Use of Technology to Promote Evidence-based Programs

Sheridan Miyamoto, PhD

Harnessing Technology

Think about your work, the problems you are trying to solve…

Harnessing Technology

Innovation to solve:

- Access and equity
- Access to education, training, mentoring and support
- Decrease costs
- Scale evidence-based programs

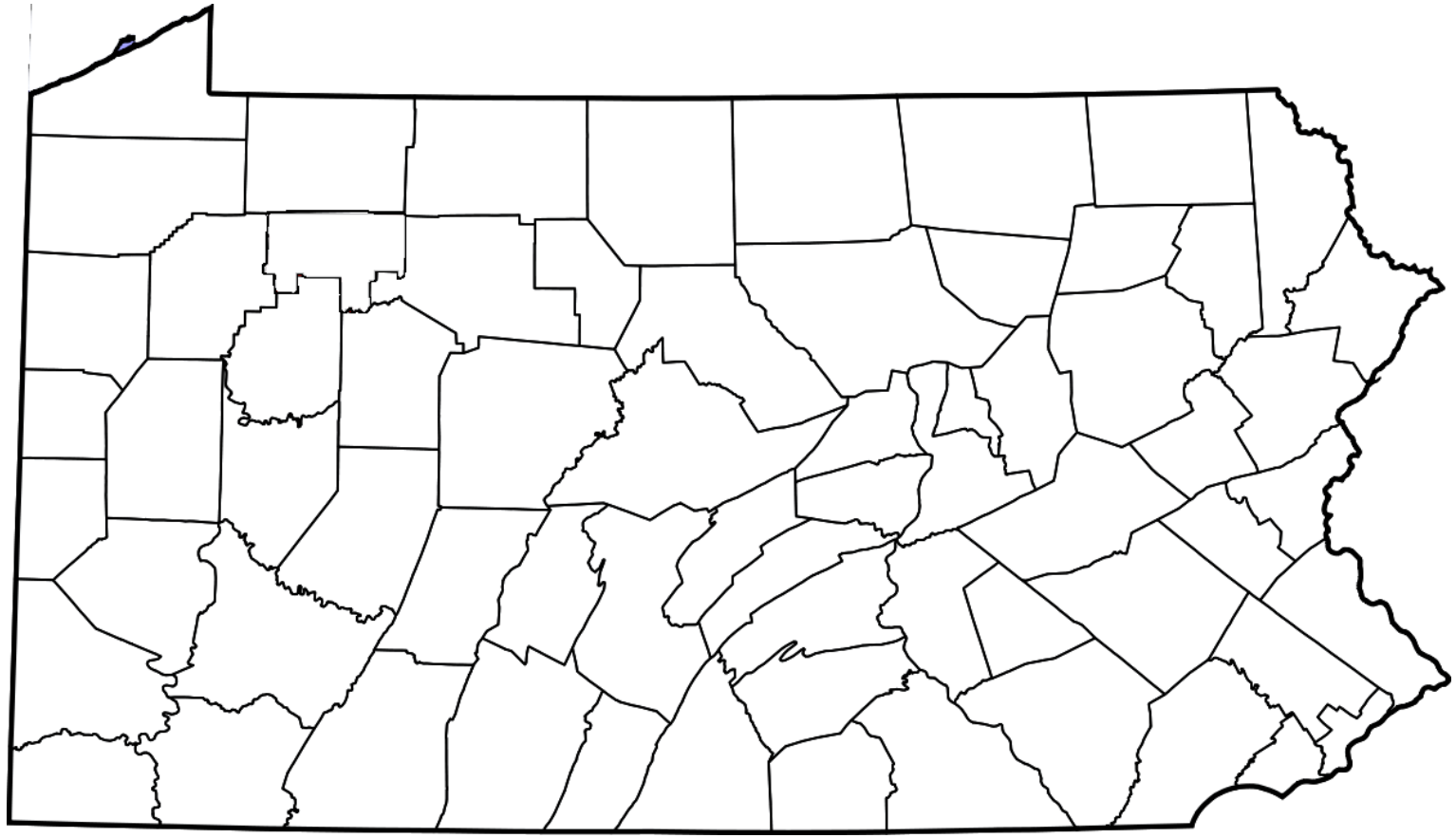
Plan

- Telehealth
- Games for health
- Mobile technology
- Evaluation / Messaging impact
- Innovation within academic constraints

TELEHEALTH
Enhancing access to expertise

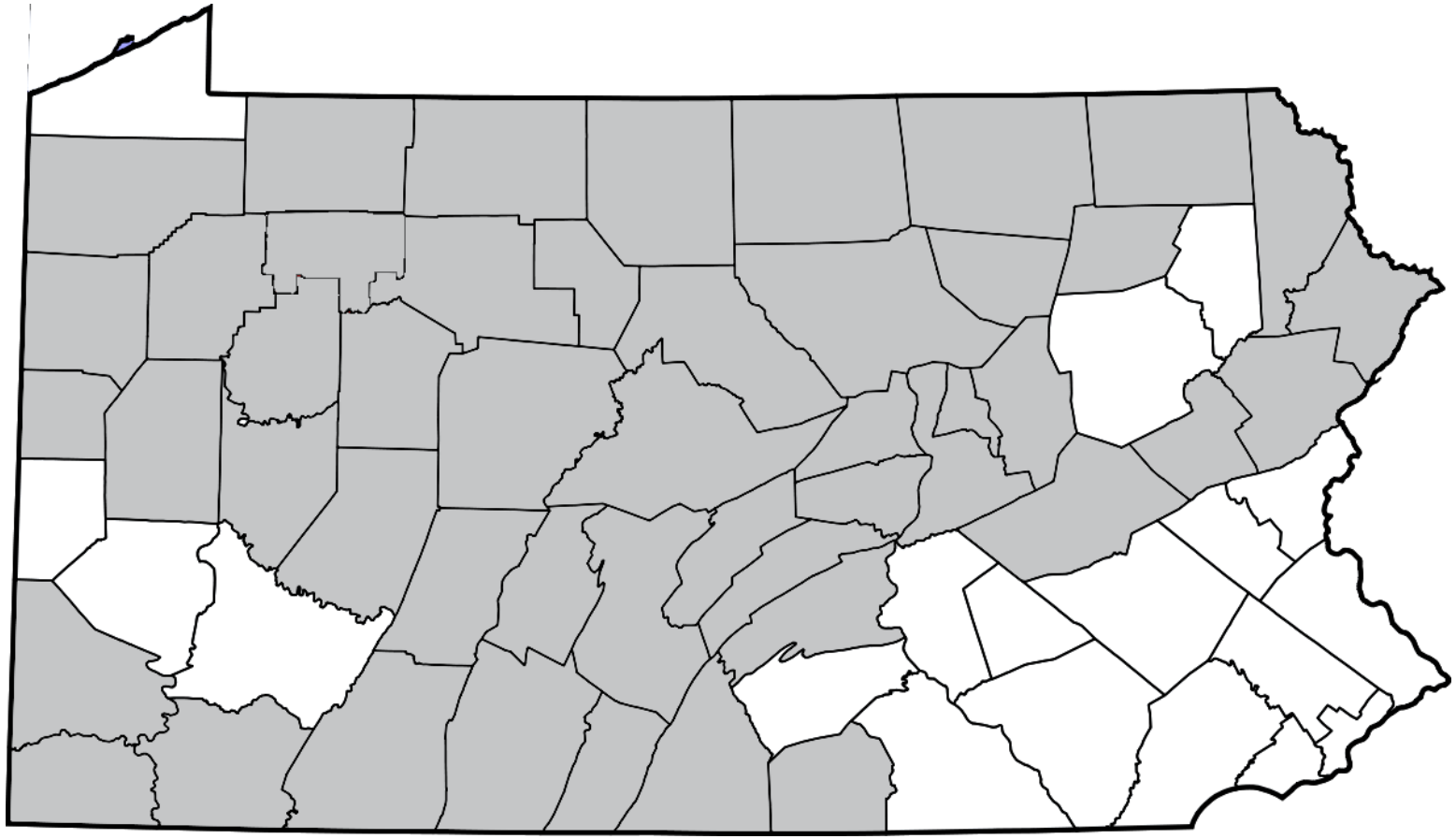
The Sexual Assault Forensic Examination and Training (SAFE-T) Center

PA Sexual Assault- Problem and Response



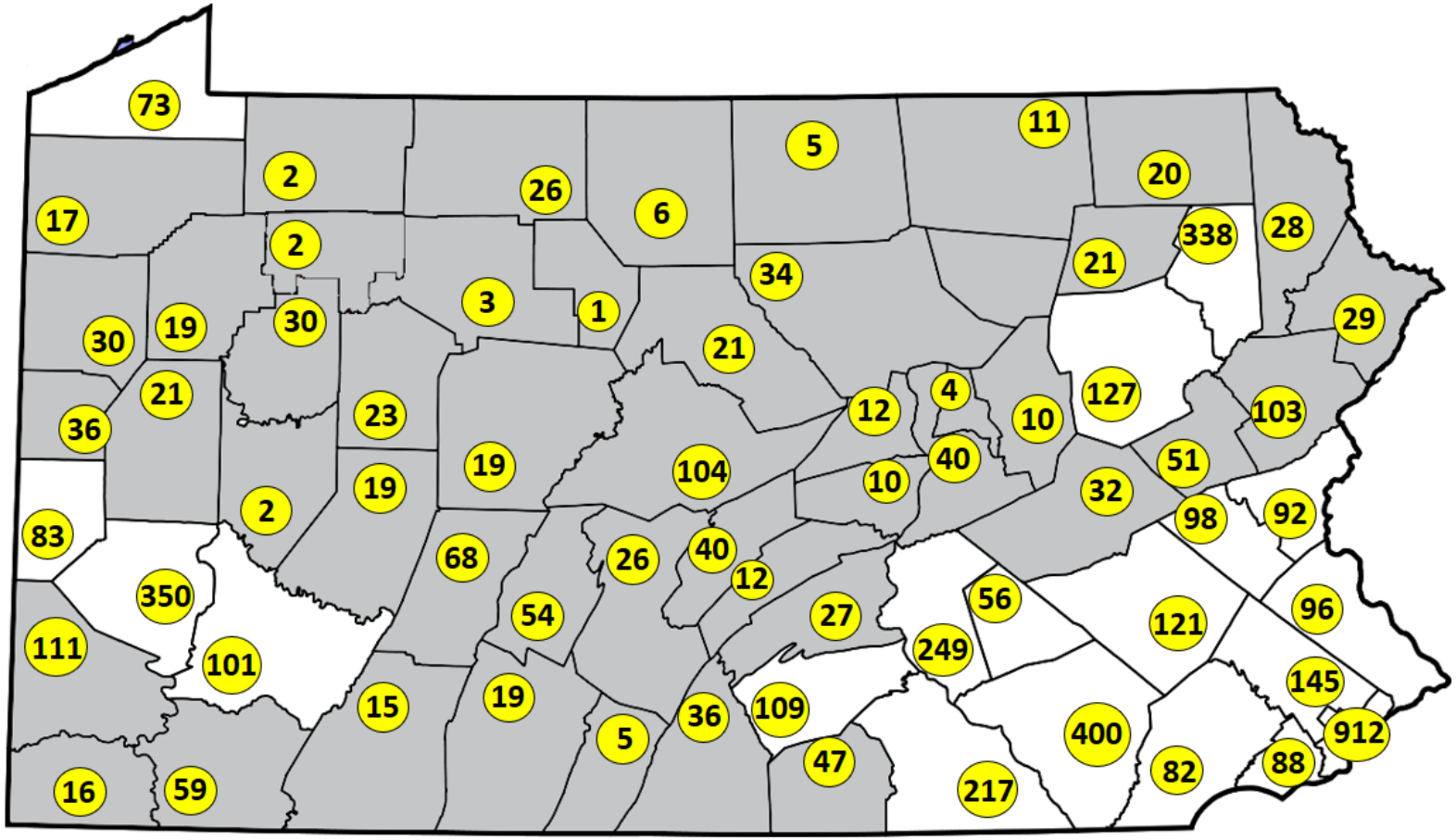
Pennsylvania

PA Sexual Assault- Problem and Response



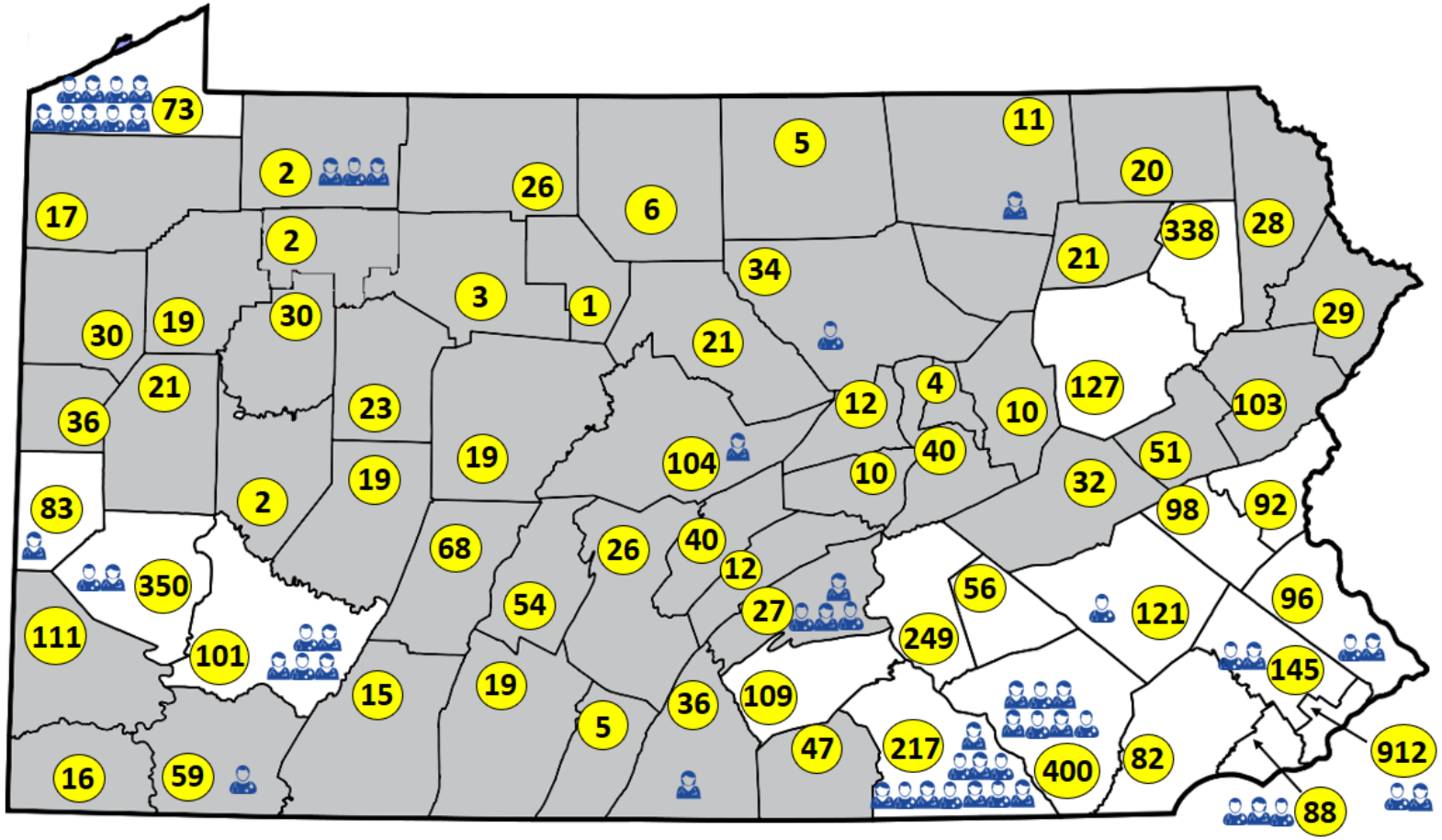
48 of 67 are Rural Counties

PA Sexual Assault- Problem and Response



# of Forensic Sexual Assault Exams per Year

PA Sexual Assault- Problem and Response



Certified forensic nurses in PA are concentrated in urban areas

The majority of the state does not have access to expert sexual assault care

Telehealth Addresses Barriers

Problem

- Few trained examiners
- High examiner burnout and turnover
- Peer Review is Gold Standard for diagnosis
- Rural examiners travel great distance for training
- DA confidence in evidence and testimony for court

Telehealth Addresses Barriers

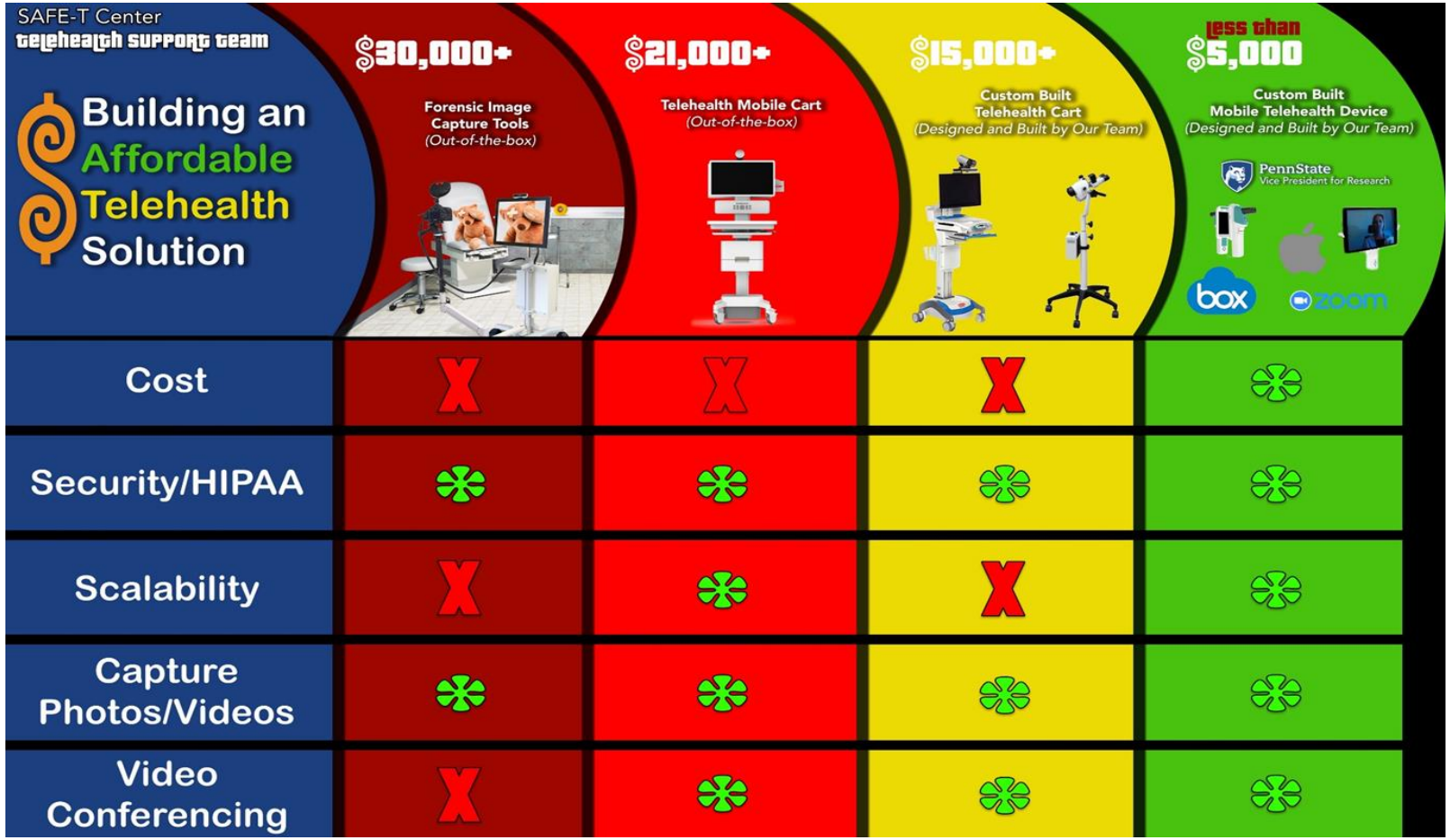
Solution

- Expert virtual teleforensic nurses mentor less experienced examiners remotely during live exams
- Secure Teleconference
- Distance “Hands on” Training
- Forensically defensible exams
- Peer networking and case review

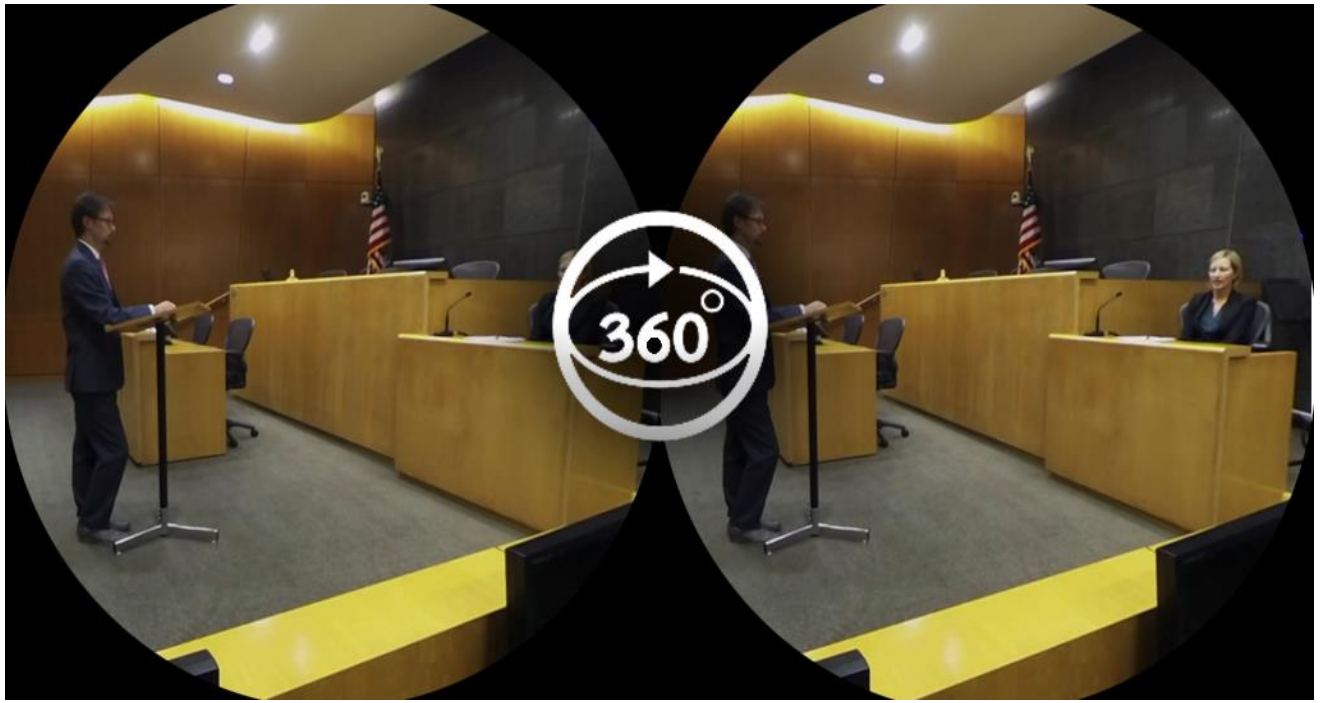
Live telehealth forensic consulation

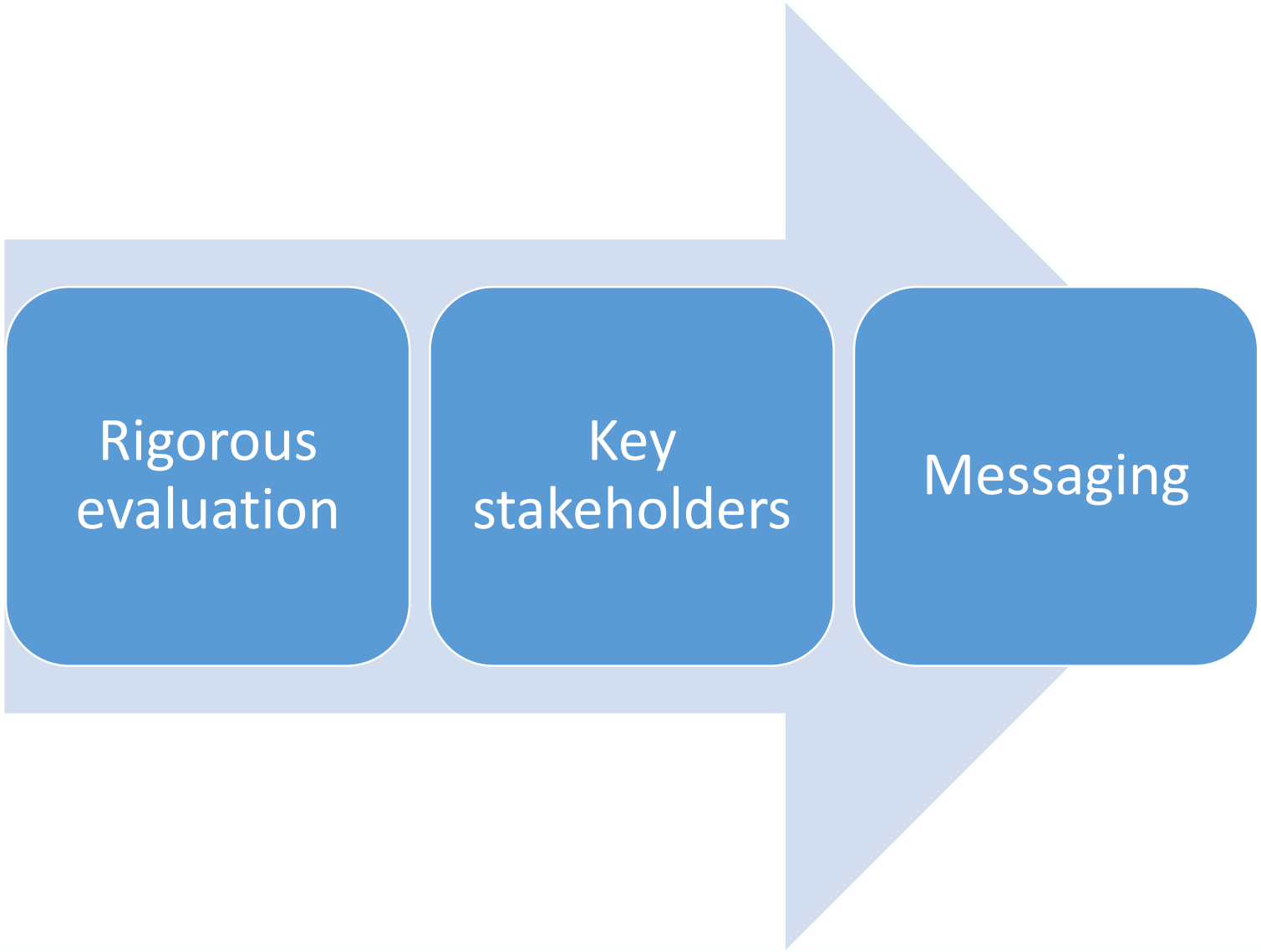
Building infrastructure

Fiscally responsible → Scalable solutions



Distance Training & Peer Networking





Sustainability

Collaborators and Funding Support

Our Team:
Sheridan Miyamoto- College of Nursing
Lorah Dorn- College of Nursing
Daniel Perkins- Clearinghouse for Military Family Readiness
Cameron Richardson- Clearinghouse for Military Family Readiness
Jennifer McCall-Hosenfeld- College of Medicine
Hui Zhao- Smeal College of Business
Cindy Bittner- College of Nursing
Tom Rodgers- College of Nursing
Bill Hartsock- College of Nursing
John Ilie- Information Technology Services

Community Partners:
Barbara Schaeffer- Pennsylvania Coalition Against Rape
Lisa Davis- PA Office of Rural Health
Faith Mong, RN, SANE-A, SANE-P- Pinnacle Health System
Jennifer McNew, RN, SANE-A

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U.S Department of Justice (DOJ), Office of Justice Programs (OJP), Office for Victims of Crime (OVC)
Using Telemedicine Technology to Enhance Access to Sexual Assault Forensic Exams
Award #: 2016-NE-BX-K001

PSU Clinical and Translational Science Institute (National Center for Advancing Translational Sciences, NIH UL1TR000127)

PSU Child Maltreatment Solutions Network

Potential telehealth technology uses

- Expertise where resources scarce
- Train the trainer
- Home visiting augmentation or substitution
- Peer mentoring
- Parenting support

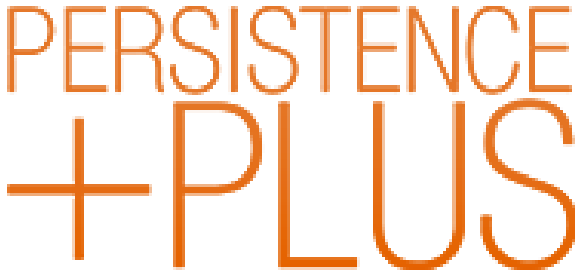
MOBILE REACH

Digital companions

19%

have dropped their cell phone in the toilet

App innovations for youth



Text-messaging

- Mobile phone text messaging has been used to support healthy behavior change and health care delivery processes.
- E.g.: **Text4baby**

text4baby℠

(CDC, 2013; Whittaker et al, 2012)

Ecological Momentary Assessment (EMA)

- Mobile technologies have the potential to be used as innovative tools for conducting research on the mental health and well-being of young people.

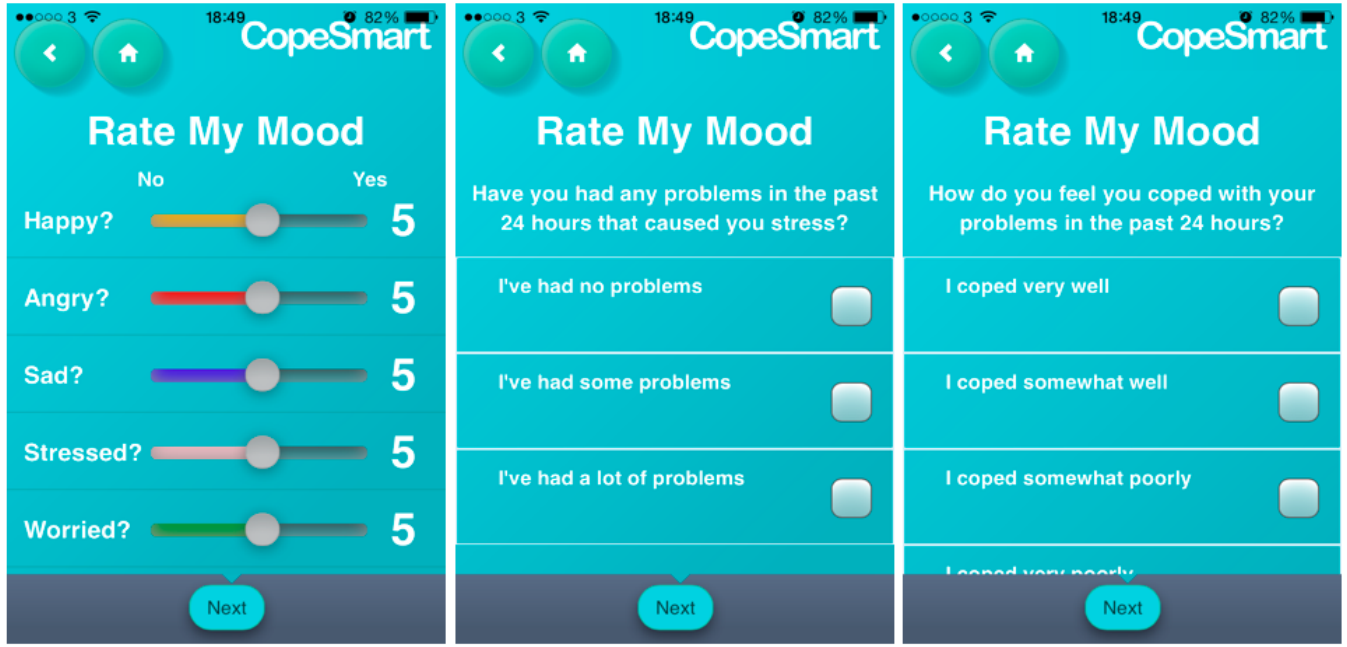
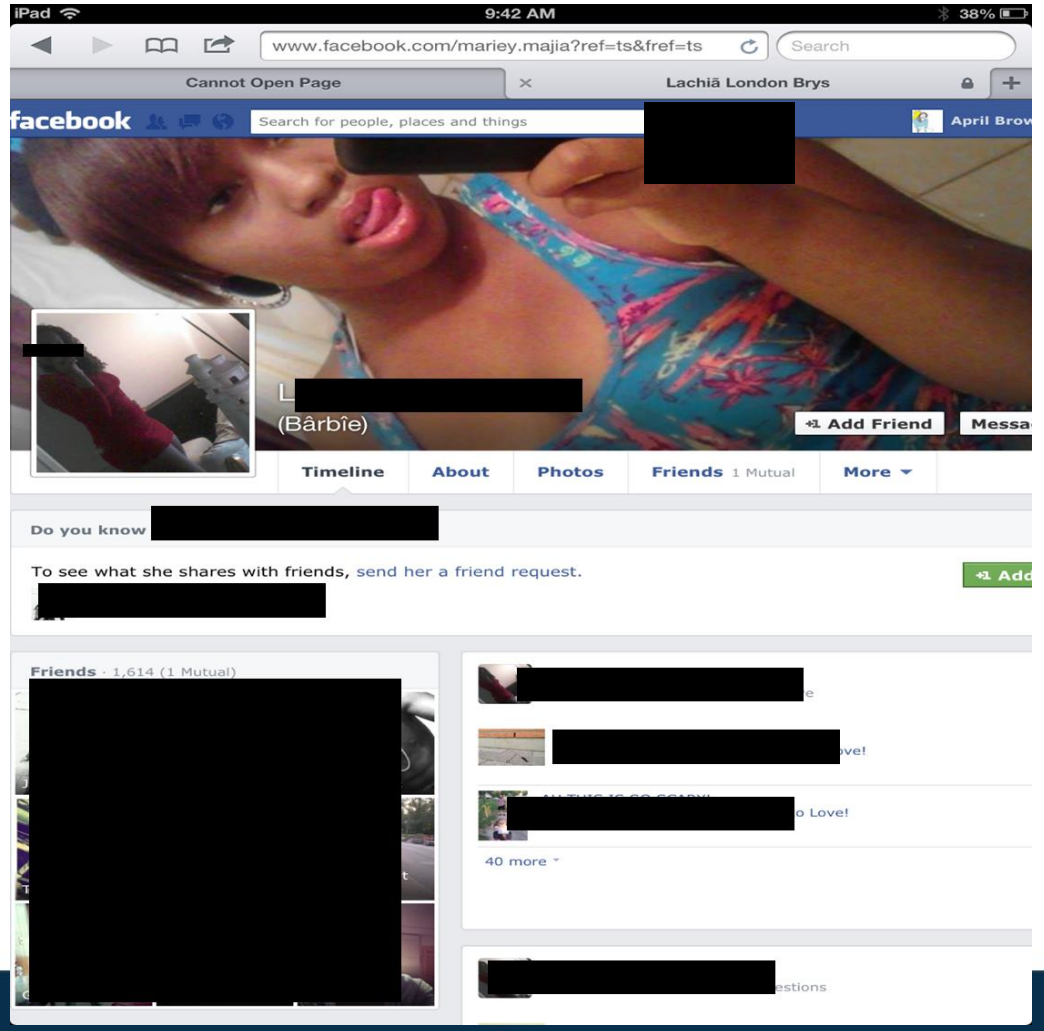
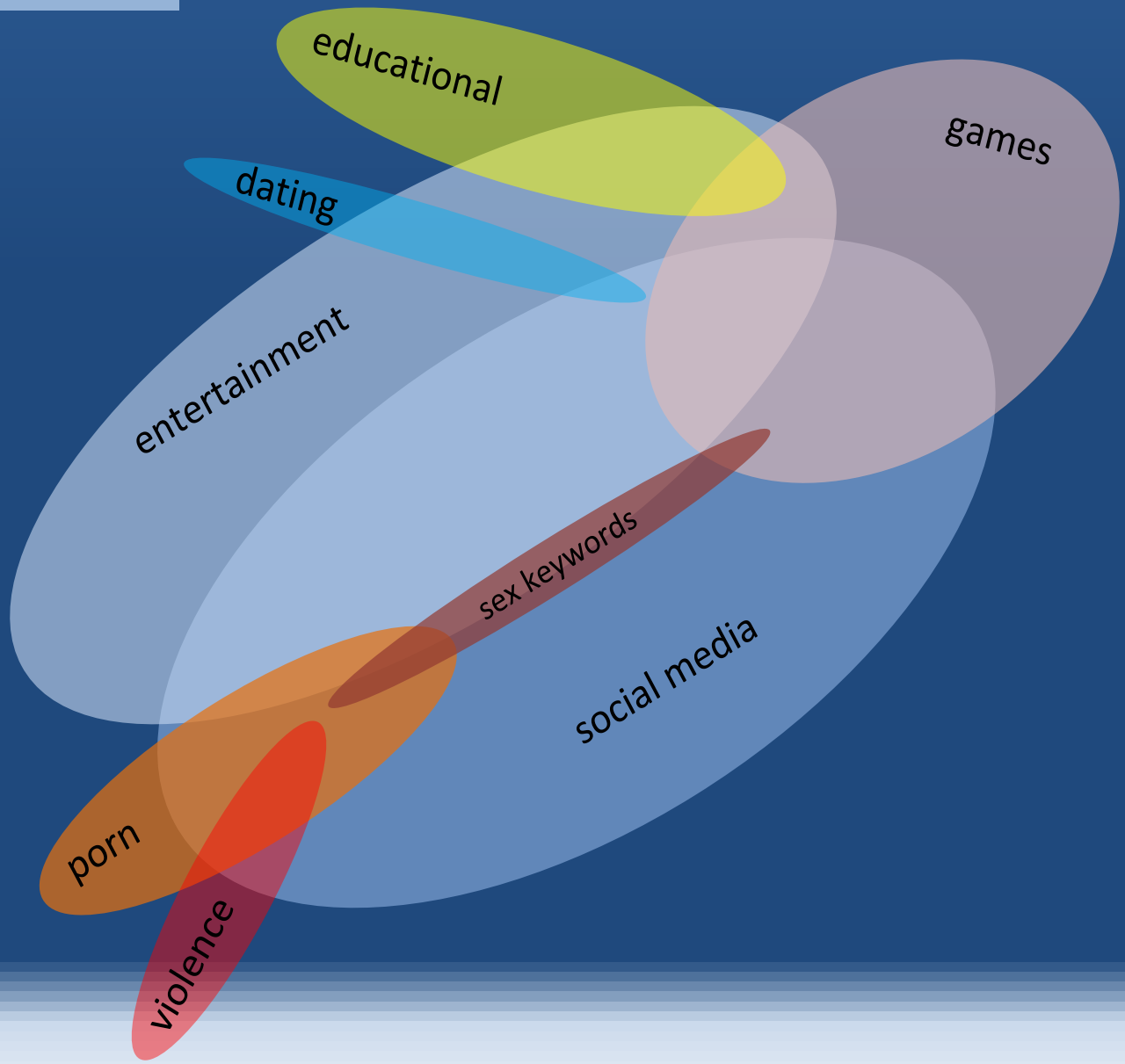


Figure 1. Sample screenshots from the ecological monetary assessment (EMA) component of the CopeSmart app.

Novel approaches to understanding risky behavior



35,000 total sessions



PennState

CHILD MALTREATMENT SOLUTIONS NETWORK

Abused

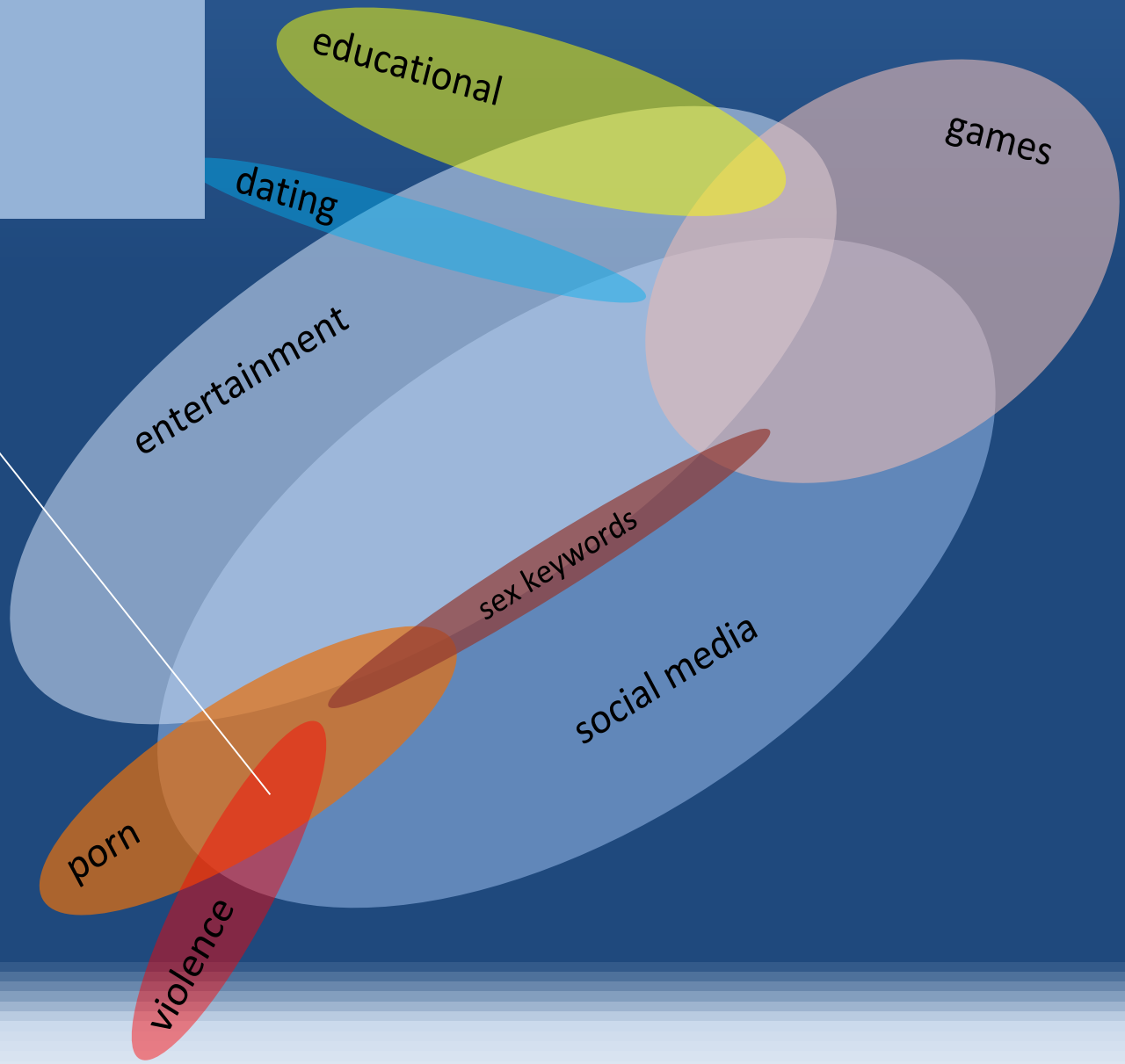
Online sex advances "gone too far"

Dangerous Offline meetings

FB friends "never met" ***(A)***

Night surfing

Sad



PennState

CHILD MALTREATMENT SOLUTIONS NETWORK

GAMES FOR HEALTH

Future Self / Possible Self

Fig. 1 Home page for the *CSI: Web Adventures* (http://forensics.rice.edu) website

Fig. 3 Evidence received after completing a facial reconstruction taken from *Case Three: Burning Star* in *CSI: Web Adventures*

Fig. 2 Procedure for making mold of shoeprint taken from *Case Three: Burning Star* in *CSI: Web Adventures*

(Beier, Miller, & Wang, 2012)

Development of an HIV Prevention Videogame Intervention: Lessons Learned

- E.g.1: *PlayForward: Elm City Stories*

Figure 1: Storytelling Using Graphic Illustration

Figure 2: Creation of the Aspirational Avatar

(Hieftje et al, 2017)

A game……
Anonymous, easy participation

Text “Bob” to 22333

Have you ever taken a partially nude or nude photo of yourself?

Yes

No

Start the presentation to activate live content

If you see this message in presentation mode, install the add-in or get help at PollEv.com/app

e you ever sent a partially nude or nude photo of yourself to someo

Yes

No

Start the presentation to activate live content

If you see this message in presentation mode, install the add-in or get help at PollEv.com/app

ever experienced negative outcomes from sending a partially nud photo to someone?

Yes

No

Start the presentation to activate live content

If you see this message in presentation mode, install the add-in or get help at PollEv.com/app

Have you ever taken a partially nude or nude photo of yourself?

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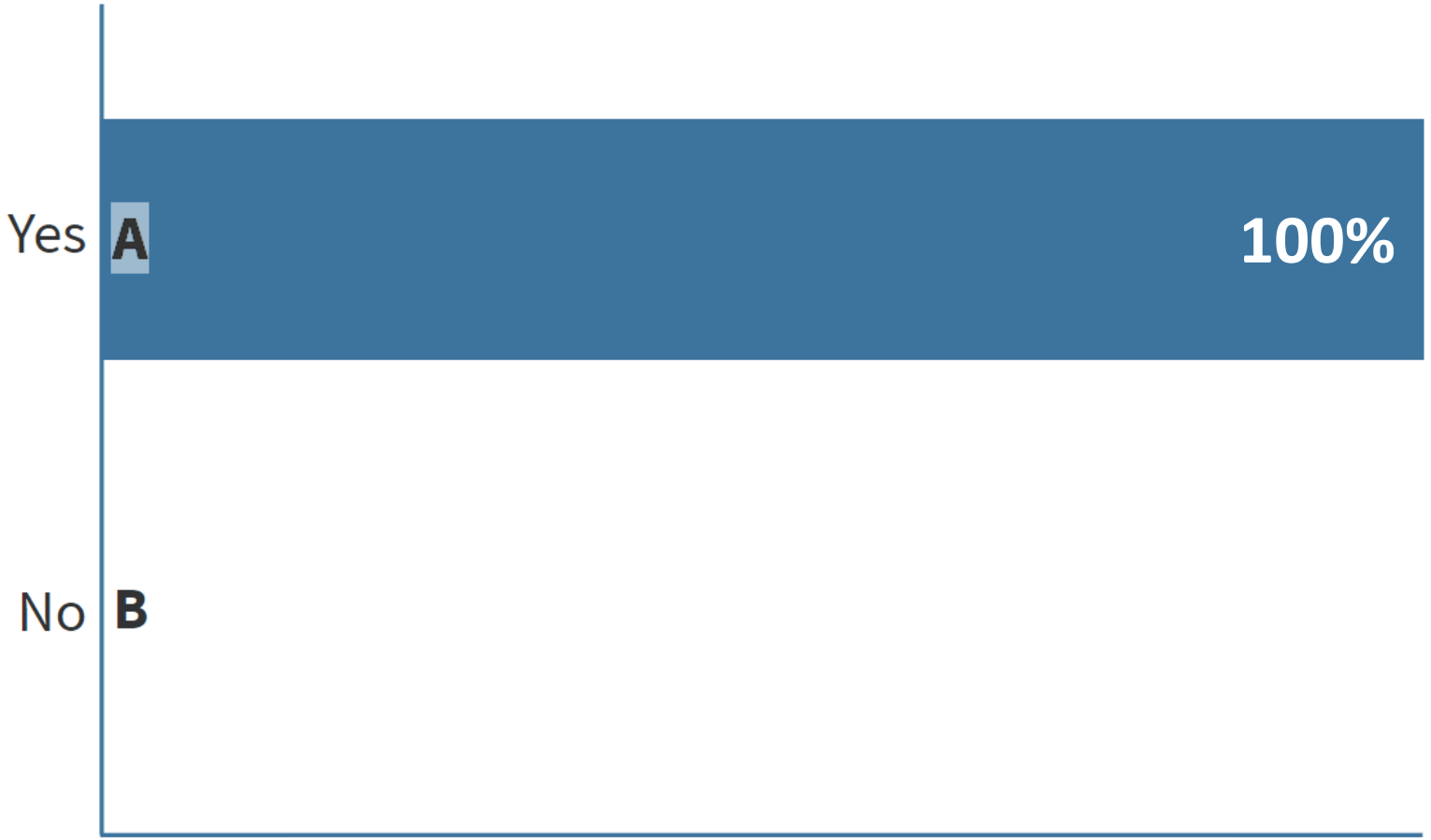

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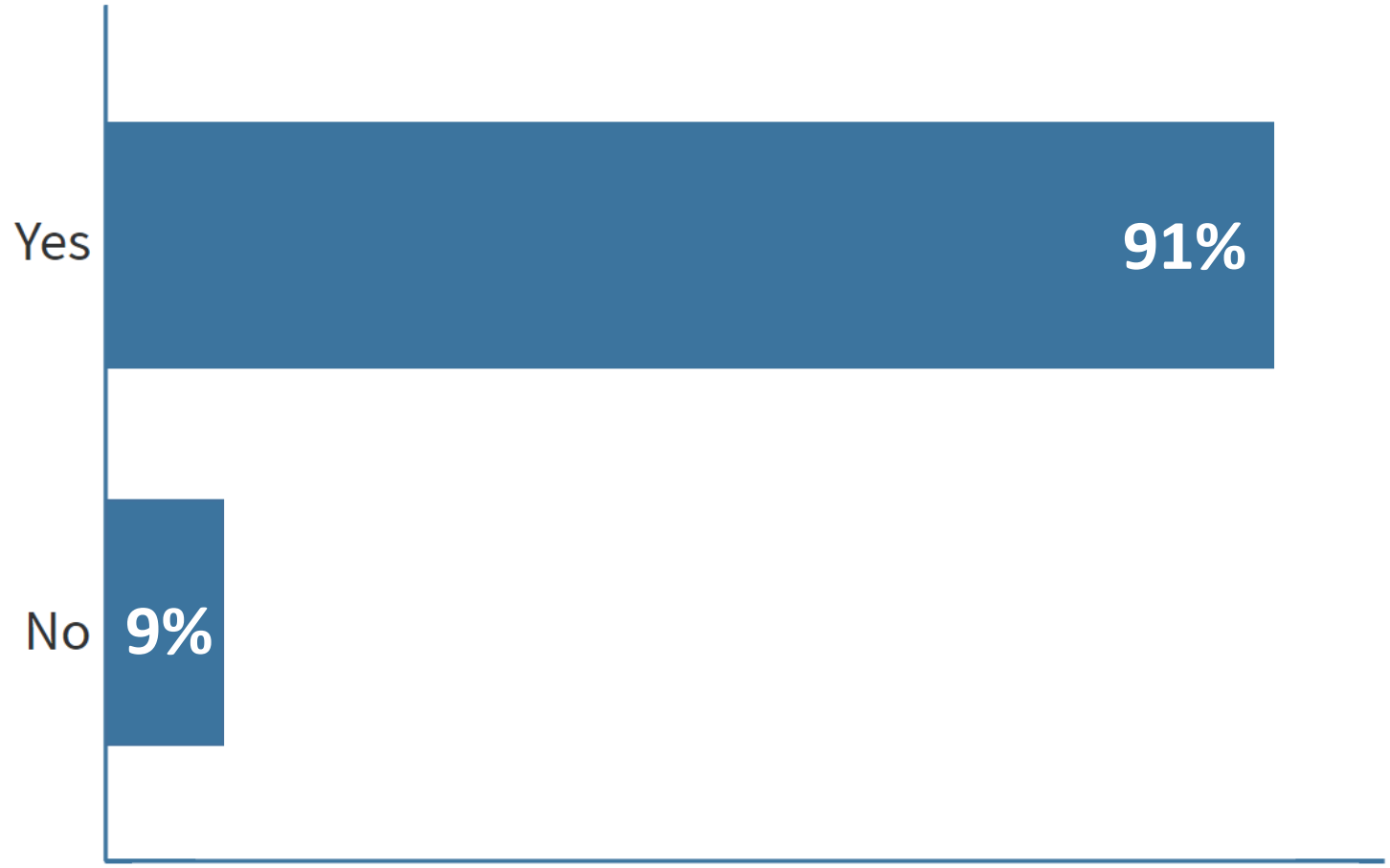

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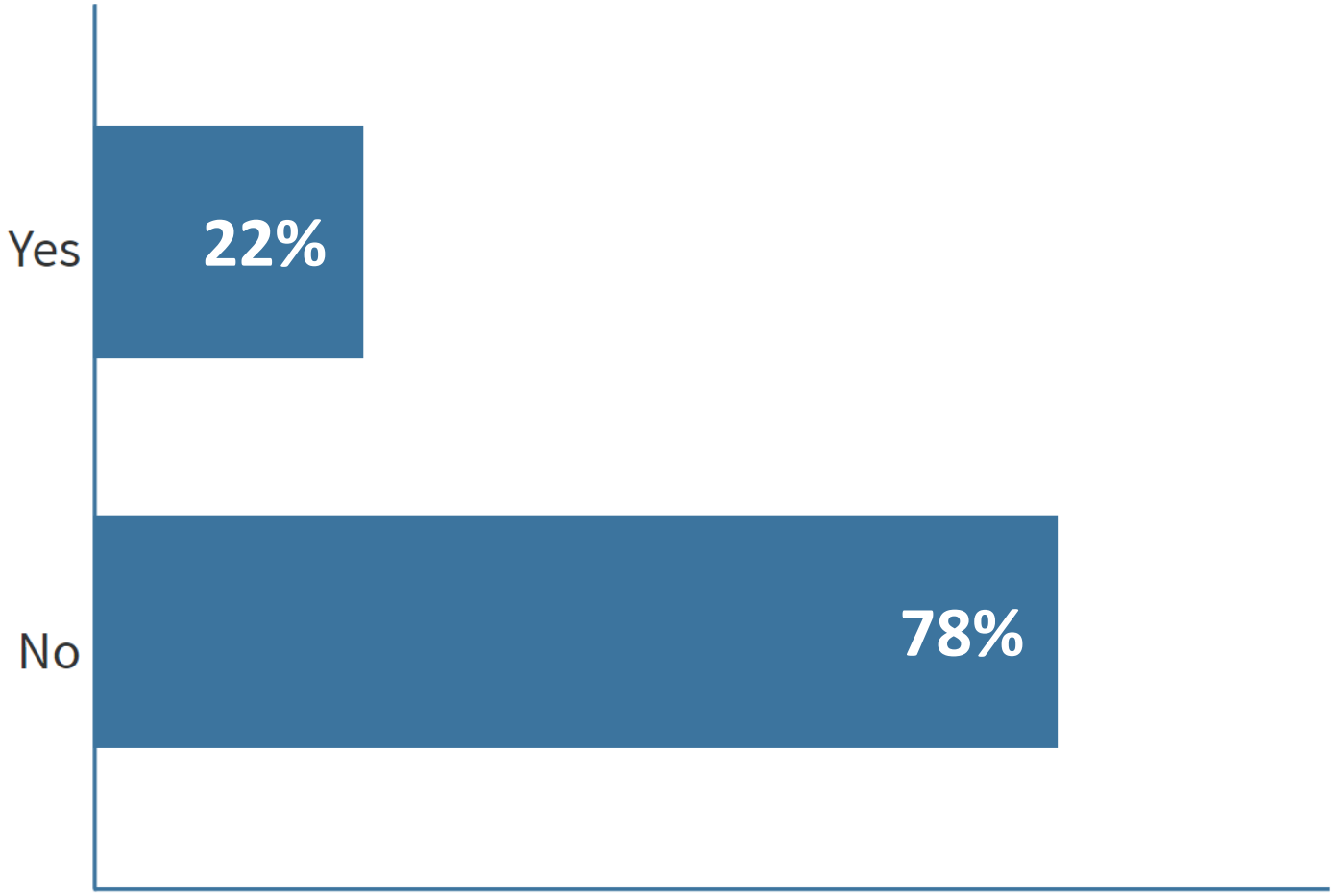

Gaming for Health

Relationships

Healthy habits/Goal setting

Decision-making

Challenges to Innovation

44

average a
first R01 f

PennState
Social Science
Research Institute

BRIDGES TO TRANSLATION III

happy valley launchbox

WHITE HOUSE
#HACKFOSTERCARE

NEW YORK CITY
#HACKFOSTERCARE

SILICON VALLEY
#HACKFOSTERCARE

LOS ANGELES
#HACKFOSTERCARE

MOON
SHOT