepsis from at least the evening of 10 December, being the day after admission, and that her sepsis continued to evolve up until the time she was transferred and treated in ICU (the sepsis finding).[14] This finding was supported by 13 individual reasons, which when considered collectively, satisfied his Honour to the requisite degree.[15]

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[6] Above n 1, at [2].
[7] Above n 1, at [9].
[8] See the judicial discussion of the expert evidence regarding causes of inflammation, above n 1, at [203]–[206].
[9] Above n 1, at [204].
[10] Above n 1, at [206], [210].
[11] Above n 1, at [10].
[12] Above n 1, at [10].
[13] Above n 1, at [70]–[72], citing evidence given by the Hospital's expert, Professor Harvey.
[14] Above n 1, at [91].
[15] Above n 1, at [79].

The sepsis finding was heavily influenced by the trial judge's reliance and preference for the evidence[16] of Dr Numa (intensivist and paediatric respiratory physician) and Professors Kesson and Star (paediatric infective disease specialists) whom he found were "best qualified to express an opinion as to whether [Sunday] in fact had sepsis".[17] The trial judge found that in circumstances where she did in fact have sepsis, those in charge of her care in the burns ward should have recognised, by at least 2 am on 11 December, that she was septic and administered antibiotics promptly (the *breach finding*).[18]

Further, the trial judge concluded that, had her sepsis been treated with antibiotics, she would not have developed ARDS, to the extent that she did, and would not have suffered her catastrophic and irreversible injuries. If Sunday had been administered antibiotics in the absence of sepsis, there would have been no detrimental impact on her condition (the *causation finding*).[19]

Appeal proceedings

Despite listing 16 individual grounds, the Hospital's case on appeal was broadly concerned with two issues, being the "essential"[20] factual sepsis finding and the breach finding.[21] The Hospital submitted that the trial judge's critical sepsis finding was inappropriately informed by his assessment of the credibility and reliability of the expert witnesses,[22] which unfairly favoured the respondent,[23] against the weight of the evidence and without reasonable explanation.[24]

In relation to the issue of breach, the Hospital refuted the relevant standard of care identified by the trial judge, namely the standard of an ordinary skilled practitioner working within the specialist field of paediatric burns,[25] conducting him or herself in a manner that was in accordance with *a practice* that was widely

[16] Above n 1, at [93].
[17] Above n 1, at [134] citing *Mabior by her next friend Mary Kelei v Child and Adolescent Health Service* [2018] WADC 12 at [673].
[18] Above n 1, at [14].
[19] Above n 1, at [16].
[20] Above n 1, at [90].
[21] Above n 1, at [7]–[14].
[22] Above n 1, at [96].
[23] Above n 1, at [98].
[24] Above n 11, at [234].
[25] Above n 1, at [81].

accepted by peers.[26] This two-prong test responds to ss 5B and 5PB of the Civil Liability Act 2002 (WA) (the Act),[27] which is markedly different from other Australian states.

It was determined that none of the grounds had merit and the appeal was accordingly dismissed.[28] In reaching this conclusion, the Court of Appeal explored issues relating to expert evidence and the peer defence afforded by the Act.

Expert evidence

A major focus of the Hospital's case on appeal was that the trial judge erred in law by preferring the expert evidence of the respondent over those experts whom the appellant considered to be more qualified, namely their own paediatric burns specialists, Professors Harvey and Kimble. The weight afforded to each expert was done so having regard to the quality of their reports, the manner and clarity of their evidence, the extent to which their opinions were supported by relevant and credible literature, and the extent to which they demonstrated an understanding of their specialisation.[29]

The Court of Appeal acknowledged that weighing evidence is a matter of judicial discretion and is ultimately informed by "*the feeling of a case*" which emerges throughout the course of the trial, including subtleties in the way questions were asked (or avoided).[30] These factors do not correlate to a written transcript[31] and as such, there is an element of appellate restraint which has been recognised consistently by the Courts,[32] and was invoked in this instance in the absence of any "glaringly improbable" deductions[33] made by the trial judge.

Relevant peer

The appellant challenged the trial judge's reliance on the evidence of Dr Numa and Professor Kesson on the basis that they were not peers in the relevant sense of the breach question. This is because they were not

[26] Above n 1, at [82].
[27] Civil Procedure Act 2002 (WA).
[28] Above n 1, at [17].
[29] Above n 1, at [75].
[30] Above n 1, at [95], citing *Brett v Rees* [2009] WASCA 159; BC200907767 at [69].
[31] Above n 1, at [95], citing *Brett v Rees* [2009] WASCA 159; above, at [69].
[32] Above n 1, at [93]–[95], citing *Smart v Power* [2019] WASCA 106; BC201906811; *Lee v Lee* (2019) 372 ALR 383; [2019] HCA 28; *Abalos v Australian Postal Commission* (1990) 171 CLR 167; 96 ALR 354; [1990] HCA 47; *Brett v Rees*, above.
[33] Above n 1, at [93], citing *Lee v Lee*, above at [55].

"doctors in the PMH burns ward", but intensivists and infection disease experts.[34] The relevant question, being whether or not the plaintiff had sepsis, in turn causing ARDS, was taken (at first instance) to be one which "*falls more squarely within the fields of expertise of infection disease physicians, respiratory physicians and intensivists rather than paediatric burns surgeons*"[emphasis added].[35]

The Court of Appeal recognised that, while the trial judge did not expressly classify them as peers, the implication in this case is that all the relevant experts were persons who, in varying ways, were generally responsible for assessing whether a patient exhibited signs and symptoms suggestive of sepsis — and could provide evidence in that regard.[36] This is consistent with the principles in *Wright v Minister for Health*,[37] and accordingly, there was no error.

Peer defence

The Hospital challenged the breach of duty finding on the basis that the trial judge erroneously interpreted s 5PB of the Act as requiring evidence of a specific practice, technique or regular course of conduct, that as a matter of fact, existed and was widely accepted by health professional peers at the time.[38] In affirming this interpretation, the Court of Appeal charted the different legislative provisions and precedential case law.[39] In essence, all states provide a two-tier test which differentiates between general breach of duty and professional negligence.[40] The latter is often expressed as a defence.

The WA provision is distinctive in two material ways — firstly, a defendant seeking to contest liability on this basis must plead material facts for the provision to apply, and secondly, when invoked, it reverses the onus of proof to the plaintiff who must show that the defendant did not act in accordance with this practice. The allegations of negligence must be directed toward these failures specifically. If "a practice" cannot be sufficiently established, or there is no responsive allegation of negligence (as was the case on the pleadings),

[34] Above n 1, at [398].
[35] Above n 2, at [673].
[36] Above n 1, at [400]–[403].
[37] Above n 1, at [399], citing *Wright v Minister for Health* [2016] WADC 93 at [87].
[38] Above n 1, at [376].
[39] Above n 1, at [294]–[311].
[40] Civil Liability Act 2002 (WA)ss 5B and 5PB; Civil Liability Act 2002 (NSW) ss 5B and 5O; Civil Liability Act 2003 (Qld) ss 9 and 22; Wrongs and Other Acts (Law of Negligence) Act 2003 (ACT) ss 48 and 59.

the question reverts to the general issue of breach;[41] in this case, whether the conduct fell below the standard of an ordinary skilled practitioner working within the specialist field of paediatric burns.

Unsurprisingly, none of the experts that gave evidence suggested that it was widely accepted by this group of practitioners to fail to suspect or recognise that a patient may be suffering from sepsis, and in those circumstances fail to commence antibiotics.[42] Further, it was unanimously agreed that the medical records revealed that no consideration was given to sepsis prior to the patient being admitted to the ICU.[43] Significantly, none of the doctors treating the infant plaintiff were called to give evidence that they had in fact considered sepsis.[44] Accordingly, the primary finding showed no error of law or fact and the appeal was dismissed.

The primary and appeal proceedings related to liability alone, with damages yet to be agreed upon. It is likely that the award will be in the many millions, having regard to the seriousness and permanence of Sunday's injuries.

The failure of those responsible for Sunday's care in the burns ward is especially alarming given the established and emerging data that shows that sepsis is a silent, yet preventable killer, responsible for 1 in 5 deaths universally.[45] A worldwide study into the global burden of sepsis was published in the *Lancet* in January 2020[46] and found that the incidence of sepsis-related deaths is almost double previous estimates;[47] almost half being in children.[48] This is significant having regard to the fact that the study attributes 11 million deaths to sepsis in 2017 alone.[49]

Takeaways for legal and medical practitioners

Peer reviewed literature

[41] Civil Liability Act 2002 (WA) s 5B.
[42] Above n 1, at [85], [403].
[43] Above n 1, at [427]–[430].
[44] Above n 1, at [432].
[45] Rudd et al "Global, regional and national sepsis incidence and mortality, 1990–2017: analysis for the Global Burden of Disease Study" 395 *The Lancet* (18 January 2020), 200, 206.
[46] Above n 45, at 211.
[47] Above n 45, at 208.
[48] Above n 45, at 208.
[49] Above n 45, at 207.

Of interest is the judicial focus on the literature supporting each opinion (or lack thereof). Those experts that were "*impressive*" to the trial judge, referred to, and relied on, literature that was consistent with their opinion. Others that referred to credible literature while omitting relevant and critical differences were adversely considered. This is not surprising. Rather, the repeated reference to "*unchallenged*" peer literature,[50] at first instance and on appeal, should impress on practitioners the importance of considering the entirety of the opinion proffered by their experts, including whether all articles support the propositions on which they rely.

Relevant peers

This case serves as a reminder to practitioners that in cases where the conduct of a hospital or health service is in issue, the relevant "peer" may not strictly correlate to the speciality of the treating practitioner/s, but may have regard to the opinion of those health professionals who are generally charged with, or responsible for, like decisions and/or management of the operative cause/s of a plaintiff's' alleged injuries. This will usually be a wider net.

Peer defence and particulars

One of the key grounds of appeal involved examining the distinction between s 5PB of the Act ("a practice") and/or simply other Civil Liability Acts (acting in accordance with professional practice).[51] However, it was generally of no consequence to the outcome of this case. While s 5PB of the Act is not strictly applicable to the peer defence provided for by s 5O of the NSW Act, it does provide an example of how a defendant could shore up his or her defence by having regard to the "extra" particulars required by s 5PB. This is because in order to enliven s 5PB, a defendant must plead material facts as to the *specific* practice that was widely accepted as competent professional practice (and followed) at the relevant time, and is more onerous than asserting compliance with some more generic "professional practice".

[50] Above n 1, at [76], [153], [242].
[51] Above n 1, [344]–[96].

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Sepsis

Sepsis is a global burden requiring urgent attention. All sepsis patients, regardless of underlying source, have a shared need for access to basic acute care services such as timely and appropriate antibiotic administration, microbiology facilities, and capacity for organ support.[52] Health practitioners should be alive to the phenomena and recognise that patients with sepsis frequently present with undifferentiated infection or underlying co-morbidities. Health professionals should not underestimate this often fatal condition and instead, should take a prudent and cautious approach where sepsis is suspected, which ought to include all burns cases.

This article was originally published by Australian Health Law Bulletin. The article was written by Principal Andrew Saxton and Solicitor Lauren Biviano. Please contact them if you have any questions or would like more information.

Andrew Saxton
Principal
+61 2 9018 9923
asaxton@meridianlawyers.com.au

Lauren Biviano
Solicitor
+61 2 9018 9996
lbiviano@meridianlawyers.com.au

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[52] Above n 45, at 209.