

Adopting Community Health Principles in Veterinary Practice

Erwin W. Hohn

Marketing & Organizational Development and College Principal, The Medivet Partnership, United Kingdom

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Abstract One Health offers the veterinary community the opportunity to re-evaluate the paradigms underpinning animal health care delivery systems. To be more effective animal health care delivery, especially as traditionally viewed by small animal practitioners, needs to be broadened and move away from a primarily technologically led clinical curative approach. Improved access to clinical care does not result in improvements in the health status of populations. The distinction between Primary (Medical) Care and Primary Health Care (PHC) is made. An overview of Community Health and, in particular PHC, as practiced in human health care is provided. For this approach to have relevance and be impactful on service users (and communities), the undergraduate curriculum needs to be community oriented and community based. Veterinary Community Health (including veterinary PHC) needs to become a recognised specialty and provide the overriding context within which the more traditional specialties are presented to the student. A model that will allow for cost effective, holistic and integrated animal health care is proposed. This provides opportunities for the profession to expand its role and influence as well as collaborate with allied stakeholders.

Keywords Veterinary Community Health, Animal Health Care Delivery, PHC

1. Introduction

Communities, rich and poor, urban and rural, largely suffer from diseases that are, in the long term, related to their socio-economic predicament¹. Paradoxically, these conditions are preventable at a relatively low cost¹. These illnesses are due to a failure of health care peripheral to the hospital, in other words a failure of primary health care (PHC)¹. Given the fact that Community Health and PHC are becoming more important and popular in human health care,

and the fact that studies by Eckersley et al have suggested that disease profiles in animal populations *also* appear to be associated with the socio-economic status of their owners², it does not seem unreasonable to consider modifying aspects of this approach (viz. PHC) to animal health care systems. To effectively transpose aspects of PHC into animal health care delivery systems it has been suggested that veterinary students receive exposure (both theoretical and practical) to this philosophy during their undergraduate training. The adoption of the One Health concept provides the veterinary profession with opportunities to re-evaluate the context of animal health care delivery systems.

It is essential to be aware of the paradigmatic context within which we operate. Context frames how we see, define problems, formulate hypotheses and even how we develop and implement solutions. In science this is probably best seen using light theory. We apply either wave or photon theory as a context and this defines our understanding of how particular systems work³.

Irrespective of how scientific our approach we, as observers, are susceptible to Fundamental Attribution Error. This means that when it comes to interpreting outcomes we tend to underestimate the importance of the situation and context. In very simplistic terms this means that were we to observe someone shooting basketball hoops in a well-lit or a dimly lit hall, we would tend to attribute a low score to the skill of the player rather than poor lighting³. The paradigmatic context to which we have subscribed as veterinarians makes us equally susceptible to this even with the application of so called scientific methodology, principally because the context limits the parameters within which we view, define and seek solutions to problems.

As veterinarians (especially clinicians) it is important to consider who we use as our reference group. This determines the paradigmatic context within which we practice our profession. With the exception of herd health practitioners, the majority of companion animal practitioners consciously or subconsciously tend to use human medical practitioners as their reference group – and predominantly the application of a technological imperative with the development of a

principally clinical curative model. Historically, this has served both us and man well.

2. A Contextual Framework

Subscribing to a technologically led clinical curative paradigm has resulted in the paradox where traditionally the physician's prestige was measured by the depth of illness treated rather than the height of health promoted⁴. This perception is unfortunately often shared by the public primarily because the use of complex and intricate technology has historically been equated with quality⁵. Notwithstanding the fact that improved health as well as decreased morbidities and mortalities were encountered in developed countries before the major advances in both curative and preventive medical technologies, that received accolades⁴.

A good example of how the delivery of so called health care within this context is limiting can be seen particularly in resource-poor communities. Traditionally, initial entry to this market would have been the building of a large well equipped and well-staffed hospital. Within a short time it became apparent that this left more distant areas relatively underserved and a number of less well-resourced district hospitals (DH) were introduced to improve access to care.

Particularly in poorer communities, the demand for basic clinical curative medicine, both curative and preventive became overwhelming with the resultant development of peripheral clinics (PC) each feeding into its local DH. Further demand eventually resulted in visiting points (VP) feeding into peripheral clinics with a number village health workers (both curative and preventive) (VHW) active around their local VP (Fig 1)¹.

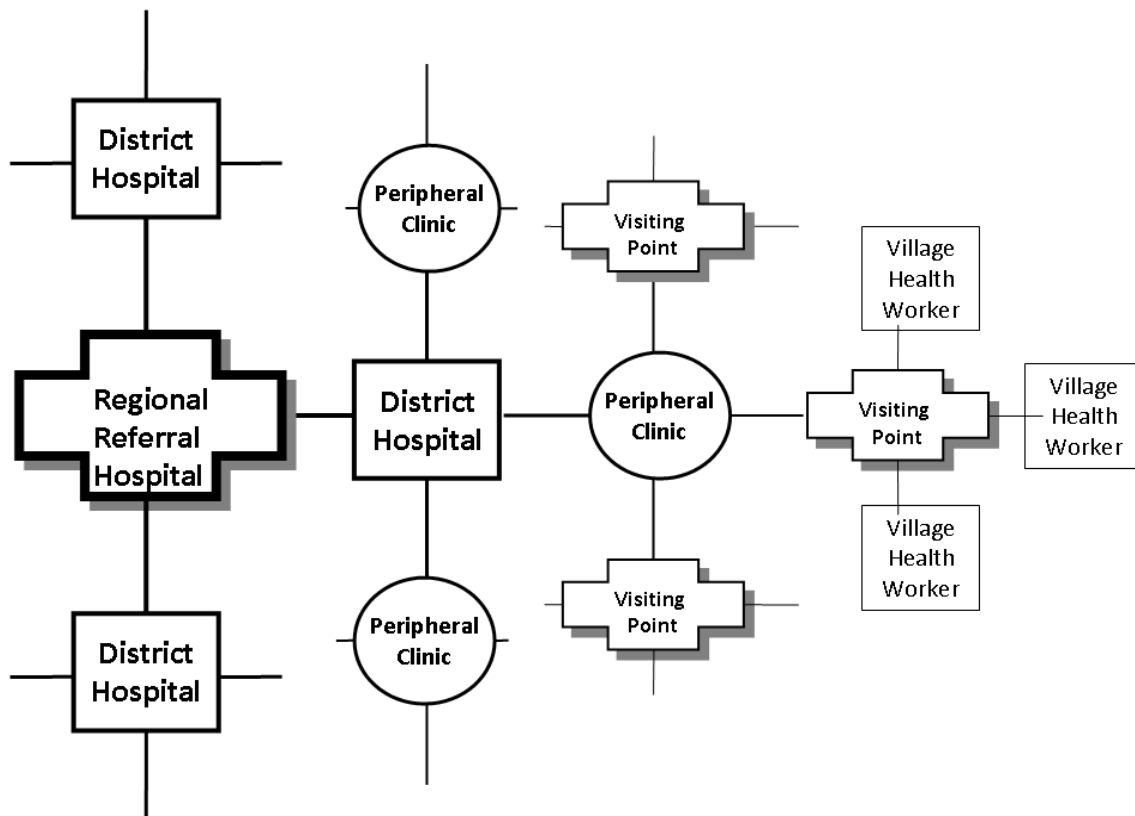


Figure 1. A Community Oriented Health Care System

The availability of technologies and skills delivering clinical curative health care is diluted as one moves further away from the Regional Referral Hospital (RRH) and down to the VP. For quality of care to be achieved the system relies on the upward referral of more complex cases requiring the attention of experts⁶.

Since disease is a manifestation of socioeconomic predicament¹, the application of a predominantly clinical curative model by definition engenders an attitude of dependency in the communities it serves⁷. If this underlying problem is not addressed, demand for a curative service continues to rise, placing increased pressure, especially financial pressure, on the system for greater access and availability to health care⁸.

One solution to this dilemma necessitates subscribing to an empowerment philosophy. This requires shifting the locus of control for health away from that of the physician and back into the community. An important but subtle nuance that is pivotal to the success of this approach is transcending the paradigm of disease prevention and embracing the philosophy of health promotion. To do this, illness needs to be viewed as a failure of health care peripheral to the hospital, in other words a failure

of primary health care.

In general, the strategic deployment of resources to deal with regional and national health problems lies in the hands of the specialists whose perspective rarely reflects the day to day realities of what happens at the coal face. This is not surprising since their universe is comprised of the roughly 0.1% of the conditions to which the population is exposed (Fig 2)⁹. These tend to represent the exotica of the routine work load for health workers, nurses and general practitioners.

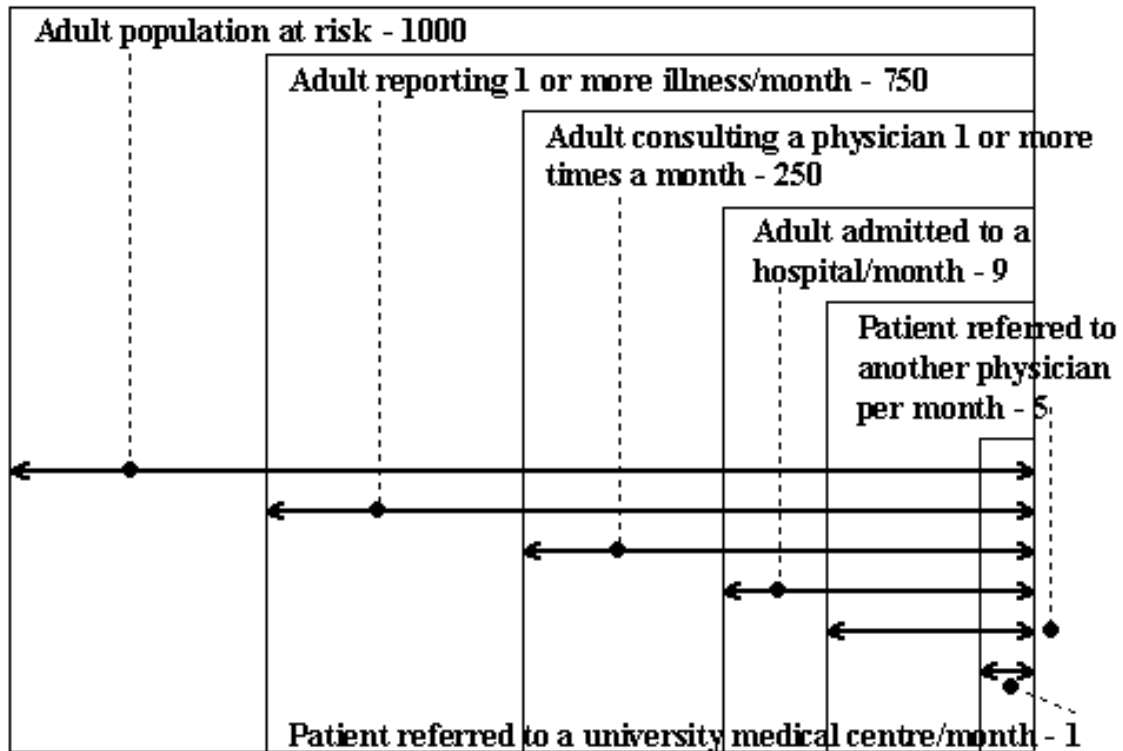


Figure 2. Prevalence of Illness and Utilisation of Medical Resources

This problem is self-perpetuating in that the predominant exposure to specialists also sets role models for the next generation of clinicians (i.e. the undergraduate students) to follow. The increasing tendency towards specialisation also results in the fragmentation of the undergraduate curriculum. Consequently, the potential to present the student with an integrated perspective risks being lost¹⁰. Another part of the problem lies in how the next generation of health care providers have been schooled and socialised into their profession. Learning primary care medicine in a university is like trying to learn forestry in a lumberyard (or worse still - a specialist joinery!)

For the sake of brevity this argument has been simplified but, for quite some time, within human health care there have been calls to address these and related issues through the provision of community based and community oriented education¹. In human health, Community Health is the discipline that has been leading this.

3. Primary Health Care - An Overview

The technological imperative resulted in the development of a clinical-curative model where doctors treat diseases

rather than people¹. It is also worth noting that people are gradually realising that despite increases in the number of doctors, other health professionals and expensive technologies, no real significant impact can be made on the health of the population unless the determinants of disease are adequately addressed^{8,11}.

The WHO offered a reasonably comprehensive definition of Primary Health Care (PHC) which unambiguously refers to health as a state of well-being rather than absence of disease¹². PHC, therefore, is health care [not only medical care] which is made available [especially to those in need] and should be appropriate, acceptable, affordable and involve the communities in which it is delivered¹.

PHC often tends to be viewed as inferior within the medical profession because it stresses simplicity⁵. PHC is also often confused with primary medical care^{5,13,14}. The latter being any first contact medical or related interventions⁵. The former embraces the latter and it is generally acknowledged that one cannot effect any form of quality PHC without primary medical care as well as an efficient referral system for cases that cannot be adequately dealt with at the periphery^{5,15}.

PHC is considered a process whereby people improve their lives and their life-styles¹⁶. Unfortunately this

developmental process often appears to take too long in achieving the desired goals⁷ and health care planners and policy makers feel an urgent need to address what they perceive are the health needs of the community¹⁷. This frustration and concern led the United Nations Children's Fund (UNICEF) to propose an approach that medically dealt with problems that were perceived to be priorities⁷. This approach led to the development of what is known as selective primary health care (SPHC) and allows for a number of quick-fix solutions to be applied to address what are perceived to be the priority problems in developing communities⁷. Unfortunately, this approach is often not integrated into a comprehensive PHC approach and has received accolades for the impressive contribution to health that it has made¹⁷. It is clear that SPHC should form an integral part of a PHC programme but that PHC is definitely not reducible to SPHC^{5,16}. In fact some feel that SPHC can only perpetuate dependency on a clinical curative model⁷.

Although much has been said about the health of communities one should not lose sight that this concept is used in a very broad sense and suggests complete physical, mental and social well-being¹². The object of PHC is therefore to assist in achieving this state. Since most of the target communities are characterised by a dependency on external agents for assistance (including health) the ultimate aim of a PHC programme is to enable them to achieve improved health primarily through *their own efforts*⁵ - a process of empowerment¹⁸ which will facilitate shifting the locus of control for health away from the professionals and back to the community. The role of the health professional is therefore transformed from a deliverer of health to a facilitator¹⁸. Ultimately it is recognised that health achieved through this means will be cheaper than through an improved curative model¹, but one should not lose sight of the fact that this process involves a multi-disciplinary *team* approach and therefore is not cheap⁵. Unfortunately the idea of community participation and responsibility in achieving their own health may be misinterpreted to imply that the authorities' (financial) responsibilities are decreased⁵. They conveniently seem to overlook the fact that the resources required for an effective PHC approach are both financial and human⁵. The only way communities will be able to assist themselves in achieving an improved health status is through an improvement in their knowledge and levels of motivation^{5,18}. The former can be achieved by formal and informal education in all sectors (including that of health) within that community⁵.

People's perceptions of their pet's health status are likely to be socially determined^{19,20}. The marked differences between the economic status of various community groups are accompanied by pronounced differences in the levels of knowledge, attitudes and behaviour towards pets and pet care¹⁹. These differences also contribute significantly to the differences in the pets' health status¹⁹.

PHC is therefore clearly a process that strives to ensure that even the most disadvantaged communities achieve a relative degree of independence^{7,16}. To ensure any level of

success a fair degree of planning needs to be done⁵. This requires the provision of some baseline information that may or may not be available¹⁹. The development of information systems may then have to be addressed⁵. Once a programme has been developed, regular surveys are essential to monitor changes in the patterns of disease and attitudes of the people as well as the efficacy of the educational or health programmes that have been implemented^{21, 22, 23}. The importance of such a system should not be underestimated since, without it, evaluation of progress is virtually impossible⁵. It has been acknowledged that the PHC approach takes time to achieve its objectives⁷. With increasing scarcity of resources in the health sector, it is critical to apply timely corrective measures to keep the process in line with its overall objectives²⁴.

The success of any community health project depends on assessing the needs of the total population and not only those who come to the service of their own initiative^{15, 24}. If the policy of health is geared to supply and demand, the resources and organisation will be very different from the situation where health services are delivered in the framework of PHC²⁴. It is therefore critical to distinguish between need and demand.

At any single time the health needs of the community could be defined in relation to the natural history of disease as depicted in Figure 3.

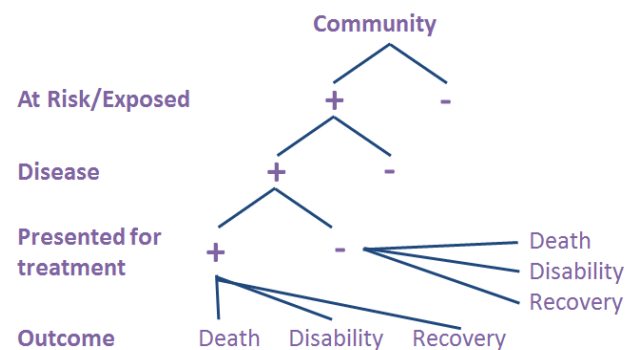


Figure 3. The Natural History of Disease In A Community

This model is useful in enabling a conceptual understanding of the overriding objectives for community health (and in particular PHC) initiatives^{1, 25, 26, 27}.

The objective of PHC is to intervene at the earliest possible stage in the natural history of disease²⁴. One would hope to push the health state in the direction of primary prevention. The application of these principles should result in a fall off in the pressure and load on the clinical team and allow for the controlled planning of work in line with needs. To respond constantly to population demand in a haphazard manner is neither cost nor time efficient.

Primary prevention^{4, 24} includes both.....

a) **Health Promotion** (here the major action is in relation to community health education) and

b) **Specific Prevention** (which involves activities like immunisation and parasite control)

Secondary prevention ²⁴ can be conveniently be subdivided into.....

- a) **Early diagnosis** (complications can be prevented if a condition is diagnosed early and treated timeously) and
- b) **Specific Treatment** (the disease is either cured or the sequelae are limited to a minimum.)

The assessment of the distribution of the different health states of the population, as defined above, is one of the two functions of epidemiology ²⁴. The second is to determine the processes by which this distribution occurs within the defined population ²⁴. For the health team to plan intervention at the community level adequately, it has to have data on the distribution of disease and its causes ²⁴. Epidemiology is therefore considered to be the basic science required in the planning and delivery of PHC ²⁴.

The role of education in assisting with especially primary preventive strategies is important and should not be underestimated. Health education should be an all pervasive, integrating force in the various spheres of community health and should not be allowed to become a separate arm of the health services ²⁸.

Health education should include the following:

1. Visits to schools to give talks, show videos and distribute pamphlets
2. The production and distribution of newsletters and leaflets within the community
3. The involvement of the media (including social) to include ongoing educational programmes for the community.

Careful co-ordination and supervision of these programmes are essential to ensure that conflicting information is not being presented.

The underlying assumption is that a basic transfer of relevant information is adequate to effect an appropriate and relevant change in behaviour. Community health practitioners and marketeers have long known that efforts are required not only to impact on knowledge but also attitudes and behaviour. The last decades' successful campaigns on smoking show how more effective this approach can be. The only way communities/people will be able to assist themselves in achieving an improved health status is through an improvement in their knowledge and levels of motivation ^{1, 6}.

By operating within a clinical curative framework, the successful tiering of services from RRH down to VPs with VHWs will result in operational efficiencies. An integrated and collaborative network will make access more affordable and cost efficient. However, the relative availability of specialized skills and resources becomes less as one moves further down the hierarchy – a primary medical care approach.

To deliver true health care it is necessary to complement this curative infrastructure with an integrated, holistic and health promoting perspective. This requires the introduction of services offering information, advice and support as well as disease prevention – and, more importantly, health promotion. The availability of these services need to be highest at the coal face viz: VP & VHW level and least at the tertiary care level (Fig 4) ⁶.

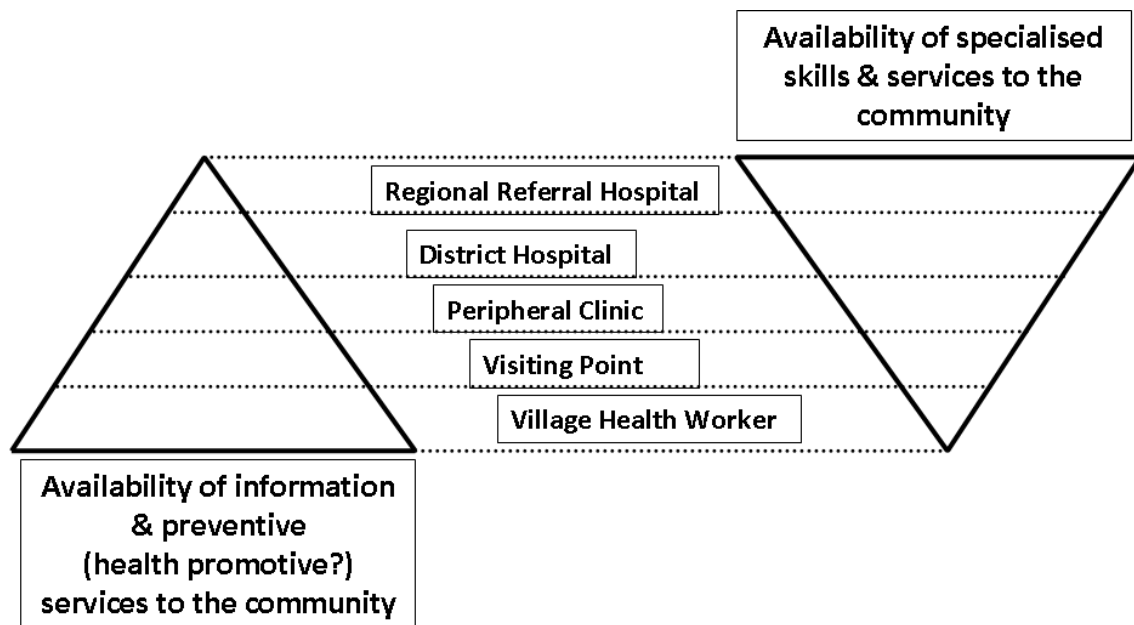


Figure 4. Organisational Levels for Integrated Veterinary Health Care

For this to work, integrated oversight as well as community, management and epidemiological perspectives are required in addition to that of the physician. Rapid identification of relevant needs (be they health or disease based) must take place with efficient referrals both up and down the hierarchy to the relevant experts. For this to happen, health care delivery needs to be planned and managed by people with the appropriate perspective and relevant training. This process involves a multi-disciplinary team approach and is, therefore, not cheap. There is no doubt, however, that it will be more cost effective and, in the long term, cheaper than our present option⁶.

4. Considerations in Implementing a Veterinary Primary Health Care System

A 'veterinary' PHC model, like its human counterpart, is unlikely to be directly transposable from one situation to another. Due to limited resources there are likely to be financial constraints in achieving specific objectives. Consequently, it is suggested that the overall management approach to veterinary PHC be one of project management. That PHC delivery can be broken down into a number of activities, is ongoing and requires time, cost and quality control as well as the need for constant evaluation further mitigates for the adoption of this approach and the resultant need for a strong single point of responsibility.

To implement an animal health care delivery system modelled on PHC it is therefore essential that the following receive attention -

Finance - It is inconceivable that communities could immediately take on the total financial responsibility for animal health care delivery. However the philosophy of PHC requires that, at some stage, this should occur. It is therefore essential to plan and budget for the transition period and to implement programmes ensuring that the community's financial resources are optimally and effectively managed.

Communication - The ultimate goal of PHC is to involve the community in its own health care delivery. To ensure that activities are carried out timeously, not replicated or that resources are mobilised optimally effective communication networks need to be established. This should ensure that information be effectively and rapidly transmitted to health care planners.

Monitoring and controlling - The effective and optimal utilisation of resources requires that programmes be constantly monitored so that appropriate actions and changes are timeously carried out. There is also a need for some form of quality control concerning service delivery.

Needs analysis/Market research - To effect health care in relation to the community's needs it is necessary for planners to know what is required, when and where. The difference between need and demand is important and should not be overlooked.

Human resource management - There can be no single

method of PHC implementation suitable for all communities¹. Modification and adaptation according to the needs of each community and its circumstances are essential¹. However, the following are well known and frequently stated general guidelines^{29,30,31}.

1. The development of and delegation down a skills pyramid. Routine work should not be carried out if somebody less qualified can do it as competently.

2. Upward referral of tasks that cannot be coped with.

3. A total commitment, by all the members of the team, to the training of those less qualified by themselves.

4. The clinicians' acceptance of all the members of the team and willingness to assist with their training.

To assess the efficacy and/or impact of any form of health care delivery, it is important to develop certain criteria to measure, or at the very least reflect, the health status of the population and how it changes in response to various intervention strategies. Whilst no single indicator of the health status of human communities exists, a number of statistics taken together give an idea of the levels of *disease*⁴.

Although the *principles* of veterinary PHC care should not alter, it should be reasonably obvious that an urban (i.e. primarily companion animal oriented) and rural (predominantly production animal oriented) models are likely to differ considerably concerning logistics etc. A decision must therefore be made as to the setting in which the model will be posited. Since traditional companion animal medicine/practice more closely parallels most delivery models in human medicine it may be prudent to start here when looking at developing a model for veterinary PHC

5. Conclusions

Communities and their pets show remarkable similarities when it comes to disease profiles and appropriate epidemiological models. Since PHC has been acknowledged as a viable approach to address the health problems of communities successfully and reduce the spiralling costs of human health care, it may be prudent to attempt modifying this approach to animal health care systems.

All, or at least many, of the pieces of the puzzle are already there. All we need is the will to rearrange them appropriately and effect delivery within the appropriate contextual framework.

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