Ethical Considerations for Decision Support Systems

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Quality, Safety & Ethics of DSS

- Aspects of Ethics in DSS
- Are we ethically bound to seek consent for the clinical use of computer diagnosis systems or treatment planning?
- Is there a need to know how a statistical decision process or neural network arrived at a decision?
Understanding the Underlying Ethical Principles

- Nonmaleficence – do no harm
- Beneficence – do good
- Distributive justice – be fair
- Autonomy – respect patient self-direction/clinical freedom
DSS & Ethics

- Autonomy – requires patient participation & informed consent for new or nonstandard tx.
  - Is a DSS new/non-standard? Yes, requires consent
  - Is DSS a tool that formalizes/standardizes common practice? No – consent not required, viewed as standardizations of care (guidelines, maps)
DSS & Ethics

- Autonomy – Clinical Freedom
  - Are suggested modes of care ethical?
  - Impact on clinician freedom
    - Guidelines, “cookbook medicine”, US managed care pressure
      - “Standard medical care” delivered inappropriately to non-standard pts.
“Clinical freedom is dead… and we need not mourn its passing. It was....at worst a cloak for incompetence.”

Hampton, J.R. British Medical Journal
287;1237
Beneficence

- To do good
  - Best interest = best available therapy
  - Best available therapy based on personal beliefs & system constraints
  - “Belief insufficiently grounded in credible outcome data, even when based on extensive personal and medical community experience, can mislead well intended clinicians to make decision that fail to benefit and even risk harm to their patients.” East & Morris, 1996
DSS & Ethics

- Justice – aka “who’s to blame”?
- How are the decision models derived?
  - Using pattern detection
    - Requires sound clinical basis for predictions
    - Requires rigorous evaluation – often an afterthought
  - Encoded expert judgment?

  “Who’s to say?
  What experts make the rules?
  Experts to some….
  To others may be fools.”
In Conclusion

“The use of DSS in clinical practice offers promise for improving patient care in many ways. But this promise is betrayed if we stray from standards for appropriate tool use or when we allow socially productive and respectful relationships to be sullied or their participants to be taken advantage of.”

Miller & Goodman, 1999