

Minnesota One Health Antibiotic Stewardship Collaborative

*Increasing awareness and behavior change
through a collective mission, cross-disciplinary
learning, and sharing of evidence-based
approaches to antibiotic stewardship*



MINNESOTA

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PACCARB Public Meeting, January 31, 2019

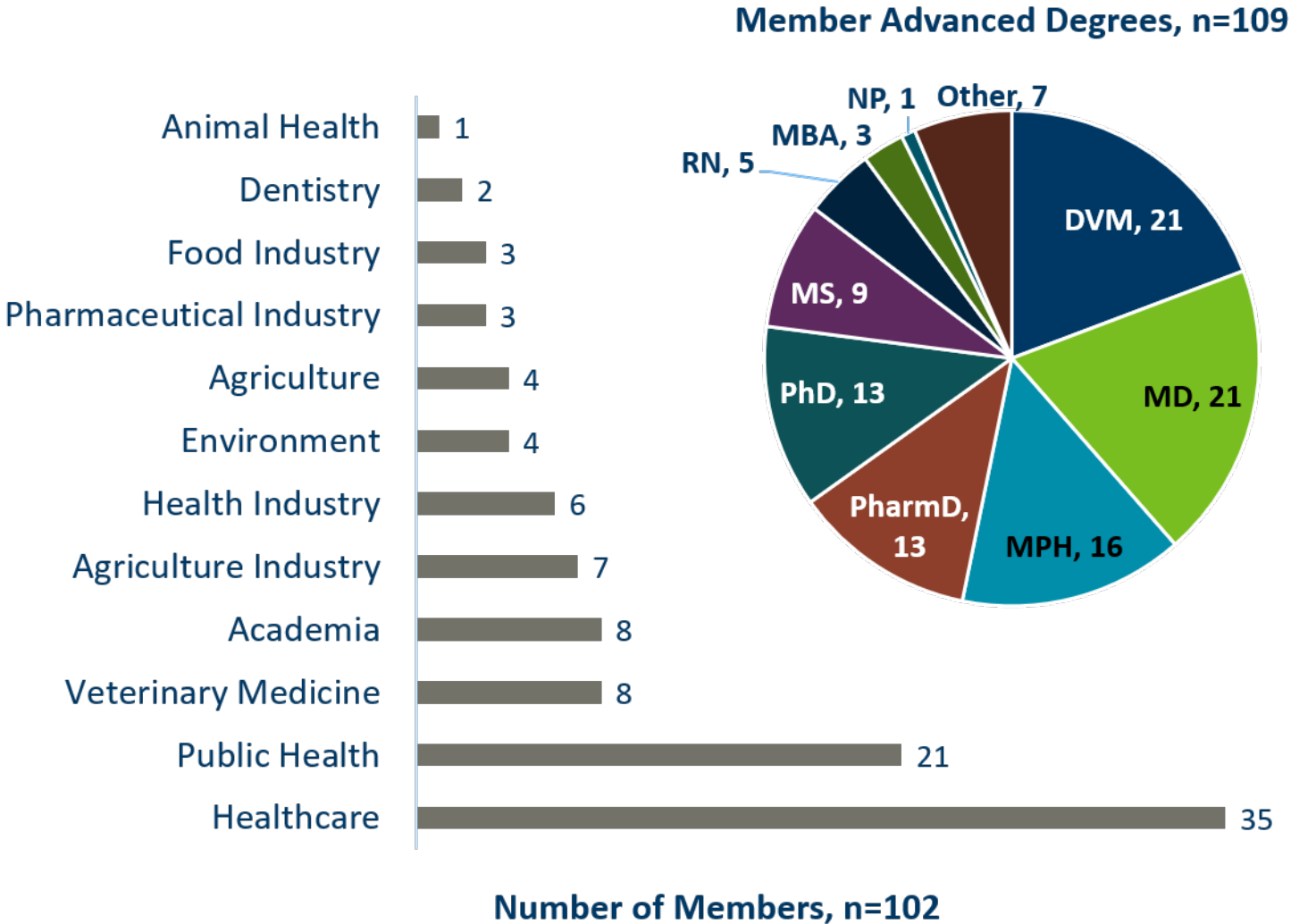
Conflicts of Interest

- No financial relationships to disclose

MN One Health Antibiotic Stewardship Collaborative (MOHASC)

Collaborative Participants

- **State agencies** of health, agriculture, environment, animal health
- **Healthcare professionals** from inpatient, outpatient, long-term care, dentistry
- **Veterinary professionals** from large and small animal clinical practice
- **University researchers** from veterinary medicine, engineering, chemistry, pharmacy, medicine
- **Industry and professional organizations**, human and animal
- **Pharmaceutical companies**, human and animal



Communicating Collaboratively

MOHASC Vision

Minnesota leaders in human, animal, and environment health will work together to raise awareness and change behaviors to preserve antibiotics and treat infections effectively.

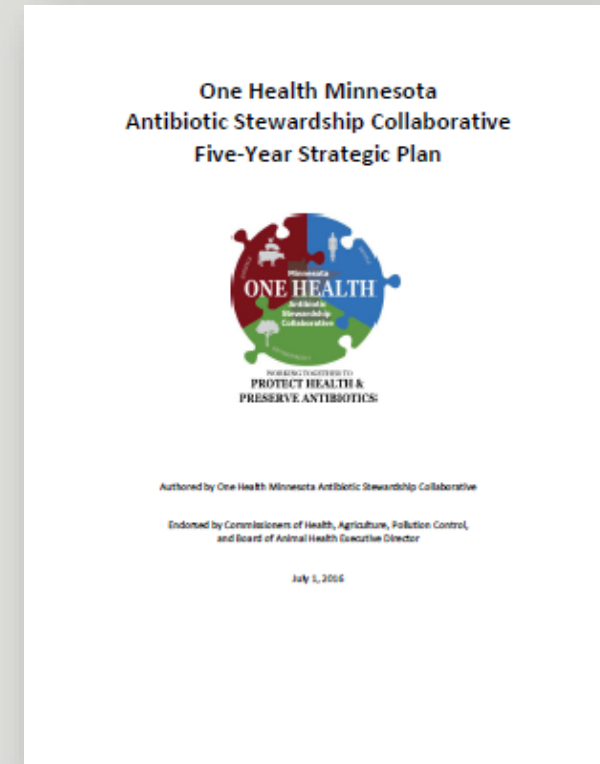


Communication Approach:

- Human, animal, and environmental health are inseparable.
- All antibiotic use can lead to resistance.
- There is some contribution to resistance from every sector using antibiotics
- Lack of “proof” of harm is not an argument for irresponsible use.
- Greater abuse in other disciplines is not an argument for injudicious use in yours.
- There are unreasonable critics.
- Behavior change is key.

Five-Year Strategic Plan Goals (2016-2021)

- Promote understanding of One Health antibiotic stewardship
- Improve human antibiotic stewardship
- Improve animal antibiotic stewardship
- Develop “antibiotic footprint” tools



How MOHASC Works

Operational Logistics

- **Annual in-person meeting**
 - Discussion of hot topics in each health discipline, Q&A
- **4 Work Groups align with strategic plan goals**
 - Quarterly calls held to advance projects
- **Email bulletin**
 - >700 recipients in MN and beyond
 - Stewardship news from all health disciplines, education opportunities, MOHASC updates
- **Website**
 - Platform for human, animal, environmental health professionals, educators, public
- **Multistate One Health stewardship quarterly call**
 - Federal agencies, national organizations, >20 states

Impact

- **Collective vision magnifies state investment**
 - 1.0 FTE at Minnesota Department of Health
 - >1,000 hours/year of in-kind member contributions
- **A common mission energizes daily stewardship practice**
 - New resources, ideas, research opportunities
- **Networking drives practice change**
 - Mentorship that benefits giver and recipient
 - Improved continuing education offerings
- **Evidence-based approaches are shared to fill gaps**
 - Healthcare tools modified for other care settings and for animal health
- **Together, we ensure the public receives reliable information**
 - Website, fact sheets, videos, Minnesota State Fair booth

Sharing Stewardship Approaches Across Facilities, Settings, Disciplines

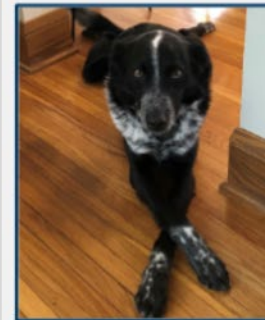
- **Antibiotic Stewardship Honor Roll Program for Acute Care and Long-Term Care**
 - Three levels provide incentive to improve stewardship over time
 - Gold “Collaboration” level fosters mentorship, improved prescribing and communication across care transitions
- **Antibiotic use measurement with point prevalence**
 - Used to measure healthcare antibiotic use nationally
 - First point prevalence survey ongoing at university veterinary hospital
- **Commitment posters for multiple care settings**
 - Evidence-based approach to change prescribing behavior
 - Customizable, with facility logos and photo

DENTISTS ARE ANTIBIOTIC STEWARDS!
I pledge to preserve the power of antibiotics.

Cold or Flu?
Antibiotics Won't Help You!

PAWS FOR A SECOND.

Are antibiotics needed in this case?



Antibiotics aren't always the answer.
At our clinic, we use professional guidelines and lab testing to help make the best decisions for our patients.
Ask us about how we are helping to preserve antibiotics by using them wisely.



Learn more about antibiotic resistance and stewardship:
www.health.state.mn.us/onehealthabx



ORGANIZATION
antibiotics for bacterial infections.

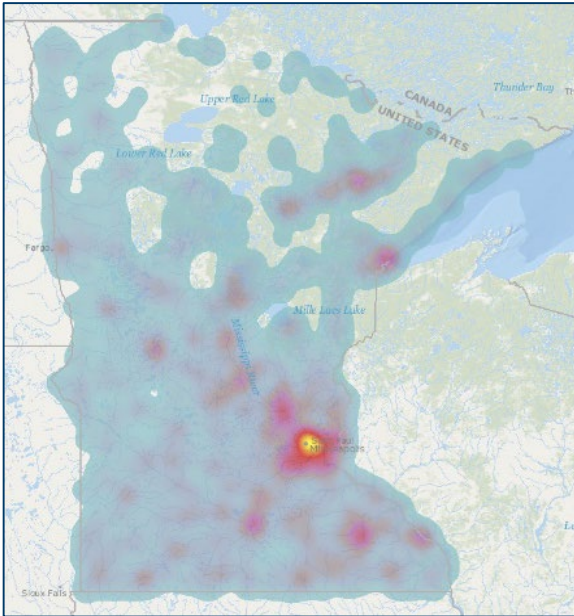


Antibiotic resistance and stewardship at:
mn.us/onehealthabx



Using Minnesota's Antibiotic Footprint to Define Consequences of Antibiotic Use and Drive Behavior Change

Mapping Minnesota's Antibiotic Footprint in the Natural Environment



1. Map-based modeling

- Where are antibiotics used, and where do they end up?

2. Environmental sampling

- Measure antibiotic concentrations, resistance genes in environment

3. Model validation

Outcomes

- Develop a tool to predict environmental contamination with antibiotics and resistance genes
- Propose risk-based mitigation and behavior change strategies to minimize antibiotic resistance
- Maximize impact of funds invested to protect environmental, human, and animal health

The “D”s of Antibiotic Stewardship Drive Behavior Change

- **Diagnosis.**
- **Drug.**
- **Dose.**
- **Duration.**
- **De-escalation.**
- **Disposal.** Dispose of antibiotics properly. Do not put in sink, toilet, or trash.

~~D=5~~

D=6

Professional and Public Engagement to Increase Knowledge

Minnesota State Fair



Antibiotic Stewardship Professional Exchanges



Annual Meetings



Acknowledgements

- **Minnesota One Health Antibiotic Stewardship Collaborative membership**
- **Ruth Lynfield MD**, State Epidemiologist and Medical Director, Minnesota Department of Health
- **Beth Thompson JD, DVM**, State Veterinarian and Executive Director, Minnesota Board of Animal Health
- **Minnesota Commissioners** of Health, Agriculture, Pollution Control Agency
- **Emma Leof MPH**, CSTE Applied Epidemiology Fellow
- **Minnesota Department of Health HAI-AR Unit staff**
- **CDC Division of Healthcare Quality Promotion** for continued ELC funding of MOHASC Director position



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