Supplemental Funding: How to Make Your Funding Opportunities Pay Off

Collaborative Opportunity for Research Between IUCRCs (CORBI)

2:30 – 4:00 pm
Thursday, January 12, 2012

2012 ANNUAL MEETING
Arlington, Virginia

Flaura Winston, Director, Center for Child Injury Prevention Studies (CChIPS), The Children’s Hospital of Philadelphia

Jose Fortes, Director, Center for Autonomic Computing (CAC), University of Florida
Topics to cover

• CChIPS & CAC
• Collaborative partnership created
• Outcome: Adaptive IT appliance for collaborative Child Fatality Review
• Securing AIR Grant
Topics to cover

• CChIPS & CAC
  • Collaborative partnership created
  • Outcome: Adaptive IT appliance for collaborative Child Fatality Review
  • Securing AIR Grant
Center for Child Injury Prevention Studies (CChIPS)

- Mission: To advance the safety of children, adolescents and young adults through research
- Multi-university center
  - Lead site: CHOP/Penn (F. Winston, Dir; K. Arbogast, co-Dir)
  - Second site: The Ohio State University (J. Bolte, Dir)
CChIPS Process

1. Ideas from IAB & Faculty
2. Faculty Proposals & RFPs
3. IAB chooses Research Agenda
4. Follow Up Study

- Surveillance
- C-ChIPS Research and Development
- Impact
- Identify Issues
- Intervention
- Publish Research
- In-Depth Study

Commercialization & Implementation by IAB
Center for Autonomic Computing (CAC)

- Started 1/2008
- Four universities
- Application domains
  - Defense & Gov
  - Health IT
  - Science
  - Critical infrastructure
- Industry members
  - Defense & Gov
  - Platform & Software
  - IT Services
- ~ 15 industrial members
  - Xerox, ERDC, Intel, Microsoft ...
Autonomic IT

- Self-optimizing
  - Monitors and tunes resources

- Self-configuring
  - Adapts to dynamic environment

- Self-healing
  - Finds, diagnoses and recovers from disruptions

- Self-protecting
  - Detects, identifies and protects from attacks

- Self-managing
  - Automates management tasks

- Self-⋆
  - Autonomously does ⋆ where ⋆ is some specific aspect of system behavior

Source: http://web2.wsj2.com/
Source: http://www.meskill.net/
Topics to cover

• CChIPS & CAC
• Collaborative partnership created
• Outcome: Adaptive IT appliance for collaborative Child Fatality Review
• Securing AIR Grant
First – Making the Match

CAC
Computer Science
Web/IT
User-Centered Design

CChIPS
Biomechanics
Injury investigation
Medicine
Prevention

Thanks, Alex and Rita, for bringing our teams together!
Collaborative Opportunities: CORBI and EAGER

- **CORBI** - “ties” centers together; must benefit both centers (supplement to I/UCRC)
  - Crash investigation review
- **EAGER** - supports early exploratory work for new approaches
  - Child Fatality Review
Child Fatality Review

BACKGROUND:
Child fatality review (CFR)
– Systematic, interdisciplinary, multi-agency review of all child deaths to inform prevention of future deaths

CHALLENGE:
• Limited resources (mostly volunteers, low tech)
• Frequently unavailable expertise
• Delays in data entry/sharing
Topics to cover

• CChIPS & CAC
• Collaborative partnership created
• Outcome: Adaptive IT appliance for collaborative Child Fatality Review
• Securing AIR Grant
Telecenter

Technical requirements:
1. Distributed, asynchronous collection of digital content with consistent organization
2. Secure, Web-based, remote participation in review meetings with multi-media
3. Archiving for post-review access and follow-up involving statistics, search and networking
4. Adaptable to meet local CFR needs
5. Low technology requirements
Telecenter and CFR – in action

Live and remote participants
Real-time data transfer to State
Outcomes

• New technology with potential to transform Child Fatality Review
  • Under consideration for widespread use
  • Follow-on grant proposal written
• Strong collaboration - CAC and CChIPS
• Two manuscripts
  • One in engineering literature
  • One in medical/public health literature
• Training
  • Two PhD students at U Florida
  • One post-doctoral fellow at Penn/CHOP
Topics to cover

• CChIPS & CAC Overview
• Collaborative Partnership through CORBI
• Outcome: Adaptive IT appliance for collaborative Child Fatality Review
• Securing AIR Grant
National Science Foundation (NSF) : Accelerating Innovation Research (AIR)

Goal: Strengthen the U.S. innovation ecosystem

“Foster connections between existing NSF innovation research alliance [e.g. CChIPS at CHOP] and other institutions”

“Spur the development of discoveries into innovative technologies through collaboration”

Bridge the “valley of death”
“valley of death”
Discoveries for new technologies resulting in the creation of future industries

Focused research, innovation, and commercialization accelerated by government investment

New and vibrant businesses will lead to new jobs and economic growth

Innovation for Sustainable Growth and Quality Jobs

Catalyze Breakthroughs for National Priorities
- Unleash a clean energy revolution
- Support advanced vehicle technology
- Drive breakthroughs in health IT
- Address the "grand challenges" of the 21st century

Promote Competitive Markets that Spur Productive Entrepreneurship
- Promote American exports
- Support open capital markets that allocate resources to the most promising ideas
- Encourage high-growth and innovation-based entrepreneurship
- Improve public sector innovation and support community innovation

Invest in the Building Blocks of American Innovation
- Restore American leadership in fundamental research
- Educate the next generation with 21st century knowledge and skills while creating a world-class workforce
- Build a leading physical infrastructure
- Develop an advanced information technology ecosystem

http://www.whitehouse.gov/administration/eop/nec/StrategyforAmericanInnovation/
Creating an Innovation Ecosystem in Online Health, Wellness and Safety
Revolution in Healthcare
One-on-One
Revolution in Healthcare
E-protocols

Computer-assisted medical management
Revolution in Healthcare
Telemedicine

Remote monitoring,
Remote management
Revolution in Healthcare
E-self-help

Families and patients:
• Self-diagnosis
• Self-treat
• Learn more
• Get “second opinion”
Benefits of computers, online, mobile

- Wide reach and accessibility
- Low cost
- Available 24 hrs / day
- (Can be) interactive / engaging
- (Can be) tailored or personalized

Pew Internet and American Life project:
- 78% of US adults have web access
- Higher - parents with children at home
- >75% of web users search for health info
Key questions

Does it work?

Does it produce the outcomes it is intended to achieve?

(increase specific knowledge or skills leading to a specific behavior)
Key questions

Is it cost-effective?

What is the most efficient way to produce intended outcomes?
(financial cost, participant time)
Current Directions

1. Bring tools of evidence-based medicine to e- and m-health
2. Create an Online Health, Safety and Wellness Innovation Ecosystem
   ➢ Grounded in the importance of evaluation
CHOP: Innovation Ecosystem for Online Health & Wellness

2 year NSF funding: August 2011 - July 2013
• Develop technology
• Build partnerships
• Commercialize

2nd year funding
• Dependent on successful completion of Yr 1 goals

Partnerships created
• University City Science Center
• University of Florida Center for Autonomic Computing
Questions?