Formalize Field of Space Medicine

- Research
  - Need for better understanding of health issues assoc with space environment
  - Encourage more fundamental research into the unknown & novel aspect of space medicine, not just known limitations on humans

- Educational activities
  - undergraduate & graduate
  - There is an array of known & unknown educational issues with space
    - what is the nature of practice in space?
    - how do caregivers deal with the environment of space
    - what are the behavioral aspects?
  - continuing education
  - well-established credentialing
  - prepares industry for possible commercial space flight

- Practice
  - develop practice standards
  - mechanism to identify holes in current practice are established
    - e.g. Currently, flight surgeons have issues maintaining clinical practice & licensure
  - Houston has international recognition & credibility already

How do we make Houston the go-to place for space medicine?

- Improvements to field & increased research interest in space will benefit everyone, including Houston
- Make Houston more competitive via current infrastructure & co-localized capital
- Inventory
    - Resources & current capabilities: people, research equipment,interests, funding
    - collate information & develop coordinated strategy
        - Self-selection of favorable partnerships; mutually beneficial
        - Should be done *quickly* to maximize value & current momentum
- Enterprise Fund application to support efforts in space medicine research & development
    - emphasize Earth-based applications
    - must emphasize job creation/protection
    - foci: space, economic development of Houston region
    - especially focusing on Space Medicine development
    - institutional ability to investigate long-term scientific inquiry
    - emphasize on medical devices, IT component, telemedicine, defense research
    - **project must have multi-institutional governance through a governing committee**
    - Encourage NASA human capital to engage with universities as technicians, PhD students, etc
    - Encourage medical schools to engage flight surgeons to become physicians & maintain licensure
    - clinical time & continuing education
    - **Alternatively, commercial sector could use space medicine knowledge**

Additional Focus Areas

- Increased collaboration between university programs and NASA engineers
    - telemedicine, biodevices, etc
    - Joint appointments through IPA process for govt employees

- Uses of the ISS
    - further Space Medicine research & projects
    - only micro-gravity lab, 3D development, tissue engineering, radiation research
    - because little is known, and this is a limiting factor for extended space exploration (>6 mo), it has paramount importance

- Development of searchable database of NASA's human performance data
    - for use by growing commercial enterprises & space tourism
    - attraction: proactive use could help stave off over-regulation
    - Highly translatable to Earth-based medicine

- Approach government to loosen regulations on CPRIT (Cancer Prevention Research Institute of Texas) for applications to Space Medicine
    - deregulate uses for money
    - Applications to radiation research particularly