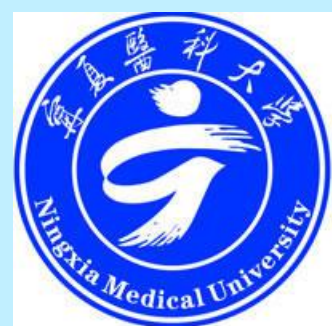


# System review of regulations on antibiotic use in food animals and a case study on broiler farms in northwestern China ( a pilot study)



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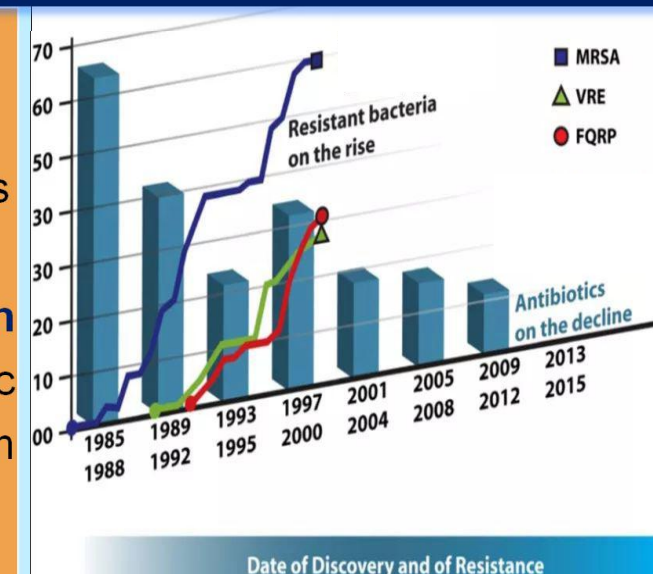
## Introduction

### ❖ Antibiotic consumption in food animals

- ❖ Global consumption of antibiotics (ATB) in food animal production was estimated at 63,151 tons in 2010, and is predicted to rise by 67%.
- ❖ In Asia, ATB consumption 105,596 tons by 2030 in chicken is expected to grow by 129% by 2030.
- ❖ China produces and uses around **half** the world's antibiotics, 48% consumed by people, **52%** used in the agricultural sector.

### ❖ The consequence of overuse

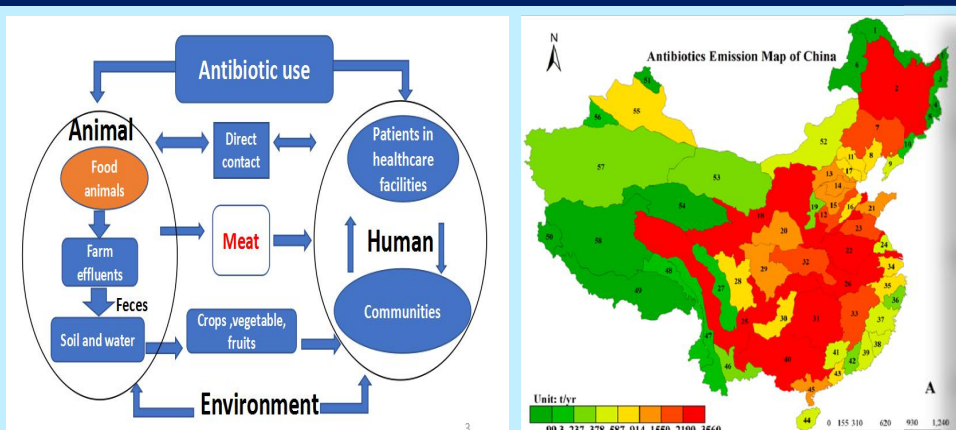
- ❖ After the end of 1970s, more and more bacteria has become resistant to antibiotics.
- ❖ A recent report estimates that, by 2050, **10 million** people will die every year due to antibiotic resistance unless a global response to the problem is mounted.



## Problems

### Growth Promotor

- ❖ In modern intensive production systems, antibiotics can be used as feed additives for growth promotion ----- motivation.



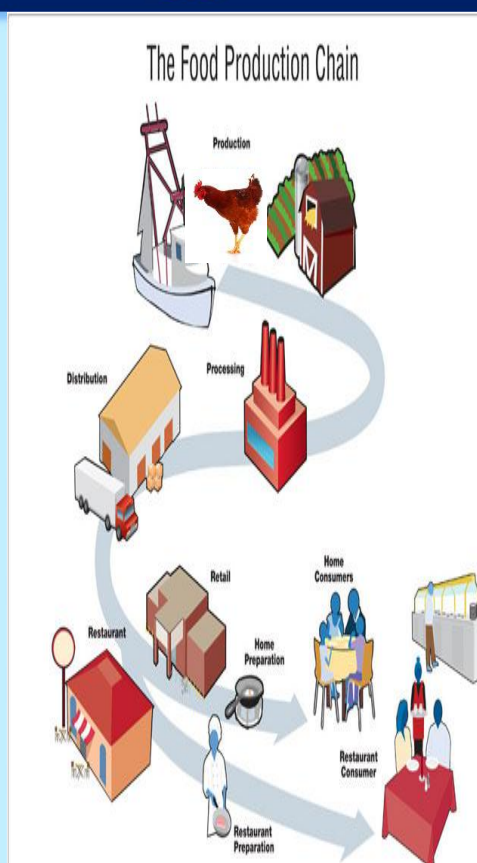
### ❖ The transmission of antibiotic resistance in the ecosystem

## Objectives

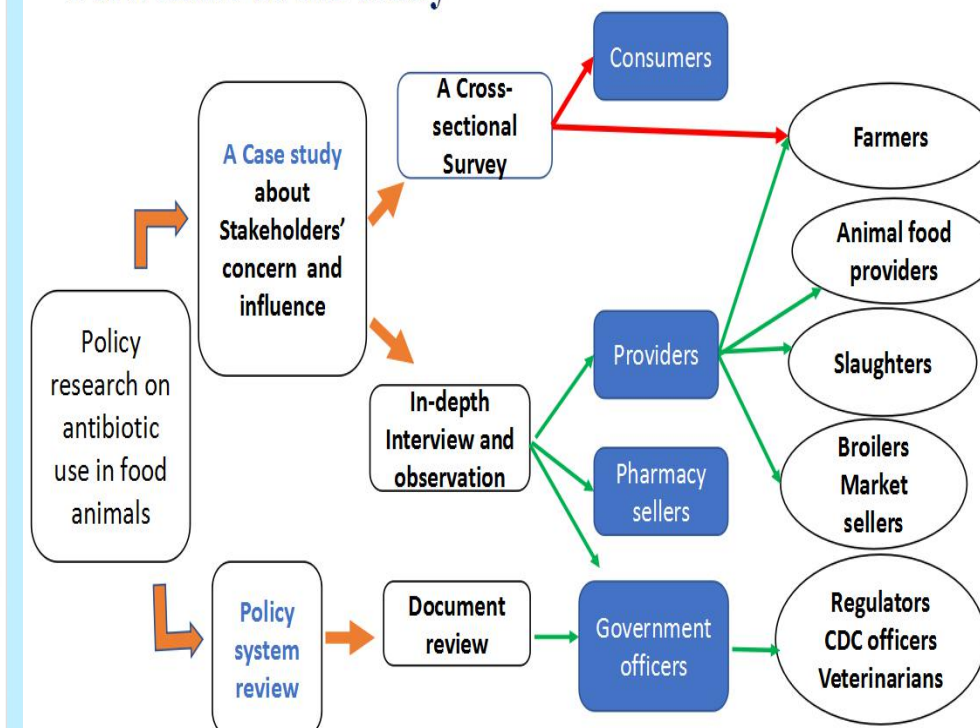
- ❖ To examine the system of control regulations in food animals including on-going consumer protection activities by civil society.
- ❖ To investigate the perceptions and behaviors of stakeholders on antibiotic use and regulations in broiler farms.
- ❖ To understand the stakeholders' influence and concern on antibiotic use and regulations in food animal.

## Methodology

- ❖ **Study design:** Policy system review, A Case study and a Cross-sectional survey
- ❖ **Study area:** Northwestern China
- ❖ **Study population:** 40 stakeholders in broiler food chain; 960 consumers and 138 farmers
- ❖ **Study period:** 2017.09-2019.09
- ❖ **Data collection:**
  - ❖ Face-to-Face interview by questionnaire about consumers and farmers
  - ❖ In-Depth interview with stakeholders
  - ❖ Document review about regulations on antibiotic use in food animals
- ❖ **Data Analysis:** Descriptive and regression analysis with R programme for quantitative data; stakeholder analysis with Ethnograph v6 for qualitative data



### Flowchart of the study



## Results

### The result here is only from in-Depth interview part

- ❖ Five government officers were interviewed in the pilot setting area including three regulators and two animal health supervisors
- ❖ The management of ATB use in food animals and human beings has two different systems, involving multiple sectors, such as Livestock bureau, Animal Sanitary agency, Food and Drug Administration and FDA Safety Inspection Committee.
- ❖ Regulations and surveillance are theoretically feasible, but difficulty in being in operation, both for regulators and supervisors. Their work is often a formality.

### The result from in-Depth interview of government officers

- ❖ The supervision of ATB residue in boilers is **out of control**, because the slaughter process for poultry is **not centralized**, different from cow, pig and sheep, which must be sent to the designated slaughter house before entry into the market.
- ❖ The quarantine of broilers is very limited due to the **lack of personnel and techniques**. There is no experimental testing lab in the county level.
- ❖ The ATB resistance due to food animals has not yet been taken seriously comparing with human use in hospital. People haven't realized the risk of ATB resistance from environment.

## Policy Recommendation

Only a pilot study has been done, the discussion is not sufficient yet.

- ❖ **Regulation** should be considered to get rid of the **control barriers** for ATB management and surveillance in food animals.

- ❖ **Education** for improving the **awareness** of the ATB resistance in food animals is required urgently in China.



"Before the animal goes to market, we theoretically be responsible for the ATB resistance testing, but realistically the broiler is out of control"

(IDI with Gov1)

"We detect the ATB use in farms and the animal pharmacy stores by checking their documents every season, instead of sampling test"

(IDI with Gov2)

"Except the major epidemic, we could not supervise the ATB residue, they (farmers) manage themselves."

(IDI with Gov3)

"According to the file from top leader, we should do it (antibiotic use regulation), but we don't have enough staff and technique"

(IDI with Gov4)