



FISH & SHRIMP

Antimicrobial resistance has been documented in bacterial pathogens that affect aquatic animal health and can have significant economic consequences. Therefore, preventing infections and preserving the efficacy of antimicrobials to treat, prevent and control infections is crucial.

PATHOGEN OF CONCERN:

- *Edwardsiella* spp.
 - *E. ictaluri*
 - *E. piscicida*
- *Aeromonas* spp.
 - *A. salmonicida*
 - *A. hydrophila*
 - *A. liquefaciens*
- *Flavobacterium psychrophilum*
- *Vibrio parahaemolyticus*
- *Vibrio vulnificus*

Antimicrobial-resistant infections affecting fish and shrimp can have significant economic and health impacts on animals and the environment.

What you need to know

- Some antimicrobial drugs used in aquatic animal medicine are available through over-the-counter and online sales, many of which are prohibited. Their extralabel use may be illegal, potentially compromising our ability to treat both aquatic animal and human infections. Taking these prohibited antimicrobials off the market may help reduce the development and spread of antimicrobial resistance.
- Antimicrobial-resistant aquatic animal and human pathogens have been found in fish and shellfish.

WHAT VETERINARIANS CAN DO:

- Maintain strict biosecurity practices to prevent or minimize the spread of disease within an aquaculture facility.
- Enact proactive management techniques in fish culture settings, such as:
 - Remove dead or moribund fish as soon as possible.
 - Reduce fish stressors as much as possible.
 - Monitor fish for signs of early infection.
- Provide judicious and evidence-based stewardship approaches to antimicrobial use.