Medical Policy Formulation and Implementation in Commercial Aviation, Space and Training Considerations*

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July 24, 2003

* Personal Views and Opinions
Drug and Alcohol Testing (aviation)
- Stakeholders:
  - Government
  - Airlines
  - Airline employees
  - Public
  - Private – 3rd party providers
- Policy makers: regulatory. Driven by new Federal regulations
  - Reaction to very public events of intoxication and perceived use of illegal substances
Drug and Alcohol Testing (aviation)

- Safety and Health Risks
  - Potential incapacitation of flight, cabin and ground crews; airport screeners
  - Potential risk to traveling public (aircraft or ground)
- Safety as a substitute for health
  - Detection may lead to improved health of the crewmember, but safety was the primary concern
Drug and Alcohol Testing (aviation)

- Evidence based policy formulation
  - Risk of occurrence available in other industries but not in aviation
- Experience based policy formulation
  - Commitment to industry to reduce testing rates based on experience
  - OTC medications a problem outside US
Aviation, Space

- Drug and Alcohol Testing (aviation)
  - Facilitators and obstacles
    - Deadlines for new regulations
    - Increased costs – screeners and training, lab costs, litigation
  - Evaluation
    - Required annual reports to FAA
    - Audits
  - Desired outcomes: deterrence
  - Beneficiaries: public
Cholera epidemic

- Stakeholders:
  - Government – CDC asked airlines to consider 1992
  - Airlines
  - Airline employees
  - Public
  - Private (minor) – 3rd party providers

- Policy makers: airlines (voluntary)
  - Consideration of epidemic in South America
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- Cholera epidemic
  - Safety and Health Risks
    - Potential inability to prevent illness
    - Potential inability to treat in-flight illness
  - Health and Safety
    - Solutions focused on health of passenger
    - Safety issues concerned training of crews, inspections of food providers in international locations
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- Cholera epidemic
  - Evidence based policy formulation
    - Epidemiology reports from CDC
    - Actual in-flight experience shared by airlines
  - Experience based policy formulation
    - Training for all crews
    - Additions to in-flight safety manuals
    - On-board rehydration and clean-up kits
**Aviation, Space**

- **Cholera epidemic**
  - Facilitators and obstacles
    - CDC information to convince administration
    - No real obstacles – airline embraced policy
  - Evaluation
    - Followed CDC reports of epidemic
  - Desired outcomes: prevention and treatment
  - Beneficiaries: crew, airline (goodwill), public
Change in medical standards
- Stakeholders:
  - Government
  - Crew
  - Public (participants, safety)
- Policy makers: program and management; OMB and administration if budget impacts
Change in medical standards

- Environmental and technological health and safety induced risks
  - Radiation
  - Fractional gravity

- Safety and Health Risks
  - Duration
  - LEO versus deep space, planetary
  - Fractional gravity
  - Consumable, medical support
Aviation, Space

- Change in medical standards
  - Evidence based policy formulation
    - Ground-based population data (cardiovascular)
    - Space flight experience (bone loss)
    - Environmental risk estimations (radiation)
  - Experience based policy formulation
    - Difficult to measure – prevent future negative even from happening
    - Focus on incapacitation (cardiovascular), performance (vision, hearing)
Change in medical standards
- Facilitators and obstacles
  - Expert panels of clinicians, physiologists
  - Lack of in-flight data
  - Lack of correlation of research and flight data
- Evaluation
  - Monitor crew health in-flight, post-slight
  - Follow LSAH
- Desired outcomes: Prevention, enhanced performance, safety
- Beneficiaries: crew, program, public