STATE OF EXECUTIONS IN 2014
A snapshot of capital punishment implementation in the U.S.

Lethal injection protocols:

**Three-drug combination:** Midazolam or pentobarbital + vecuronium + potassium chloride
- Used in 2014 with midazolam: Florida, 5; Oklahoma, 1
- Used in 2014 with pentobarbital: Oklahoma, 2

**Two-drug combination:** Midazolam + hydromorphone
- Used in 2014: Ohio, 1

**One drug:** Pentobarbital
- Used in 2014: Texas, 7; Missouri, 4

Midazolam hydrochloride
- Drug class: Benzodiazepine sedative
- Biological mechanism: Depresses central nervous system activity by binding to neurotransmitter receptors
- Major medical uses: Antianxiety, sedation, induce amnesia, anticonvulsant
- Execution use: Induce unconsciousness, stop breathing
- Alternative compounds: Diazepam, lorazepam
- Number of manufacturers\(^a\): 9
  - Diazepam: 1
  - Lorazepam: 5

Vecuronium bromide
- Drug class: Muscle relaxant
- Biological mechanism: Inhibits muscle contraction by blocking neurotransmitter receptors
- Medical use: Induce paralysis for intubation or surgery
- Execution use: Stop breathing
- Alternative compounds: Pancuronium bromide, rocuronium bromide
- Number of manufacturers\(^a\): 7
  - Pancuronium: 2
  - Rocuronium: 8

Pentobarbital sodium
- Drug class: Barbiturate anesthetic
- Biological mechanism: Depresses central nervous system activity by interfering with neurotransmitter action
- Major medical use: Anticonvulsant
- Execution use: Induce unconsciousness, stop breathing
- Alternative compounds: Thiopental sodium, phenobarbital, propofol
- Number of manufacturers\(^a\): 1
  - Thiopental: 0
  - Phenobarbital: 0
  - Propofol: 3

Potassium chloride
- Therapeutic class: Electrolyte replenisher
- Biological mechanism: Alters voltage potential across ion channels
- Medical uses: Stop heart for cardiac procedures, electrolyte replenisher
- Execution use: Stop heart
- Number of manufacturers\(^a\): 4

Hydromorphone hydrochloride
- Therapeutic category: Opioid analgesic
- Biological mechanism: Alters central nervous system activity by binding to neurotransmitter receptors
- Major medical use: Pain relief
- Execution use: Stop breathing
- Alternative compounds: Morphine sulfate, fentanyl citrate
- Number of manufacturers\(^a\): 4
  - Morphine: 5
  - Fentanyl: 3

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