One Health Activities and Veterinary Workforce In Hong Kong

Dr. Mary KW CHOW

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中华人民共和国农业农村部
Ministry of Agriculture and Rural Affairs of the People's Republic of China

Ministry of Agriculture, Food and Rural Affairs

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One Health Governance and Coordination Mechanisms

Key stakeholders

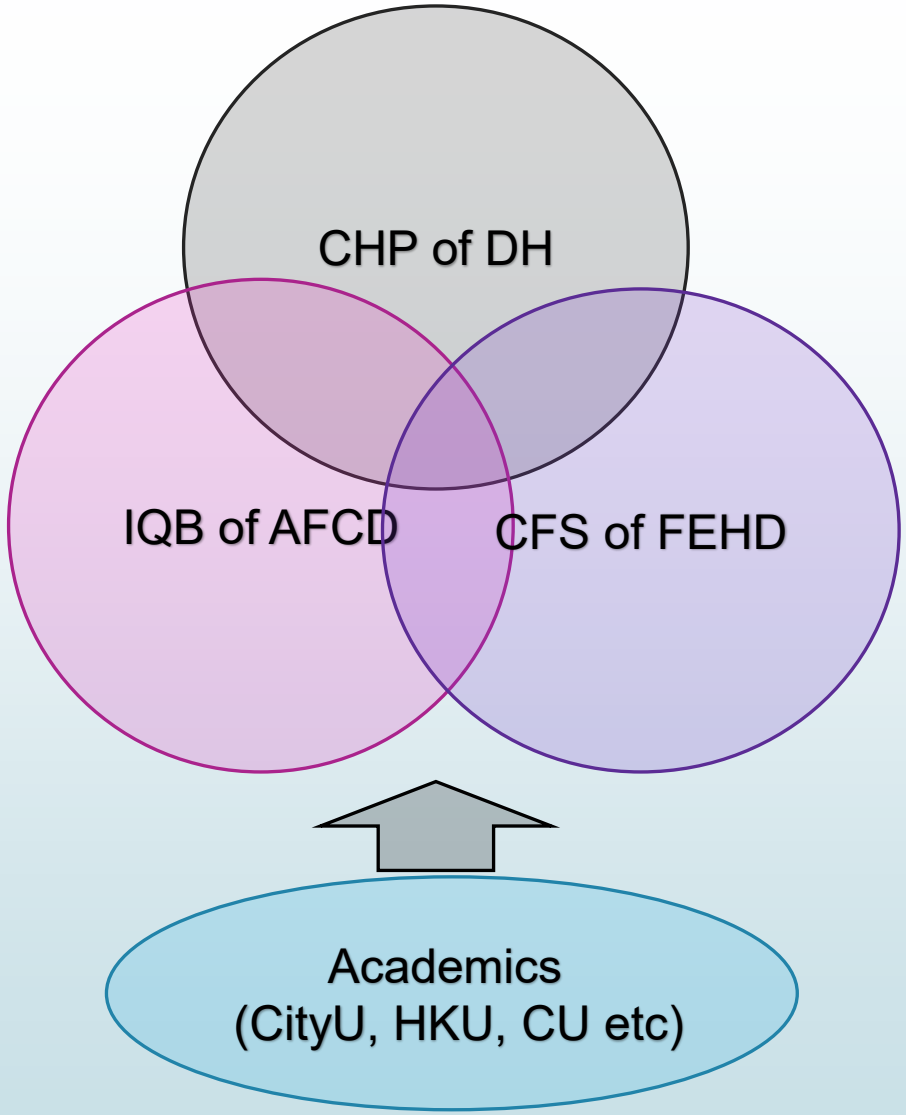
- The Inspection and Quarantine Branch (IQB) under the Agriculture, Fisheries and Conservation Department (AFCD)
- The Centre for Health Protection (CHP) under the Department of Health (DH)
- The Center for Food Safety (CFS) under the Food and Environmental Hygiene Department (FEHD)

- Centre for Applied One Health Research and Policy Advice, the Jockey Club College of Veterinary Medicine and Life Sciences, City University of Hong Kong
- School of Public Health, Hong Kong University
- JC School of Public Health and Primary Care, The Chinese University of Hong Kong academics

Work Area

- Regulations
- Inspection & monitoring
- Enforcement
- Surveillance
- Disease Investigation
- Public education

- Research
- Policy Advice



Key activities (Infectious Diseases)

Contingency Plans and Drills

- Regular update of the Preparedness and Response Plan / Contingency Plan for various zoonotic diseases (e.g., Ebola Virus Disease, Rabies, Avian Influenza, Covid-19 …etc.)
- Conduct Inter-Departmental Public Health Exercise (including table-top and ground movement exercise) for the control of important zoonotic diseases (e.g. AI on Nov 2024)
- Annual Avian Influenza Drill (training staff to conduct poultry culling operation)

Key activities (Infectious Diseases)

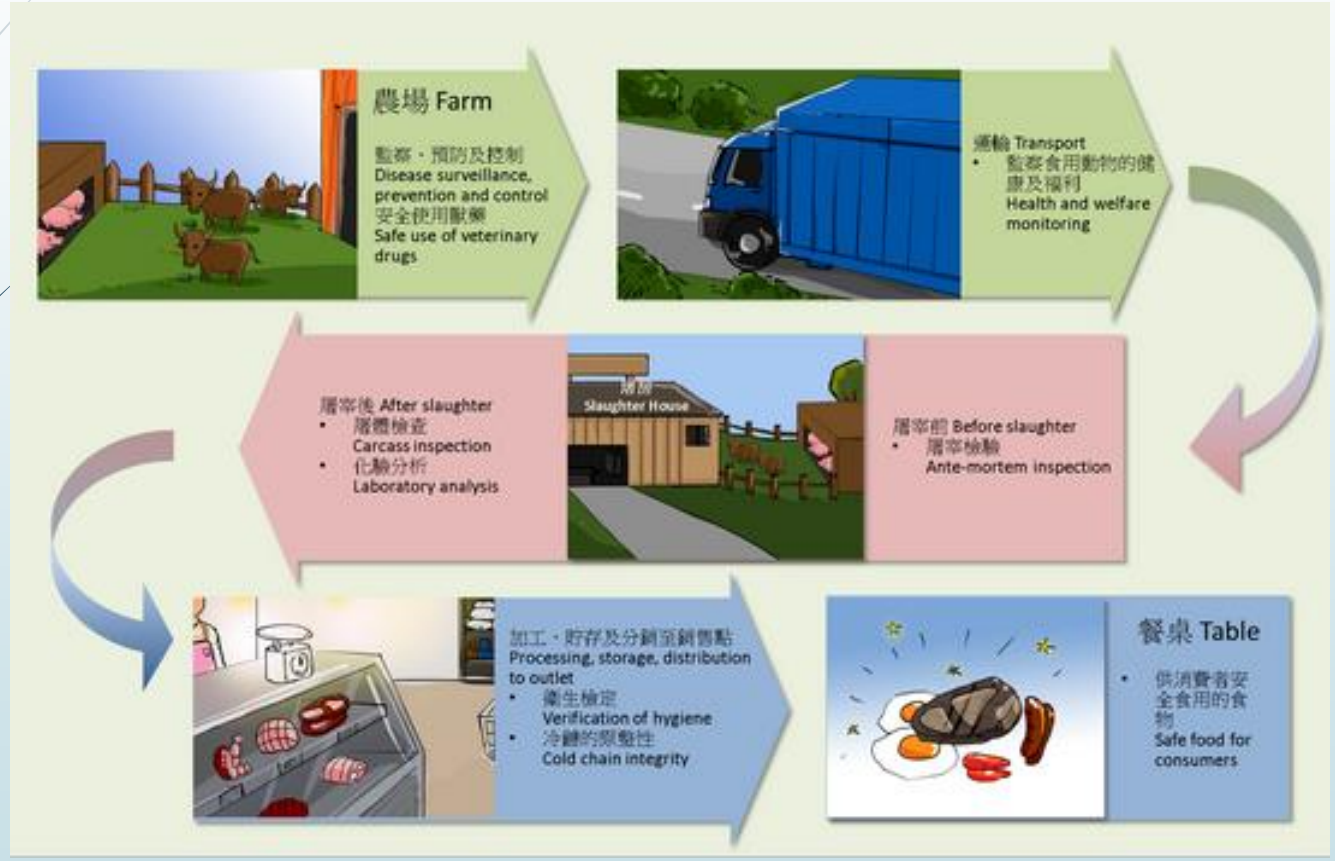
Representatives from DH, AFCD, FEHD, along with academic experts, will serve on various Committees to review and formulate strategies for public health management

- Scientific Committee on Emerging and Zoonotic Diseases
- Scientific Committee for Enteric Infections and Food Borne Diseases
- Scientific Committee for Vector-borne Diseases

The Principal Veterinary Officer of AFCD will serve on the Pharmacy and Poisons Board of Hong Kong and provide expert commentary on the registration of veterinary drugs and vaccines.

Key activities (Foodborne zoonoses)

- From Farm to Table approach (CFS)



- Food poisoning investigation (CHP & CFS)

Key activities (Antimicrobial resistance)

- **Hong Kong Strategy and Action Plan on Antimicrobial Resistance (2017-2022)** was **launched in July 2017.** It outlined activities under **six key areas**:
  1. *Strengthen knowledge through surveillance and research*
  2. *Optimise use of antimicrobials in humans and animals*
  3. *Reduce incidence of infection through effective sanitation, hygiene and preventive measures*
  4. *Improve awareness and understanding of AMR through effective communication, education and training*
  5. *Promote research on AMR*
  6. *Strengthen partnerships and foster engagement of relevant stakeholders*
- **The second 5-year plan: Hong Kong Strategy and Action Plan on Antimicrobial Resistance (2023-27) was launched in November 2022**

  Prioritise interventions and target indicators to enable the Government and stakeholders to focus resources and address the threat of AMR more effectively

Key activities (Antimicrobial resistance)

Action Plan-

High-Level Commitment:

- **High Level Steering Committee on AMR (HLSC)** established in May 2016 formulate **strategies** in **collaboration** with **relevant Sectors** (Human Health, Animal health, Food and Environment) to **tackle** the **AMR threat**
- **Expert Committee on Antimicrobial Resistance (EC)** set up in October 2016 provide **expert opinions** on **priority areas** for actions for HLSC's consideration

Animal Health Sector :

- Led by **Agriculture, Fisheries and Conservation Department (AFCD)**
- **Four focus areas**: **surveillance**, **optimised antimicrobial use**, **infection reduction**, **awareness and training**

Antimicrobial Use (AMU) and Antimicrobial Resistance (AMR)

Surveillance and Actions taken to optimize AMU

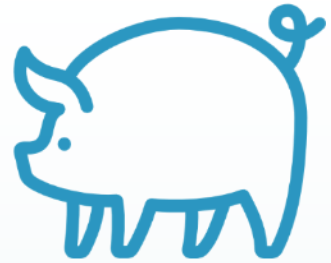
Current situation

- **43 licensed pig farms** and **29 licensed poultry farms** Supervised by AFCD in accordance with the Public Health (Animals and Birds) (Licensing of Livestock Keeping) Regulation (Cap. 139L)
- Among the food supply for local consumption, **8 % live pigs** came from local farms while **100 % live chickens** came from local farms.
  - Limited contribution to AMR
  - gene pool
  - The sector is unlikely to significantly impact the overall AMR burden in food of animal origin
- Expectation of good practices
  - Local farms are required to implement disease prevention and antimicrobial stewardship as part of farm health management

Activities taken by AFCD

1. **Surveillance**: **AMR/AMU surveillance** in pigs, chickens, and fish **since mid-2019**
2. **Optimising Antimicrobial Use**:
   - **Phased withdrawal** of **Antibiotics Permit** (**ceased since 1st January 2025**)
   - **Codes of Practice for proper antimicrobial use** distributed and regularly updated
3. **Infection Prevention:**
   - > **3, 500 farm visits annually** to promote **disease prevention** and **biosecurity**
   - **Government-funded veterinary services & tailored disease management plans**
4. **Awareness & Training**:
   - **Annual educational seminars** for the farmers **& roving exhibitions** for the public
   - **Joint publicity activities with other Sectors** during the World Antimicrobial Awareness Week
5. **Ongoing Support:**
   - Projects under **AFCD Sustainable Agricultural/Fisheries Development Fund** to **promote prudent and responsible antimicrobial use in farms**

AMU Surveillance – Pig Farms

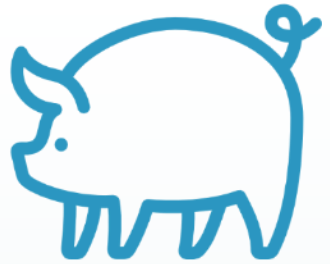


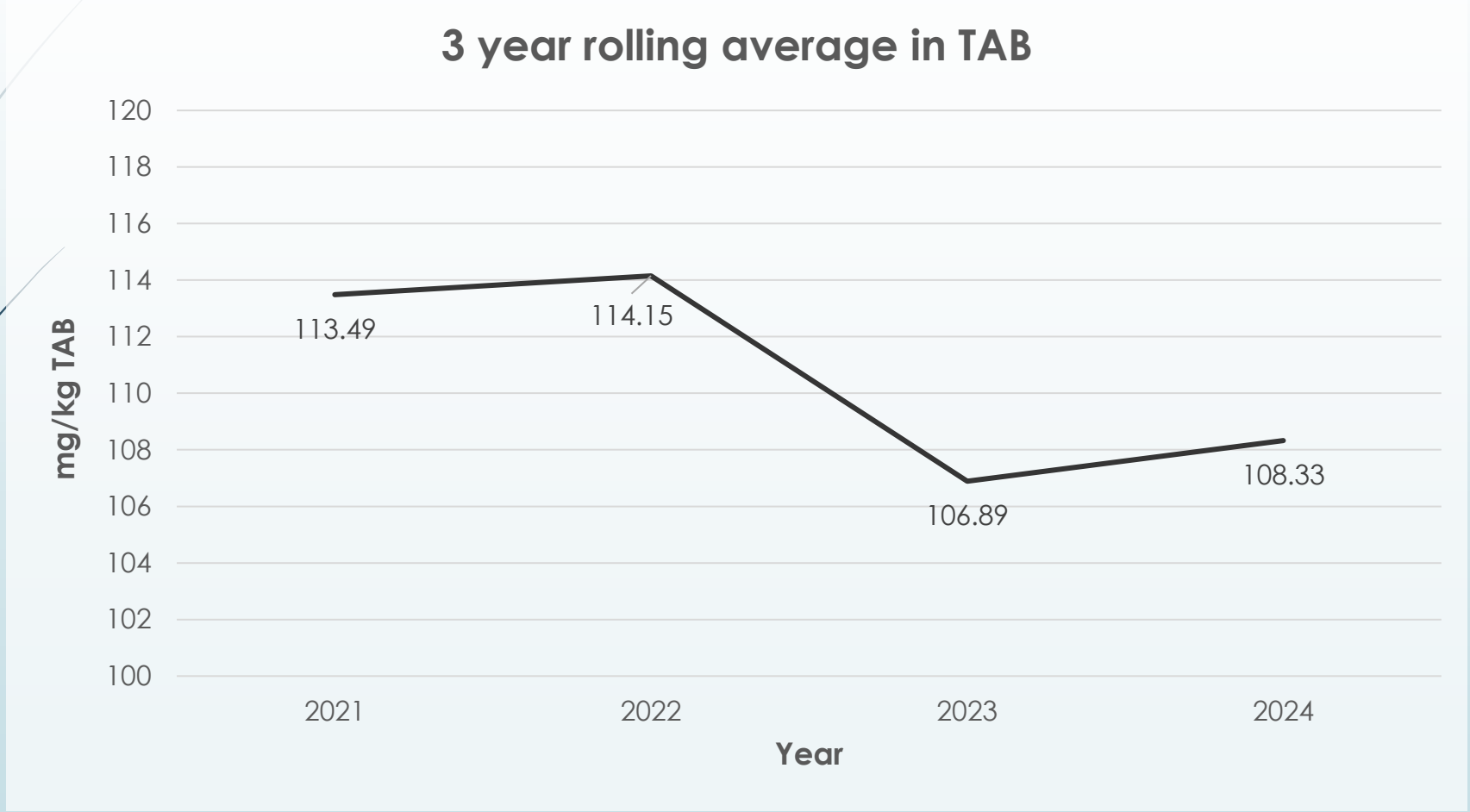
Key results on antimicrobial usage

Time Period	2020	2021	2022	2023	2024
Response rate to AFCD monthly AMU survey (including reports of no AM usage)	76%	86%	88.7%	85.1%	85.5%
Number of farmers reporting AMU data to AFCD at least once in the year	38/43	39/43	40/43	39/43	37/43
Calculated total quantity of AMU in kg	1933.04	1582.60	1871.54	1575.52	1209.43
AMU in mg/kg TAB	123.72	105.56	113.18	101.94	109.86
Rolling average of AMU in mg/kg TAB over the past 3 years	-	113.49	114.15	106.89	108.33
Median of AMU in mg/kg TAB	102.16	69.96	58.36	47.97	(7.37)

- 10 farms were not in operation for the majority of 2024 due to African swine fever outbreaks, hence not representable
- Usage of 3rd and 4th generation cephalosporins (mg/kg TAB) decreased from 2023
- Quinolone usage (mg/kg TAB) also declined in 2024

AMU Surveillance – Pig Farms





AMU Surveillance – Chicken Farms

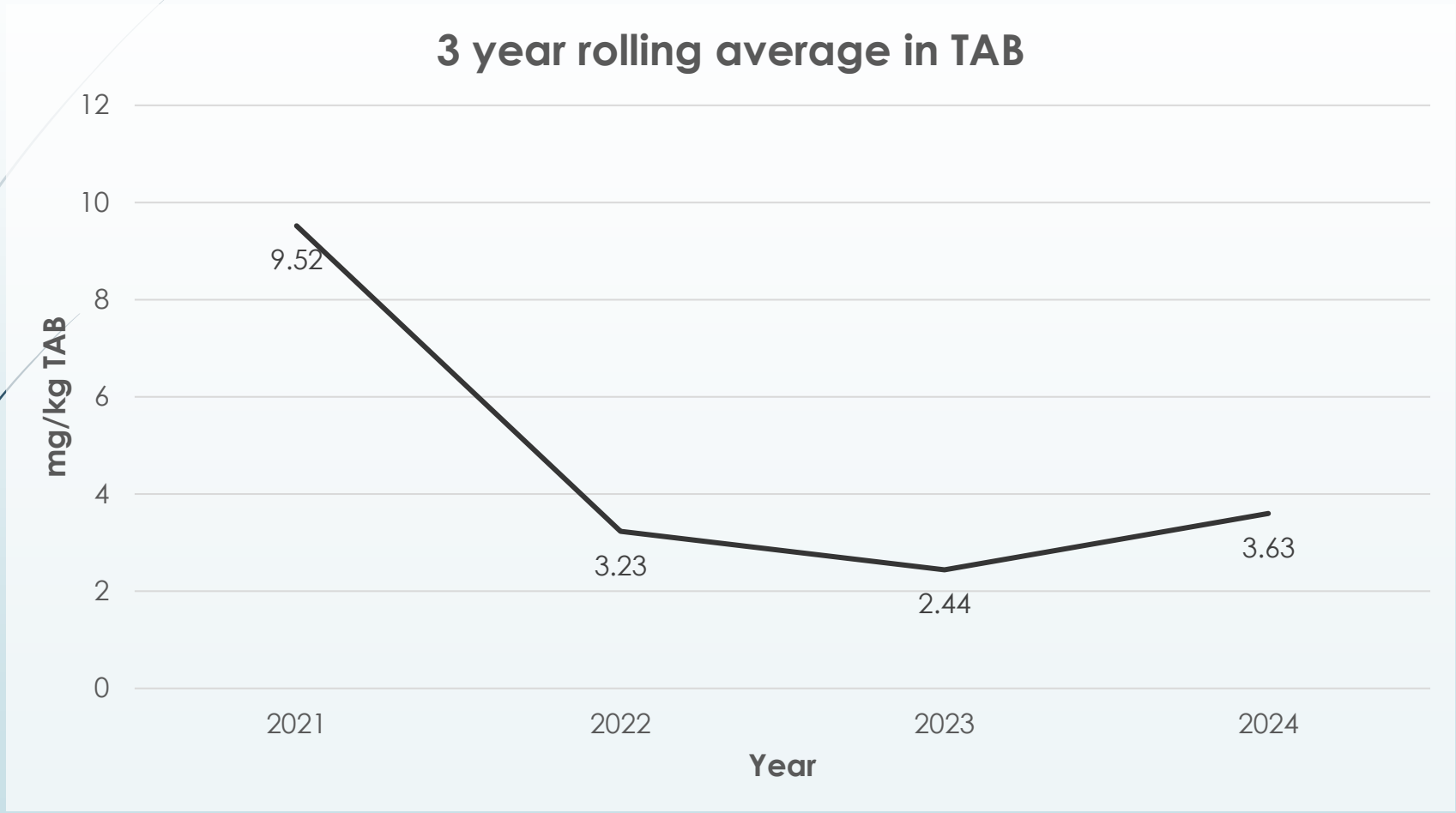
Key results on antimicrobial usage

Time Period	2020	2021	2022	2023	2024
Response rate to AFCD monthly AMU survey (including reports of no AM usage)	90%	93%	91%	93%	93%
Number of farmers reporting AMU data to AFCD at least once in the year	27/29	27/29	27/29	27/29	27/29
Calculated total quantity of AMU in kg	43.40	15.41	11.76	23.51*	36.69*
AMU in mg/kg TAB	5.83	2.10	1.76	3.46*	5.67*
Rolling average of AMU in mg/kg TAB over the past 3 years	-	9.52	3.23	2.44	3.63
Median of AMU in mg/kg TAB	0	0	0	0	0

**The increase in AMU was attributed to the prescription of antimicrobials by registered veterinarians for treatment of disease outbreaks in chicken farms.*

- 100% of live chickens consumed in Hong Kong are from local chicken farms
- Decreased number of farms using fluroquinolones from 6 in 2023 to 1 in 2024
- No reported usage of 3rd and 4th generation cephalosporins in the past 4 years
- AM usage is rare in chicken farming in Hong Kong – slight increases could occur in response to disease outbreaks on a small number of farms

AMU Surveillance – Chicken Farms



AMU Surveillance – Aquaculture Farms

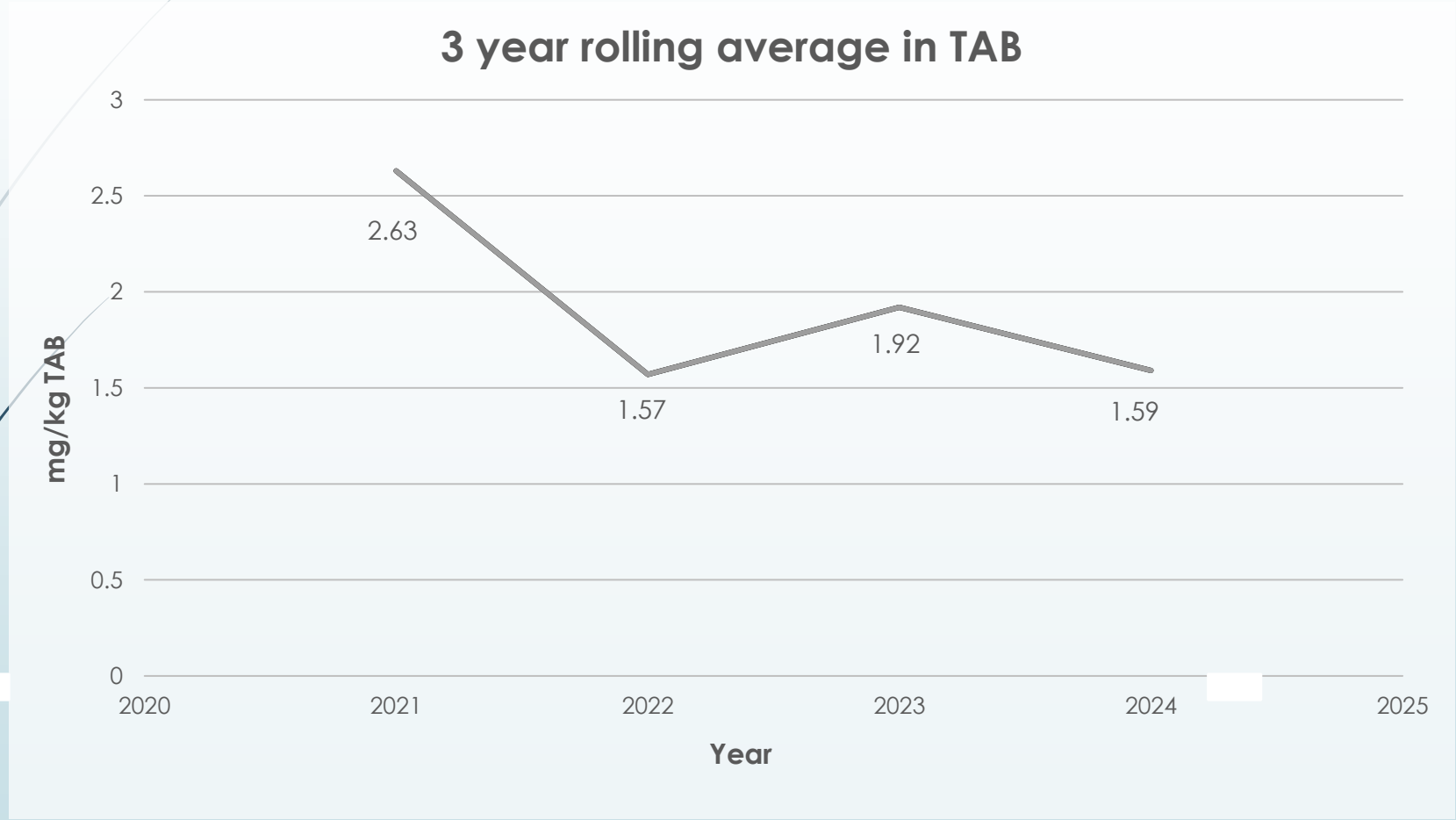
Key results on antimicrobial usage

Time Period	2020	2021	2022	2023	2024
Percentage of farms used AM in the year among the surveyed farms*	3.65%	4.20%	5.05%	0.85%	4.70%
Total number of farms in Hong Kong	1265	1265	1260	1261	1262
Calculated total quantity of AM used in kg	0.37	9.16	4.77	1.82	3.55
AMU in mg/kg TAB	0.12	2.81	1.79	1.17	1.80
Rolling average of AMU in mg/kg TAB over the past 3 years	-	2.63	1.57	1.92	1.58
Median of AMU in mg/kg TAB	0.003	0.031	0.025	0.586	0.035

** Fish farms and shrimp farms which reported AMU data (including reports of no AM usage) to AFCD*

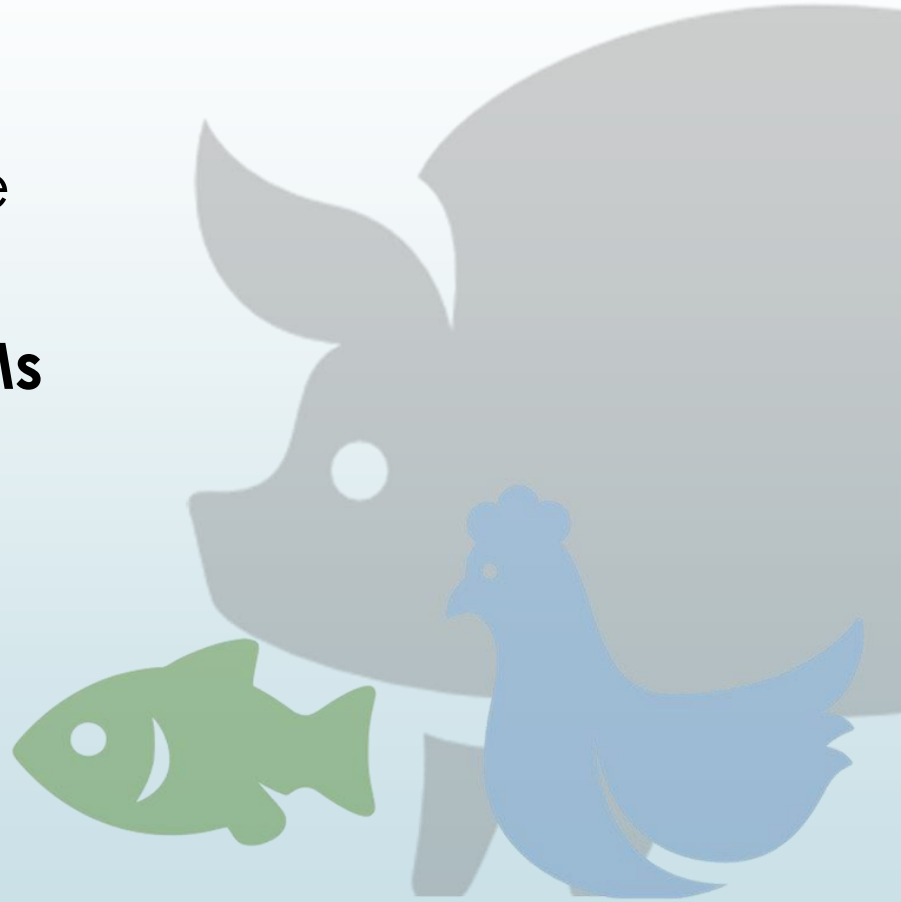
- AMU is rare in aquaculture farms in Hong Kong, with tetracyclines being the primary antimicrobials

AMU Surveillance - Aquaculture Farms



AMU Surveillance Findings

1. **Chicken producers use less antimicrobials than pig producers** (life span, how animals are reared)
2. Farmers reported **no known use of AMs for growth promotion**
3. **Aquaculture farms are not significant users of antimicrobials**
4. **Decreasing trend** of **AMU** in pig, chickens, and aquaculture farms



AMR Surveillance – Pig Farms

Number of samples **positive** for resistant bacteria cultured

Time Period	2020	2021	2022	2023	2024 (Jan-Jun)
No. of Sample[1] Collected	**152**	**204**	**195**	**186**	**90**
Culture media	**Non-S**	**Non-S**	**Non-S**	**Non-S**	**Non-S**
No. of sample positive for suspected extended spectrum beta-lactamase (ESBL)-producing[3] *E coli*	4 (2.6%)	4 (2.0%)	6 (3.1%)	8 (4.3%)	2 (2.2%)
No. of samples positive for carbapenem-resistant[4] *E coli*	0 (0%)	0 (0%)	1 (0.5%)	0 (0%)	0 (0%)
No. of samples positive for vancomycin-resistant Enterococcus (VRE)[5]	-	-	-	-	-

[1] Samples collected were faecal samples.
[2] Suspected ESBL is determined by ceftiofur resistance (3rd generation cephalosporin).
[3] Carbapenem-resistance is determined by meropenem resistance.
[4] Culturing of Enterococcus was performed using enrichment medium.

AMR Surveillance – Chicken Farms

Number of samples **positive** for resistant bacteria cultured

Time Period	2020	2021	2022	2023	2024 (Jan-Jun)
No. of Sample[1] Collected	61	207	195	189	78
Culture media	Non-S	Non-S	Non-S	Non-S	Non-S
No. of sample positive for suspected extended spectrum beta-lactamase (ESBL)-producing[3] *E coli*	9 (14.8%)	50 (24.2%)	38 (19.5%)	34 (18.0%)	18 (23.1%)
No. of samples positive for carbapenem-resistant[4] *E coli*	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
No. of samples positive for vancomycin-resistant Enterococcus (VRE)[5]	-	-	-	-	-

[1] Samples collected were cloacal swabs and faecal samples.
[2] Suspected ESBL is determined by ceftiofur resistance (3rd generation cephalosporin).
[3] Carbapenem-resistance is determined by meropenem resistance.
[4] Culturing of Enterococcus was performed using enrichment medium.

AMR Surveillance – Marine Aquaculture Farms

Number of samples **positive** for resistant bacteria cultured

Time Period	2020	2021	2022	2023	2024
No. of Sample[1] Collected	63	89	65	65	102
Culture media	Differential media[4]	Differential media[4]	Differential media[4]	Differential media[4]	Differential media[4]
Samples positive for suspected extended spectrum beta-lactamase (ESBL)-producing[2] *Vibrio* spp.[3]	0 (0%)	0 (0%)	1 (1.5%)	0 (0%)	0 (0%)
Samples positive for carbapenem-resistant *Vibrio* spp.[3]	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

[1] Samples collected were fish slime samples
[2] Suspected ESBL is determined by resistance to ceftazidime (3rd generation cephalosporin)
[3] Only *Vibrio spp*. is shown as there are no available breakpoints to determine susceptibility of *Photobacterium spp.*

AMR Surveillance – Pond aquaculture Farms

Number of samples **positive** for resistant bacteria cultured

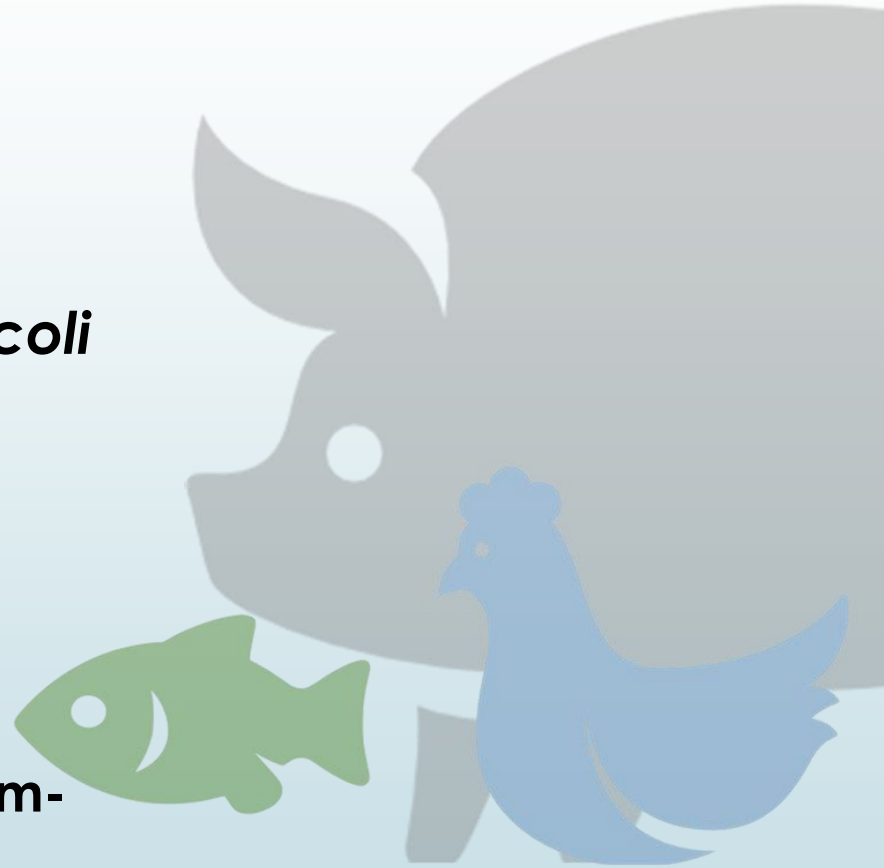
Time Period	2020	2021	2022	2023	2024
No. of Sample[1] Collected	16	44	50	45	60
Culture media	Differential media[3]	Differential media[3]	Differential media[3]	Differential media[3]	Differential media[3]
Samples positive for suspected extended spectrum beta-lactamase (ESBL)-producing[2] *Aeromonas* spp.	0 (0%)	0 (0%)	0 (0%)	1 (2.2%)	0 (0%)
Samples positive for carbapenem-resistant *Aeromonas* spp.	1 (6.3%)	2 (4.5%)	0 (0%)	0 (0%)	0 (0%)

[1] Samples collected were fish slime sample and whole shrimp samples (shrimp sampling started since 2024)

[2] Suspected ESBL is determined by resistance to ceftazidime (3rd generation cephalosporin)

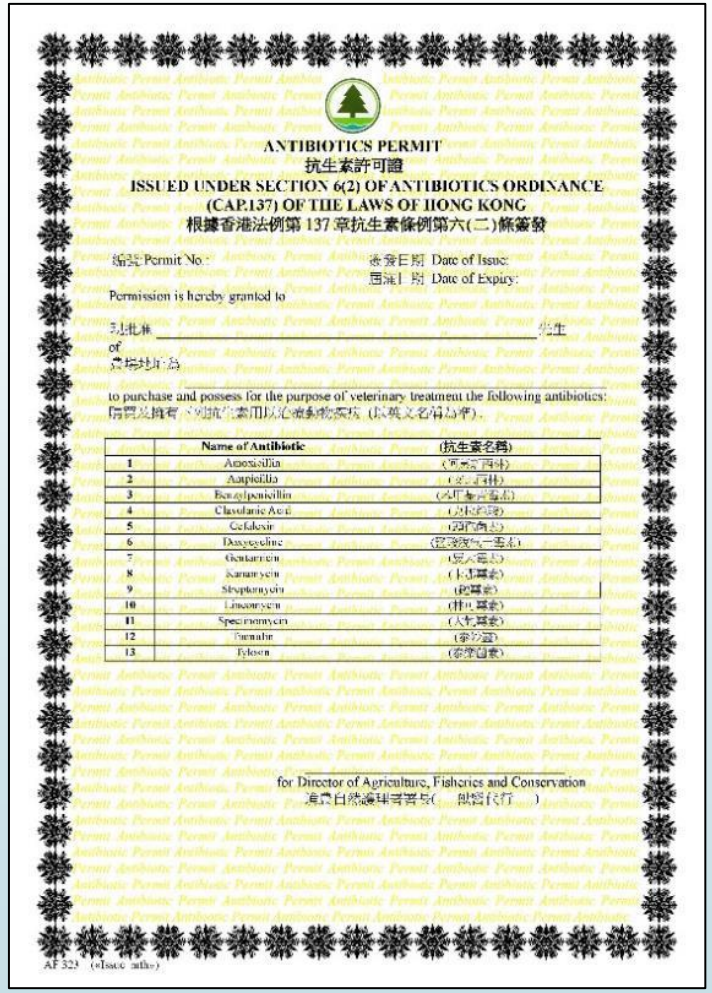
AMR Surveillance Findings

1. **No obvious trend** observed
2. The percentage of **ESBL-producing *E coli* remained relatively stable** & **absence** of **VRE** in both **chicken** and **pig farms**
3. **A small amount** of **carbapenem-resistant[4] *E coli* was** detected in **pig farms**
4. **A small number** of **samples** tested **positive** for **ESBL-producing *Vibrio spp***. & **absence** of **Carbapenem-resistant *Vibrio spp.*** in **marine aquaculture farms**
5. **A small number of samples tested positive for ESBL-producing *Aeromonas spp***. & **Carbapenem-resistant *Aeromonas spp.*** in **pond aquaculture farms**



Optimising Antimicrobial Use:

- AFCD has been issuing **Antibiotic Permit** for local livestock farmers to purchase antibiotics as needed
- In **October 2020**, with City University's provision of veterinary services and drugs to farmers, AFCD commenced **phased withdrawal of Antibiotic Permit** removing **8 antibiotics** at that time
- In **July 2022**, **6 additional antibiotics** were removed from the Permit
- The **remaining 13 antibiotics were removed by end of 2024** to cease the issuance of Antibiotic Permit from 2025 onwards
- Since 1st January 2025, AFCD stops issuance of Antibiotic Permit and implements **"veterinary prescription-only medication supply" policy**, antimicrobials could only be administered to food animals by farmers with a prescription from registered veterinary surgeons



ANTIBIOTICS PERMIT
抗生素許可證
ISSUED UNDER SECTION 6(2) OF ANTIBIOTICS ORDINANCE
(CAP.137) OF THE LAWS OF HONG KONG
根據香港法例第 137 章抗生素條例第六(二)條簽發

Permit No.:
Date of Issue:
Date of Expiry:

Permission is hereby granted to

of

to purchase and possess for the purpose of veterinary treatment the following antibiotics:

	Name of Antibiotic	(抗生素名稱)
1	Amoxicillin	
2	Ampicillin	
3	Benzylpenicillin	
4	Clavulanic Acid	
5	Cefalexin	
6	Doxycycline	
7	Gentamycin	
8	Kanamycin	
9	Streptomycin	
10	Lincomycin	
11	Spectinomycin	
12	Tiamulin	
13	Tylosin	

for Director of Agriculture, Fisheries and Conservation

AF 324

Awareness & Training:

Joint FB posts with other sectors during World AMR Awareness Week

Other ongoing activities

- A series of **roving exhibitions** have been arranged. Information about **AMU/AMR** in **veterinary sector (including both livestock** and **small animals)** has been delivered.
- **Mascots**, **posters**, **leaflets**, **public transport** advertisement

Veterinary Workforce in Hong Kong

Veterinary related workforce

- Registered veterinary surgeon (RVS) as in June 2025: 1392
- Registered veterinary specialist as in June 2025: 108
- Around 180 vet clinics
- Most of the RVS are small animal practitioners
- 53 veterinarians work in the public health sector
- Some 50-70 veterinarians work in local universities, the Jockey Club, Ocean Park, and the Kardoorie Farm.
- The City University of Hong Kong is the only University that has a veterinary college in HK

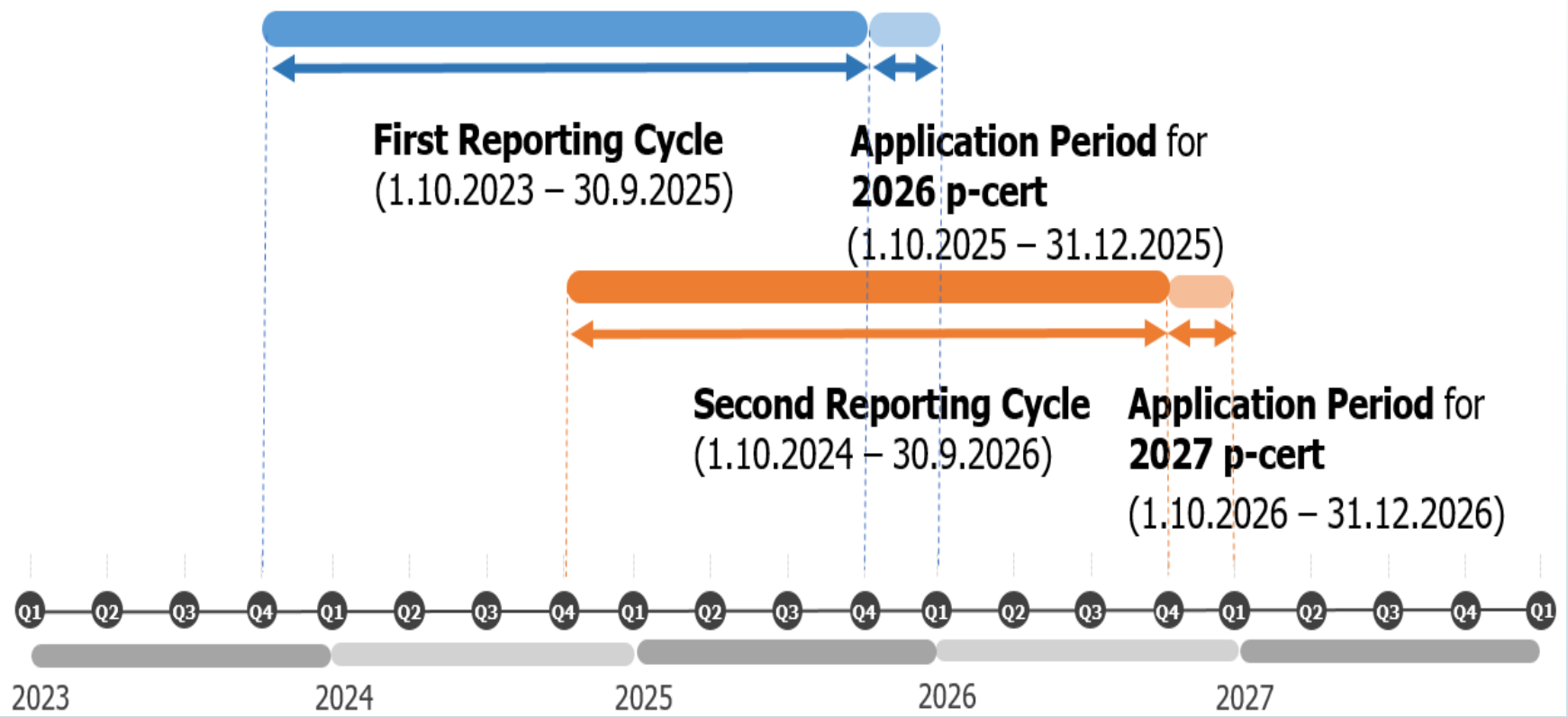
Veterinary Surgeons Board of Hong Kong

- The Veterinary Surgeons Registration Ordinance (Cap. 529) was enacted in July 1997 to provide for the statutory registration of veterinary surgeons to ensure a high standard of veterinary care in Hong Kong.
- The VSB is established under Cap. 529, works on matters related to the register, qualification standards for registration, applications for registration and renewal, and disciplinary offences.
- There is 11 committees under the VSB including the Committee on Continuing Professional Development (CPD)

Continuing Professional Development

- An RVS who wishes to practice veterinary science or provide veterinary service in HK is required to comply with CPD requirement to ensure he is up to date
- They are required to obtain at least 40 CPD points during a 2-year reporting period, with at least 25 points coming from "Structured Activities."
- Each two-year reporting cycle begins on 1 Oct two years prior to the year of application for renewal of a practising certificate
- First reporting cycle commenced on 1 Oct, 2023
- Applied to applicants with Practising Certificate to be issued from Dec 2026

Continuing Professional Development



Acceptable Structured Activities

Item	*Structured activity*	*CPD points*	*Examples of Evidence*
S1	•CPD courses / Lectures / Seminars / Conferences / Online Courses / Webinars / Correspondence courses (including audio-visual or computer-based courses)	1 point per hour	Certificate of participation or attendance
S2	•Publication and/or presentation of scientific papers	5 points per paper	Copy of paper
	•Preparation and presentation of lectures/workshops (only for the first presentation of the paper or lecture/workshop)	5 points per hour of the first presentation	Copy of presentation
	•Accreditation scheme by examination Examples of accreditation scheme by examination include but not limited to those of the American Board of Veterinary Specialties (ABVS), European Board of Veterinary Specialisation (EBVS) and Advisory Committee on the Registration of Veterinary Specialists (ACRVS) in Australia and New Zealand	5 points per hour of examination	Certificate / evidence of attainment (e.g. notification of results or transcript)
S3	•Engagement in Board-related services Service as a Board member or assessor on a Preliminary Investigation Committee •Service as a reviewer in providing a report under Rule 5(9) of the Rules of the Veterinary Surgeons Board (Disciplinary Proceedings)	1 point per hour of participation / service capped at a maximum of 10 points per reporting cycle	Written confirmation from the Secretariat of the

Acceptable Unstructured Activities

Item	*Unstructured activity*	*CPD points*	*Examples of Evidence*
U1	• In-practice training and instruction received from professional colleagues and specialists Documented discussions between professional colleagues include formal case presentations, medical or surgical rounds, journal article discussions or meetings to share knowledge gained at conferences, courses, seminars or workshops as well as time spent with veterinary specialists e.g. in a referral situation	0.5 points per hour of documented discussion	Appropriate record of activity and participation (e.g. minutes or agenda of peer group meeting)
	Reading of books and journals and audio-visual / information technology / printed medium	0.5 points per hour of reading / participation	Name of publication/ author/pages; Website URL and topic
U2	Mentoring of veterinary students, interns, residents and/or professional colleagues • Documented discussions with veterinary students, interns, residents and/or professional colleagues include formal case presentations, medical or surgical rounds, journal article discussions or meetings to share knowledge.	0.5 points per day with maximum of 10 points per cycle	Appropriate record of activity and participation (e.g. documented discussions with recipient's name and signature on CPD record)

CPD Record Keeping

Complete the CPD point record sheet

Keeping documents evidencing the attendance of activities

Keep the documents for at least 6 years and presented to VSB upon request

CPD Audit

- Conduct during the first 6 months of each year
- Randomly select 3% of RVSs who have applied for a practising certificate in the year
- RVSs selected for CPD audit shall submit the duly completed CPD Point Record Sheet (including CPD Declaration and documentary proof of participation in the declared CPD activities) for inspection by VSB
- RVSs are required to provide an explanation for any non-compliance found during the CPD audit
- VSB will determine whether the explanation is satisfactory

CPD Audit Violation Handling

Depending on the explanation, the handling of the non-compliance may include:

- Conducting the next CPD audit;
- Requesting further CPD points (make up the deficient points and/or request additional points);
- Issuing a warning letter;
- Inscribing a non-practice condition on his/her next practising certificate; and/or
- Referring to the police and/or taking disciplinary action in the case of false declarations

Thank you

Dr. Mary KW CHOW

Senior Veterinary Officer (Technical Services)

Agriculture, Fisheries and Conservation Department

Hong Kong SAR, China

- Email address: mary_kw_chow@afcd.gov.hk
- Office tel: (852) 2150 6906

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