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**FOUNDATION**  
FOR THE  
National Institutes of Health

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## Overview FNIH

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PARTNERS FOR INNOVATION, DISCOVERY, LIFE



## Foundation for NIH

- Sole entity authorized by Congress to raise private funds in support of NIH's mission of improving health through scientific discovery and translational research
- Not part of NIH
- Independent nonprofit 501(c)(3) public charity created by Congress in 1990 & incorporated in 1996; able to partner with a broad range of entities
- Both private- and public-sector represented on Board of Directors
- NIH Director and FDA Commissioner are *ex officio* Board members
- No endowment



## Foundation for NIH

### ▪ Function

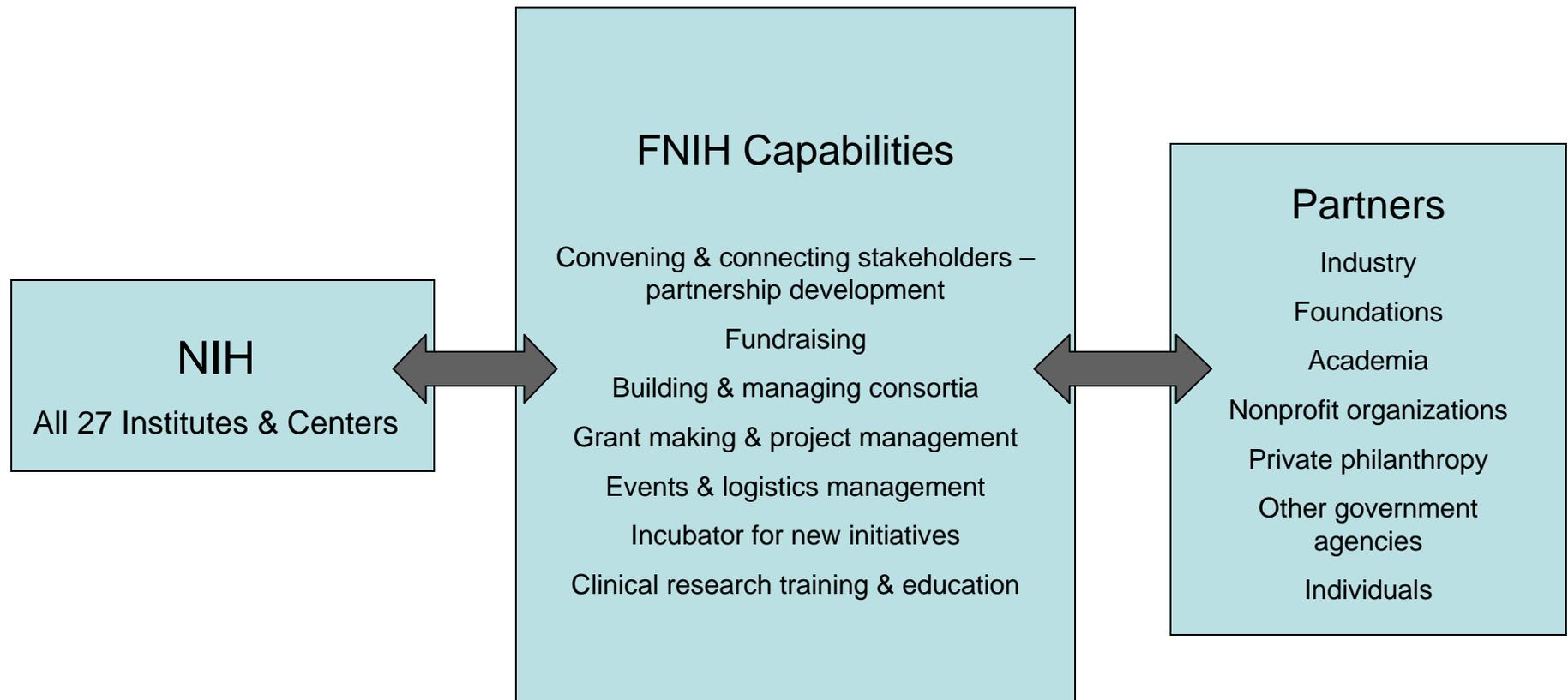
- Creates innovative public-private biomedical partnerships that complement NIH priorities and enhance NIH activities
- Works with all NIH Institutes, Centers, and Office of the Director
- Involves NIH and other federal partners, industry, academia, the philanthropic community
- Provides a neutral forum able to engage all partners to work together with an equal ability to contribute
- Collaborative, entrepreneurial approach to address large, complex problems

### ▪ Track Record

- Proven expertise in public-private partnership development and management
- Since 1996 over initiated over 400 projects; raised over \$520M



## FNIH Programs Represent a Broad Array of Capabilities





## History of mHealth Summit

- Microsoft Research - 15 grantees, National Institute of Minority Health and Health Disparities
  - Uses for mobile health devices in underserved and minority communities
- FNIH brought in NIH's Fogarty International Center (FIC)
  - To develop a global health perspective
- Private meeting; 75 invited, 200 attended.
  - mHealth Alliance and UN Foundation joined with FNIH to plan the 2009 mHealth Summit
- 2009 mHealth Summit planned
  - ~700 participants met in October, 2009



## 2010 mHealth Summit

- ~2,700 attendees from around the world
- 20 out of 27 NIH Institutes and Centers involved
- Multiple corporate sponsors:
  - Verizon, Abbott, Accenture, ATA, CDC Foundation, Continua, CTIA, CTIS, HMN, Intel, Johnson and Johnson, McKesson, Microsoft Research, Pfizer, Qualcomm, Robert Wood Johnson Foundation, the Rockefeller Foundation, Skype, West Wireless Health Institute
- Key note addresses from:
  - Francis Collins, MD, PhD, Director, NIH, Bill Gates, Co-chair and Trustee, Bill & Melinda Gates Foundation, Todd Park, Chief Technology Officer, DHHS, Ted Turner, Chairman, UN Foundation, Tom Wheeler, Chairman, mHealth Alliance, Aneesh Chopra, US Chief Technology Officer, the White House, Judith Rodin, PhD, President, The Rockefeller Foundation, Julio Frenk, MD, MPH, PhD, Dean of Faculty, Harvard School of Public Health



## What is mHealth?

- The definition of mHealth was a topic of much discussion at the mHealth Summit
- <http://vimeo.com/17125591> A video recorded at the Summit, caught the following definitions:
  - “It’s about 5.3 billion connections”...”it’s a form of personalized medicine”...”it takes information and access to service providers and puts it right in the patient’s pocket”...”wireless isn’t about the mobility, it’s about the connectivity”...”anything related to your personal health on your cell phone”...”it’s all about the potential”...”it’s more of a revolution”...
  - One interesting response from Jody Ranck: “In order to have an eye on where things might go and in order to have some ability to anticipate or analyze the unexpected, resisting a precise definition for mHealth, in my mind, is a good thing.”



## Whatever it is, it's growing!

- Bloomberg Businessweek estimates the US market for health related mobile products for consumers will double to \$600M from 2009 to 2010.
  - It will double again to \$1.3M in 2011
- Mobile health products will be for patients and practitioners:
  - Appointment reminders
  - Patient support from practitioners
  - Peer support network formation
  - Medication reminders
  - Personal medical data capture
  - Accessing patient records
  - Diagnosis
  - Monitoring conditions and chronic diseases



## A few examples of what's out there now:

- **NETRA**, updates eyewear prescriptions and diagnoses eye conditions such as astigmatism
- **GlowCaps**, a pill bottle cap using light and sound to signal when to take a pill and if missed triggers a phone call reminder
- **iMurmur 2**, an iPhone app lets health providers listen to prerecorded heart sounds on iPhone, iPod Touch, iPad tablet
- **MobiUS**, using a smartphone the device can examine the abdomen, aorta, kidneys, all bladder and thyroid, confirm pregnancy and be used in place of a regular ultrasound
- **nGage**, uses radio-frequency id tags worn by health care providers to monitor hand-washing
- **Raisin™ System**, tiny sensors imbedded in pills that communicate from the stomach to mobile phones; can also monitor sleep patterns and activity levels
- **WellDoc Diabetes Manager System**: For type 2 Diabetes, helps users gather, store, transmit information on blood glucose levels



## It is growing in the developing countries, too:

- Mobile phone use in developing countries is growing.
  - 64% of mobiles phones are in developing countries
- mHealth in developing countries has:
  - Enabled emergency response teams to coordinate efforts using mobile phones
  - Allowed health professionals to gather large amounts of information from the public in real time to save costs,
  - Promoted best practices
  - Used SMS to disseminate information
    - Uganda, Text for Change, using SMS to improve HIV AIDS awareness
    - South Africa, SIMpill resulted in 90% compliance (up from 22%) of patients taking their TB medications

### Curb the spread of epidemics

EpiSurveyor deployed in 20 countries in sub-Saharan Africa, Kenya, Uganda and Zambia, collects on immunizations



## Opportunities and Challenges

- Technological advances – especially cloud computing - can make mHealth a reality and
- the opportunities are impressive for:
  - improving health care access,
  - for remote diagnosis,
  - chronic disease management,
  - patient education and compliance,
  - data gathering for research initiatives
  - lowering health care costs
  - making personalized medicine a reality



## Opportunities and Challenges

- The challenges are equally impressive:
  - Will there be business models that provide a return on investment, are the many one-off projects scalable?
  - Will governments be able to articulate public health needs to industry so that they work together to improve public health?
  - Will the platforms be open source to spur innovation, or proprietary?
  - How will data be secured?
  - How will ethical considerations be addressed, such as informed consent and privacy, especially among illiterate populations?
  - Will new mHealth technologies really change behaviors?



What's in store for the mHealth future?

**Attend the mHealth Summit  
2011 and find out...**

**December, 2011, Gaylord National  
Center**



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