Socio-Ecological Model:
An Approach for Addressing Compassion Fatigue in Biomedical Research

Brianna Skinner, DVM, MPH, DACLAM

US Food and Drug Administration

Disclaimer

The findings and conclusions in this presentation are those of the author and do not represent the official position of the U.S. Food and Drug Administration nor the Department of Health and Human Services.

Compassion in Science

- Compassion is “sympathetic consciousness of others' distress together with a desire to alleviate it.” *Merriam-Webster Dictionary*
- Science is “the intellectual and practical activity encompassing the systematic study of the structure and behavior of the physical and natural world through observation and experiment.” *Oxford Dictionary*
- **Compassion in Science – When one’s knowledge, understanding, or experience is driven by a feeling, emotion, or urge to alleviate an occurrence of pain and suffering systematically through observation and exploration of the triggering phenomenon.**

Compassion Terminology

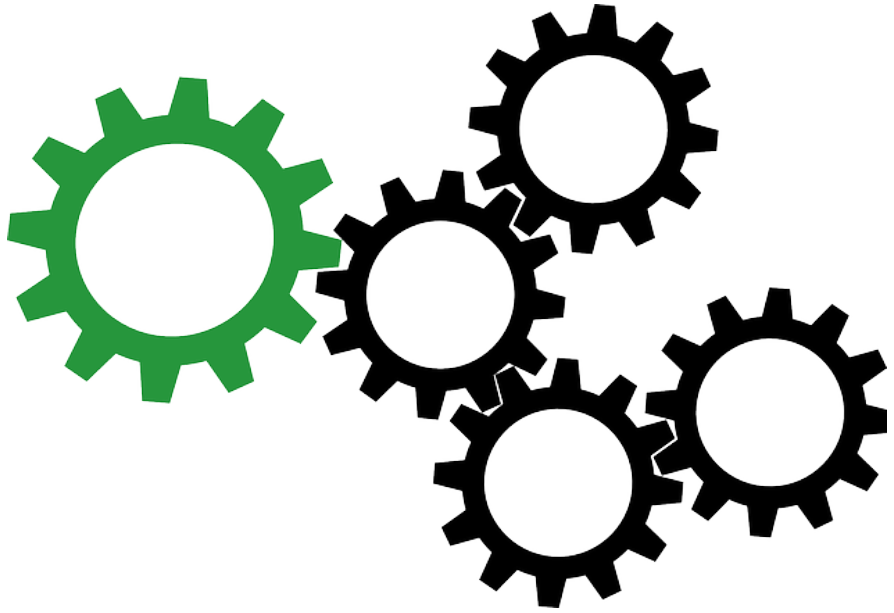
Compassion Stress	"the demand to be compassionate and effective in helping."
Compassion Fatigue (CF)	"exhaustion due to compassion stress, the demands of being empathic and helpful to those who are suffering. It's a combination of burnout and secondary trauma."
Compassion Satisfaction	"a sense of fulfillment or gratification from the work."

Figley, C. R., & Roop, R. G. (2006). *Compassion fatigue in the animal-care community*. Humane Society Press.

Systems Thinking with Compassion

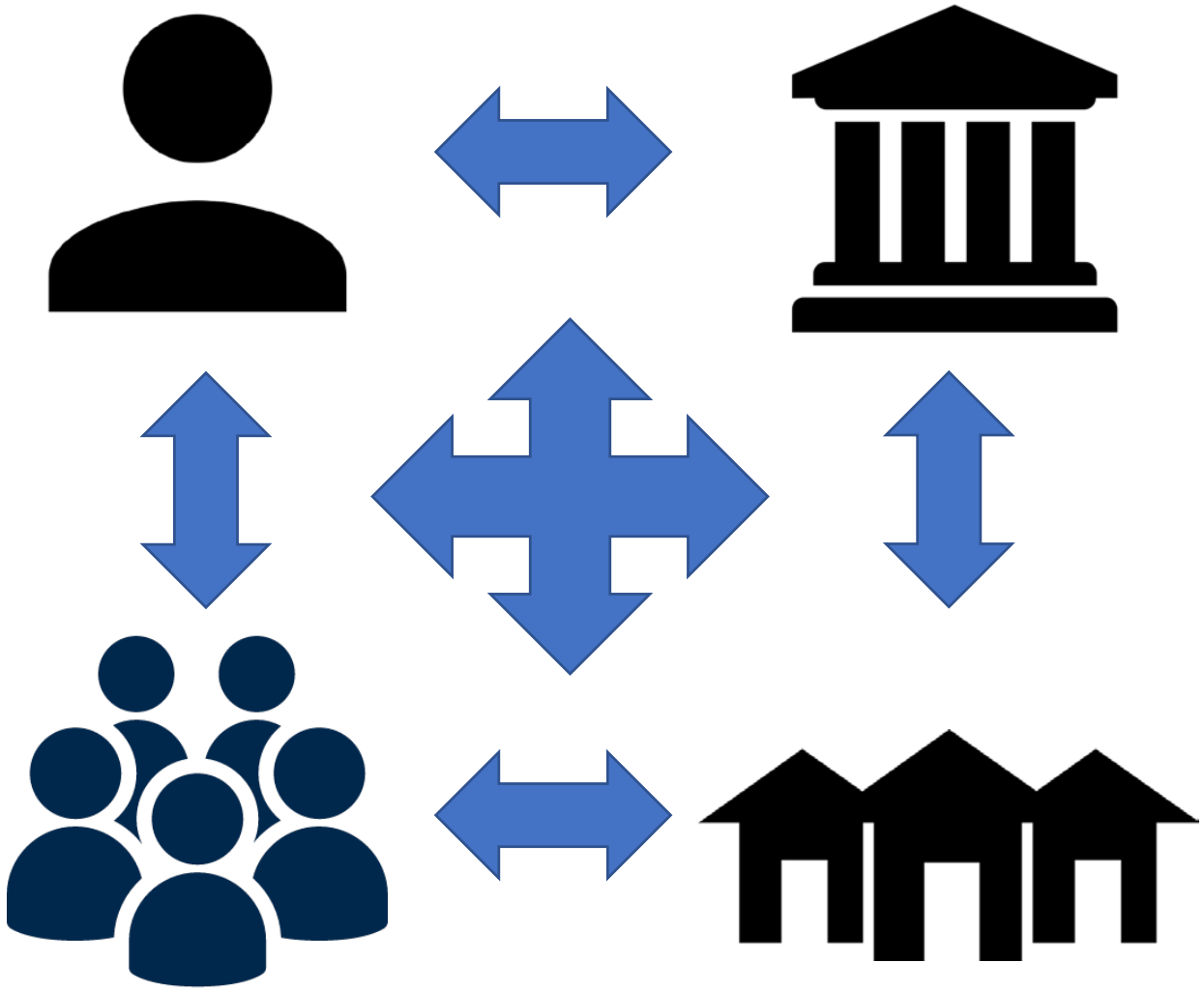
- Elements work together to generate the results you want…or want to change.
- An interplay between policies and procedures, infrastructure, spending decisions, human actions, and intangible drivers of behavior (e.g., trust, goodwill, etc.).

Centers for Disease Control and Prevention



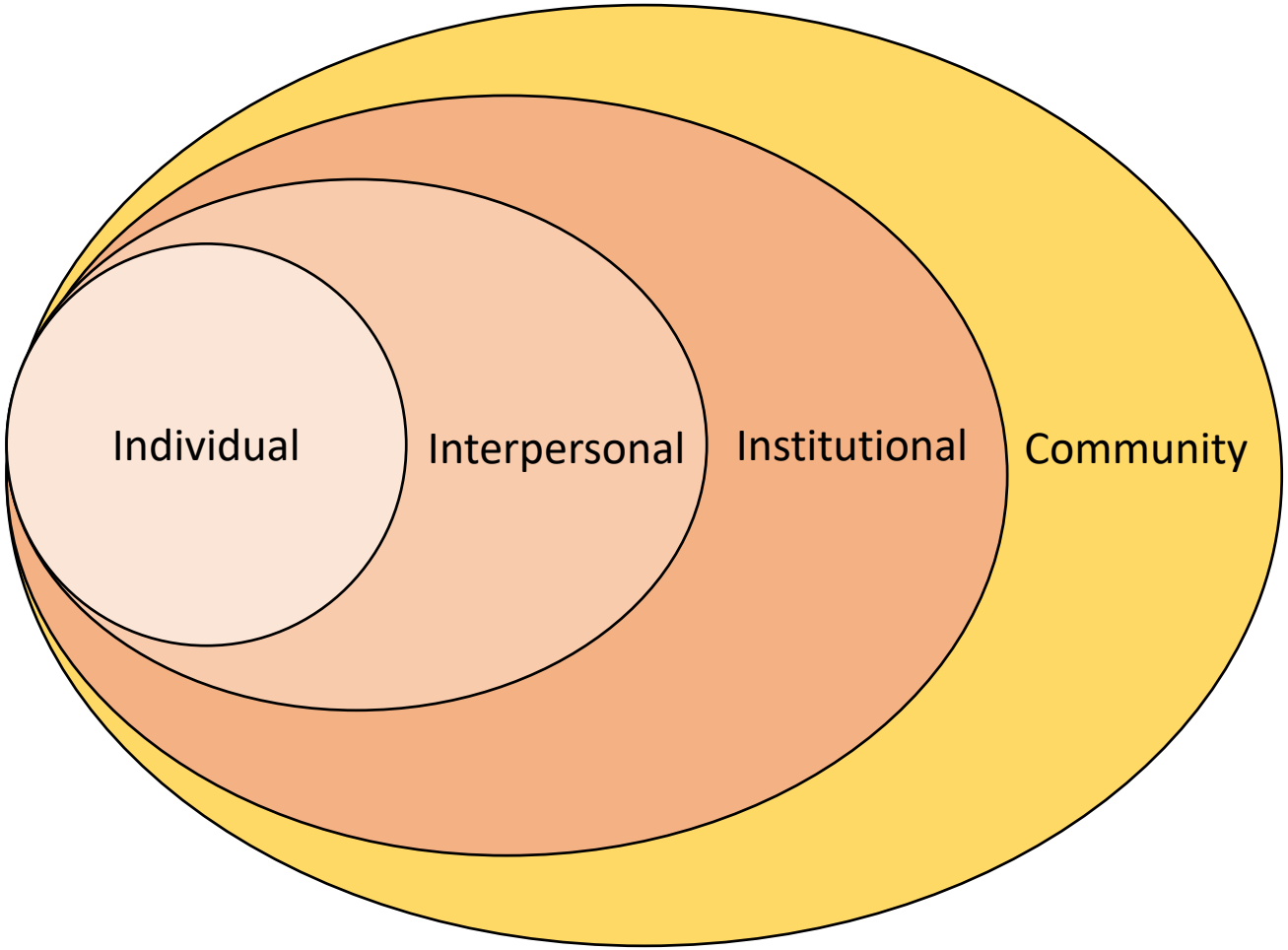
Systems Thinking with Compassion

- Causal factors and impact may be complex and dynamic
- May not be clearly defined
- Factors may change at any time
- Most are cyclic/circular rather than linear in focus
- Factors may be interconnected



What is the Socio-Ecological Model (SEM)?

- An interdependent group-based framework
- Looks at the social and behavioral factors relevant to an issue.
- Analyzes the interaction of influence and impact at multiple levels.
- A change in any level can effect other levels
- Risk Factors, interventions, and prevention efforts are addressed from all levels.

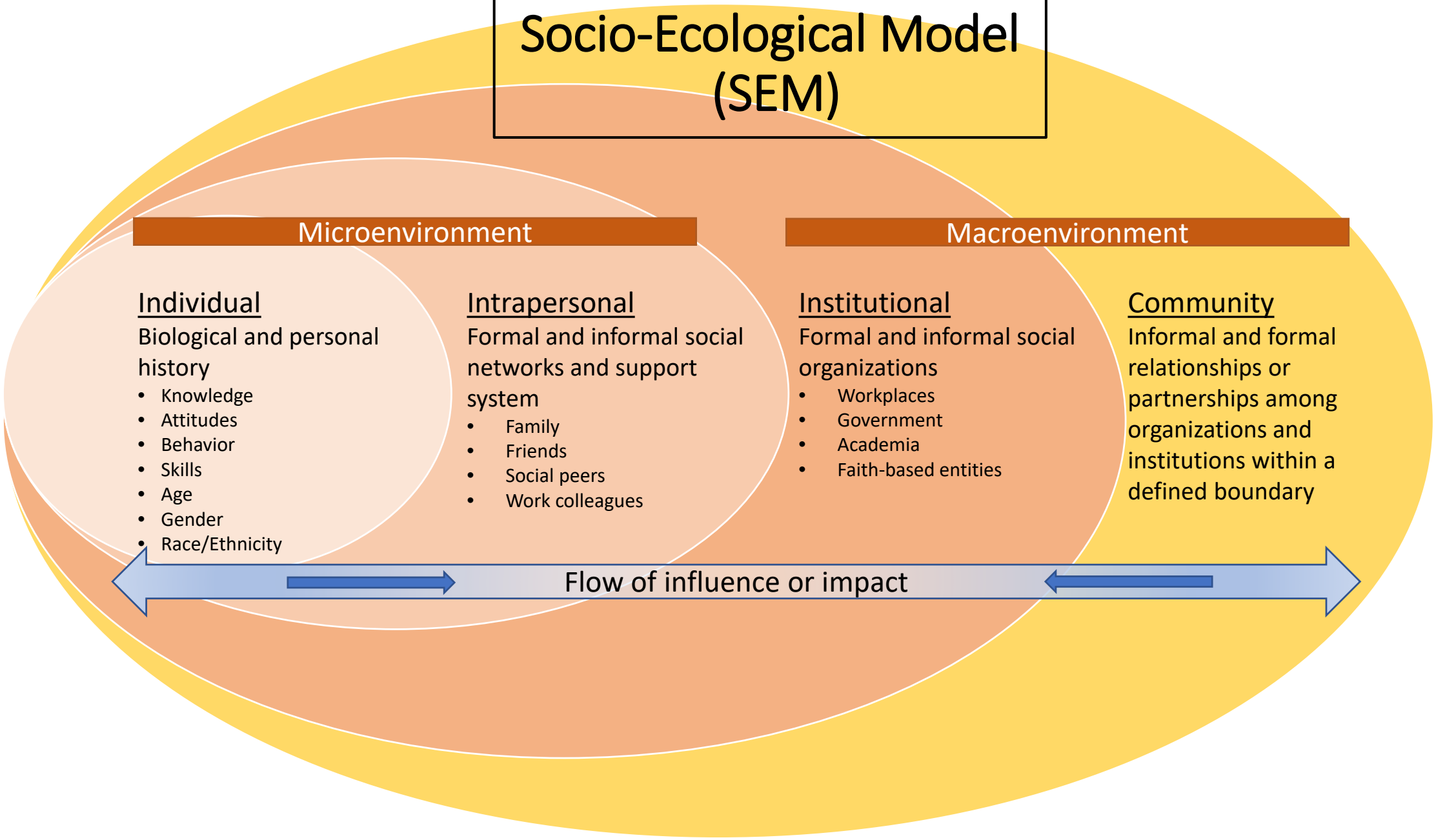


Modified from McLeroy KR, Bibeau D, Steckler A, Glanz K. (1988) An Ecology Perspective on Health Promotion Programs*, Health Education Quarterly*. 1988 Winter;15(4):351-77.

Evidence-Based Application of Framework for Decisions

- Research and peer-reviewed evidence
- Assessment of needs and resources for target populations
- Utilization of data and information systematically
- Application of information in program-planning
- Engage key stakeholders and community in decisions
- Evaluate plan or program (formative and summative)
- Disseminate what is learned

Socio-Ecological Model (SEM)



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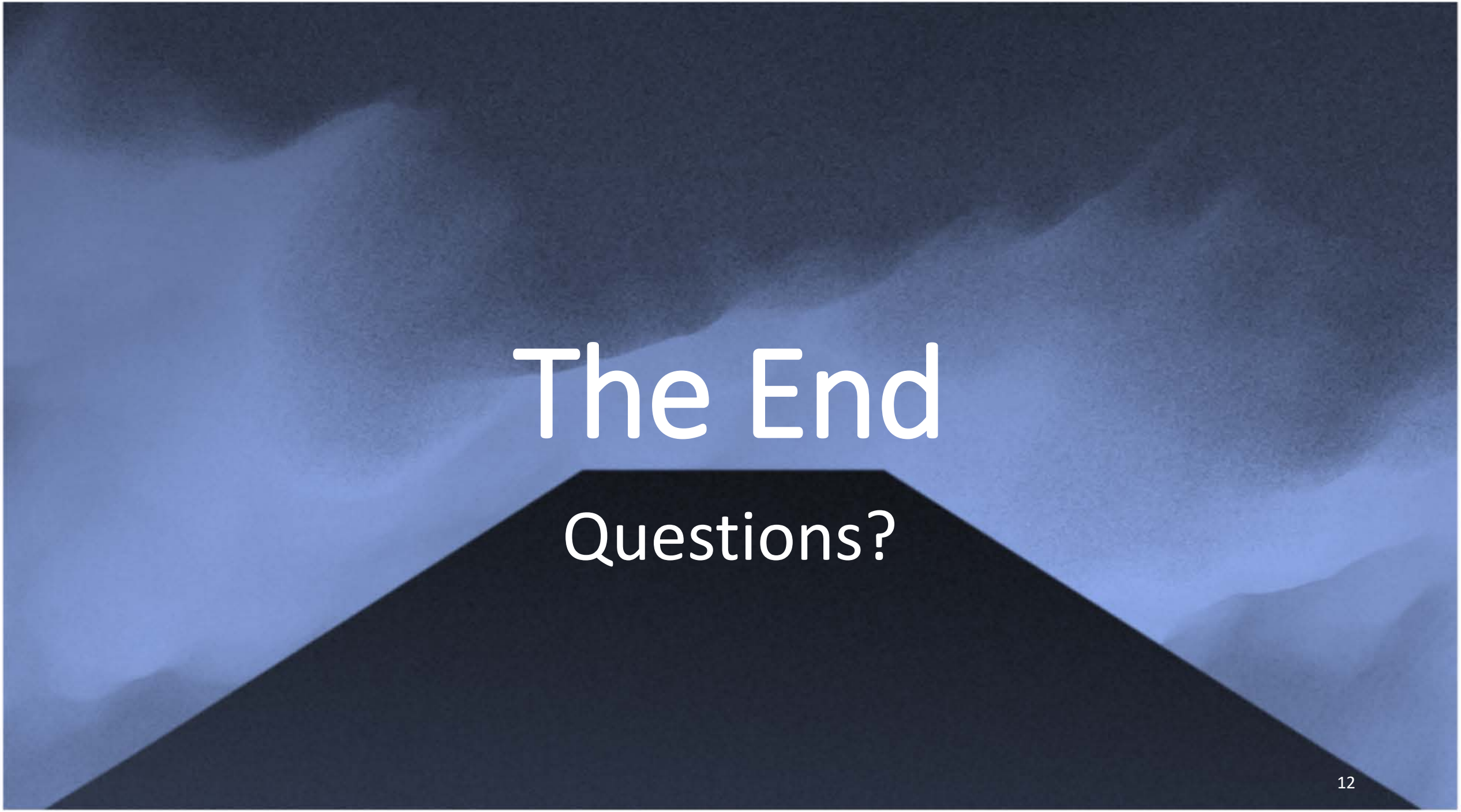
Social Level	Social/Environmental Risk Factor	Outcomes or impact	Intervention/Prevention
Individual	• High level of empathy • Lack of awareness or prevalence of CF • Training • Moral dilemma (animal use, research, euthanasia) • Demographic disparities	• Weariness/mental exhaustion • Health problems • Lack of confidence and coping skills • Cynicism • Lack of self-awareness and self-management	• One-on-one counseling and identifying triggers • Training on CF, emotional intelligence, self-care • Enhance provision of health services • Training and support in managing stress and enhancing resiliency
Intrapersonal	• Employee interaction • Family support • Social support	• Employee conflicts • Emotional unavailability or withdrawal • Separation/isolation • Not feeling respected	• Training in conflict management and emotional intelligence • Coaching and mentoring • Peer support • Mentoring, Team building and networking opportunities
Institutional	• Workplace culture and climate • Demand of job • Clarity about area of responsibility • Management and supervision • Workplace equality; diversity and Inclusion	• Workplace dread • High employee turnover • Frequent tardiness/absenteeism • Low productivity and work quality	• Employee support and incentive programs • Encourage employees to discuss how they are affected by their work in meetings and with supervisors. • Enhance employee engagement and empowerment • Encourage leadership training and skill development Implement guidance, rules and regulations
Community	• Transparency • Extent of knowledge sharing • Extent of collaboration and coordination • Political and power structures	• Distrust • Lack of shared knowledge and innovation • Creation of silos among professions and special interest groups • Administrative and regulatory burden; negative political climate towards research	• Improve understanding and enhance transparency in the biomedical research field • Research and surveillance of risk factors of occupational stressors in the biomedical research field • Community and stakeholder engagement; organizing strategies • Organizational partnerships to develop guidelines, advocate policy and analyze interventions and community outreach.

Future Implications for the Laboratory Animal Science Community

- More exploration and observations are needed on CF specific to biomedical research and laboratory animal science (LAS).
  - How can we prepare future members?
  - What risks are more prevalent in the LAS?
  - What factors significantly impact positive and negative outcomes in LAS?
  - What evidence-based policies and guidelines would be protective or influence positive outcomes for CF?
  - What are additional LAS institutional and community level interventions that can be implemented?


The End
Questions?

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