

# AMR and SARS-CoV-2 Surveillance in Sewage

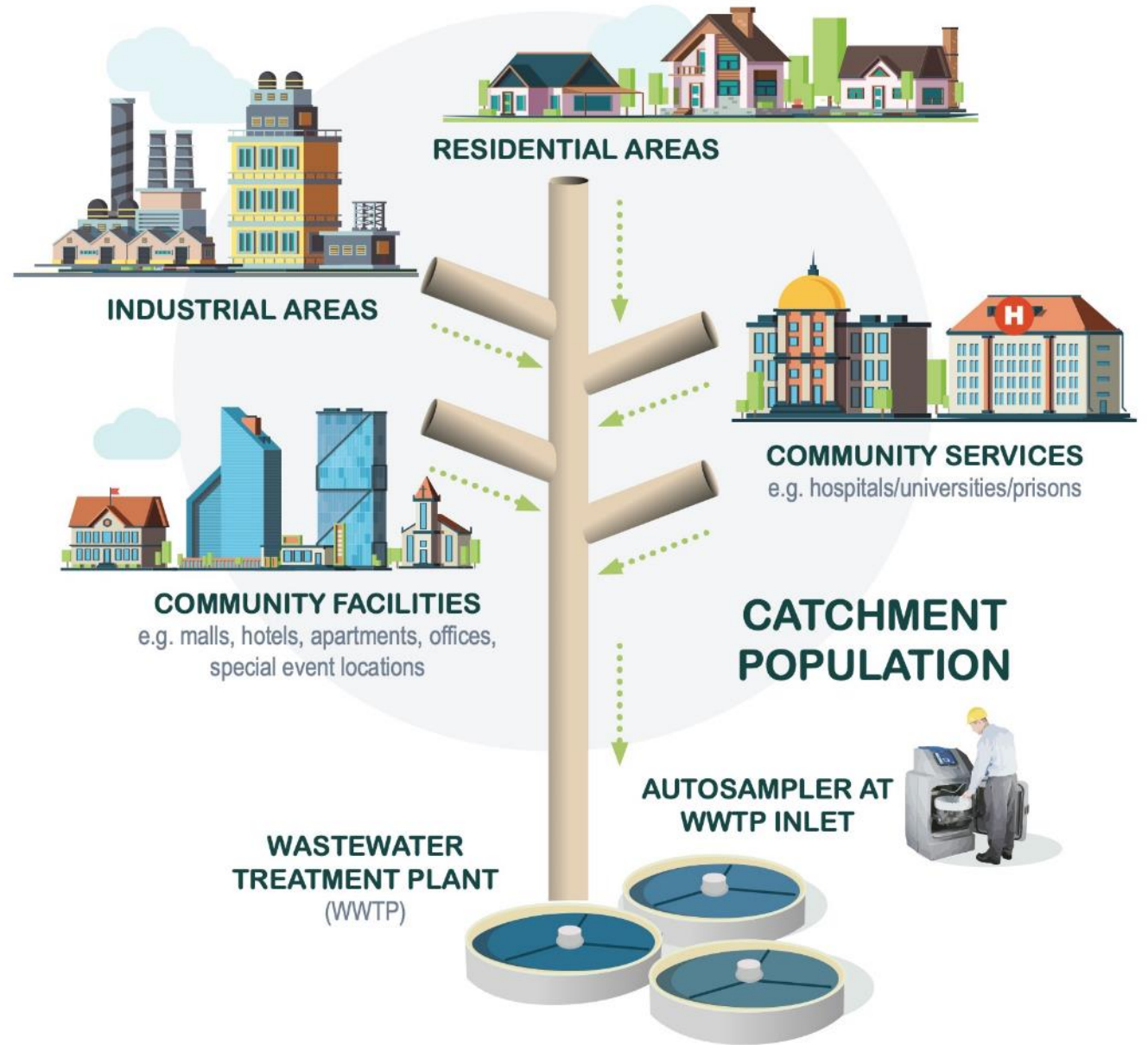
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# Sewage Surveillance as a Public Health Tool







Do bioaerosols contribute to the release of antibiotic resistant bacteria from WWTPs?

# ARGs in WWTP Sludge and Bioaerosols

Gaviria-Figueroa, A., Preisner, E. C., Hoque, S., Feigley, C. E., & Norman, R. S. 2019. Emission and dispersal of antibiotic resistance genes through bioaerosols generated during the treatment of municipal sewage. *Science of The Total Environment* 686:404-412

Class	Gene	Location	
		AS	DW

Plasmid-mediated ESBL:  
activity against  
late generation  
cephalosporins:



Integron-encoded gene conferring  
resistance to high levels of imipenem

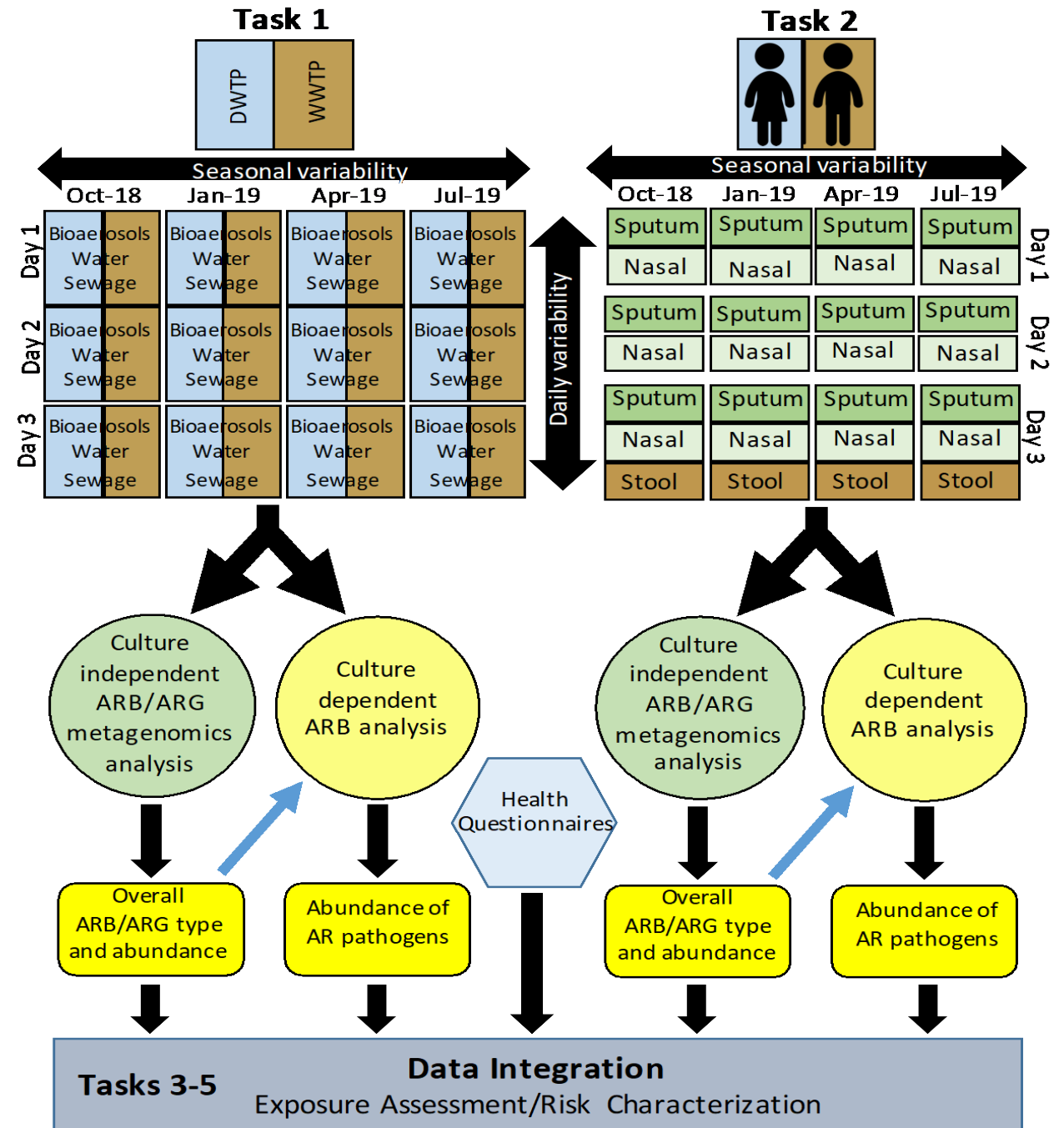


Plasmid-mediated encoding  
pentapeptide repeat proteins:  
activity against fluoroquinolones



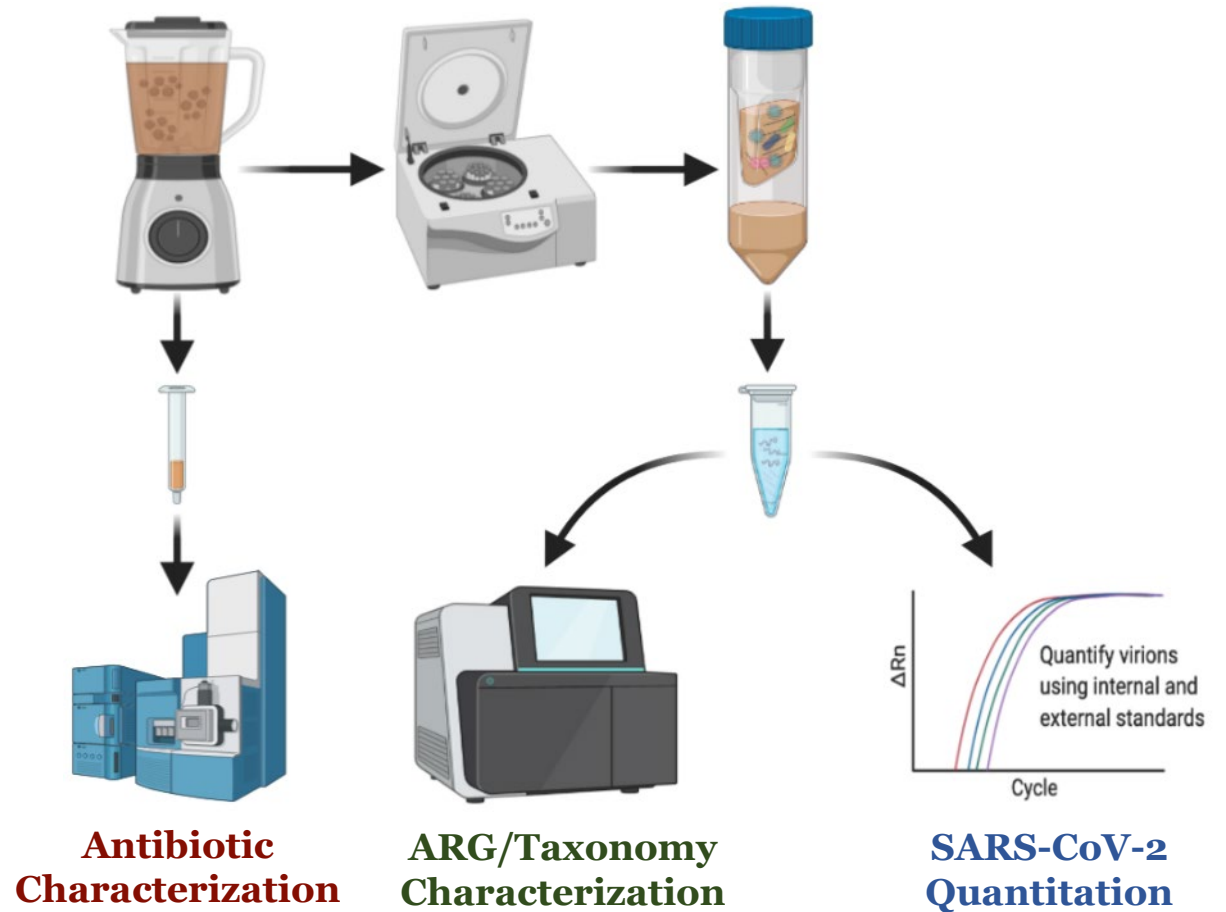
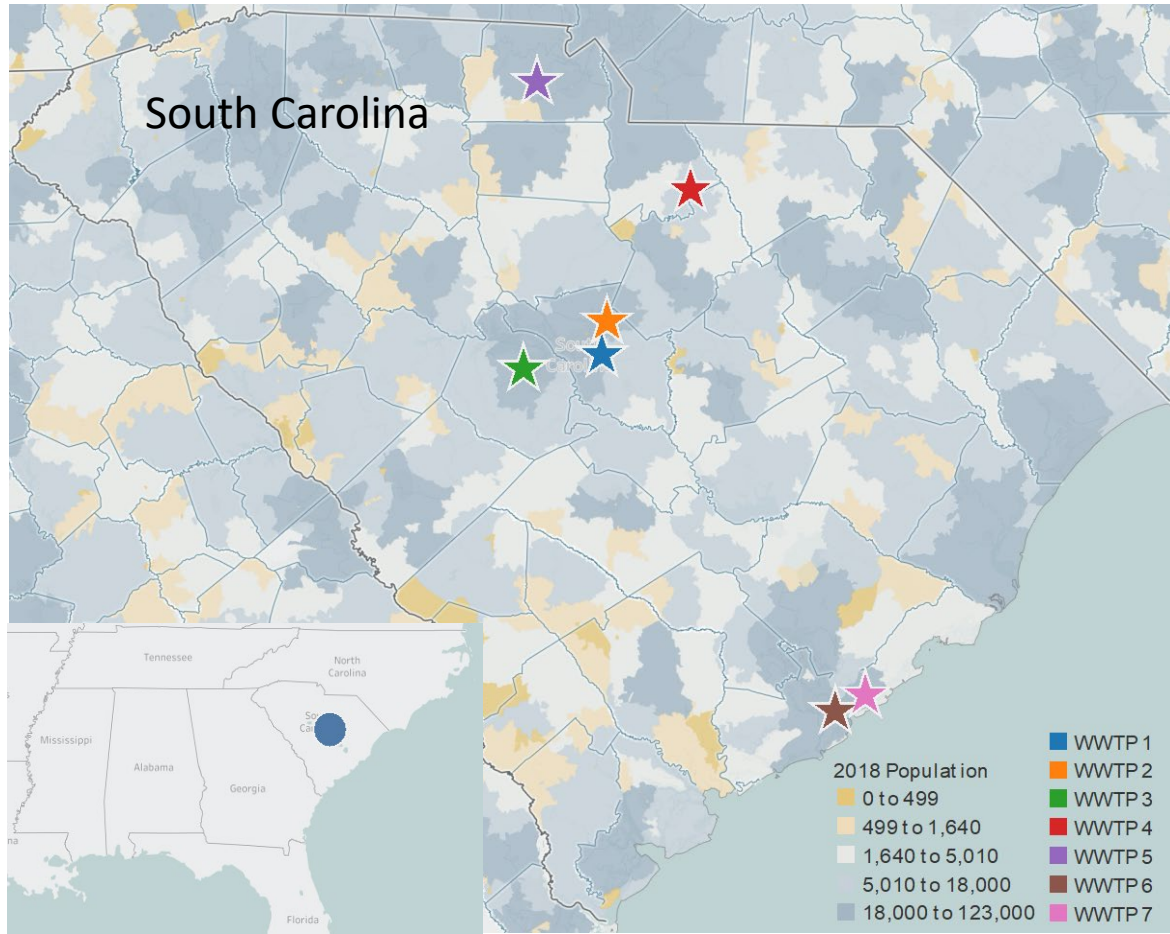


**CDC Project 1: 'COALITION'**  
soCio-ecOlogicAl coupLing of  
anTibiOtic resistaNce and the  
potential risk of human  
exposure to AR pathogens in  
bioaerosols generated during  
wastewater treatment



# CDC Project 2: 'GLANCE'

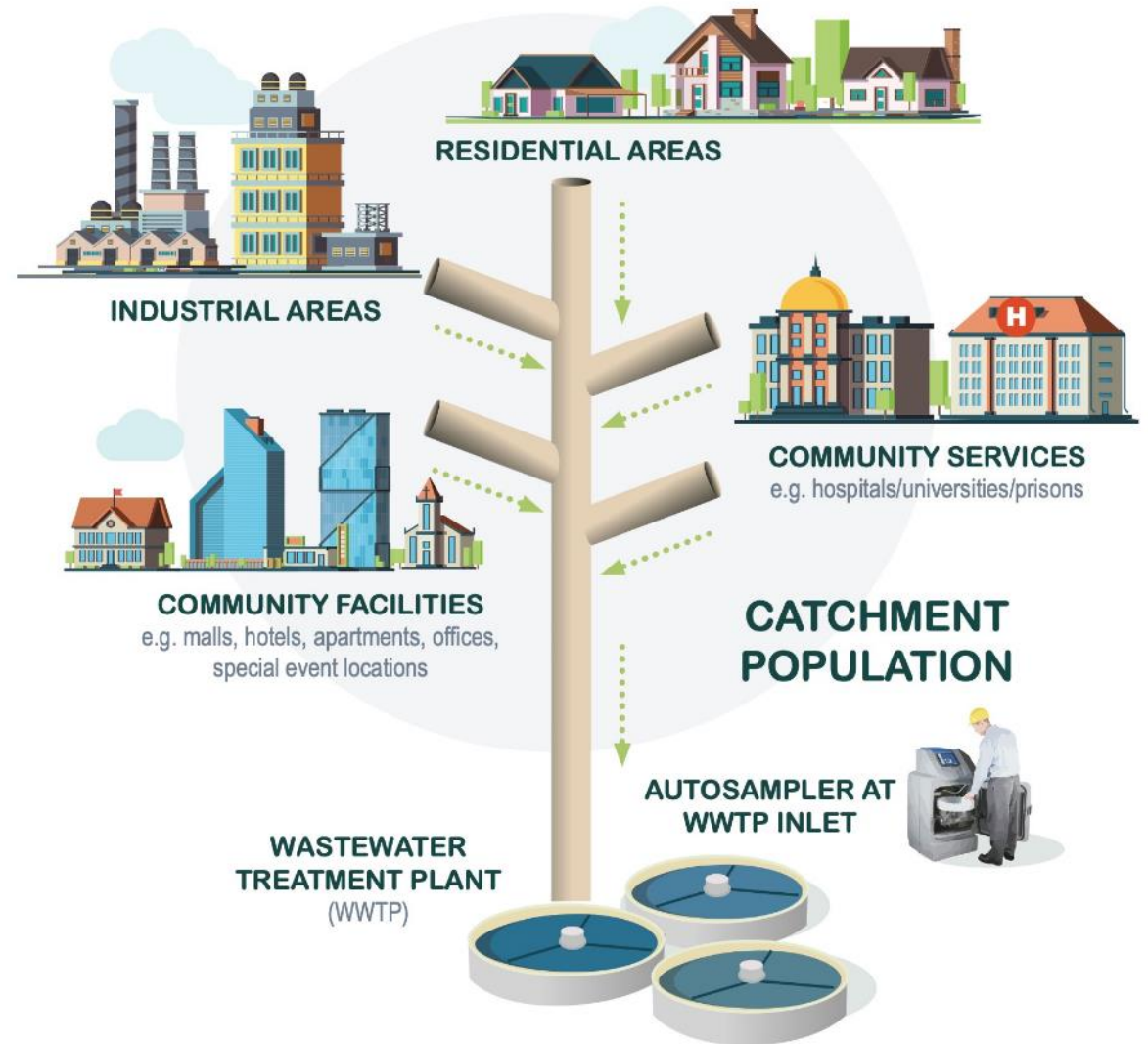
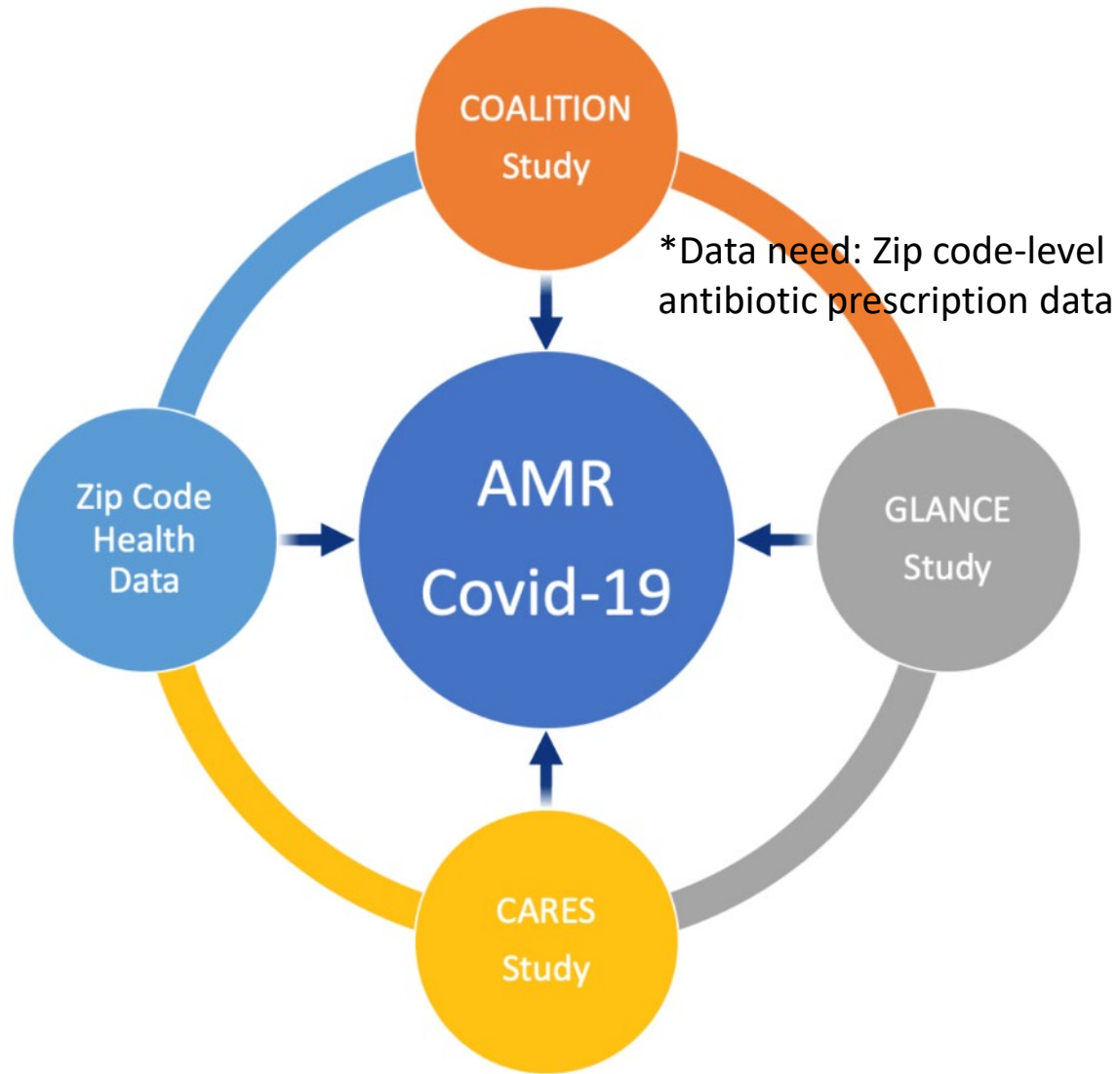
## Using sewaGe surveilLance to examine the relationship between SARS-CoV-2 and aNtibiotiC rEsistance







# Project Integration: Using sewage surveillance to examine the relationship between Covid-19 and AMR within communities





# Acknowledgments

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