Execution by lethal injection – a quarter century of state poisoning

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According to one press report, Angel Diaz "appeared to be moving 24 minutes after the first injection, grimacing, blinking, licking his lips, blowing and appearing to mouth words". A second [dose] was administered to complete the execution. Over half an hour after the execution began, a doctor wearing a blue hood to cover his face entered the execution chamber to check Angel Diaz's vital signs. He returned a minute later, checked the vital signs again and nodded to a member of the execution team. It was then announced to the witnesses that the execution had been carried out.[1]

Introduction

For more than two centuries, approaches to execution have changed, from methods designed to inflict and maximise the suffering of prisoners being judicially killed, to the functional approach taken by the majority of modern governments which use capital punishment. These place emphasis on the death of the prisoner rather than to exaggerate the suffering inherent in the process of execution.[2]

In 18th century England, certain crimes were punished by execution by hanging, drawing and quartering. This involved the prisoner being hung by the neck until nearly dead, having parts of their intestines removed and burnt before them and then being beheaded and their bodies divided into quarters for public display. Countries such as Iran and Saudi Arabia continue to purposefully inflict suffering through especially cruel methods of executions including stoning. In Iran, the law prescribes that "In the punishment of stoning to death, the

[1] Execution of Angel Díaz, Florida, USA, December 2006. Amnesty International. *Urgent Action,* AI Index: AMR 51/198/2006, 14 December 2006. (See below page 6.)

[2] It should be noted that countries utilising the death penalty have become comparatively rare, with only 23 nations carrying out executions in 2005 and 25 in 2006. (Of these 25, just six – China, Iran, Pakistan, Iraq, Sudan and the USA – each executed more than 50 prisoners and together accounted for 91% of all recorded executions; China executes more prisoners than all other countries combined. In addition, Saudi Arabia beheaded in public at least 39 prisoners – the only country to systematically apply this method – and together with the remaining 18 countries accounted for only 9% of global executions in 2006.) Statistics on the death penalty can be found at: http://web.amnesty.org/pages/deathpenalty-index-eng

stones should not be so large that the person dies on being hit by one or two of them, nor should they be so small that they could not be defined as stones." [3]

However, some nations such as the United States of America (USA) and the United Kingdom (UK) have at points sought to make methods of execution less liable to bungling or to inflicting gratuitous suffering. In the UK in the late 19th century, a government commission made recommendations to ensure rapid death by hanging rather than uncertain and cruel outcomes which had prompted the inquiry in the first place. (These included prolonged death by strangulation on the one hand and decapitation of the condemned prisoner on the other.) [4]

In 1889, New York State became the first jurisdiction to introduce electrocution as a more scientific method of execution following concerns around the number of hangings where the prisoner took a prolonged time to die. The proposal to use electricity provoked legal wrangles between the Edison and Westinghouse companies which promoted, respectively, direct and alternating current. Following the first electrocution in 1890, Dr Alfred Southwick, the chair of the commission which recommended the electric chair, was reported as saying that "we live in a higher civilisation from this day"[5] though Thomas Edison reportedly "rebuked the doctors and said it was a mistake to have let them handle the execution"[6] after more than one charge was required to complete the execution.

Further methods of execution were introduced. Poison gas was adopted in the USA in 1921 and was eventually used by 11 states.[7] Lethal injection was proposed and adopted in 1977 in Oklahoma and Texas and subsequently in other states.[8]

Other countries have also sought to make execution more palatable. Thailand, which had introduced beheading as execution method in 1908, replaced it in 1934 with the alternative of firing squad. This method was replaced, in turn, in 2003 with lethal injection.

Amnesty International opposes the death penalty without reservation as a violation of the right to life and the right not to be exposed to torture or to cruel, inhuman or degrading treatment. The method of execution has no bearing on this position as, in Amnesty International's view, the problem lies not with the *method* of execution but with the punishment itself.

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[3] Amnesty International. *Urgent Action*. Iran: Fear of imminent executions by stoning. AI Index: MDE 13/006/2002.
[4] *Capital Sentence Committee Report*, London, 1888. National Archives, HO 144/212/A48697.
[5] Cited by Beichman A. The first electrocution. *Commentary*, 1963, 35:410-9. Citation from p.417.
[6] *Ibid*., p.418.
[7] See Bedau H. *The Death Penalty in America*. Third Edition. 1982.
[8] For details see Denno DW. When legislatures delegate death: the troubling paradoxes behind state uses of electrocution and lethal injection and what is says about us. *Ohio State Law Journal* 2002; 63: 63-128; Human Rights Watch. *So Long as They Die: Lethal Injections in the United States.* New York, 2006. Available at: http://hrw.org/reports/2006/us0406/

However, lethal injection as a method of execution raises particular concerns. These include:

- *Attempted diversion of attention from the cruel, inhuman and degrading nature of the death penalty.* By focusing on the presumed reduction in pain suffered during the lethal injection execution, proponents of this method disregard the suffering inflicted on prisoners through the entire death penalty process.
- *The potential for this method to cause physical suffering.* A number of executions in the USA have been botched and caused suffering, sometimes prolonged, to the victim. In addition, a number of recent court challenges have been based on inherent potential problems with the method, notably that inadequate anaesthetic may be delivered into circulation and that the use of a paralysing agent in the lethal mixture could mask any suffering caused to the prisoner during the execution since he or she would be immobilized and unable to signal any discomfort or pain. A high degree of medical skill would be needed to ensure avoidance of this outcome.
- *The involvement of health personnel in executions.* Virtually all codes of professional ethics which consider the death penalty oppose medical or nursing participation. Despite this, many death penalty states have regulations specifying that health professionals be present at executions[9] and in some cases they have actually participated in the execution. The medicalization of lethal injection can give the appearance of clinical effectiveness but the only personnel who can limit the risk of botched executions are appropriately trained medical specialists. These can be unwilling to perform this role and are barred by professional ethics from doing so.

Amnesty International argues that every execution is a violation of fundamental human rights. Amnesty International is therefore totally committed to ending executions whether by lethal injection or any other method. Any potential increase in executions or lobbying for the death penalty as a result of the use of lethal injection is of serious concern. The increased pressure on medical professionals to participate in executions also raises serious ethical and human rights issues. This paper reviews developments with respect to lethal injection executions over the past decade.[10] In this 25th year of lethal injection executions,[11] Amnesty International renews its call on health professionals to respect professional ethics and human

[9] For a comprehensive review of the situation in US states see Denno DW. When legislatures delegate death: the troubling paradoxes behind state uses of electrocution and lethal injection and what is says about us. *Ohio State Law Journal* 2002; 63: 63-128; Denno DW. The lethal injection quandary: how medicine has dismantled the death penalty. 76 *Fordham Law Review* (2007) (forthcoming).

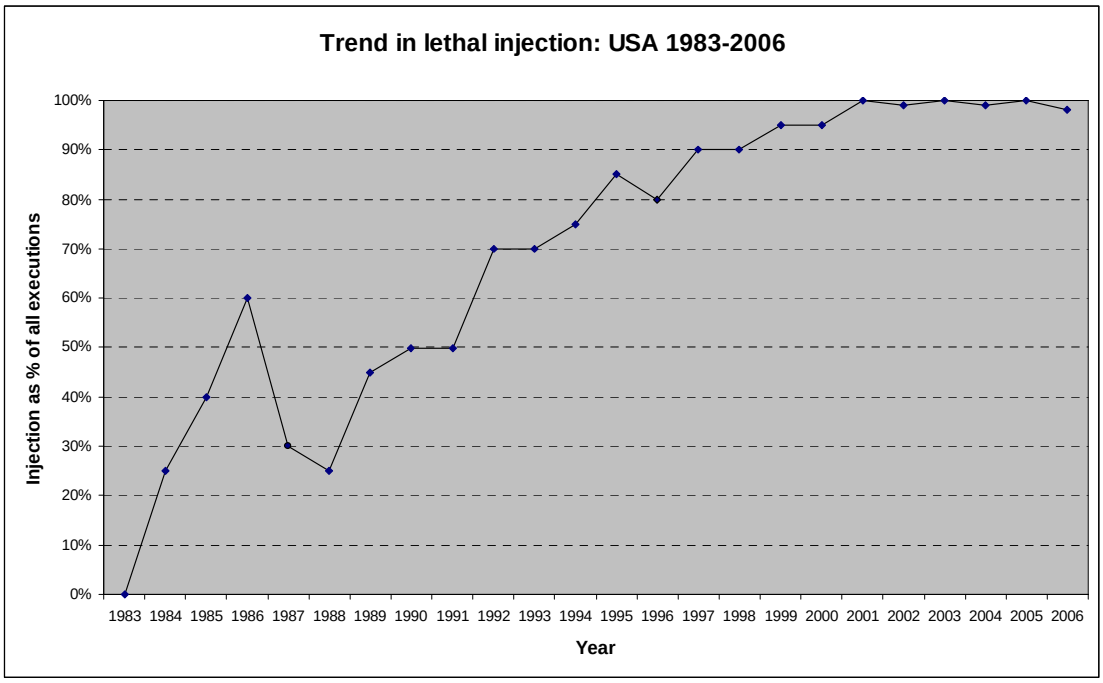
[10] For earlier Amnesty International publications on this subject see: Amnesty International, *Lethal injection: the medical technology of execution,* AI Index: ACT 50/001/1998, January 1998; and Amnesty International, *Lethal injection – The medical technology of execution. Update September 1999,* AI Index: ACT 50/008/1999, Available at: http://web.amnesty.org/library/Index/ENGACT500081999.

[11] The first execution by lethal injection, that of Charles Brooks, took place on 7 December 1982.

rights and not to facilitate or participate in the taking of life in state-ordered executions.[12] It also calls for an end to the death penalty and a more human rights-affirming response to crime.

Background

Execution by lethal injection was first used in the USA. It was introduced into US state law nearly 30 years ago and the first execution by this method was in 1982. Since that time more than 900 prisoners have been executed by lethal injection in the USA and it has all but replaced the alternative methods – electric chair, hanging, gassing and firing squad. (See graph below.) Over the next 20 years it was adopted by other governments – Taiwan, China, Guatemala, Philippines and Thailand. Other countries – India, Papua New Guinea, and Vietnam – have discussed introducing this method of execution.



One argument made by proponents of lethal injection is that the punishment is more humane than alternatives. Some have argued that this makes executions by lethal injection easier to defend and promote than other forms of execution. In practice, apart from the USA and China, the number of such executions is very small. Four of the six countries with legislation permitting lethal injection executions have carried out a total of only 14 executions since 1997. The introduction of lethal injection has not led to rapid expansion in the use of the method among countries which practice executions nor, as far as one can judge, to an increase

[12] Amnesty International. *Declaration on the Participation of Health Personnel in the Death Penalty*, 1988; available at: http://web.amnesty.org/pages/health-ethicsdpdeclaration-eng.

in executions in countries which have the method (though this is difficult to document). However in the USA, lethal injection is now virtually the only method of execution and, in China, it is a method increasingly being employed (though data is not disclosed by the government). China, where each year the majority of the world's executions are carried out, uses predominantly the firing squad as a method of execution, although a serious attempt is being made to extend the application of lethal injection.

Lethal injection raises a number of human rights challenges, notably the argument of proponents that it is a "humane" method of execution. Further, the adoption of lethal injection as a method of execution has resulted in health professionals -- people committed to preserving life where possible -- becoming key participants in executions.

There is a diverse range of lethal injection execution protocols and level of physician involvement. Just over one third of executing jurisdictions – 13 states – have formal execution protocols though recent court litigation suggests a lack of knowledge of the procedures by corrections staff and unreliable implementation of procedures in many cases. Twenty-seven states make reference to the medical role in the death penalty though again the laws and the roles expected of health personnel vary greatly.[13]

In lethal injection executions, prisoners are commonly injected with massive doses of three chemicals: sodium thiopental (also known by the trade name Pentothal) to induce general anaesthesia; pancuronium bromide to cause muscle paralysis, including of the diaphragm; and potassium chloride to stop the heart. Doctors have expressed concern that if inadequate levels of sodium thiopental are administered (for example, through incorrect doses of thiopental, faulty attachment of the line, or precipitation of chemicals) proper anaesthetic depth will not be achieved or the anaesthetic effect can wear off rapidly and the prisoner will experience severe pain as the lethal potassium chloride enters the veins and he or she goes into cardiac arrest. Due to the paralysis induced by pancuronium bromide, they may be unable to communicate their distress to anyone.

Such issues have led to these chemicals – used on humans as punishment – being barred from use on animals in euthanasia. The professional body representing the USA's veterinary surgeons has argued that the use of pancuronium bromide is unacceptable for euthanasia of domestic pets. The American Veterinary Medical Association has taken the view that a mixture for euthanasia of animals by sodium pentobarbital should not include a paralysing agent and that humane killing of animals by potassium chloride requires prior establishment of surgical plane of anaesthesia characterised by "loss of response to noxious stimuli"[14] by a

[13] These themes are discussed at length in Denno DW. The lethal injection quandary: how medicine has dismantled the death penalty. 76 *Fordham Law Review* (2007) (forthcoming).
[14] American Veterinary Medical Association. AVMA Guidelines on Euthanasia, June 2007, p.12. The Guidelines were formerly the 2000 *Report of the AVMA Panel on Euthanasia*. *JAVMA*, 2001;218(5): 669-96, 1 March 2001.

competent person.[15] The use of pancuronium bromide in animal euthanasia has since been banned in individual US states including Tennessee[16]. In September 2003, a new law came into force in Texas prohibiting the use of pancuronium bromide in the euthanasia of cats and dogs. Texas is the US state which uses lethal injection the most frequently for humans, having executed some 400 people by this method since 1982.

Table 1: Lethal injections and total executions

Country	Lethal injection executions since adoption of method (to 31 July 2007)	Total executions in same period
USA	919[17] [age range of prisoner: 23 to 77 years]	1084
China	Hundreds, perhaps thousands*	25-30,000*
Guatemala	3	3
Philippines	7	7
Thailand	4	4
Taiwan	0	134

*Estimates of executions in China are based on unofficial published sources and not on government data which remain secret; real figures are believed to be considerably higher.

Botched executions

Lethal injection has been promoted by its supporters as a humane form of execution. However, like other methods, it does not always go to plan. The first execution in Guatemala took longer than expected after health personnel involved had difficulty finding a vein. The Human Rights Procurator, Julio Arango, who observed the execution, later stated: "I think we all have

[15] *Ibid.* ("A combination of [barbiturate] with a neuromuscular blocking agent [of which pancuronium is an example] is not an acceptable euthanasia agent", report, p.90.) The AVMA issued a clarifying statement attached to a 2007 statement of AVMA Guidelines on Euthanasia making clear that their position on animal euthanasia did not represent a comment on lethal injection in humans. See: http://www.avma.org/issues/animal_welfare/euthanasia.pdf (accessed 19 September 2007).

[16] See Act of April 5, 2001, ch. 194, 2001 Tenn. Pub. Acts 114. Death row prisoner, Abu-Ali Abdur'Rahman, argued that this law should prohibit his executioners using a lethal drug mix containing pancuronium bromide. The Supreme Court of Tennessee rejected this line of argument, noting that "The plain language in the statutory definition of a nonlivestock animal as provided in section 39-14-201(3) does not include human beings" and thus would not apply to executions. See *Abdur'Rahman v Bresenden et al*, No. M2003-01767-SC-R11-CV, 17 October 2005, p.28a; available at: http://www.tsc.state.tn.us/opinions/tsc/capcases/Rahman/02172006/Abdur'Rahman Pet App final.pdf .

[17] Death Penalty Information Center, Washington, DC: http://www.deathpenaltyinfo.org .

the obligation to tell what happened: his arms were bleeding heavily, I think everyone who was there was suffering."[18]

In December 2006, the botched execution of Angel Nieves Díaz in Florida, USA, led the then state Governor, Jeb Bush, to place a moratorium on further executions. Angel Díaz, who was sentenced to death in 1986 for a murder committed in 1979, took 34 minutes to die. According to one press report he "appeared to be moving 24 minutes after the first injection, grimacing, blinking, licking his lips, blowing and appearing to mouth words."[19] A second dose of drugs was administered to complete the execution. Over half an hour after the execution began, a doctor wearing a blue hood to cover his face entered the execution chamber to check Angel Díaz's vital signs. He returned a minute later, checked the vital signs again and nodded to a member of the execution team. It was then announced to the witnesses that the execution had been carried out.[20] Dr William Hamilton, who performed a post-execution autopsy, reported that the lethal injection catheters pierced the front and back walls of the veins in Angel Díaz's arms and went into underlying soft tissues. Dr Hamilton's report also noted that the prisoner suffered a 12 x 5 inch (30 x 13 cm) chemical burn on his right arm and an 11 x 7 inch (27 x 18 cm) chemical burn on his left arm.[21]

A number of death row prisoners in Florida sought emergency legal protection following the botched execution, seeking to have the court "declare that the State of Florida's current lethal injection procedures violate the Eighth Amendment to the US Constitution [prohibiting cruel and unusual punishment] and the corresponding provision of the Florida Constitution".[22]

In response to the Díaz execution, the outgoing Governor of Florida, Jeb Bush, released a statement on 15 December 2006 stating that he had "issued Executive Order 06-260, creating the Commission on Administration of Lethal Injection [which] is charged with reviewing the method in which the lethal injection protocols are administered by the Department of Corrections." His statement continued: "I look forward to the Commission's expeditious review of the lethal injection protocols in Florida to ensure the method is consistent with the Eighth Amendment of the United States Constitution and its prohibition against cruel and unusual punishment."[23] The Commission was quickly established and reported to the incoming Governor, Charlie Crist, on 1 March 2007. It recommended that the Department of Corrections "consider[s] modifications to its written policies and procedures [including]

[18] Amnesty International. *Lethal injection – The medical technology of execution. Update September 1999*. AI Index: ACT 50/008/1999, p.3.
[19] Associated Press, 15 December 2006.
[20] Amnesty International Urgent Action, AI Index: AMR 51/198/2006, 14 December 2006.
[21] William F Hamilton MD. Post-mortem examination of the body of Angel Diaz, 14 December 2006. The report records "zones of …fluid-filled bullae" [blisters] with "focal erythematous changes [red inflamed area] in the surrounding skin", p.1.
[22] *Lightbourne et al v. Crist et al*. Emergency Petition. Supreme Court of Florida, 14 December 2006. In September 2007, Judge Corven Angel reversed Lightbourne's stay of execution, stating that the execution of Angel Diaz did not involve suffering. (See below note 23)
[23] Jeb Bush, Governor. Statement regarding Executive Order 06-260, Florida, 15 December 2006.

implement[ing] a comprehensive, systematic procedure for ensuring that persons selected to perform these official duties related to carrying out lethal injections are suitably qualified and trained to perform the assigned duties." [24]

In a statement appended to the report, three physician members of the commission noted that "it is of great concern to us that this task [execution] may require the use of medical personnel" and "We know of no other occasion where the State employs the services of individuals operating outside of the ethical boundaries of their profession. This is not a desirable situation."[25] The Florida Department of Corrections submitted its response to the reports recommendations to Governor Crist on 7 May 2007. In its submission the department set out its three guiding principles:

"The Department must put foremost the objective of a humane and dignified death.

While the entire process of execution should be transparent, the concerns and emotions of all those involved must be addressed.

Without impinging on the other principles, the execution should not be of long duration."[26]

Table 2: Examples of known botched lethal injection executions in the USA since 2000

Date	Name / State	Details
13 Dec 2006	Angel Díaz, Florida	Injection missed vein; caused chemical burns to arms and required two injections to bring about death in 34 minutes. [27]
2 May 2006	Joseph Clark , Ohio	It took 22 minutes for the execution technicians to find a vein suitable for insertion of the catheter. The vein collapsed shortly after the start of the injection and Clark's arm began to swell. He raised his head off the gurney and said five times, "It don't work. It don't work." The curtains surrounding the gurney were then closed while the technicians worked for 30 minutes to find another vein. An autopsy found 19 puncture

[24] The Governor's Commission on Administration of Lethal Injection. *Final Report with Findings and Recommendations*. 1 March 2007, p.9. Available at: http://www.law.berkeley.edu/clinics/dpclinic/Lethal%20Injection%20Documents/Florida/lethalinjectionfinalreport.pdf (accessed 13 March 2007)

[25] Report Appendix A: The Physicians' Statement.

[26] Department of Corrections' response to the Governor's Commission on the Administration of Lethal Injection's Final Report with Findings and Recommendations, 7 May 2007, p.1.

[27] In a ruling lifting a stay of execution in an unrelated case, Judge Carven D. Angel (Florida) stated, "The court rejects the argument that the Diaz execution was 'botched'. Inmate Diaz died within a reasonably short time after the chemicals were injected in a manner that the court finds was painless and humane. It was never intended that the inmate should wake up and go home.", *Florida v Lightbourne*, case 1981-170 CF; SC06-2391, Circuit Court, Fifth Judicial Circuit, Marion County, Florida, Judicial order, 10 September 2007). Available at: http://www.law.berkeley.edu/clinics/dpclinic/Lethal%20Injection%20Documents/Florida/Lightbourne/09.10.07.FL.lightbourne.orderofdenial.pdf

Date	Name / State	Details
		marks resulting from attempts to establish an IV line.
13 Dec 2005	Stanley "Tookie" Williams	The execution team struggled to find a vein in Williams' arm and a paramedic reportedly took 11-12 minutes to attach an IV line. The execution took more than half an hour.[28]
10 Dec 2001	Lloyd Lafevers, Oklahoma	LaFevers began making gasping sounds and started convulsing three minutes after the lethal injection commenced and ceased moving after the 12th convulsion. Post mortem levels of thiopental were very low.[29]
7 Nov 2001	Jose High, Georgia	High was pronounced dead about 69 minutes after the execution began. The execution was accomplished with one needle in High's hand and a second needle (inserted by a physician) between his shoulder and neck – a subclavian venous catheter
28 June 2000	Bert L Hunter, Missouri	Hunter had a reaction to the lethal drugs, repeatedly coughing and gasping for air before he lapsed into unconsciousness. A witness said he suffered "violent convulsions".
7 Dec 2000	Claude Jones, Texas	Jones was a former intravenous drug user. His execution was delayed 30 minutes while personnel struggled to insert an IV into a vein. It was eventually attached to his leg.
8 June 2000	Bennie Demps, Florida	It took 33 minutes for execution personnel to find suitable veins for the execution. "They butchered me back there," said Demps in his final statement. "They cut me in the groin; they cut me in the leg. I was bleeding profusely."
3 May 2000	Christina M Riggs, Arkansas	The execution was delayed for 18 minutes when prison staff couldn't find a suitable vein in her elbows. Finally, Riggs agreed to the executioners' requests to have the needles in her wrists.

(Table drawn substantially from Death Penalty Information Center web-site)[30]

The Department of Corrections agreed with the recommendations of the commission though maintained its belief that the current drugs used for executions are appropriate and, in particular that pancuronium bromide should continue to be used.[31]

Meanwhile no further executions have taken place in Florida up to time of writing (though one is scheduled for November 2007 under the new execution protocol which has now been adopted[32]).

[28] See Fagan K. The execution of Stanley Tookie Williams. *San Francisco Chronicle* 14 December 2007. Available at http://www.sfgate.com (Accessed 21 September 2007).
[29] See Declaration of Dr Mark Heath, 27 July 2006, p.8. Available at: http://www.law.berkeley.edu/clinics/dpclinic/LethalInjectionResourcePages/resources.ca.html (Accessed 21 September 2007).
[30] Radelet ML, Some Examples of Post-Furman Botched Executions, 3 May 2006. Available at: http://www.deathpenaltyinfo.org/article.php?scid=8&did=478 (accessed 27 October 2006).
[31] *Ibid*. p.13.
[32] Mark Dean Schwab is scheduled to be executed on 15 November 2007.

There are numerous reasons why a lethal injection execution can be problematic and prolonged. These include:

- Execution personnel are often unqualified, untrained, and/or unfit to perform the execution procedures
- the execution team is not able to find a suitable vein (in which case a doctor may be sought to perform an alternate procedure[33])
- the mixture or composition of the drugs is wrong due to mixing errors, precipitation (clumping into particles) or other reasons
- the flow blood is restricted by excessively tight restraints across the arms
- the direction of flow of the injected fluid is wrong
- the chemicals are injected into tissue rather than a vein, decreasing or eliminating the intended effect (and thus causing a slower death) and possibly causing skin burns
- the drugs are administered in the wrong order with the anaesthetic not being administered first
- the prisoner does not react normally to the drugs

In addition there is the possibility, currently cited in a number of legal cases in the USA, that one of the drugs used, pancuronium bromide, could prevent the expression of pain experienced by a prisoner should the effect of thiopental be inadequate or wear off early.

Developments in the past decade: country by country

The vast majority of executions by lethal injections have taken place in the USA (where the number of such executions is known to be 919 as of 31 July 2007) and China (where the number is unknown, but believed to range from hundreds to more than a thousand). Taiwan, Guatemala, Philippines and Thailand also provide for lethal injection execution in their laws. Between them they have carried out a total of 14 such executions, and Taiwan has not carried out any. At least three other countries – India, Papua New Guinea, and Vietnam – are considering introducing this method of execution.

USA

In the two decades from the early 1980s until 2001, the annual percentage of executions carried out by lethal injection rose steadily from 25 per cent of all executions (1984) to virtually 100 per cent (2001-2006) – see Figure below. From 2002 to 2005, 99 per cent of executions were by lethal injection. Of the 53 executions carried out in the USA in 2006, 52

[33] These procedures include: surgical cut-down – a procedure allowing direct access to an underlying vein; establishing a subclavian central venous catheter [named after the subclavian vein located below the clavicle or collar-bone]; jugular catheter, or a percutaneous femoral line insertion near the groin. The latter two procedures carry the risk of significant complications in a clinical setting if they are not carried out properly.

were by lethal injection. (One man was executed in the electric chair in Virginia on 20 July 2006 after choosing to be put to death by that method.)[34]

As a result of continuing protests against medical participation in executions, Illinois barred heath professionals from participating in executions in 2003.[35] Illinois law had previously defined medical participation in lethal injection executions as not constituting the practice of medicine and therefore outside the scope of the Medical Practice Act. The new law states that "the Department of Corrections shall not request, require, or allow a health care practitioner licensed in Illinois, including but not limited to physicians and nurses . . . to participate in an execution".[36] Illinois does not currently implement the death penalty. Lethal injection has been the subject of numerous legal challenges over the past two years resulting at one point in temporary suspension of executions in nearly one third of states practising the death penalty.[37] Considerable attention has focused on the procedures used in implementing lethal injection which, despite appearing to be similar in all jurisdictions, vary from state to state.[38] Court cases are proceeding in a number of jurisdictions at time of writing and individual states are revising their procedures or undertaking inquiries into the death penalty itself. .

Box 1: Capital cases: a 'dysfunctional patchwork of stays and executions'

Dissenting from the refusal by his colleagues on the US Court of Appeals for the Sixth Circuit to grant a stay of execution based on a lethal injection challenge brought by Tennessee death row inmate, Sedley Alley, Judge Boyce Martin wrote: "[T]he dysfunctional patchwork of stays and executions going on in this country further undermines the various states' effectiveness and ability to properly carry out death sentences. We are currently operating under a system wherein condemned inmates are bringing nearly identical challenges to the lethal injection procedure. In some instances stays are granted, while in others they are not and the defendants are executed, with no principled distinction to justify such a result".[39]

[34] 37 of 38 states with the death penalty had adopted lethal injection as sole or optional method of execution; the only exception is Nebraska, which only allows for the electric chair. Inmates who were sentenced to death before the adoption of lethal injection may be allowed to "choose" their method of execution. See: http://www.amnestyusa.org/abolish/execmethod.do.

[35] Illinois Public Act 093-0379 enacted on 24 July 2003. Available at http://www.ilga.gov/legislation/publicacts/fulltext.asp?Name=093-0379&GA=093. Illinois had also seen an inquiry into the death penalty following the exoneration of 18 death row prisoners during the period between 1977 and 2000 when Illinois Governor Ryan established an inquiry into the death penalty in the state. The report of the inquiry is available at: http://www.idoc.state.il.us/ccp/ccp/reports/index.html

[36] *Ibid*. In February 2006, California Assembly members introduced a bill, supported by the California Medical Society, which would prohibit physicians from attending or otherwise participating in executions. However it did not get through the required committees and never reached the Assembly.

[37] See Denno DW. The lethal injection quandary: how medicine has dismantled the death penalty, 76 Fordham Law Review (2007) (forthcoming) for detailed discussion of recent litigation.

[38] See Denno DW. Ibid.

[39] *Alley v. Little*, No. 06-5650 (6th Cir. 16 May 2006) (Martin, J, dissenting).

It is not possible to review here all cases involving litigation over the use of the lethal injection method of execution. The following cases illuminate some of the issues being challenged in the courts.

Box 2: Missouri unable to comply with court order to involve doctor in execution

The State of Missouri, facing a deadline today for changing the way it executes condemned prisoners by lethal injection, told a federal judge last night that it was simply unable to meet his demand that the state hire a board-certified anesthesiologist to oversee executions.

The judge, Fernando J. Gaitan Jr. of the United States District Court for the Western District of Missouri, had demanded an overhaul of the system after the doctor who now mixes the drugs for the state described an improvised process that Judge Gaitan found so chilling that he temporarily barred executions in Missouri.

New York Times, 15 July 2006[40]

Michael Angelos Morales, California

In the case of *Morales v Hickman*, heard in California in February 2006, Judge Jeremy Fogel conditionally rejected Michael Angelos Morales' contention that he should not be executed by lethal injection as it would breach his Eighth Amendment rights not to be subjected to cruel and unusual punishment. However, Judge Fogel imposed conditions on the state of California should it wish to go ahead with the execution. These were that the state either certify in writing that it would use only sodium thiopental or another barbiturate or combination of barbiturates in the execution, or that it would agree to independent verification "by a qualified individual or individuals … that Plaintiff in fact is unconscious before either pancuronium bromide or potassium chloride is injected."[41]

Two anaesthesiologists initially agreed to assist in the execution by the triple chemical mix but decided to withdraw from the procedure after the judge ruled that they may have to be present in the chamber during the execution and intervene should a problem arise.[42]

[40] In a subsequent appeal in the same case (*Taylor v Crawford*) the Court of Appeals for the Eighth Circuit "conclude[d] that Missouri's written lethal injection protocol does not violate the Eighth Amendment", reversed the judgment of the district court and the vacated that court's injunction. (United States Court of Appeals for the Eighth Circuit, No 06-3651, *Taylor v Crawford*, 4 June 2007. Available at http://www.law.berkeley.edu/clinics/dpclinic/Lethal%20Injection%20Documents/Missouri/Taylor/2007.06.04%20CA8%20Op.pdf)

[41] US District Court for the Northern District of California San Jose Division, *Michael Angelo Morales v. Roderick Q. Hickman*, 14 February 2006. Judge Fogel's decision reflects the view that thiopental administered competently could not cause pain while the other two drugs inherently cause pain or other suffering and should only be administered during effective (surgical plane) anaesthesia.

[42] At the time, the two anaesthesiologists had not been publicly identified although one was reportedly "a chief of anesthesia, an assistant clinical professor in a volunteer faculty, a member of the California Society of Anesthesiologists, a delegate of the American Medical Association, and is board-certified in

Following the "walk out" by the anaesthesiologists, the authorities sought leave from the court to proceed with the second alternative -- an injection of sodium thiopental alone. Judge Fogel ruled that they could proceed with the execution using only sodium thiopental, but "they may do so only if the sodium thiopental is injected in the execution chamber directly into the intravenous cannula [flexible tube] by a person or persons licensed by the State of California to inject medications intravenously. The dosage used shall be at least five grams of sodium thiopental to be followed by a 20 cc saline flush …. The persons may wear appropriate clothing to protect their anonymity."[43]

At around 6 pm – 90 minutes before the re-scheduled execution – prison officials announced that the state was unable to find a licensed medical professional to comply with the judge's order regarding the administration of the drug. As a result, the State agreed to postpone the execution indefinitely.

In response to proposals for medical participation in executions, the California Medical Association supported legislation (State Assembly Bill 1954) that would end the role of physicians in capital punishment. However the bill did not emerge from the Committee system and was not put to a vote.

The Morales case returned for the consideration of Judge Fogel in September 2006. A *Los Angeles Times* report of the hearing suggested that testimony portrayed lethal injection methods in California as haphazard.[44] The room adjacent to the former gas chamber (where the prisoner is strapped down for lethal injection) is often packed with state officials, prosecutors and other government visitors, according to the report.

> A nurse working in the … room said she had to pass syringes to an outstretched hand whose owner she could not see. The same nurse said she did not know the origins of a document with instructions for the drugs. She had simply found it "in the gas chamber."[45]

Several of the executioners (who are volunteers) had had training as registered nurses. Following Judge Fogel's earlier ruling, two anaesthesiologists were recruited, although they appeared to be reluctant participants who withdrew when Judge Fogel's ruling required that they should intervene if there were problems with the execution. Their withdrawal illustrated

anaesthesiology". Garman JK, "Humane execution: an oxymoron", *Stanford Hospital Medical Staff Update*, March 2006. http://med.stanford.edu/shs/update/archives/MAR2006/president.htm.

[43] United States District Court for the Northern District of California San Jose Division. *Michael Angelo Morales v. Roderick Q. Hickman and others*, Case Number C 06 219 JF; Case Number C 06 926 JF RS, 21 February 2006, p.3. available at: http://www.deathpenaltyinfo.org/Calif.leth.inj.order2.pdf

[44] "The chaos behind California executions", *Los Angeles Times*, 2 October 2006.

[45] *Ibid*. Lethal injection executions in California have been carried out in the former lethal gas chamber. The State of California is currently building a custom lethal injection facility to address the concerns previously raised.

the apparent conflict between current professional ethics and medical effectiveness in executions

Judge Fogel delivered his 17-page judgment on 15 December 2006, ruling that California's application of its lethal injection death penalty procedure would violate the Constitutional prohibition against cruel and unusual punishment. He left open the possibility that the system could be reformed to make it compatible with the Constitution. Among the concerns he expressed about the California system were:

- Inconsistent and unreliable screening of execution team members
- A lack of meaningful training, supervision and oversight of the execution team
- Inconsistent and unreliable recordkeeping
- Improper mixing, preparation and mixing of sodium thiopental by the execution team
- Inadequate lighting, overcrowded conditions and poorly designed facilities in which the execution team must work.[46]

Willie Brown, North Carolina

On 7 April 2006, Judge Malcolm J. Howard of the US District Court in Greenville, North Carolina, ordered state officials to make certain that Willie Brown, a man scheduled for execution, would be provided with medical personnel capable of ensuring unconsciousness before the second and third chemicals [pancuronium bromide and potassium chloride] were administered and of "providing appropriate medical care" if Willie Brown woke up. Brown's lawyers had contended that an anaesthesiologist was necessary to ensure competent evaluation of anaesthesia. Prison officials responded to Judge Howard's initial ruling by ensuring that a doctor and nurse would evaluate Brown's level of consciousness on a brain wave monitor in a room adjacent to the execution chamber.

Willie Brown was executed by lethal injection at 2am local time on 21 April 2006 at the Central Prison in Raleigh. The manufacturers of the monitoring instrument had said that they did not want their device used in executions and were unaware of its intended use when they sold one to a prison official from North Carolina less than two weeks before Brown's

[46] See the report in the *Los Angeles Times*, 16 December 2006, available at: http://www.latimes.com/news/local/la-me-lethal16dec16,0,1245111.story (accessed 18 December 2006). In testimony given to the court, Dr Mark Heath listed 13 possible problems which might cause faulty administration of sodium thiopental during an execution. (Declaration of Dr Mark Heath, United States District Court for Northern California, *Morales v Hickman*, pp. 10-13, available at: http://www.law.berkeley.edu/clinics/dpclinic/Lethal%20Injection%20Documents/California/Morales/Morales%20Dist%20Ct.Cp/Ex%20C%20to%20TRO%20Motion%20(Heath%20Decl).pdf. Dr Heath also stated that "The risk of improper anesthesia administration has been realized in at least one, and possibly three California executions", going on to provide details of these. *Ibid*. p.24). Criticisms similar to those of Judge Fogel have been made in other jurisdictions.

execution. They have since said that any prison wanting to buy such a device – for example, for prison hospital use – must sign a declaration that it will not be used to monitor executions.[47] Subsequent litigation in North Carolina has revealed that prison officials gave misleading information about the use of the monitoring instrument in executions and that medical practitioners did not read the device during Brown's execution.[48]

Marcus Robinson and James Edward Thomas, North Carolina

On 25 January 2007, North Carolina Superior Court Judge Donald W. Stephens blocked two executions in that state until authorities change their practice regarding the state's lethal injection procedure.[49] The ruling came a day before the scheduled execution of Marcus Robinson and a week before the scheduled execution of James Edward Thomas. On 17 January, the North Carolina Medical Board, the state licensing board for doctors, had said that medical ethics prevented a doctor from assisting in an execution and that a doctor could only observe the execution. The state Department of Corrections responded by saying that it was changing a doctor's role during the execution to be simply an observer and to sign the death certificate. Judge Stephens said that this would require approval by the Governor and the Council of State for North Carolina and executions could not proceed in the meantime.[50] Subsequently state officials of the Department of Corrections have taken legal action to prohibit the North Carolina Medical Board from disciplining doctors under the new policy that doctors may only observe, but not monitor, executions.[51] The Department of Corrections contended that the law specified that a doctor should be present at an execution but that the policy of the Medical Board made it difficult to find a physician as required by the relevant law.[52] In the meantime, the state is unable to find doctors willing to participate in executions since they may face Medical Board discipline.

Box 3: New Jersey Death Penalty Study Commission, 2006

The New Jersey Death Penalty Study Commission was created in 2006 by the New Jersey Legislature (under Act P.L.2005, c.321, approved January 2006).[53] The Commission

[47] Steinbrook R. "New technology, old dilemma – monitoring EEG activity during executions", *New England Journal of Medicine*, 2006; 354:2525-7.
[48] Hill C. Deception and the death penalty. *News & Observer*, 22 August 2007.
[49] "N.C. is 11th state to halt lethal injections", *Los Angeles Times*, 26 January 2007.
[50] *Fayettville Observer* online, 25 January 2007: http://www.fayobserver.com/article?id=252894 (accessed 13 March 2007). The Council of State comprises the Governor and nine other elected officials. The judge's ruling is available at: http://www.fayobserver.com/photos/2007/01/x25decision.pdf
[51] *North Carolina Department of Corrections et al v North Carolina Medical Board*. State of North Carolina General Court of Justice, Superior Court Division. Available at: http://www.law.berkeley.edu/clinics/dpclinic/Lethal%20Injection%20Documents/North%20Carolina/2007.03.07%20Complaint%20(DOC%20v%20NC%20Med%20Bd).pdf
[52] *Ibid.*
[53] Details are available at: http://www.njleg.state.nj.us/committees/njdeath_penalty.asp

published its findings in January 2007.[54] The recommendations address precisely the questions posed to the Commission. (They follow the questions set out below and are in italics.) The Commission was asked to determine

- whether the death penalty rationally serves a legitimate penological intent such as deterrence; *There is no compelling evidence that the New Jersey death penalty rationally serves a legitimate penological intent*
- whether there was a significant difference between the cost of the death penalty and the cost of life in prison without parole; *The costs of the death penalty are greater than the costs of life in prison without parole, but it is not possible to measure these costs with any degree of precision*
- whether the death penalty is consistent with evolving standards of decency; *There is increasing evidence that the death penalty is inconsistent with evolving standards of decency.*
- whether the selection of defendants in New Jersey for capital trials is arbitrary, unfair, or discriminatory in any way and there is unfair, arbitrary, or discriminatory variability in sentencing *The available data do not support a finding of invidious racial bias in the application of the death penalty in New Jersey.*
- whether there is a significant difference in the crimes of those selected for the punishment of death as opposed to those who receive life in prison; *Abolition of the death penalty will eliminate the risk of disproportionality in capital sentencing*
- whether the penological interest in executing some of those guilty of murder is sufficiently compelling that the risk of an irreversible mistake is acceptable; *The penological interest in executing a small number of persons guilty of murder is not sufficiently compelling to justify the risk of making an irreversible mistake.*
- whether alternatives to the death penalty exist that would sufficiently ensure public safety and address other legitimate social and penological interests, including the interests of families of victims. *The alternative of life imprisonment in a maximum security institution without the possibility of parole would sufficiently ensure public safety and address other legitimate social and penological interests, including the interests of the families of murder victims.*

China

China has executed more people than any other country in recent years. Based on available reports, Amnesty International estimated that in 2005 at least 1,770 people were executed and 3,900 people were sentenced to death. In 2006 the reported minimum figures were respectively 1,010 and 2,790, although the true figures are believed to be much higher.[55]

[54] *New Jersey Death Penalty Study Commission Report.* January 2007. Executive Summary: Recommendations. Available at: http://www.njleg.state.nj.us/committees/dpsc_final.pdf, accessed 17 January 2007.

[55] In March 2004, Chinese legislator Chen Zhonglin estimated the figure at around 10,000 executions per year. In early 2006, Liu Renwen, a leading Chinese abolitionist and criminal law professor, estimated that around 8,000 people are executed per year based on information obtained from local

Until 1997, execution in China was carried out by shooting, usually at an outdoor execution ground where it was sometimes witnessed by crowds assembled for the purpose. However, the revised Criminal Procedure Law (CPL) which came into force on 1 January 1997 added the possibility of execution by lethal injection, and specified that execution can be carried out at an execution ground or a designated detention site (Article 212).

Kunming City Intermediate People's Court in Yunnan Province was reportedly the first court in China to use the new method, doing so on 28 March 1997 against two convicts.

In 2000, a vice-president of the Supreme People's Court stated that execution by firing squad would continue, despite the widespread use of lethal injection.[56]

By 1 March 2003, this court alone (one of 18 intermediate-level courts in the province) had reportedly ordered the execution of 112 people by means of lethal injection.[57]

The use of lethal injections as a method of execution has been on the increase. In January 2003, a journalist and a group of court officers from throughout Gansu province were taken by officials of the provincial high court to a detention centre near Lanzhou for a lecture and then to witness the execution by lethal injection of 11 convicted prisoners.[58]

Although execution by shooting continued to be widely used, Yunnan Province announced on 1 March 2003 its intention to use lethal injection as the sole means of execution.[59]

Eighteen mobile executions vans, converted 24-seater buses, were distributed to all intermediate courts and one high court in Yunnan province in 2003. The windowless execution chamber at the back contains a metal bed on which the prisoner is strapped down. Once the needle is attached by the doctor, a police officer presses a button and an automatic syringe inserts the lethal drug into the prisoner's vein. The execution can be watched on a video monitor next to the driver's seat and can be videotaped if required. In December 2003,

officials and judges. (See Amnesty International, *People's Republic of China. The Olympics countdown – failing to keep human rights promises*. AI Index: ASA 17/046/2006, 21 September 2006; available at: http://web.amnesty.org/library/Index/ENGASA170462006.) See also *Amnesty International Report 2007*, entry on China.

[56] Amnesty International. *Executed "according to law"? The death penalty in China*, AI Index: ASA 17/003/2004 [note 136]. Available at: http://web.amnesty.org/library/Index/ENGASA170032004.

[57] Xinhua News Agency, cited by Amnesty International, *Executed "according to law"? The death penalty in China*, AI Index: ASA 17/003/2004.

[58] Amnesty International, "Chinese use mobile death vans to execute prisoners", *the Wire*, May 2003, http://web.amnesty.org/wire/May2003/China.

[59] "Chinese province rules on use of lethal injection for executions", Xinhua, 1 March 2003, (BBC Monitoring Service).

the Supreme People's Court urged all courts throughout China to purchase mobile execution chambers "that can put to death convicted criminals immediately after sentencing".[60]

The number of vans now in use is not known, although a US newspaper reported in 2006 that more than 40 were deployed.[61] The proportion of executions carried out by lethal injection is also a secret.[62] A researcher on the death penalty at the Chinese Academy of Social Sciences was reported to have said that the majority of executions continue to be by shooting although "the use of injections has grown in recent years, and may have reached 40 per cent."[63]

Although China executes more prisoners than all other counties in the world combined, there are signs of discussion, debate and reform of the death penalty in China. In 2006, Chinese law was changed to require all death sentences to be reviewed by the Supreme Court from 1 January 2007. Speaking in the Human Rights Council of the UN in March 2007, a Chinese delegate, La Yifan, said:

> On the question of the death penalty there is a difference of views among members of the international community; some countries support it and some countries are against it. Regarding this matter there is no agreed consensus. We're quite open to having a discussion on this matter but we are categorically opposed to the practice of imposing one view on others …
>
> China is a country with the rule of law. The death penalty only applies to most heinous crimes in China, and this is entirely compatible with the provisions of the International Covenant on Civil and Political Rights. This year, starting from 1 January, the death penalty will be reviewed in the final instance in the Supreme Court of China. By doing so we are seeking to limit the application of death penalty in China. I am confident that with the development and the progress in my country the application of the death penalty will be further reduced and it will be finally abolished.[64]

[60] "Chinese courts purchasing mobile execution units", AFP, 18 December 2003.
[61] "China makes ultimate punishment mobile", *USA Today*, 14 June 2006. Available at: http://www.usatoday.com/news/world/2006-06-14-death-van_x.htm.
[62] Also not known is the composition of the lethal chemicals used in executions, although the mix is likely to be similar to that used in the USA. The *USA Today* report cited above (note 54) states that the Chinese authorities use the same three drugs used in most of the USA – sodium thiopental, pancuronium bromide and potassium chloride.
[63] See note 54 above.
[64] La Yifan, Adviser (Human Rights), Permanent Mission of the People's Republic of China to the United Nations Office at Geneva and other International Organizations in Switzerland. Delivered in Chinese. UN Human Rights Council, 12 March 2007. (Text as delivered in English translation by UN interpreter.)

Guatemala

In October 1995, Manuel Martínez Coronado was sentenced to death for the murder of seven members of one family. In 1996, the botching of a double execution by firing squad (which was shown on television) led to widespread public criticism and Congress approved a measure providing for future executions to be carried out by lethal injection.[65] Martínez was executed on 10 February 1998 by lethal injection – also in front of television cameras. The execution was prolonged and accompanied by the wailing of Martinez's wife who, with her three children, was present at the execution. (Witnesses reported that health personnel had trouble finding a vein into which to insert the catheter bearing the lethal drugs. Moreover, they were so nervous that they had been shaking badly. One report said the execution had taken 18 minutes to complete.[66])

A photograph taken at the execution showed health personnel dressed in green surgical gowns and face-masks, as if for surgery. (See cover photo.) A further two executions were carried out by lethal injection – those of Tomás Cerrate Hernández and Luis Amilcar Cetino Pérez in 2000. There have been no judicial executions by any method since then.

In 2000, the Guatemalan Congress repealed Decree No 159 which gave the President the facility to grant pardons to those on death row. From then on, a de facto moratorium has been in place. In 2005 the Inter-American Court of Human Rights (IACHR) reinforced the de facto moratorium by ruling that the lack of possibility of a pardon meant that the death sentences could not be carried out.[67] On 3 May 2005, a draft law was presented to Congress to abolish the death penalty by modifying the articles of the Criminal Code that contemplate it as a possible sentence, but this failed.

A Presidential decree issued on 1 June 2000 suspended the law which allowed those sentenced to death to apply for clemency, amnesty or commutation of sentence and, since then, Guatemala has not had any such procedure in place. On 15 September 2005, the Inter-American Court of Human Rights ruled against Guatemala in the Raxcacó case[68] and urged the state to reform, among other things, its current legislation on the death penalty in order to bring it into line with international standards. Bill 3521, currently awaiting a third reading in the Guatemalan Congress, is the government's response though, if adopted, it could facilitate the re-introduction of the death penalty and place the rights of those under sentence of death at risk.

Nineteen prisoners were on death row at time of writing, although the de facto moratorium on executions remains in place. Six prisoners had their death sentences commuted to 50-year

[65] For background see: http://web.amnesty.org/library/Index/ENGAMR340331997
[66] See Amnesty International, *Lethal injection – The medical technology of execution. Update September 1999*, AI Index: ACT 50/008/1999.
[67] Amnesty International. *Report 2006: The State of the World's Human Rights*. London, 2007, p.128.
[68] *Ronald Ernesto Raxcacó Reyes v. Guatemala*, Case P-050/02, 15 September 2005, available at: http://www.corteidh.or.cr/docs/casos/articulos/seriec_133_esp.pdf

prison sentences in 2006.[69] The final outcome of the 2007 election will be known in November 2007 and key decisions about the death penalty are likely to follow.

Philippines

Between 1987 and 1993, the death penalty was prohibited in the Philippines under a Constitutional provision introduced during the Presidency of Corazon Aquino. However with a change in political leadership and a growing crime rate, this Constitutional provision was overturned. A steady number of convicted prisoners were subsequently sentenced to death. The government also replaced the former method of execution with lethal injections.

In total, seven executions were carried out between the first execution by lethal injection of Leo Echegaray on 5 February 1999 and the suspension of executions in 2000. The fifth person to be given a lethal injection was a man who had been granted a last-minute stay of execution, but the telephone call to the death chamber came too late to prevent his death. Eduardo Agbayani, was the subject of appeals to the President by the prisoner's six daughters and members of the Catholic Church. President Estrada decided at the last minute to grant a stay of execution but the call from the presidential palace came too late – the lethal injection had already commenced and two minutes after the call arrived the prisoner was dead.[70]

In 2000, President Joseph Estrada announced a suspension of executions to mark the Roman Catholic Jubilee year proclaimed by Pope John Paul II. This initiated a de facto moratorium. In December 2003, President Gloria Arroyo announced the lifting of a moratorium on the execution of prisoners convicted of kidnapping or drug offences. However, despite continuing government public statements about implementing the death penalty,[71] there were no further executions. It was reported that 17 prisoners were listed for execution by lethal injection as of 6 April 2006, but their names were confidential.[72]

On 15 April 2006, some 1,200 prisoners on death row had their sentences commuted to life imprisonment by President Arroyo. On 6 June 2006 a joint meeting of the two houses of the Philippines congress voted to abolish the death penalty (with immediate effect). The

[69] Amnesty International *Report 2007*.
[70] Amnesty International. Philippines: Presidential clemency came minutes too late to save Eduardo Agbayani's life. AI Index: ASA 35/22/99, 25 June 1999. A similar case – in which a phone call *saved* the prisoner's life – occurred after the government had announced a suspension of executions. On 29 March 2000, Victor Esteban was taken to the lethal injection chamber in preparation for his execution which had previously been scheduled for that day. He was saved after a prison chaplain made a hasty phone call to a local radio station, whose staff contacted the President's chief aide and stopped the execution from going ahead. See Amnesty International. *Death Penalty News*, March 2000, AI Index ASA 53/001/2000.
[71] For example, when two men under sentence of death were granted a stay of execution in January 2004, President Arroyo stated she remained determined to "enforce the law".
[72] Reuters news agency, 17 April 2006.

abolition bill was signed into law by President Arroyo on 24 June 2006.[73] There have been no signs of a return to the death penalty since.

Thailand

In October 2003, Thailand adopted lethal injection as the humane execution method to replace firing squad. Shooting had been introduced in Thai law in 1934 as a humane replacement for execution by beheading which had been prescribed in 1908. In 1999 – four years before the method was first used doctors writing in the *Journal of the Medical Association of Thailand* rejected medical participation in such executions.[74]

The first executions by lethal injection – of three men convicted of drug offences and one convicted of murder – took place on 12 December 2003. Prison officials were reported in the Thai press to have said that it took nearly an hour to administer the lethal drugs to the first inmate, who was unidentified, because of problems locating his veins. The other three prisoners reportedly took 15 minutes each while doctors, public prosecutors, police and prison officials watched. [75]

There have been no further executions as of 31 July 2007.

Around 1,000 prisoners are believed to be held under sentence of death and some 125 have had their sentences confirmed – the final step before execution.

Taiwan

On 19 October 1992, Taiwan's Legislative Assembly (*Yuan*) introduced legislation permitting execution by injection of lethal chemicals as an alternative method to shooting. No lethal injection executions have been carried out.[76]

The past decade has seen a downward trend in the number of executions (see Table 5 below) and on 27 October 2003 the presidential office and the cabinet announced they were jointly drafting legislation to abolish the death penalty. (Two days later, however, a new draft anti-terrorism law specified the death penalty as punishment although this was subsequently not adopted.)

Despite repeated public commitments by the President and government ministers to move towards abolition, the death penalty remains on the statute in Taiwan. Between 70 and 100 prisoners are believed to be held under sentence of death. Executions are by shooting, and are carried out in the presence of "a medical team consisting of a psychiatrist, anaesthesiologist,

[73] See: "Philippines stops death penalty", BBC, 24 June 2006; http://news.bbc.co.uk/1/hi/world/asia-pacific/5112696.stm.
[74] Wilde H, Pruksapong C, Phaosavasdi S, Tannirandorn Y, Tanaepanichskul S. Physicians and the death penalty. *Journal of the Medical Association of Thailand* 1999; 82(3):317-8.
[75] *Bangkok Post*, 13 December 2003.
[76] *Amnesty International Report 2007*. Entry on *Taiwan*.

and a doctor".[77] The prisoner is shot through the heart, or through the head when there are plans to use organs for transplantation.[78]

Table 5: Taiwan: execution trends: 1996-2006

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Executions	22	38	32	24	17	10	9	7	3	3	0

Source: Taiwan Alliance to End the Death Penalty

India

Currently, Indian law provides that a sentence of death is carried out either by hanging (in civilian cases) or by hanging or shooting (military cases).[79] Indian regulations provide for a doctor to be present at a hanging to certify the death of the condemned. The role of doctors in executions has been the subject of ongoing concern in India.[80]

After reviewing historical and contemporary use of the death penalty, in October 2003 the Law Commission of India published a report on execution methods.[81] It compared hanging, shooting, lethal injection and stated that lethal injection involved "Pain only as result of needle prick" and that "It is being accepted now to be most civilized mode of execution of death sentence".[82]

The Law Commission recommended that the Code of Criminal Procedure should be amended to provide lethal injection as an alternative to hanging, and that the Army, Navy and Air Force Acts should be amended to replace hanging with lethal injection, as an alternative to shooting.[83]

The only mention of medical ethics in the report is the following: "it is important to note that the process of administering lethal injection is not regarded as a practice of medicine and most of the states in the USA are able to overcome this issue and outside the scope of medical

[77] FIDH, *The death penalty in Taiwan: towards abolition?* Paris: June 2006, p.35. Available at: http://www.fidh.org/IMG/pdf/tw450a.pdf.
[78] *Ibid*.
[79] Section 354(5) of the Code of the Criminal Procedure, 1973, state *Jail Manuals*, and the Army Act, Air Force Act and Navy Act.
[80] Bhan A., "Killing for the state: death penalty and the medical profession: a call for action in India", *National Medical Journal of India,* 2005; 18(4):205-8; Jesani A. "Medicalisation of 'legal' killing: doctors' participation in the death penalty". *Indian Journal of Medical Ethics,* 2004;1(4):104-5.
[81] Law Commission of India. *187th Report on Mode of Execution of Death Sentence and Incidental Matters.* New Delhi, October 2003, p.23. Available at: http://lawcommissionofindia.nic.in/reports/187th%20report.pdf
[82] *Ibid*. p.43.
[83] *Ibid*. pp. 83-85.

ethics" [sic]. [84] The Indian Medical Association expressed strong opposition to the Law Commission recommendation during its annual conference in Bhubeneswar, in 2004.[85]

At the time of writing, hanging remains the prescribed method of execution in India. Since 1995 at least 11 prisoners have been hanged, although this figure must be regarded as a minimum – the Indian government does not publish information on the death penalty.

Calls for an end to executions in India have come from the highest level. In 2005, the President of India, APJ Abdul Kalam, twice asked the government to pardon around 50 prisoners under sentence of death.[86] In October 2005, President Kalam publicly called for the death penalty to be discussed in Parliament and a comprehensive policy of reform drawn up. The newly-appointed Chief Justice of India, Justice YK Saberwal, also told journalists of his support for the abolition of the death penalty. He said that as Chief Justice he would apply it only "in the rarest of rare cases".[87] The last execution in India took place in August 2004.

Papua New Guinea

Papua New Guinea (PNG) reintroduced the death penalty in 1991 (having abolished it in 1970) and seven prisoners are currently under sentence of death. The last execution in PNG was more than half a century ago.

The PNG Criminal Code provides for the death penalty (at section 599)[88] and sets out related procedures at section 614. However the prevailing view in PNG appears to be that there is not enough detail and direction in section 614 about the procedures for carrying out the death penalty to allow the government to proceed with executions. In 2003, the National Executive Council asked the Minister for Justice and the Attorney General to report on what further regulations and administrative machinery would be required to carry out executions. At the time the Minister explained:

> While death penalty is clearly defined under the Criminal Code Act and the Defence Force Act, the administrative mechanism[s] have not been attended to yet. Such include the place of execution, the construction of the structure to hang, who is to be the executioner, the rights of certain persons to view the execution,

[84] *Ibid*. p.40.
[85] See *Daily Excelsior*, 29 December 2004. Available at: http://www.dailyexcelsior.com/web1/04dec29/national.htm#9
[86] See Amnesty International, *Death penalty developments in 2005*, AI Index: ACT 50/005/2006, April 2006. Available at: http://web.amnesty.org/library/Index/ENGACT500052006.
[87] See Amnesty International, *Death penalty news*, AI Index: ACT 53/001/2006, January 2006.
[88] Papua New Guinea Criminal Code 1974 (Consolidated to No 12 of 1993). Available at: http://www.paclii.org/pg/legis/consrol_act/cc197494/. (Accessed 20 October 2006.)

the appeal process and adequate facilities to accommodate detainees on death row, etc.[89]

In the context of this lack of clarity about execution procedures, the possible introduction of lethal injection was raised. The Minister of Justice, Bire Kimisopa, who was appointed in 2006, has said that there should be no further executions in the country.[90]

Vietnam

In February 2006, the Reuters news agency reported that the Police Ministry was discussing the introduction of lethal injections as an execution method, and, in the interim, the replacement of the human firing squad with an automated machine to reduce stress on those carrying out the execution.[91] In April 2006, the Public Security Ministry was also reported to be examining replacement of the firing squad with either remotely-fired guns or lethal injection to ease the burden on executioners and make for more precise executions.[92]

Vietnam is one of the countries thought to execute relatively high numbers of prisoners, although it is difficult to obtain exact numbers since the government does not make figures public. AI reported in its 2007 annual report that at least 36 death sentences were imposed and 14 executions carried out, including those of five women; the majority were for drug trafficking offences. The true number is believed to be much higher.

Medical research into lethal injection executions

By its nature the death penalty is one of the least transparent procedures implemented by a state. In some countries no statistics or information about executions is made public or limited and partial information is provided. Lethal injection as a method of execution appears not to be based on solid research.[93] This is perhaps not surprising since rigorous research into methods of depriving humans of life in the most effective way would almost certainly be unethical (unless it were based on animal studies and computer modelling). In China it was reported that doctors carried out practical tests to establish effectiveness of lethal injection executions though no details have been made public in line with Chinese policy not to reveal

[89] "PNG studies Singapore law". *The National*, 26 March 2004; cited in Amnesty International. *Papua New Guinea The state as killer?* AI Index: ASA 34/001/2004, 1 April 2004.
[90] "Papua New Guinea justice minister against death penalty", *Papua New Guinea Post-Courier*, 13 April 2006.
[91] Reuters news agency, 10 February 2006. Available at: http://www.thanhniennews.com/politics/?catid=1&newsid=12573
[92] Reported by *Thanh Nien News*, 8 April 2006, available at http://www.thanhniennews.com/politics/?catid=1&newsid=14289
[93] Denno DW. When legislatures delegate death: the troubling paradoxes behind state uses of electrocution and lethal injection and what is says about us. *Ohio State Law Journal* 2002; 63: 63-128; Human Rights Watch. *So Long as They Die: Lethal Injections in the United States.* New York, 2006. Available at: http://hrw.org/reports/2006/us0406/

information on the death penalty.[94] One approach to researching the outcome of lethal injection executions would be to attempt to document levels of the drugs in blood and tissue after the death of the executed prisoner. However this requires the carrying out of post-mortem toxicology examinations and an openness on the part of the state to evaluation of the data. However, even then there are technical difficulties. Sodium thiopental is a difficult drug to monitor in the body so that even when researchers obtain data, there are complex discussions about the interpretation of this data. Early studies provoked discussion and dispute on this point[95] though more data is entering the public realm and a clearer understanding of the underlying processes during execution may emerge.

Medical ethics of lethal injection

Lethal injection inevitably leads to this paradox: It is ethically wrong to torture inmates to death with unskilled execution personnel, but also ethically wrong to bring skilled personnel into the execution process. Courts in several states are currently wrestling with this dilemma.[96]

The use of a medical procedure to end a prisoner's life has been challenged on ethical grounds by medical professional bodies, academics, NGOs and individual medical practitioners.

At international and national level, the ethics of medical and nursing participation have been discussed among professional organizations and there is consensus that involvement of health professionals in carrying out an execution by lethal injection (or by any other method) is a breach of medical ethics.[97] Among bodies opposing this role for health professionals are international associations of doctors, psychiatrists and nurses and US associations of doctors, nurses, public health specialists, and emergency medical technicians.

"[P]hysician involvement in moderating suffering in the final minutes of the lives of the condemned is too high a price for medicine to bear relative to the harms caused by legitimizing the practice of execution through physician involvement."[98]

[94] See Amnesty International. *Lethal injection: the medical technology of execution*. London AI Index: ACT 50001/1998, pp.14-15.
[95] See the paper by Koniaris and colleagues and associated correspondence listed in appendix one, for example. Research on the levels of thiopental in the blood should illuminate the potential for suffering experienced by a prisoner during the execution process.
[96] Groner JI. Lethal injection: a closer look. ABC News, 16 January 2007.
[97] Critiques of lethal injection from an ethics perspective have come from Groner and LeGraw and Grodin among others (see appendix one).
[98] Caplan A. Should physicians participate in capital punishment? *Mayo Clinic Proceedings* 2007;82:1047-8.

International medical bodies

The international bodies that have concluded that participation in executions is a breach of medical ethics include:

The World Medical Association

The World Medical Association (WMA) first adopted a strong resolution against medical participation in executions when the first lethal injection execution was scheduled in 1981. This resolution was revised and the organization resolved in 2000 that "it is unethical for physicians to participate in capital punishment, in any way, or during any step of the execution process".[99]

The World Psychiatric Association

The World Psychiatric Association (WPA), in its Declaration of Madrid (1996), states that "Under no circumstances should psychiatrists participate in legally authorized executions nor participate in assessments of competency to be executed."[100]

The International Council of Nurses

The International Council of Nurses (ICN) has had a long-standing policy against the death penalty. It states that "While ICN considers the death penalty to be unacceptable, clearly the nurse's responsibility to a prisoner sentenced to death continues until execution." It continues:

> ICN urges its member national nurses' associations (NNAs) to lobby for abolition of the death penalty; to actively oppose torture and participation by nurses in executions; and to develop mechanisms to provide nurses with confidential advice and support in caring for prisoners sentenced to death or subjected to torture.[101]

The Standing Committee of European Doctors

The Standing Committee of European Doctors[102] (Comité permanent des médecins européens, CPME), meeting in June 2007, adopted a motion for a universal moratorium on the death penalty. It commended the Council of the European Union for its resolution to the United

[99] WMA, Resolution on Physician Participation in Capital Punishment Adopted by the 34th World Medical Assembly Lisbon, Portugal, September 28 - October 2, 1981, and amended by the 52nd WMA General Assembly in Edinburgh, Scotland, October 2000.

[100] WPA, Declaration of Madrid, Approved by the WPA General Assembly on 25 August 1996 and amended in Yokohama, Japan, in August 2002. Available at: http://www.wpanet.org/generalinfo/ethic1.html

[101] ICN, Torture, Death Penalty and Participation by Nurses in Executions, Adopted 1998, revised 2006. Available at: http://www.icn.ch/pstorture.htm

[102] The CPME represents all medical doctors in the European Union – approximately two million physicians. It is body made up of the national medical associations of the European Union. It also unites associated members (those countries that are currently negotiating with the EU) associated organisations (specialised European medical associations) and observers. See http://www.cpme.be/

Nations concerning the death penalty moratorium and reminded European doctors of the need to safeguard life and not to collaborate, participate, or even be present at executions.

A regional grouping of medical associations declared in September 2004 that "the death penalty is an unacceptable form of punishment as it violates the fundamental human right to life".[103]

National medical bodies

In many countries, national organizations of medical personnel have taken a stand against involvement in executions. For example, the British Medical Association adopted a position against the death penalty in July 2001.[104] The national medical associations in both Guatemala and the Philippines adopted positions against medical participation in executions at the time of introduction of the penalty on the basis of professional ethics.[105]

Within the USA, several bodies have adopted positions against professional participation in executions.

American Medical Association

The American Medical Association (AMA) policy on the death penalty provides a detailed review of what is meant by participation in execution and states that:

> An individual's opinion on capital punishment is the personal moral decision of the individual. *A physician, as a member of a profession dedicated to preserving life when there is hope of doing so, should not be a participant in a legally authorized execution.*[106] Physician participation in execution is defined generally as actions which would fall into one or more of the following categories: (1) an action which would directly cause the death of the condemned; (2) an action which would assist, supervise, or contribute to the ability of another individual to directly cause the death of the condemned; (3) an action which could automatically cause an execution to be carried out on a condemned prisoner.
>
> Physician participation in an execution includes, but is not limited to, the following actions: prescribing or administering tranquilizers and other psychotropic agents and medications that are part of the execution procedure; monitoring vital signs on site or remotely (including monitoring electrocardiograms); attending or observing an execution as a physician; and rendering of technical advice regarding execution.

[103] Board of the Council of Nordic Medical Associations. Resolution, 16 September 2004.
[104] The British Medical Association (BMA), at its Annual Representatives Meeting in Bournemouth, England, in July 2001, adopted the following policy statement: "'That the BMA is opposed to the death penalty worldwide.'"
[105] See Amnesty International, *Lethal injection* 1999.
[106] Emphasis added.

> In the case where the method of execution is lethal injection, the following actions by the physician would also constitute physician participation in execution: selecting injection sites; starting intravenous lines as a port for a lethal injection device; prescribing, preparing, administering, or supervising injection drugs or their doses or types; inspecting, testing, or maintaining lethal injection devices; and consulting with or supervising lethal injection personnel.[107]

American Nurses Association

The Code of Ethics of the American Nurses Association (ANA) states that:

> The obligation to refrain from causing death is longstanding and should not be breached even when legally sanctioned. Participation in capital punishment is inconsistent with these ethical precepts and the goals of the profession. The ANA is strongly opposed to all forms of participation, by whatever means, whether under civil or military legal authority. Nurses should refrain from participation in capital punishment and not take part in assessment, supervision or monitoring of the procedure or the prisoner; procuring, prescribing or preparing medications or solutions; inserting the intravenous catheter; injecting the lethal solution; and attending or witnessing the execution as a nurse. The fact that capital punishment is currently supported in many segments of society does not override the obligation of nurses to uphold the ethical mandates of the profession.[108]

American College of Physicians

The Code of Ethics of the American College of Physicians (ACP) states that "Participation by physicians in the execution of prisoners except to certify death is unethical."[109] The ACP was also a co-author of a 1994 study on physicians and the death penalty in the USA.[110]

American Public Health Association

The American Public Health Association (APHA) has adopted more than one policy statement on the death penalty. In 1985 it resolved "that health personnel, as members of a

[107] AMA. E2.06 Capital Punishment. http://www.ama-assn.org/ama/pub/category/8419.html
[108] ANA, Nurses' Participation in Capital Punishment, 8 December 1994. Available to members at: http://www.nursingworld.org.
[109] American College of Physicians. *Ethics Manual*. 5th Edition, 2005. Available at: http://www.acponline.org/ethics/ethicman5th.htm
[110] American College of Physicians et al. *Breach of Trust: Physician Participation in Executions in the United States*. New York: Human Rights Watch, 1994. Available at: http://hrw.org/reports/1994/usdp/index.htm

profession dedicated to preserving life when there is hope of doing so, should not be required nor expected to assist in legally authorized executions."[111]

In 1986, the APHA resolved to:

> 1. Call upon the legislative branches at national and state levels to abolish capital punishment;
> 2. Urge executive officials to use their power to prevent the imposition or execution of the death sentence; and
> 3. Encourage professional organizations of health workers to work for the abolition of capital punishment and to discourage their members from participating in or contributing to the carrying out of the death penalty.[112]

In 2001 it resolved that:

> the APHA publicly reaffirm its March 1994 collaborative statement[113] to all health professional societies and state licensing and discipline boards that health professional participation in executions or pre-execution procedures is a serious violation of ethical codes and should be grounds for active disciplinary proceedings including expulsion from society membership and license revocation.[114]

National Association of Emergency Medical Technicians

The professional body representing emergency medical technicians – the National Association of Emergency Medical Technicians – adopted a position statement in 2006. This said:

> The National Association of Emergency Medical Technicians (NAEMT) is strongly opposed to participation in capital punishment by an EMT, Paramedic or other emergency medical professional. Participation in executions is viewed

[111] APHA. Policy statement 8521. Participation of Health Professionals in Capital Punishment. Washington DC, 1985.
[112] APHA. Policy statement 8611. Abolition of the Death Penalty. Washington DC, 1986.
[113] In March 1994, in response to concern about the increasing number of executions requiring health professional participation, the APHA in collaboration with the American College of Physicians-American Society of Internal Medicine, the AMA, and the ANA publicly stated that ethical codes of health professions forbid participation in executions and, since these codes are integral parts of most state medical, nursing, and other health professional practice and licensing acts, health professional participation in executions violates state law. APHA et al. "Health care professional participation in capital punishment: statement from professional societies regarding disciplinary action", Press release, 23 March 1994. Published in *Nation's Health*, November 1994.
[114] APHA, Policy statement 200125, "Participation of Health Professionals in Capital Punishment", Washington DC, 2001.

> as contrary to the fundamental goals and ethical obligations of emergency medical services.[115]

American Society of Anesthesiologists

Following a court ruling in Missouri which called on the participation of anaesthesiologists in the execution process[116], the president of the American Society of Anesthesiologists (ASA), Orin Guidry MD, acknowledged that anaesthesiologists represented the only way to assure what the court was calling for, but wrote that:

> Clearly an anaesthesiologist complying with the Missouri ruling [requiring the participation of a physician with training in the application and administration of anesthesia] – and despite this court's position on ethical obligations – would be violating the AMA position which ASA has adopted. It is my belief that the court cannot modify physicians' ethical principles to meet its needs.[117]

The Society subsequently adopted a 'Statement on Physician Nonparticipation in Legally Authorized Executions'.[118] This statement held that "Although lethal injection mimics certain technical aspects of the practice of anesthesia, *capital punishment in any form is not the practice of medicine"*; that "legal execution should not necessitate participation by an anesthesiologist or any other physician" and that the ASA "strongly discourages participation by anesthesiologists in executions".[119]

American Psychological Association

In 2001, the American Psychological Association

[115] NAEMT, "Position Statement on EMT and Paramedic Participation in Capital Punishment", adopted 9 June 2006. Available at: http://www.naemt.org/aboutNAEMT/capitalpunishment.htm.

[116] In September 2006, the judge who called for participation by a state-certified anaesthesiologist in lethal injection executions modified this condition, saying that while noting that a board-certified anaesthesiologist "is preferred", it would be acceptable for "a physician with training in the application and administration of anesthesia to either mix the chemicals or to oversee the mixing of the chemicals for lethal injection". See: *Kansas City Star*, 13 September 2006, http://www.kansascity.com/mld/kansascity/news/local/15503882.htm. Some anesthesiologists would support the judge's initial call. In September 2007 Dr David Waisel, writing in the *Mayo Clinic Proceedings* (82:1073-80), argued that condemned prisoners have a right to medical assistance at the end of their life through execution. "If one accepts the premise that physician participation will lead to more humane executions, does the fact that death is not in the inmate's best interest obviate a request for relief from suffering?", he asked. He concluded that "we should permit physician participation in capital punishment".

[117] Guidry OF, "Observations regarding lethal injection". See: *ASA News*: http://www.asahq.org/news/asanews063006.htm.

[118] Approved by the ASA House of Delegates on 18 October 2006. Available at: http://www.asahq.org/publicationsAndServices/standards/41.pdf (accessed 13 June 2007).

[119] Emphasis in original.

> Call[ed] upon each jurisdiction in the United States that imposes capital punishment not to carry out the death penalty until the jurisdiction implements policies and procedures that can be shown through psychological and other social science research to ameliorate the deficiencies identified [earlier in the resolution][120].

Failure to implement ethical guidelines

Numerous state medical societies or associations in the USA also have adopted positions concerning medical participation in executions. While there is, by and large, consensus that participation by health professionals in executions breaches medical ethics, there is little commitment to take action when individuals disregard these ethical principles. To Amnesty International's knowledge no health professional has been disciplined by a professional body or successfully called to account before a medical regulatory body for participation in a lethal injection execution in breach of the professional's applicable ethical code..

The extent to which these ethical positions have reached into the medical community is questionable. A study published in 2001 surveyed the attitudes of 1000 AMA members and found that, of the 413 who responded, 41 per cent were willing to undertake at least one of the activities prohibited by the AMA guidelines. These included a significant number who expressed willingness to inject poison into the veins of the prisoner.[121] Only 3 per cent of the survey population knew of any guidelines on this issue.[122] Amnesty International knows of few similar studies on medical attitudes in other countries.[123]

[120] American Psychological Association. Resolution: the Death Penalty in the United States, 26 August 2001. Available online at: http://www.apa.org/pi/deathpenalty.html (accessed 11 June 2007). This resolution does not address lethal injection specifically but rather the death penalty in the wider sense.
[121] Farber NJ, Aboff BM, Weiner J *et al*. Physicians' willingness to participate in the process of lethal injection for capital punishment. *Annals of Internal Medicine,* 2001; 13:884–888.
[122] *Ibid.*
[123] In one of these rare studies, the attitudes of the Danish medical profession to capital punishment and participation in executions were investigated by questionnaire. A total of 1,011 questionnaires were sent to a representative section of Danish doctors. Out of the 591 who replied, 474 (80%) said that capital punishment is not an acceptable form of punishment while 76 (13%) considered that capital punishment is acceptable. Twenty doctors (3%) were willing to participate actively in executions despite strong opposition from the Nordic Medical Associations and the World Medical Association. Tulenius A-C, Andersen PM, Holm SA. Questionnaire investigation about the attitude of the Danish medical profession to capital punishment. *Ugeskr Læger* 1989; 151: 2252-5.

Box 4: Doctors and executions in North Carolina

Doctors in North Carolina who monitor executions are in breach of state and national medical ethics guidelines. However, no doctor who carries out this function has been disciplined because of a state law that protects that doctor's identity.

According to the guidelines of the American Medical Association (AMA) and the North Carolina Medical Society, doctors who attend executions at Central Prison in Raleigh are allowed only to certify a condemned inmate's death or to prescribe medication that can help alleviate acute pain or anxiety.

But in North Carolina doctors monitor the vital signs of condemned inmates while other employees inject the sequence of lethal drugs that kill them.

"The use of a physician's clinical skill and judgment for purposes other than promoting an individual's health and welfare undermines a basic ethical foundation of medicine — first, do no harm. Therefore, requiring physicians to be involved in executions violates their oath to protect lives and erodes public confidence in the medical profession," said Dr Priscilla Ray of the AMA in February 2007, re-stating the AMA position.[124]

The relevance of the ethical critique has increased in the USA since the ruling in California in the case of Michael Angelos Morales that a medical professional should participate in an execution by lethal injection to ensure that it is carried out competently according to medical standards. The *effect* of this ruling has been to strengthen the implementation of an ethical stance against participation (although it has not put an end to executions). The 2006 court ruling in Missouri in the case of Michael Taylor, which required the participation of a physician with training in the application and administration of anaesthesia, adds to concerns about a court-ordered medical role in state killing.

Reasons for medical participation in executions

While the reasons the state want to involved health personnel in executions is clear, research into the motivation of physicians who choose to be involved in the death penalty is rare. However, a paper by Atul Gawande in the *New England Journal of Medicine* in March 2006, addressed precisely the question of why doctors participate in executions.[126] The paper contains extensive analysis of interviews he conducted with five health professionals – four physicians and a nurse – who have assisted in 45 executions. Themes which emerged included lack of ethical analysis regarding participation, belief that what was being carried out reflected the law, and the view that prisoners had a right to competent treatment even as their life was being brought to an end.

[124] AMA press release, 17 February 2006. Available at: http://www.ama-assn.org/ama/pub/category/16007.html (accessed 21 March 2007)
[125] See also p.14 above.
[126] Gawande A. When law and ethics collide — why physicians participate in executions. *New England Journal of Medicine*, 2006; 354:1221-9.

Dr Gawande concluded that:

> The doctors' and nurse's arguments for competence and comfort in the execution process do have some force. But however much they may wish to be there for an inmate, it seems clear that the inmate is not really their patient. Unlike genuine patients, an inmate has no ability to refuse the physicians' "care" — indeed, the inmate and his family are not even permitted to know the physician's identity. And the medical assistance provided primarily serves the government's purposes — not the inmate's needs as a patient. Medicine is being made an instrument of punishment. The hand of comfort that more gently places the IV, more carefully times the bolus of potassium, is also the hand of death. We cannot escape this truth.[127]

The secrecy involved in executions in most countries where they are carried out, including, in the USA, secrecy mandated by court judgments, makes it difficult to see how participation in executions could be regarded as a routine medical function. It is likely that, over time, the tension between ethics, transparency, accountability and participation in execution will increase the level of debate and ethical analysis within the health professions and the wider society, though states are likely to continue to promote secrecy and unaccountability regarding medical participation.[128]

Conclusion

As of 31 July 2007, 919 of the 1,084 executions carried out in the USA since the execution of Charlie Brooks in December 1982 have been by lethal injection. This figure constitutes 85 per cent of total executions in the USA in this period. In other jurisdictions where lethal injection executions have been introduced, the numbers of such executions have been very small either in percentage or absolute terms. In China the number is unknown, due to official secrecy, but probably ranges between several hundred and more than one thousand of the tens of thousands of executions carried out since 1997. In Guatemala, there have been three

[127] *Ibid*. p.1229.

[128] State representatives in Oklahoma and Georgia voted legislation prohibiting medical licensing boards from punishing doctors or other certified medical professionals who participate in executions. In Oklahoma, House Bill HB2660 passed both houses and was signed by the Governor on 10 May 2006. A similar bill in Georgia, House Bill HB57, passed with only one dissenting vote in both houses. It was signed by the Governor on 21 April 2006 and took effect on 1 July 2006. However there is ongoing litigation against the Georgia medical board for failing to discipline the physician involved in the execution of Jose High. (*Arthur Zitrin v. GA Composite Board of Medical Examiners* , Case No. A07A0914, Court of Appeals of the State of Georgia.) In North Carolina, the identities of doctors and nurses who participate in executions are kept confidential under a 2004 state law arising from a "technical corrections" bill. The law only allows a senior resident Superior Court judge to order the disclosure if it serves the proper administration of justice.

executions by lethal injection since 1999; in Philippines, seven since 1999; and in Thailand, four since 2003.

The overwhelming proportion of executions globally continue to be carried out by "old technology" and share with lethal injection the problems inherent to the death penalty: its cruelty; its irreversibility; the risk of executing the innocent; its selective application against minorities and marginalized groups; and its irrelevance to effective crime control.

The challenge to medical ethics posed by lethal injection executions continues to be a major concern to health professionals and human rights organizations. Health professional bodies in all countries with death penalty laws should have clear principles on the question of medical participation in execution which should be disseminated to their membership. Professional bodies should take their own principles of ethics seriously and investigate reports that doctors, nurses or other health workers have been participants in executions where this is against prevailing ethics. Of course, the ethical dilemmas can be simply resolved by ending the use of the death penalty. Amnesty International urges health professionals, and everyone concerned with human rights, to work for the reduction of suffering for death row prisoners in line with international standards and for the immediate cessation of executions and the abolition in law of the death penalty.

Note

As this report was going to press, court rulings bearing on lethal injection were handed down in Tennessee and North Carolina, USA and the US Supreme Court agreed to hear an appeal concerning the method of lethal injection execution.

Tennessee: On 19 September 2007, US District Judge, Aleta A. Trauger ruled in the appeal of Edward J. Harbison that "the plaintiff's pending execution under Tennessee's new lethal injection protocol violates the Eighth Amendment to the United States Constitution. The new protocol presents a substantial risk of unnecessary pain" and the judge barred the state of Tennessee from executing the prisoner. (The ruling and associated memorandum are available at: http://www.tnmd.uscourts.gov/files/Harbison%20DE%20147%20Memorandum%20Opinion.pdf and http://www.tnmd.uscourts.gov/files/Harbison%20DE%20148%20Order.pdf respectively.)

North Carolina: Superior Court judge, Donald Stephens, ruled on 21 September 2007 that the North Carolina Medical Board can no longer hold up executions by threatening to discipline doctors who participate in them. It is not known at time of writing if the Medical Board will appeal (see this report, pp.15, above) [The judgement in the case of the North Carolina Department of Correction et al v. the North Carolina Medical Board is available at: http://www.newsobserver.com/content/media/2007/9/21/DOC092107.pdf]

US Supreme Court: On 25 September 2007, the US Supreme Court agreed to hear the appeal from two Kentucky death row inmates (*Baze et al v. Rees et al*) challenging the constitutionality of lethal injection procedures in Kentucky. This would be the first time that the Supreme Court has considered a direct challenge to lethal injection. It will hear oral argument in the case in early 2008 and a decision is expected before the end of June 2008.

Appendix 1: Further reading

Recent selected publications on medical or ethical aspects of lethal injection include:

Caplan AL. Should physicians participate in capital punishment? *Mayo Clinic Proceedings* 2007 82:1047-8.

Clark PA. Physician participation in executions: care giver or executioner? *Journal of Law, Medicine & Ethics* 2006; 34: 95–104.

Denno DW. When legislatures delegate death: the troubling paradoxes behind state uses of electrocution and lethal injection and what is says about us. *Ohio State Law Journal* 2002; 63: 63-128.

Denno DW. The lethal injection quandary: how medicine has dismantled the death penalty. 76 *Fordham Law Review* (2007) (forthcoming).

Editors, PLoS Medicine. Lethal injection is not humane. *PLoS Med* 2007; 4(4): e171. Available at: http://medicine.plosjournals.org/archive/1549-1676/4/4/pdf/10.1371_journal.pmed.0040171-S.pdf

Farber N, Davis EB, Weiner J, Jordan J, Boyer EG, Ubel PA. Physicians' attitudes about involvement in lethal injection for capital punishment. *Archives of Internal Medicine,* 2000 Oct 23;160(19):2912-6.

Farber NJ, Aboff BM, Weiner J, Davis EB, Boyer EG, Ubel PA. Physicians' willingness to participate in the process of lethal injection for capital punishment. *Annals of Internal Medicine,* 2001;135(10):884-8.

Gawande A. When law and ethics collide — why physicians participate in executions. *New England Journal of Medicine,* 2006; 354:1221-9.

Groner JI. Lethal injection: a stain on the face of medicine. *BMJ,* 2002; 325:1026-1028. Available at: http://bmj.bmjjournals.com/cgi/content/full/325/7371/1026.

Groner JI. Lethal Injection and the medicalization of capital punishment in the United States. *Health and Human Rights* 6(1):65-79, 2002.

Groner JI. Lethal injection: the medical charade. *Ethics & Medicine* 2004, 20: 25-32.

Human Rights Watch. *So Long as They Die: Lethal Injections in the United States.* New York, 2006. Available at: http://hrw.org/reports/2006/us0406/

Koniaris LG, Zimmers TA, Lubarsky DA, Sheldon JP. Inadequate anaesthesia in lethal injection for execution. *Lancet,* 2005; 365(9468):1412-4. See also correspondence: Groner JI, *Lancet,* 2005;366(9491):1073, Heath MJ, Stanski DR, Pounder DJ, *Lancet,* 2005; 366(9491):1073-4; Weisman RS, Bernstein JN, Weisman RS, *Lancet,* 2005; 366(9491):1074; and authors' response: *Lancet* 2005; 366(9491):1074-6.

Koniaris LG, Sheldon JP, Zimmers TA. Can lethal injection for execution really be "fixed"? *Lancet* 2007; 369: 352–353.

Kreitzberg E. Richter D. But Can it Be Fixed? A Look at Constitutional Challenges to Lethal Injection Executions. *Santa Clara Law Review*, Vol. 47, No. 3, 2007 Available at SSRN: http://ssrn.com/abstract=995812.

Lanier WL, Berge KH. Physician involvement in capital punishment: simplifying a complex calculus. *Mayo Clinic Proceedings* 2007; 82:1043-6.

LeGraw J, Grodin M., Health professionals and lethal injection execution in the United States. *Human Rights Quarterly*, 2002; 24:382-423.

Lerman DN. Second opinion: inconsistent deference to medical ethics in death penalty jurisprudence. *Georgetown Law Journal* 2007*;* 95:1941-78.

Waisel D. Physician participation in capital punishment. *Mayo Clinic Proceedings* 2007; 82:1073-80.

Zimmers TA, Lubarsky DA. Physician participation in lethal injection executions. *Current Opinions in Anesthesiology* 2007; 20(2):147-51.

Zimmers TA, Sheldon JP, Lubarsky DA, López-Muñoz F, Waterman L, *et al*. Lethal injection for execution: Chemical asphyxiation? *PLoS Med* 2007*;* 4(4): e156.Available at: http://medicine.plosjournals.org/archive/1549-1676/4/4/pdf/10.1371_journal.pmed.0040156-S.pdf

Appendix 2: The introduction of lethal injection executions

Table 4: Chronology of the introduction of lethal injection execution laws and practice

Country	Lethal injection law introduced	First lethal injection execution
USA	1977 [Oklahoma, Texas]	7 December 1982 [Texas]
Taiwan	1992	None to date
China	March 1996 (came into effect in January 1997)	March 1997
Guatemala	1997	10 February 1998
Philippines	1999	5 February 1999
Thailand	October 2003	December 2003

Lethal injections became a legal method of execution for the first time in Oklahoma, USA, in 1977. On 11 May 1977, the state of Oklahoma introduced legislation permitting this form of execution. From the outset, medical personnel were involved, at the behest of political decision-makers. The methodology had been developed by the state's medical examiner and the then head of the Oklahoma Medical School's Anaesthesiology Department, at the instigation of a State Assembly member and a State Senator.[129]

Texas adopted similar legislation on the following day, apparently without further research, and subsequently other states moved to legislate for lethal injection executions.

By 1981, five states in the USA had legislation permitting execution by lethal injection. Other states introduced similar legislation, typically specifying in law or practice the use of three chemicals: sodium thiopental, pancuronium bromide and potassium chloride.

The first lethal injection execution was carried out in Texas on 7 December 1982 when Charles Brooks, an African American, was put to death. Two doctors were in attendance, monitoring his death. The second such execution, also in Texas, occurred 15 months later, on 14 March 1984; two further executions by lethal injection were carried out that year in Texas and two, including that of a woman, in North Carolina.[130]

[129] Human Rights Watch. *So Long as They Die. Lethal Injections Executions in the United States*. New York, April 2006. Available at: http://hrw.org/reports/2006/us0406/index.htm. See also Denno DW. The lethal injection quandary: how medicine has dismantled the death penalty (1 May 2007). Fordham Legal Studies Research Paper No. 983732. Available at SSRN: http://ssrn.com/abstract=983732.

Appendix 3: Use of organs from executed prisoners, China

An issue linked to executions that has additional implications for human rights and medical ethics is that of organ harvesting and commercial transplantation. Amnesty International has been reporting the practice of harvesting organs from executed prisoners in China since 1993.[131] Amnesty International's concern about this practice was based on the link between the transplantation and execution processes, the effect this had on the ethical practice of medicine with prisoners, and the impact on reform of the death penalty. These concerns remain and are intensified with the advent of lethal injection executions, given the involvement of medical professionals in the execution process. The extent to which prisoners can consent within an inherently coercive environment has led many medical bodies to limit the use of consent as a measure by which the ethical acceptability of transplantation procedures involving prisoners can be measured.[132]

In 1995, Amnesty International reported that the use of organs from executed prisoners continued in China, on a large scale,[133] and cited a paper suggesting that as many as 90 per cent of organs used in transplantations in China came from executed prisoners.[134]

Occasional reports of the use of organs from executed prisoners continued to emerge. In 1999 for example, Cameron and Hoffenberg cited Professor Lei Shili as informing them that

[130] Those executed after Charles Brooks were: *Texas*: James Autry, 14 March 1984; Ronald O'Bryan, 31 March 1984; Thomas Barefoot, 30 October 1984; *North Carolina*: James Hutchins, 16 March 1984; Velma Barfield, 2 November 1984.

[131] Two years earlier, Amnesty International had reported the use of organs for transplantation from executed prisoners in Taiwan: see Amnesty International, *Executions and organ transplants*, AI Index: ASA 38/11/91, 8 July 1991. See also: Amnesty International. *China: Victims in their thousands: the death penalty in 1992*, AI Index: ASA 17/09/93. A 1994 report by Human Rights Watch provided further evidence of the practice, including the text of a government decree on the subject "Temporary Rules Concerning the Utilization of Corpses or Organs from the Corpses of Executed Criminals", 9 October 1984. Appendix 2. in *China: Organ Procurement and Judicial Execution in China*, Human Rights Watch, August 1994, available at: http://www.hrw.org.

[132] The International Society for Heart and Lung Transplantation adopted a *Statement on Transplant Ethics* in April 2007 which said inter alia: "Obtaining organs for transplantation from the bodies of executed prisoners contravenes the principle of voluntary donation. A condemned prisoner and his relatives cannot consent freely. Furthermore, such practices provide a perverse incentive to increase the number of executions and it lays the judicial process open to corruption." The statement is available at: http://www.ishlt.org/ContentDocuments/Transplant%20ethics%20statement.doc

[133] Amnesty International. *China: Medical concern: the use of organs from executed prisoners*, AI Index: ASA 17/001/1995, March 1995.

[134] Guttmann RD. On the use of organs from executed prisoners. *Transplantation Reviews*, 1992,6:189-93. This paper recommended that executed prisoners should not be a source of organs for transplantation, a position subsequently adopted by the Transplantation Society.

1,600 prisoners had been the source of 3,200 kidneys in 1996.[135] In 2001, US transplant surgeon Dr Thomas Diflo said that he was seeing patients who had received transplanted kidneys in China. He said the he was certain from his experiences, and from the testimonies of his patients, that these organs came from executed prisoners in China.[136]

At an International Conference on Liver Transplants in July 2005, the Chinese Vice-Minister of Health, Huang Jiefu, was reported to have acknowledged that the majority of organs used for transplant in China come from executed prisoners.[137] In March 2006, Chinese transplantation specialists estimated that this may now account for as many as 99 per cent of transplanted organs.[138]

In September 2006 a Chinese Foreign Ministry spokesperson, Qin Gang, was asked at a regular press conference about organ transplantation in China and responded:

> In China, the use of bodies and organs of the executed prisoners is very prudent with relevant regulations being strictly implemented. The following terms are requested, first, the written consent of the prisoner to be executed must be obtained. Second, the approval of the provincial health authorities and the people's high court must be granted. Third, hospitals and institutions involved must be approved by health authorities above the provincial level and their qualification authenticated.[139]

Some Chinese transplant surgeons appear to be uneasy about their involvement in organ extraction from death penalty prisoners. According to a recent media report published in April 2006, one Chinese surgeon stated:

> To some extent, the doctors are part of the execution. That is too much for many young doctors to accept ... but if you want to do the transplants you have to face the reality. [140]

Organ transplants have become a highly profitable business, particularly since the commercialization of health care in China. There are serious concerns that the potential to profit from such transactions, combined with apparently widespread corruption among police, courts and hospitals, may lead to abusive practices. It may also provide an economic incentive to retain the death penalty.

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[135] Cameron JS, Hoffenberg R. The ethics of organ transplantation reconsidered: paid organ donation and the use of executed prisoners as donors. *Kidney International*, 1999; 55:724-32.
[136] Baard E, Cooneyn R. China's execution, Inc. *Village Voice*, 2-8 May 2001. Available at: http://www.villagevoice.com/news/0118,baard,24344,1.html
[137] See "Accelerating the regulation of organ transplants", *Caijing Magazine*, 28 November 2005, pp.118-120.
[138] "Top surgeon says he has seen only 20 cases of voluntary donation," *South China Morning Post*, 1 April 2006.
[139] Press conference, 28 September 2006. See Foreign Ministry web-site: http://www.fmprc.gov.cn/eng/xwfw/s2510/t274295.htm, accessed 10 October 2006.
[140] *South China Morning Post*, 1 April 2006.

Chinese transplantation websites, aimed at foreign clients in search of organ transplants, apparently use organs from executed prisoners. For example, the Chinese Bek-Transplant.com website openly admitted in 2006 under its "Frequently Asked Questions" section that the organs they use come from "people that are executed in China". This question is no longer on the web-site.[141]

On 28 March 2006, the Chinese Ministry of Health released new regulations on organ transplants which took effect on 1 July 2006.[142] They ban the buying and selling of organs and stress that organs may only be removed with the written consent of the donor. However, medical experts have criticized them for not addressing the crux of the problem. For example, Professor Chen Zhonghua, a transplantation specialist who reportedly helped to draft the regulations, has stated that they only offer guidance on transplants from live donors and fail to address key issues such as the source of organs.[143] On 24 October 2006, the *South China Morning Post* quoted a doctor involved in drafting the regulations as saying that he believed that organs from executed prisoners "should be very cautiously considered and it would be better if they were not used in the future." However, he added that "as China cannot find a replacement ... while the demand for organs is huge, the executed prisoners' organs will not be specifically banned".

It remains unclear how well the new regulations will be enforced. International medical standards state that organ transplants may only take place "voluntarily" and with the "free and informed" consent of the donor. Amnesty International considers that those faced with the trauma and anguish of imminent execution are not in a position to provide such consent. In addition, the secrecy surrounding the application of the death penalty in China makes it impossible to verify whether such consent was given, whatever the method of execution. Nor has it been possible to establish the exact practice linking lethal injection and transplantation.

[141] The following question and answer have now been removed from the http://www.bek-transplant.com web-site : "*Q. Do the organs come from a alive [sic] or dead donors? A. The donor organs come from people that are executed in China."* [Accessed 3 May 2006; web-site with question removed accessed 23 March 2007]

[142] "Temporary regulations on the administration and clinical application of organ transplantation technology", available in Chinese at: http://www.mol.org.cn/news/NewsList.asp?newsid=4230&boardid=14.

[143] "New organ transplant rules released", *South China Morning Post*, 28 March 2006.