Precision Health Protection: barriers and opportunities for industry

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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. supplanlanted 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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