

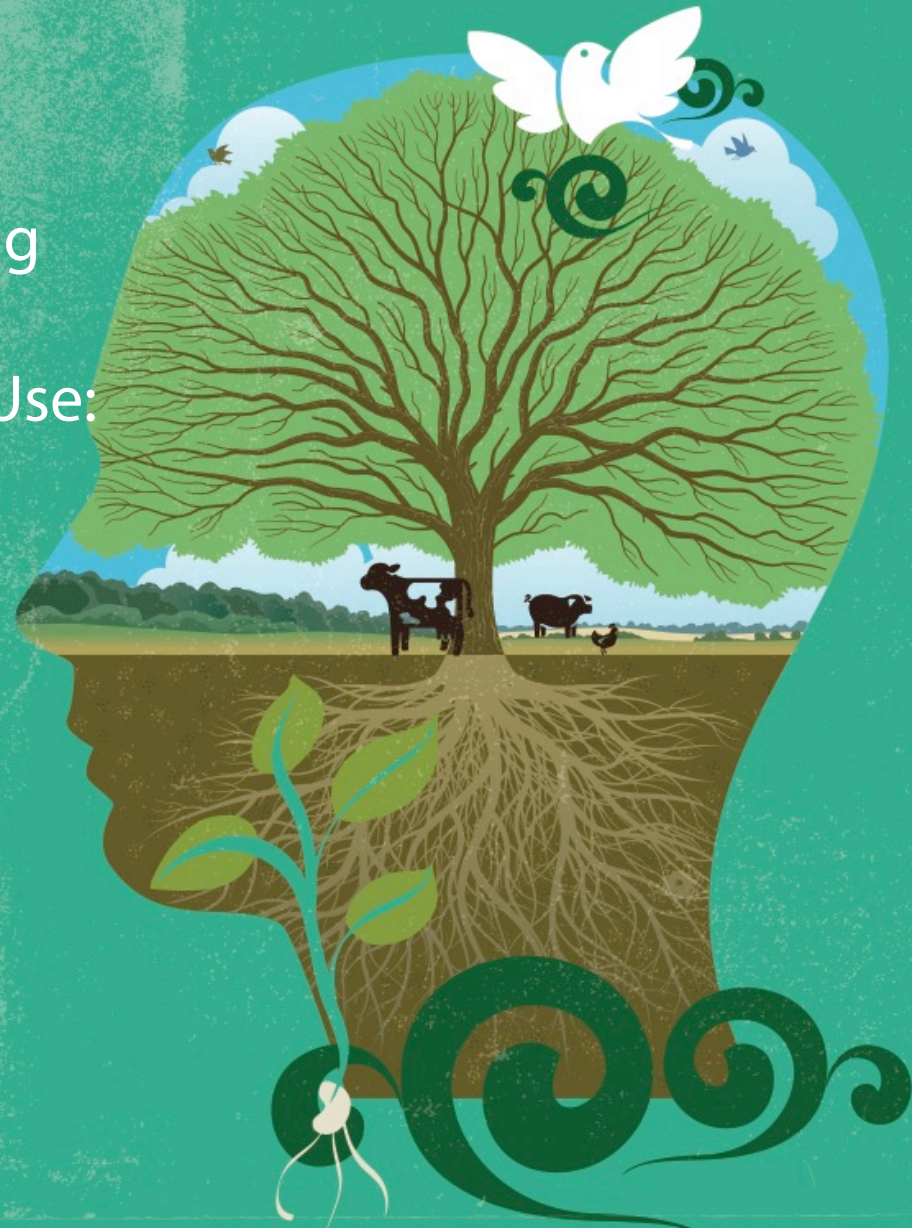


ONE HEALTH

# Understanding a Role of Emerging Technologies in Veterinarians' Decision-Making about Antibiotic Use: A One Health Approach

Michigan State University  
Grace YoungJoo Jeon, Maria Lapinski,  
Julie Funk, Bo Norby

May 7, 2017  
FoodCHI Workshop  
Presented by Grace YoungJoo Jeon





ONE HEALTH

# Defining “One Health”

- **Interdependency** of animal, environmental, and human health
- Large, **interdisciplinary integrated** research problems
- Beyond **zoonotic disease**



<http://www.cdc.gov/onehealth/about.html>



ONE HEALTH

# One Health Activities at MSU

- Held NIH-funded 'One Health' Symposia
- Created the One Health and Emerging Communication Technologies Research Consortia
- Published a paper mapping the conceptual areas for future research



# Emerging Technologies in Human Decision-Making & Behavior



Contents lists available at [ScienceDirect](#)

Social Science & Medicine

journal homepage: [www.elsevier.com/locate/socscimed](http://www.elsevier.com/locate/socscimed)



## Recommendations for the role of social science research in One Health

Maria Knight Lapinski<sup>a, b, \*</sup>, Julie A. Funk<sup>c</sup>, Lauren T. Moccia<sup>a</sup>

<sup>a</sup> Department of Communication, College of Communication Arts and Sciences, United States

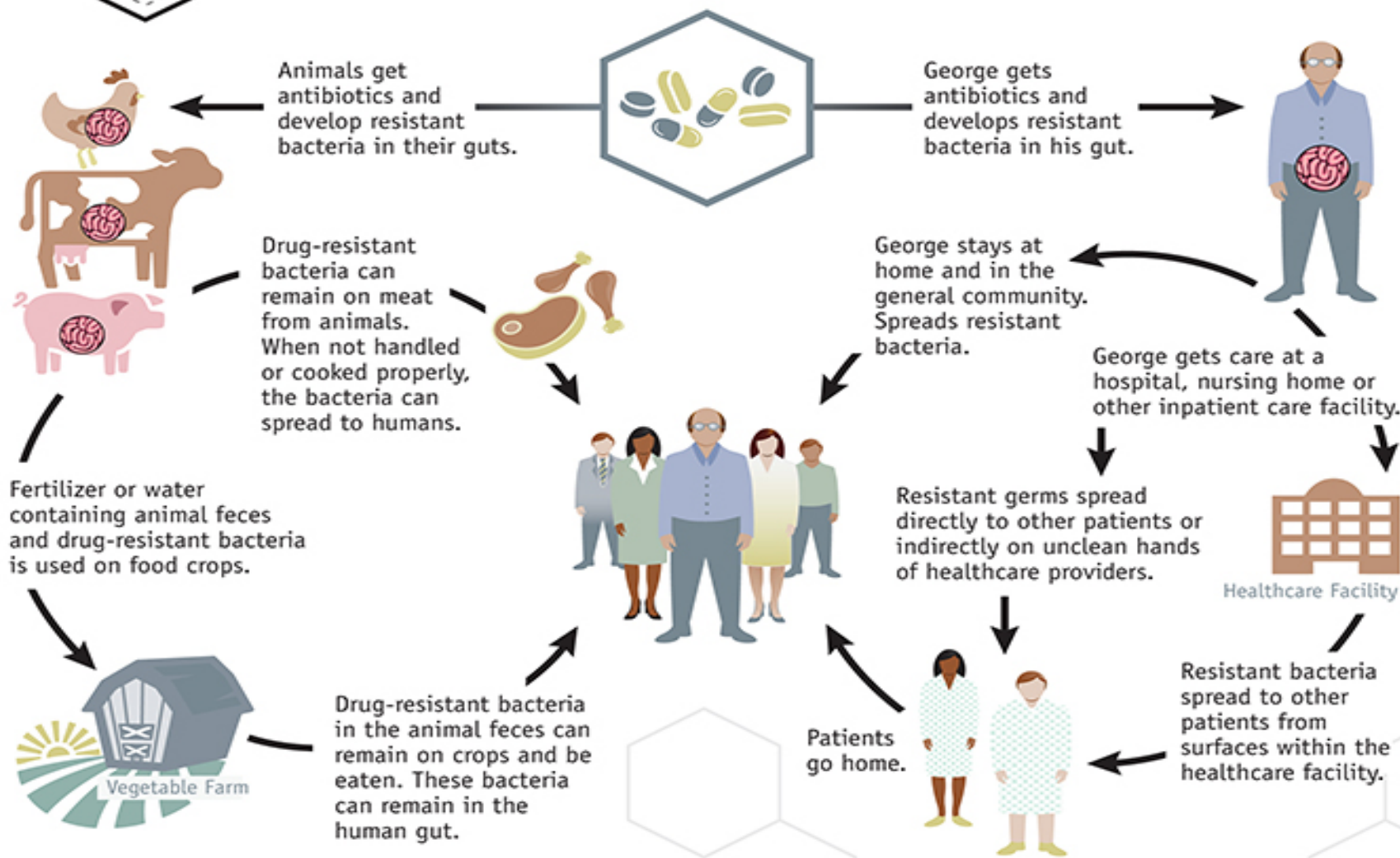
<sup>b</sup> Michigan Ag-Bio Research, Michigan State University, United States

<sup>c</sup> College of Veterinary Medicine, Michigan State University, United States

Lapinski, M. K., Funk, J. A., & Moccia, L. T. (2015). Recommendations for the role of social science research in one health. *Social Science & Medicine*, 129, 51-60.

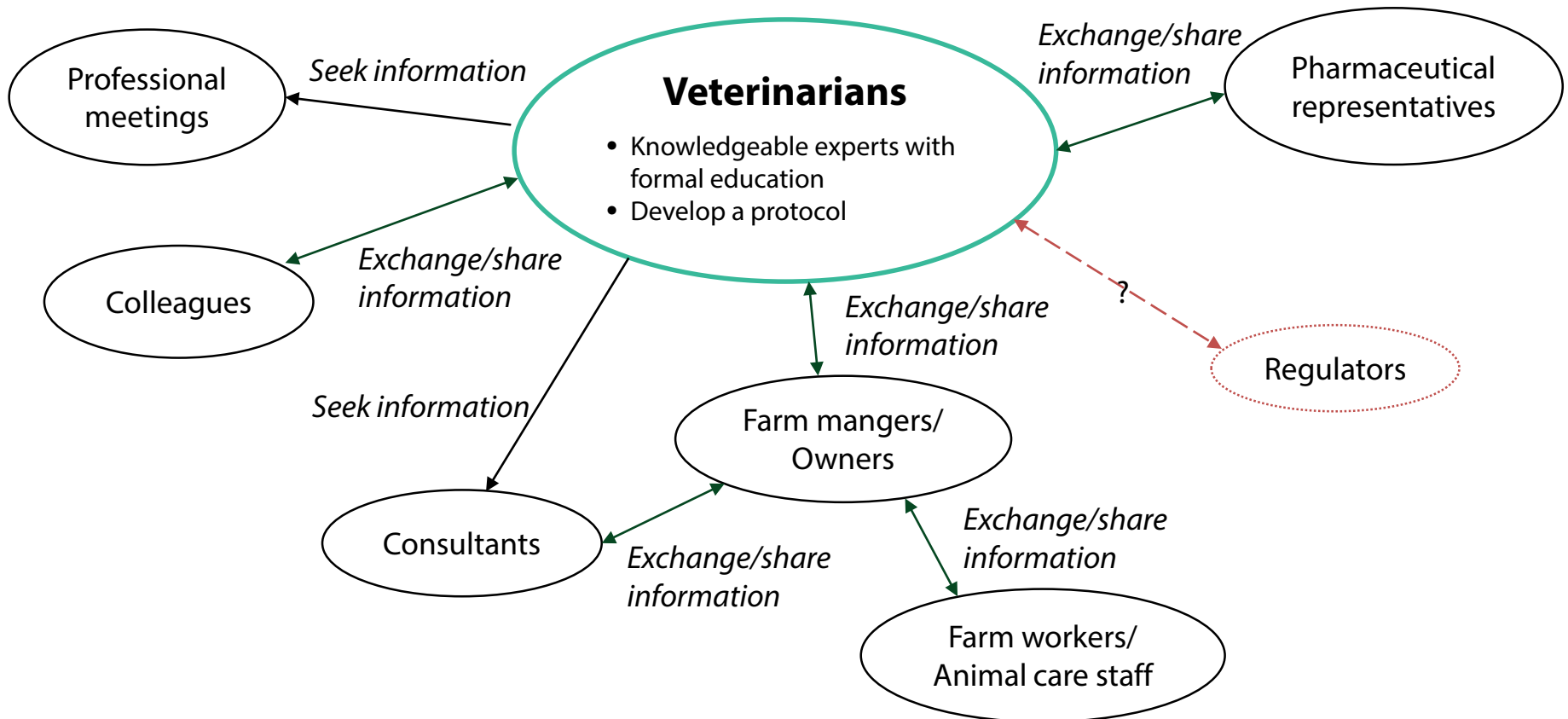


## Examples of How Antibiotic Resistance Spreads



**Simply using antibiotics creates resistance. These drugs should only be used to treat infections.**

# Decision Map: Antibiotic Use in Food Animals





ONE HEALTH

# Our Current Research Project

- **Goals:**
  - Examine decision-making processes and information practices of veterinarians in the context of antibiotic use
  - Identify currently available public online data sources on antibiotic resistance
  - Begin creation of a digital tool



ONE HEALTH

# Data Collection in Progress

- Completed initial key informant interviews
- Currently interviewing food animal veterinarians in Michigan
  - Clinical decision-making around antibiotic use
  - Tools and resources they use in making decisions
  - Thoughts on antibiotic resistance in general





ONE HEALTH

# Next Phase & Future Work

- To build a pilot digital tool to help veterinarians access useful information sources
- Examples of information sources:
  - US and international health organizations (e.g., CDC, FDA, WHO)
  - Non-profit organizations (e.g., universities, extensions)
  - Drug companies
- Future work:
  - Expand our work to address needs of other stakeholders (e.g., extension educators and producers)
  - Create a visualization tool



ONE HEALTH

# Expected Contributions

- Inform designers of the needs of veterinarians to help them create better tools and technologies for veterinarians
- Help veterinarians better take advantage of existing useful resources available online in their decision-making through creation of a digital tool
- Help identify effective ways to mitigate antibiotic resistance through improved antibiotic stewardship



ONE HEALTH

**Thank you!**

For more information,  
contact **Grace Jeon** at  
**[gyj@msu.edu](mailto:gyj@msu.edu)**

**Acknowledgements:**

This research is funded by a Michigan Applied Public Policy Research grant from the MSU Institute for Public Policy and Social Research.

