Indiana University Fairbanks School of Public Health

Precision Health Protection:
barriers and opportunities for industry

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Yuma Pacific Southwest 2019

Background

- "Total Exposure Health" -- a big idea out of USAF

- To leverage sensor technology and genetics for improved prevention (*an example*)

- Total Exposure Health Conference, September 2018

- "…bridging human exposure and precision medicine…"

- Address barriers to industry adoption

Quick discussion

- What are the key barriers to implementing TEH in industry ?

Barriers organized by…

- Workers

- Management

- Healthcare providers

- Occupational hygienists

Workers

- Protected health information

- Information used as screening tool

- Privacy / autonomy

Management

- Capital costs & system maintenance

- Iterative implementation

- Liability for failure to use data collected

- Data breach

Healthcare Providers

- Appropriate training & skills

- Assisted decision making vs. supplanted thinking

Occupational Hygienists

- Appropriate training & skills

- Assisted decision making vs. supplanted thinking

- De-valuing of observation

- Impact on upstream prevention

- Managing precision prevention

- Demonstrating compliance

- Accounting for the psychosocial environment

Societal-level

- Will entire industries or classes of people be passed over ?

- Will this ever account for poorly designed / low control / low pay jobs ?

Need for a purposeful approach

- Mapping of data protection and privacy issues

- Needs assessment for new skills required

- Examine through implementation science lens

- Explore ethics regarding inclusivity

- Plan for evaluation

Opportunities

- More effective health protection for more people

- If we don't do this, nothing will change

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