Putting the Science in Forensic Science

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“The bottom line is simple: In a number of forensic science disciplines, forensic science professionals have yet to establish either the validity of their approach or the accuracy of their conclusions, and the courts have been utterly ineffective in addressing this problem.”
The Essential Point

• Empirical testing is the touchstone
• Not…
  – how many members of the club believe it.
  – how sincerely the belief is held.
  – how long the belief has been held.
Examples from Medicine

• Folk Medicine
• Radical Mastectomy
• Other Surgical Treatment: 1/3 1/3 1/3
• Hormone Replacement Therapy
Examples from Forensic Science

• Fire and arson indicators
• Susceptibility of examiners to extraneous information (context/observer effects)
• Extent of error and disagreement among examiners looking at the same evidence
Questions to Ask

• Is forensic science well founded science?
• If not, so what?
  – Is it ethical....?
  – Is it legal....?
  – If, in spite of its failings, it is to be admitted anyway....?
Michael & Judge Hallisey’s Very Excellent Adventure…
To the Crime Lab