Infrastructure and Population Health:  
*Form Follows Function*  

*A Neurologist’s Perspective*  

**47TH ANNUAL ARIZONA RURAL HEALTH CONFERENCE**  

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Never miss the idea that architecture and music belong together. They are practically one.

Jazz is a matter of thoughtful creation, not mere unaided instinct.

Frank Lloyd Wright

Duke Ellington
Brain and Mind

- ... data obtained with modern imaging techniques, point out that all intra-psychic processes are associated with neural processes in certain brain areas—for example, imagination, empathy, the experience of feelings and making decisions or the deliberate planning of actions ... that all these processes may generally be described by physical-chemical processes.

   2004 Neuroscience Manifesto

- ...and how could we descend into the depths of our nervous system to ascertain what is the nature of the psychical correlative of the physiological bottom? If we could, we could only describe that correlative psychical in terms of object-consciousness, which would be a pseudo description of it.

   John Hughlings-Jackson (1887)
Left and Right Hemispheric Perspectives

Left
• focus
• common, known
• predictability
• part
• deconstruct
• impersonal
• goal-oriented
• centripetal
• either/or
• paradox

Right
flexibility, breadth
new
possibility
integration, wholeness
context
personal
other oriented
centrifugal
as well as
metaphors, symbols
Central Values of Medicine

• respect for human dignity
  social justice
• respect for self-determination and autonomy
  informed consent
• the primacy of patient welfare
  salus aegroti suprema lex
• the principle of non-injury
  primum nil nocere
“The good physician knows the disease the patient has; the great physician knows the patient who has the disease.”

William Osler, M. D.

“One of the essential qualities of the clinician is interest in humanity, for the secret of the care of the patient is in caring for the patient.”

Francis Peabody, M. D.
Alignment of an Organization’s Vision with its Plans and Goals

- Community Needs Assessment
- Patient Outcomes Data
- Strategic Objectives
- Care Delivery Models
- Prevention and Wellness Programs
- Sustainability
- Population Health
**Population Health** – is a conceptual shift in how health care is organized, delivered and purposed. It’s a means and an end, where data-informed design provides outcome measures, the results of which further refine ongoing strategies to best improve the health status of a defined group.

Done correctly, it’s a transition from reactive symptom management to a proactive prevention model, able to provide highly-personalized care for individual patients suffering with the chronic diseases most prevalent in their particular community through scalable multidisciplinary teams; and, equally weighted to provide sustained long-term improvement in the health of that community through identifying and overcoming barriers to disease management and prevention.

The chronic health conditions that are most prevalent in the Gila River Indian Community (GRIC) are Diabetes Mellitus and its subsequent multi-organ dysfunction, and Behavioral Health Disorders. Earlier cancer detection is also a priority.

Social influencers of health (poverty, reduced education and employment opportunities, food insecurity, unstable housing/transportation, childhood trauma, high rates of substance abuse) impact the incidence and course of chronic diseases at the individual and population level. Community-focused health care is the best option to determine and address the factors that influence health-based behaviors.
the underlying foundation or basic framework (as of a system or organization)

American Rescue Plan (ARP) - 1.9T

- $350 billion for state and local governments to use for local economic relief purposes and to offset pandemic-induced declines in tax revenue;
- $30.5 billion for public transportation agency operations to offset the foregone revenue from ridership declines and other COVID-related factors;
- $10 billion for states to use on capital projects that help enable work, education, and health monitoring; and
- $8 billion for airports to help with operating and other costs associated with airport revenue declines over the last year.

ARP provides one-time funding (H8F) thru HRSA to support Federally Qualified Health Centers (FQHCs) – 6.1B

Funds made available through this funding opportunity are required to be used for the following purposes:

- Plan, prepare for, promote, distribute, administer, and track COVID-19 vaccines, and carry out other vaccine-related activities.
- Detect, diagnose, trace, and monitor COVID-19 infections and related activities necessary to mitigate the spread of COVID-19, including activities related to, and equipment or supplies purchased for, testing, contact tracing, surveillance, mitigation, and treatment of COVID-19.
- Purchase equipment and supplies to conduct mobile testing or vaccinations for COVID-19, purchase and maintain mobile vehicles and equipment to conduct such testing or vaccinations, and hire and train laboratory personnel and other staff to conduct such mobile testing or vaccinations, particularly in medically underserved areas.
- Establish, expand, and sustain the health care workforce to prevent, prepare for, and respond to COVID-19, and to carry out other health work force-related activities.
- Modify, enhance, and expand health care services and infrastructure.
- Conduct community outreach and education activities related to COVID-19.

Out of the $31 billion tribes will receive, $20 billion will focus on combating COVID-19 and stabilizing safety nets in tribal communities. Additionally, $1 billion will be split evenly among the 574 federally recognized tribes, portioning about $1.7 million to each tribe.