



Occupational standard for veterinary assistant (small animal)

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Abstract

Veterinary assistant is career which assists routine veterinary work and is needed in veterinary practices. Occupational standard is a tool for setting-up new or improving existing manpower according to market needs. This research aimed to formulate occupational standard which can be used in vocational school, for middle level labor who would like to pursue this career, also as benefit for all stakeholders in this industry and as a guideline for curriculum development for Office of Vocational Education Commission and Thailand Professional Qualification Institute (TPQI). This research comprised of 2 stages, the first stage, defining the occupational standard for Thai veterinary assistants (Small animal). A descriptive research used the functional analysis to define the key roles, units of competence, elements of competence and performance criteria. The target group agreed on preparing the occupational standard, comprised of 91 voluntary veterinarians: 2 presidents of the Veterinary Council of Thailand, 50 veterinary practitioners; government and private veterinary hospitals; 29 veterinarians from private veterinary companies; and 10 veterinary lecturers. Ideas from discussions from the meeting were collected to identify the needs of occupational standards for veterinary assistants. The second stage verified questionnaires about the occupational standard which was mailed to 102 veterinarians, working in both private and government clinics and hospitals. They all agreed that the occupational standard for Thai veterinarian assistants (small animal) showed well reflection on the current needs of the sector. Method of this paper was analyzing data by statistic tools, median and interquartile.

Result revealed that the key purpose of the veterinarian assistants in assisting the veterinary practitioners, divided into three key roles 1) assist and work in veterinary practices with standard focus on care and welfare of animals consisting of 5 units of competence and 17 elements of competence; 2) sanitation and clinical care consisting of 3 units of competence and 9 elements of competence; 3) front office customer service and workplace skills consisting of 4 units of competence and 9 elements of competence. The target groups all agreed with the set of occupational standards which was made and commented that the roles of working were good and according to right functions of veterinary assistants.

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Introduction

Pets, particularly dogs and cats are important as human companions both in rural and urban areas. In 2010, the National Statistical Office estimated that every 2 to 3 households have dogs (389,097 dogs in 942,796 surveyed

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households in 50 districts) and the number of urban dog owners has increased. The popularity of pets was also beneficial to, related businesses such as pet food and animal health products, other pet supplies, boarding and grooming services, as well as public and private veterinary services. The increasing number of pets was also reflected in an increasing number of small animal veterinary practices in Thailand, which in 2015 was 2,570 (279 large, 370 medium and 1,921 small) (the Department of Livestock Development, Ministry of Agriculture and Cooperatives, 2015) with a tendency to have bigger and more specialized veterinary hospitals. In turn, this has created increased demands for educated veterinary assistants to undertake routine work as well as specialized tasks (Khattiya, 1999). At present, there is no formalized education for veterinary assistants guided by an occupational standard in Thailand, hence, the many veterinary practices are hired staff without basic knowledge and skills to take care of small animals. This research developed a veterinary assistant curriculum, with 6 training courses comprised of subjects: restraint, basic-pharmacology, x-ray, surgery, animal health, and laboratory sampling. Student should pass writing theory exam and observation in practice to finish the courses. (see Tables 1 and 2)

One of the most widely used approaches for developing occupational standards, providing more depth and riches to the skill with outcome-based is the Functional Analysis (F.A.) (Carroll & Boutall, 2011), method containing components to identify key purpose, key role and key functions, units and elements of competence, performance criteria including theory and skill in various subjects. The method encompasses suggestions and ideas from all stakeholders including potential employers (Carroll & Boutall, 2011). Various methods were used to prepare occupational standards. The Functional Analysis was utilized to develop a training program and curriculum suiting of the concerned sector and labor market. The competence-based method is concerned with knowledge, skills and attitude with the view to improve the performance of the work forces (Thammakittipob, 2012).

This research was concerned with the development of a formal education system for veterinary assistants working with small animals such as dogs, cats, rabbits, etc. which are serving as companion pets to humans. The veterinary assistants would typically work for veterinarians specializing in small animals at veterinary hospitals and clinics. The veterinary assistants equipped with knowledge and skills are increasingly needed by the sector and pet owners.

Research Objective

The research aims to prepare an occupational standard for veterinary assistants working with small animal and also the guideline for preparing a curriculum for training them.

Literature Review

Occupational standards method covering the specification of the ability to work according to well-defined standards, must show the success of the given tasks within the

organization and includes the required knowledge and skills of workers (Carroll & Boutall, 2011; Rösch, Labarre, & Roser, 2013). Standards of roles and tasks in each career are prepared with inputs by all stakeholders in the concerned profession. Schools and other educational institutions need to further develop standards and curricula for workers with competence in both theories and practices including relevant attitudes. Hence, the occupational standards are the key tool for vocational schools to further develop curricula for students to acquire knowledge, abilities and competence in their chosen career and is an important tool for developing and improving the manpower required by the industry and being ready to work with complete ability (Fletcher, 1991). Occupational standards also define the level of competence of workers to the satisfaction of other stakeholders and can be used as the role and assessment in qualification framework, for certificate or diploma (Lester & Religa, 2016; Sawatthanasakul, Thammakittipob, & Tobua, 2015). The occupational standards are also the linkage between employment and developing workforce.

Development of Occupational Standards Using Functional Analysis

The functional analysis is the main method for defining the need of the occupational sector compared to closely related occupations and for developing occupational standards. A functional map can be used to define key purpose, key role, key function, unit of competence, element of competence, and performance criteria. The map must show all the functions that need to be performed in order to achieve overall objective and should show all tasks leading to key purpose with linkage to duty. The number of levels in the functional analysis diagram depends on the size and nature of each profession and may differ in various career developments. After analyzing every step of the occupational standard and Occupational Standard Title, Performance Criteria, Knowledge and Understanding (Carroll & Boutall, 2011; Deissinger & Hellwig, 2011; Rösch et al., 2013) were completed.

Research Framework and Methodology

In the development of the occupational standard for veterinary assistants, the functional analysis method has been used to define the key purpose expressed the industry, small animal sub-sector and profession, followed by the key role, the unit of competence, the element of competence and performance criteria, seen in schematic overview in Figures 1 and 2. In this research, there was no key function because the scope of veterinary work in small animals is one of the main tasks of the veterinary profession (small animals and large animals). Research framework is to analyze the functional map for veterinary assistants (small animal) in order to assist veterinarian in taking care and treating small animals (see Figure 3).

Methods

Stage 1: Identify needs for occupational standards for veterinary assistants working with small animals.

Table 1
Content of occupational standards of Veterinary Assistants

Key Purpose	Key Role	Unit of Competence	Element of Competence
Assist Veterinarians in their daily work with small animals	1. assist and work in veterinary practices with standard of focus on care & welfare of animals	1. Maintain veterinary equipment and other equipment in the hospital as required.	1. Prepare tools and maintain equipment, as required. 2. Prepare tools and maintain surgical equipment, as required. 3. Prepare tools and maintain special equipment, as required.
		2. Assist the veterinarian in treating small animals, as required.	1. Prepare normal and special equipment and tools, as required. 2. Restrain animals and assist veterinarians while performing various treatment tasks, as required. 3. Collect basic samples for laboratory and perform basic laboratory work, as required. 4. Take care of wounds and give pills to sick animals correctly, as required. 5. Assist in X-ray procedures, as required.
		3. Take good care and maintain all medical supplies, as required.	1. Arrange medical supplies according to type, qualification of medicine, as required. 2. Update and take care of all medical stock correctly as required.
		4. Take care of and be conscious of safety at work place as required.	1. Take care or undertake sanitary work and other hazardous things related to veterinary instruments, in accordance with regulations. 2. Manage the safety of animals while being treated, properly, as required. 3. Organize and manage cages according to kind of disease and treatment, correctly, as required. 4. Be conscious and beware of zoonosis, as required.
		5. Take care of sick animals admitted as in-patient, as required.	1. Assist in the daily work of veterinary treatment of orders correctly, as required. 2. Provide water and food, as per veterinary description orders correctly as required. 3. Clean the animals properly, as required.
Assist Veterinarians in their daily work with small animals.	2. Sanitation and clinical care.	1. Clean rooms and equipment in the work places, as required.	1. Clean the floor, the counter and cabinet in the workplace correctly, as required. 2. Clean the medical cabinet and the temperature control cabinet correctly, as required. 3. Collect and separate garbage and send out for decomposition correctly.
		2. Clean equipment, tools and accessories, according to specifications, as required.	1. Clean general, surgical and special instruments correctly, as required. 2. Clean the food/water bowls properly, as required. 3. Clean other tools and cleaning clothes which are used daily properly, as required.
		3. Clean the cage and keep in-patient animal properly, as required.	1. Clean cages for in-patients with general sickness properly, as required. 2. Clean cages for surgical in-patients properly, as required. 3. Clean cages from infected in-patients properly, as required.
Assist Veterinarians in their daily work with small animals.	3. Front office customer service and workplace skills	1. Answer the telephone and make appointments correctly, as required.	1. Answer the telephone properly. 2. Provide details and explanations according to client requirements correctly as required. 3. Make a clear and correct appointment to client as required.
		2. Perform customer services operation card system and systematically arrange clients for consultations or treatment properly as required.	1. Perform customer services and prepare the operation cards as required. 2. Arrange client to see veterinarian according to the scheduled appointments as required. 3. Assist in emergency cases properly, as required.
		3. Advise or Inform clients after treatment or discharge from work place according to veterinarians instructions properly, as required.	1. Inform about medicine, water and food intake to client according to veterinarian instructions, correctly, as required. 2. Inform how to collect samples for further treatment, as required. 3. Inform client about next appointment, correctly, as required.

(continued on next page)

Table 1 (continued)

Key Purpose	Key Role	Unit of Competence	Element of Competence
		4. Perform basic accounting and manage all operational cards properly, as required.	1. Report daily income and expenses, as required. 2. Report admission service correctly, as required. 3. Keep the operation card after finishing services correctly, as required.

Table 2

Stakeholder assessment of units and elements of competence for developing occupational standards for veterinary assistant for small animal

Occupational standards for Thai veterinary assistant (small animal)	Median	Quartile
Unit of Competence		
1. To maintain the equipment and medical equipment in the hospital as required	4.58	1.05
2. Assist the veterinarian in performing the treatment as required	4.66	1.02
3. Take good care and maintain all medical supplies as required	4.49	1.13
4. Take care and be conscious of safety in work place as required.	4.22	1.01
5. Take care of sick animals admitted as in-patient as required	4.58	1.12
6. Clean rooms and equipment in the work places as required	4.66	1.09
7. Clean up all equipment, tools and accessories according to specifications as required	4.58	1.05
8. Clean the cage which keeps in-patient animal properly as required.	4.27	1.15
9. Answer the telephone and make appointment correctly as required	4.38	1.11
10. Take care of customer services, operation card system and systematically arrange client for consulting or treatment properly as required.	4.37	1.19
11. Advise client after treatment or discharge from work place according to veterinarians instruction properly as required.	4.30	1.07
12. Take care of basic account, manage all operation cards properly as required.	4.66	1.02
Element of Competence		
1. Prepare tools and maintain the equipment as required	4.31	1.06
2. Prepare tools and maintain the surgical equipment as required	4.40	0.99
3. Prepare tools and maintain special equipment as required	4.37	1.00
4. Prepare normal and special equipment and tools as required.	4.22	0.86
5. Restrain animals and assist veterinarian while performing various tasks as required.	4.58	1.02
6. Collect basic samples for laboratory and perform basic laboratory task as required.	4.52	1.04
7. Take care of the wound and give pills to sick animal and other help correctly as required.	4.30	0.93
8. Assist in X-ray procedure correctly as required.	4.20	0.83
9. Divide all medical supplies according to type, characteristic and qualification of medicine as required.	4.43	1.06
10. Update and take care of all medical stock correctly as required.	4.22	0.82
11. Take care of sanitation and other hazardous things which are related to all veterinary instruments in according to the regulations	4.68	0.98
12. Manage the safety of animals while being treated properly as required	4.64	1.19
13. Organize the cage management system according to the disease type correctly	4.25	0.78
14. Be conscious and beware of zoonosis as required	4.65	0.96
15. Assist in the daily treatment of veterinary orders correctly as required	4.20	0.83
16. Provide the water and food according to veterinary orders correctly as required	4.66	1.09
17. Clean the animals properly as required	4.49	1.13
18. Clean the floor, the counter and cabinet in the workplace correctly as required	4.51	1.05
19. Clean the medical cabinet and the temperature control cabinet correctly as required	4.58	1.05
20. Collect and separate garbage and send out for decomposition correctly as required	4.45	1.12
21. Clean the general instrument, surgical instruments and special instrument correctly as required	4.72	1.14
22. Clean the food/water bowl properly as required	4.20	1.08
23. Clean the tools and cleaning cloths which are used daily properly as required	4.27	1.15
24. Clean the cage which keeps in-patient with general sickness properly as required	4.72	1.12
25. Clean the cage which keeps surgical in-patient properly as required	4.72	1.02
26. Clean the cage which keeps infected in-patient properly as required	4.32	1.03
27. Answer the telephone properly	4.30	1.07
28. Provide details and explanations according to client requirements correctly as required	4.11	0.76
29. Make a clear and correct appointment to client as required	4.39	1.04
30. Perform customer services and prepare the operation cards as required	4.66	1.09
31. Arrange client to see veterinarian according to the scheduled appointment as required	4.66	1.18
32. Assist in emergency case properly as required	4.83	0.70
33. Advise about medicine, water and food intake to client according to veterinarian order correctly as required	4.39	1.04
34. Advise how to collect sample for further treatment as required	4.49	1.13
35. Inform client about next appointment correctly as required	4.20	1.08
36. Report daily income and expense correctly.	4.49	1.22
37. Report admission service correctly.	4.68	1.05
38. Keep the operation card after finishing services correctly	4.30	1.07

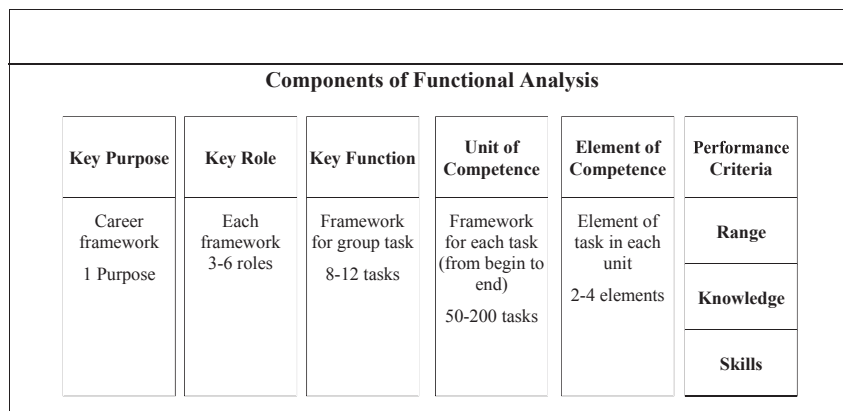


Figure 1 Diagram for developing occupational standards by functional analysis

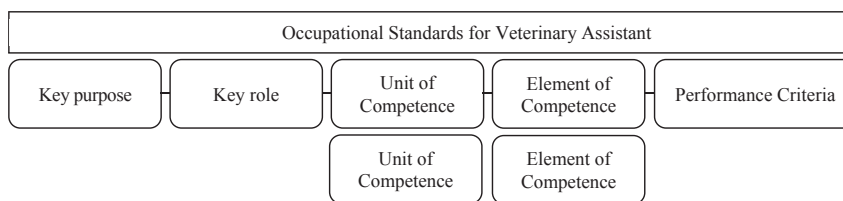


Figure 2 Research framework for formulating occupational standards for veterinary assistants

A descriptive research used and information from 91 voluntary veterinarians (with 1–45 years of experiences); 2 presidents of the Veterinary Council of Thailand, 50 veterinary practitioners; government and private veterinary hospitals; 29 veterinarians from private veterinary companies; and 10 veterinary lecturers, were gathered to identify the need of occupational standard for veterinary assistants. Career definition suggestions were provided by discussion focus groups by using predefined questionnaires and analyzed by grouping data and information. In

turn, this was used to define the key purpose, the key role and characteristic of outcomes, units of competence, elements of competence, knowledge, skills and performance criteria. The results were presented both in descriptive data and statistically as frequency (f) and percentage (%).

Stage 2: Revise and verify occupational standards for veterinary assistant for small animals.

The research utilized populations of 102 voluntary veterinarians (with 1–45 years of experience): 2 presidents of

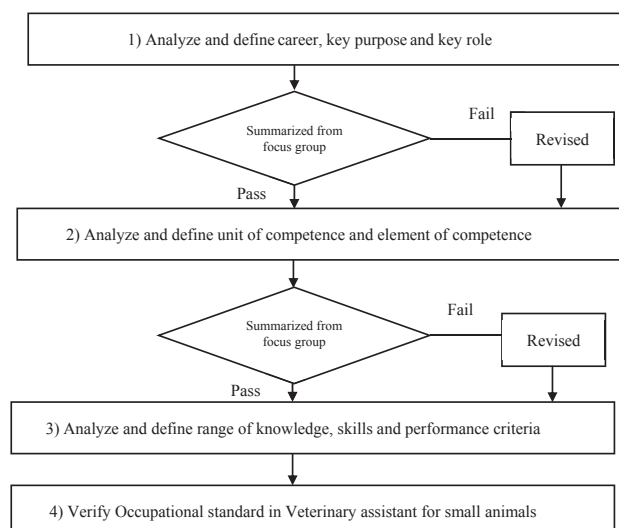


Figure 3 Schematic presentation of research framework

the Veterinary Council of Thailand, veterinary practitioners; 61 government and private veterinary hospitals; 29 veterinarians from private veterinary companies; and 10 veterinary lecturers. Analyze returned questionnaires were statistically analyzed as median and mode interquartile with five level questionnaire, ranging from 1– 5, meaning that, median: 1.00–1.49 = less agree, 4.50–5.00 = fully agree. Accept mean > 3.51. At most levels, the criteria for acceptance with a median of more than 3.51 and Inter-quartile range <1.50.

Results

The first stage focus groups provided a clear consensus on occupational standard of veterinary assistant for small animals with a required knowledge and ability of veterinary work and thereby create a professional career as veterinary assistants with the key purpose of assisting veterinarians in their daily work with small animals. The three key roles of the profession were defined as: 1) assist and work in veterinary practices with standard focus on care & welfare of animals consisting of 5 units of competence and 17 elements of competence; 2) sanitation and clinical care consisting of 3 units of competence and 9 elements of competence; 3) front office customer service and workplace skills consisting of 4 units of competence and 9 elements of competence.

The Results of Occupational Standards for Thai Veterinary Assistant (Small Animals)

The focus group of 102 participants and stakeholders on the occupational standard for veterinary assistant for small animals all agreed on the chart of duty in every item. With a median of 3.51 and interquartile range of no more than 1.50, it was concluded that the proposed standard veterinary assistants for small animal standard is appropriate. Stakeholders in the profession also accepted it.

Discussion

Occupational standards defined the role and tasks in professions taking into consideration the view of the owners of profession/owner of the proposed functions The supporting educational institutions need to develop manpower according to these standards. The role of performance needs competence, theory knowledge, skills and attitude for completeness and efficiency in that profession, according to expectation of employer (Sawatthanasakul et al., 2015).

Development in occupational standards in Thailand most likely used Functional Analysis method. This method states clear role for worker in each field of work. As a deductive theory, it uses general to target-oriented approach which is compatible with vocational education. The functional analysis method includes the ability of the workforce by focusing on units and elements of competence (Carroll & Boutall, 2011; Deissinger & Hellwig, 2011; Rösch et al., 2013).

This research provided the educational standards for veterinary assistants for small animals, leading to introduce

a formal educational system for staff working in small animal hospitals and clinics as proposed and agreed by a 102-member focus group, representing the sub-sector including president of the Veterinary Council of Thailand, veterinary practitioners; government and private veterinary hospitals; management of private veterinary companies; and veterinary lecturers.

Conclusion and Recommendation

1. The Office of the Vocational Education Commission and other units within the Ministry of Education, responsible for developing middle level manpower were recommended to study the data of this research for proposing occupation standards for veterinarian assistants for small animal and thereby increased the production of middle level of manpower. This program introduced competence-based teaching for good outcome into labor market, supporting Thai government policy to improve by urging and supporting with policy and money into vocational study. The proposed occupational standards were developed with input from and agreed by a 102-member focus group of veterinarians and is systematic way of generating competence-based outputs.

2. The Thai Government has already given policies to developing vocational manpower into health and medicinal fields by urging young people to lifelong learning. This research provides an extension of these efforts by offering veterinary assistant career opportunities, in accordance with national and international occupational standards.

3. The Veterinary Council, veterinary practitioners, public and private organizations, veterinary clinics and hospitals can make use of and benefit from this qualification, when recruiting manpower with formalized vocational veterinary knowledge, abilities and skills and at the same time offering career opportunities for their new staff.

4. Thailand Professional Qualification Institute (TPQI) could possibly top-up, build and make use of these standards to produce other careers some of which may be connected to the veterinary services.

5. Persons, who would like to pursue a veterinary assistant career, can use this opportunity as a motivation to study, develop skills, build on their current career and achieve a self-satisfaction for being competent veterinary assistants and being a formal part of the labor market.

Conflict of Interest

There is no conflict of interest.

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