

Introduction

Many Veterinary Colleges use the Competency-Based Veterinary Education model to design their curriculum. By the time they graduate, BVM students (Bachelor of Veterinary Medicine) are expected to have the knowledge, skills, values, and attitudes necessary to perform their first duties safely (i.e., "Day One Competence")^{3,5}.

In August 2023, the Jockey Club College of Veterinary Medicine and Life Sciences (JCC, City University of Hong Kong) established a Ruminant Ambulatory Service (RAS) to (i) expose and train BVM students in small ruminant Day-One competencies and (ii) contribute to the improvement of goat health and welfare in Hong Kong S.A.R. BVM students participate in the RAS during clinical rotations (Year 5 and 6) and as part of the Ruminant Student Club for volunteers (all years).

Objective

To describe the clinical exposure of BVM student volunteers involved in the Ruminant Ambulatory Service (RAS).

Materials and Methods

Study design - Retrospective observational study

Study period - From August 1, 2023, to June 5, 2024

Methods - Reports of veterinary visits carried out as part of the RAS (JCC) involving BVM student volunteers were reviewed. The description and number of farms, animals, students, and procedures performed (across all students and all on-farm visits) were collected. Reports on visits carried out as part of the curriculum-based teaching activities (i.e., clinical rotations) were excluded.

Summary

As part of the Ruminant Ambulatory Service (JCC), BVM student volunteers are mainly exposed to practical skills and competencies used in goat herd medicine (e.g., vaccination, deworming, health monitoring).

20 farms were visited on a regular basis (Competence 1.6 - Adapts knowledge to varied scenarios and context¹)

Goat farm (n = 20)
Sheep farm (n = 2)
Alpaca farm (n = 2)

Median goat herd size = 8.5 goats [min: 1; Max: 250]

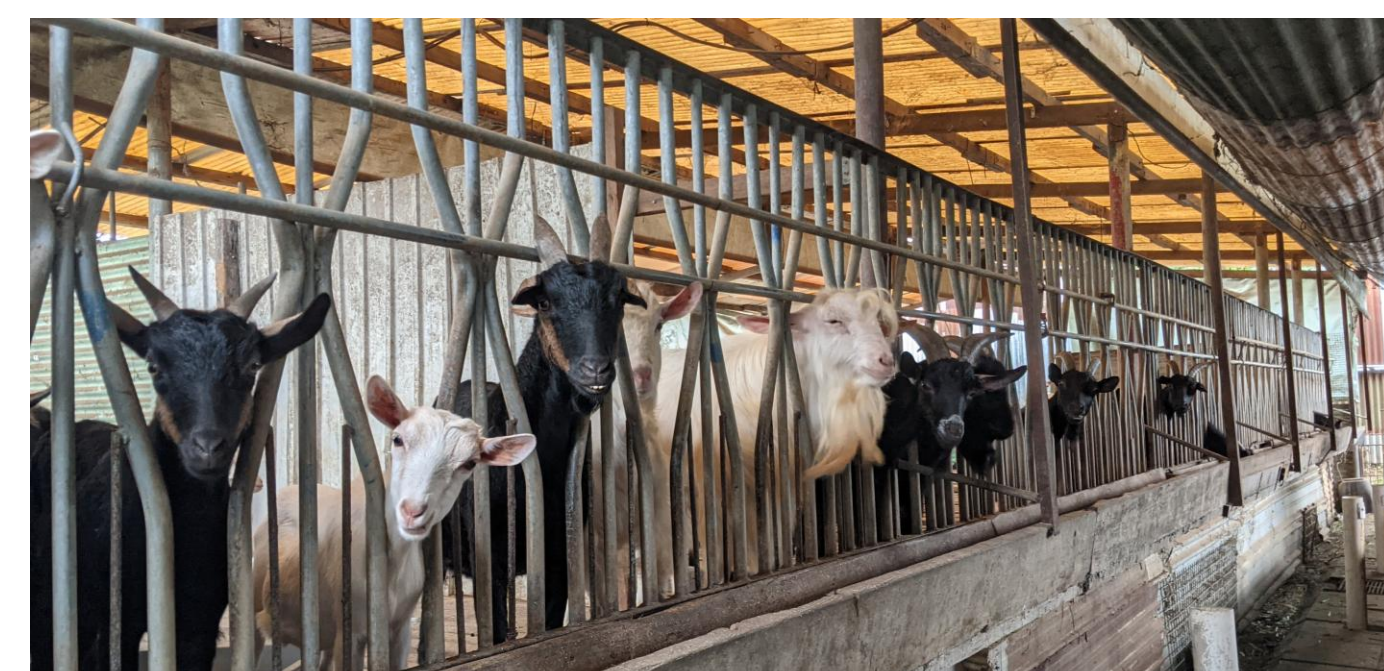


Figure 1. Medium-size Hong Kong goat farm.

Student participation (Competence 7.4 - Engages in self-directed learning¹)

A participation rate of 75.5% (37/49) with a maximum of 2 students per visit.

Median number of visits per student = 2 [min: 1; Max: 10]
Total of 17 students (Year 1 = 37.5%, 12/32; Year 2 = 3.1%, 1/32; Year 4 = 17.4%, 4/23)



Figure 3. Small-size Hong Kong goat farm.

Reasons for consultation (Competence 2.2 - Promotes comprehensive wellness and preventive care¹)

44.7% (17/38) - Herd medicine
39.5% (15/38) - Herd & individual medicine
15.8% (6/38) - Individual medicine

- Skin disorders (57.1%, 24/42)
- Respiratory disorders (23.8%, 10/42)
- Lameness (9.5%, 4/42)
- Reproductive disorders (4.8%, 2/42)
- Eye disorders (4.8%, 2/42).



Figure 2. Equipment.

Practical skills⁶ (Total number of procedures performed across all students and all on-farm visits) and **competencies** (Competence 1.1 - Gathers and assimilates relevant information about animals¹; Competence 2.1 - Performs veterinary procedures and post-procedural care¹)

- “Handle and restrain safely and humanely” (n = 771)
- “Perform a thorough clinical examination” (n = 771)
- “Inspect teeth to identify age” (n = 771)
- “Body condition score” (n = 771),
- “Administer subcutaneous injections” (n = 435)
- “Drench” (n = 202)
- “Administer intramuscular injections” (n = 13)
- “Foot trim” (n = 3)
- “Collect a blood sample from the jugular or tail vein” (n = 2)

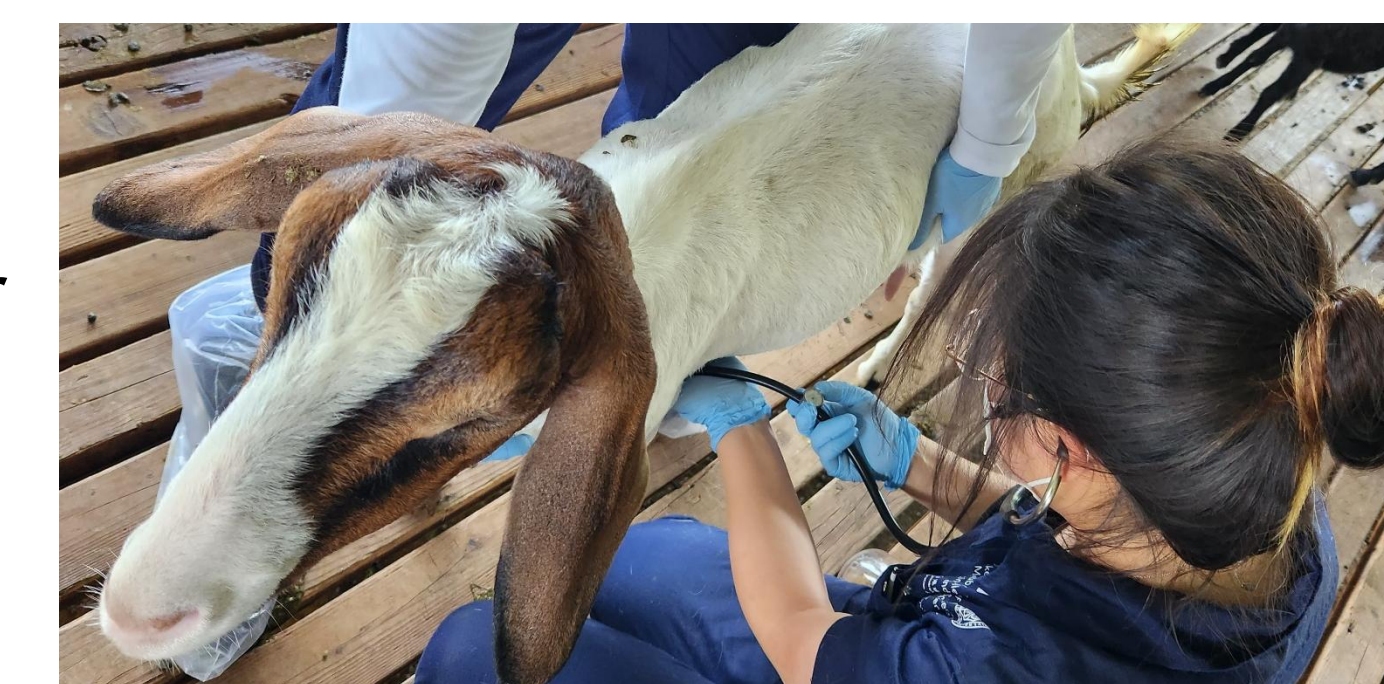


Figure 4. BVM student volunteer performing a physical examination.

Discussion

The clinical exposure of students is highly dependent on the veterinary service and its clientele.

- As in most Southeast Asian countries², goats are very common in Hong Kong (unpublished data). In our clientele, the demand is mainly for preventive medicine (e.g., deworming) and individual cases are animals showing obvious clinical signs (e.g., skin lesions, nasal discharge, lameness, etc.).
- Few authors have studied the Day-one competencies specific to farm animal veterinarians^{4,6}. Here, clinical exposure is not perfectly aligned with the clinical skills considered to be of high importance by British and American farm animal veterinarians (e.g., small ruminant obstetrics).

Student clinical exposure depends on many factors, such as farm size, reason for consultation, and student's previous training.

- In this study, visits attended by students were planned in advance. The lack of planning for emergency cases (e.g., colic) limited student participation in these visits.

The data collected do not allow us to assess the clinical exposure in terms of certain competencies (e.g., medical reasoning, medical recording, and communication)¹ or the motivations of the BVM student volunteers (e.g., novelty, discovery, career choice, availability, etc.).

Future Directions

- To investigate the Day-one competencies for farm animal veterinarians in Southeast Asia
- To investigate the outcomes of the RAS on learning, education, and career pathways

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Abbreviations

BVM: Bachelor of Veterinary Medicine
JCC: Jockey Club College of Veterinary Medicine and Life Sciences
RAS: Ruminant Ambulatory Service

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