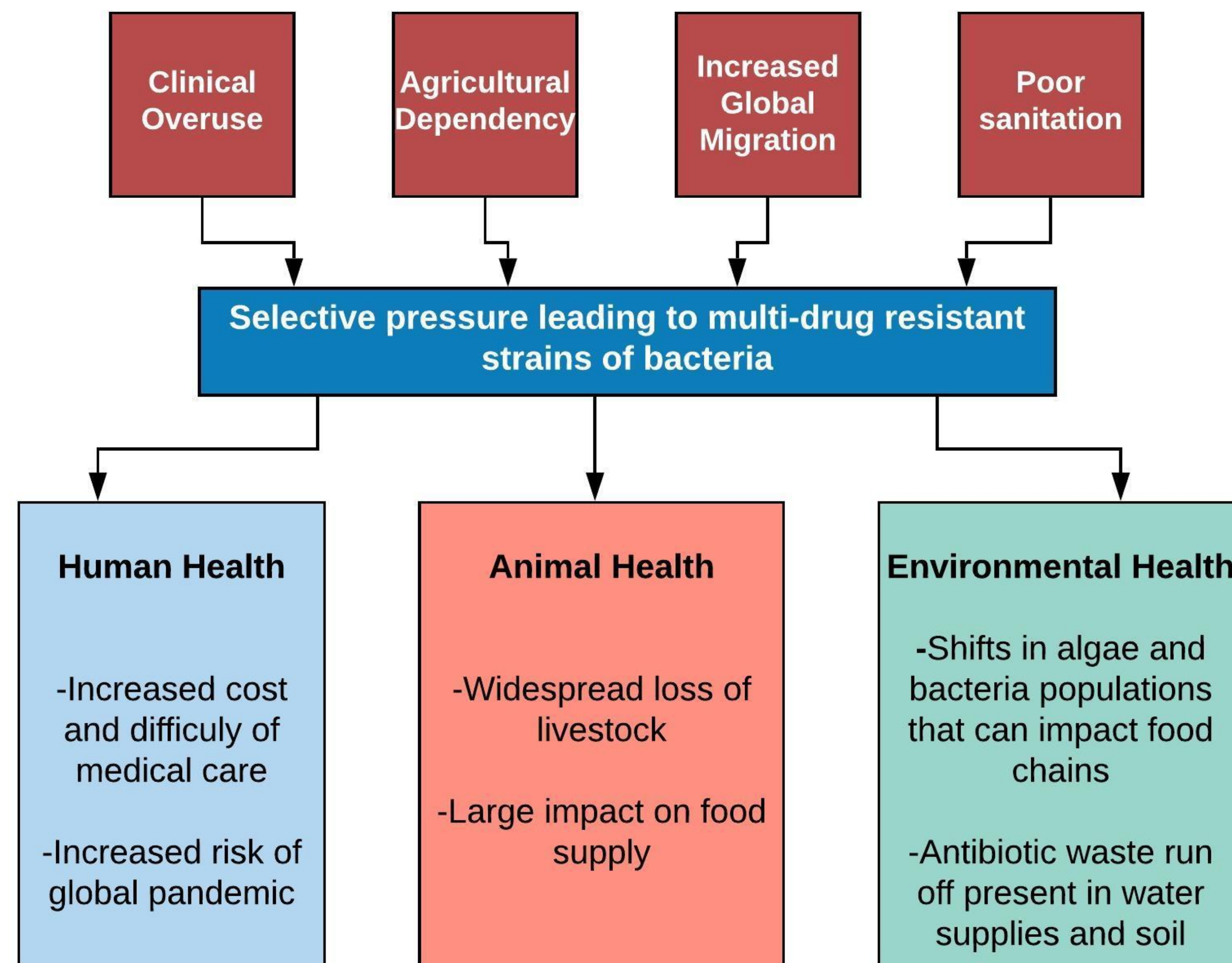


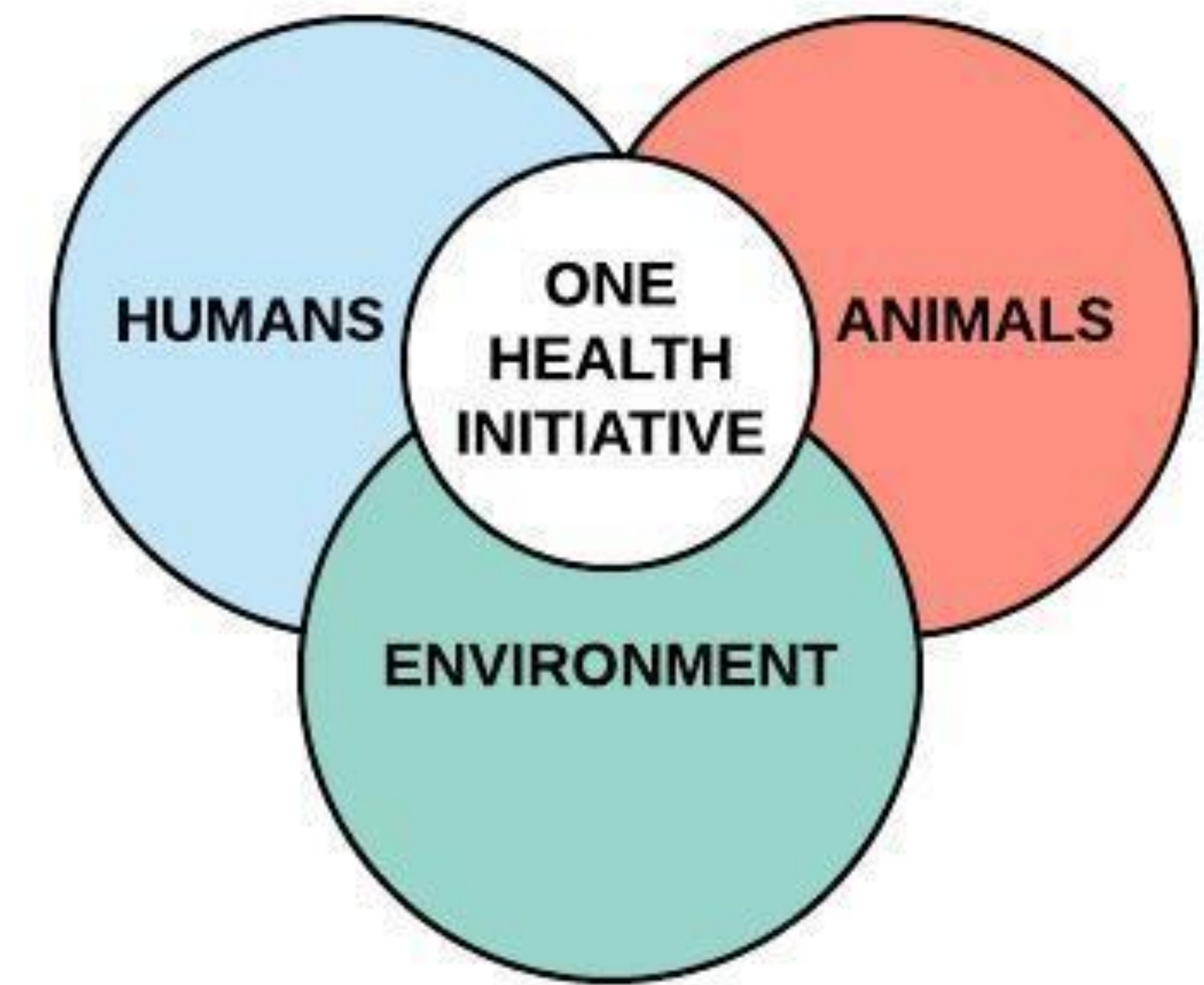
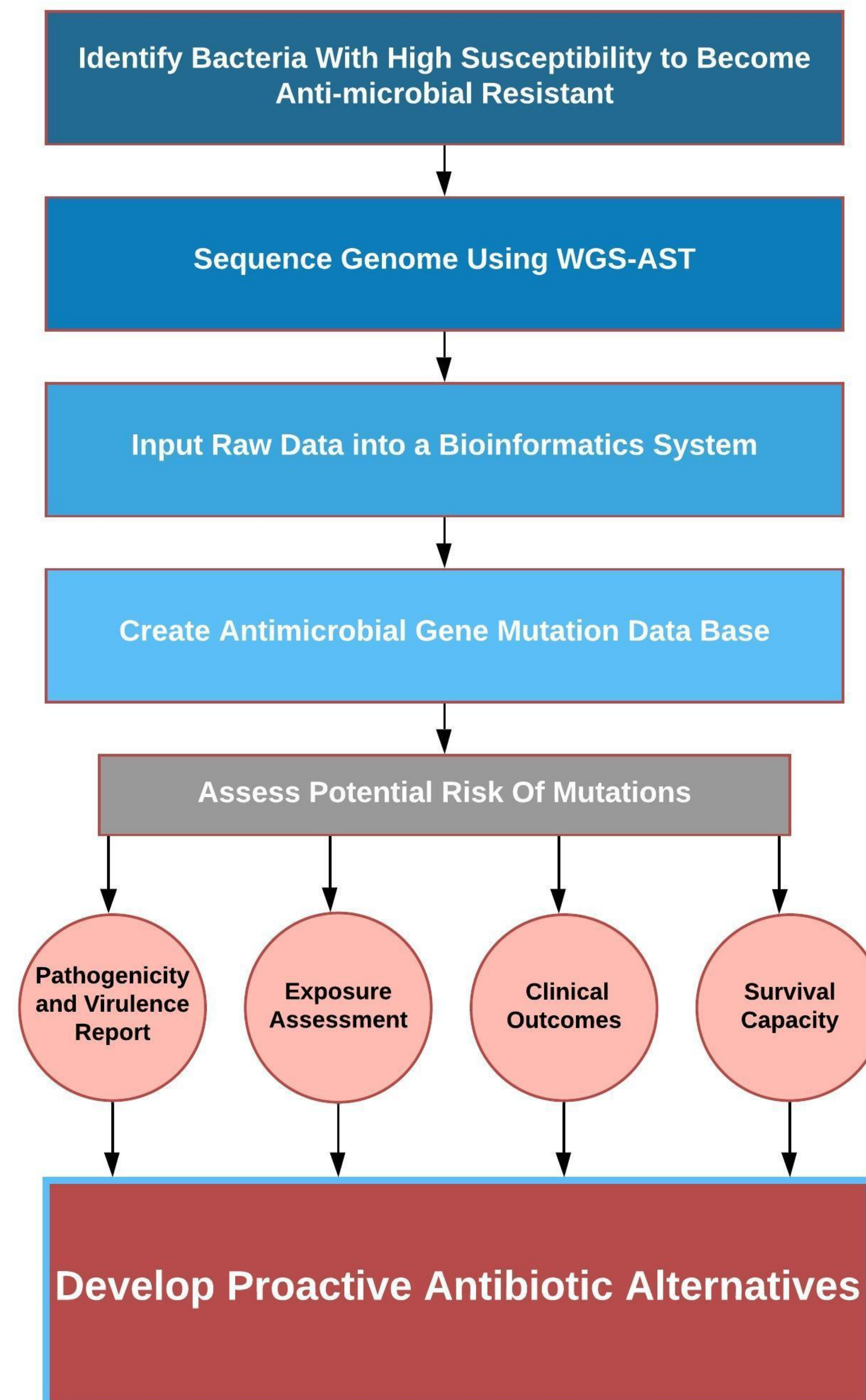
What's the Problem?



What is Whole-Genome Sequencing?

- Whole-Genome Sequencing for Antibiotic Susceptibility Testing (WGS-AST)
- Establishes the order of nucleotides in an organism's complete genome
- Comprehensive database
- Accurate, quick, becoming more affordable
- **How would WGS analysis help us?**
 - Determines weak spots in DNA sequence where mutations more likely to occur
 - Finds allelic trends in bacterial strains

Our Plan



Future Applications of WGS-AST

- **Antibiotics:** can better design antibiotics that target bacteria in multiple ways, avoiding the potentially resistant functions
- **Bacteriophages:** maps genome to design a phage that attacks the bacteria in multiple effective ways.
- **Bacteriocins:** mapped genome allows for better targeting of DNA, RNA, and proteins in the infectious bacteria