THE NEED AND POSSIBLE MODALITIES OF ESTABLISHMENT OF COMMUNITY BASED DELIVERY OF VETERINARY SERVICES AND INPUTS IN THE ARID AND SEMI ARID AREAS IN KENYA

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Abstract

Veterinary services and inputs in the ASAL, as most other services in the rest of the country, has for sometime now been offered free, with the Government meeting the costs of drugs, service, disease control and surveillance and employment and deployment of personnel. This structure and mode of delivery of services, which is based on extension packages tested in the sedentary and semi-sedentary production systems, has proved to be impractical and unsustainable. The situation is compounded by the collapse of basic infrastructure, including service delivery systems and insecurity and the “almost total control” of livestock marketing by middlemen.

The provision of veterinary inputs and services is unlikely to improve if the present delivery systems are left in place. Thus there is need to empower the animal health technicians (AHTs) and selected livestock producers in the pastoral areas to be service and input providers. This is especially critical now that the donor nations, international financial institutions and non-governmental organizations (NGOs), which are deeply entrenched in the process of economic and social change, are insisting on reduced Government spending, right sizing Government service delivery personnel and privatization of delivery of goods and services.

The alleviation or easing of the current livestock production constraints alone, however, will not serve the livestock producers if the current livestock marketing system remains in place. This system is between an “informed and wealthy middlemen” and “unaware and often desperate livestock producers”. The odds have to be made more even through regular provision of current livestock market information and training of livestock producers (and their school age children whenever possible) in the art of livestock pricing.

It is our humble opinion that the current marketing and the veterinary services delivery system has to evolve to become truly participatory if livestock productivity, food security, increased rural incomes and improved quality of life is to be come a reality in the ASAL areas. This will not only ease production and marketing constraints currently facing farmers but also stabilize their economic base and change their socio-economic status to one that gives them hope of rising to the next notch in their hierarchy of needs.

1. Introduction

The agricultural sector in Kenya accounts for 30% of the gross domestic product, with livestock contributing 10%. Livestock production in the ASAL areas which holds 70% of Kenya’s animal population, accounts for 90% of the farm-gate prices, 95% of employment and 90% of most household incomes. These areas also hold over 80% of Kenya’s wildlife population (Government of Kenya, 1997).

The Department of Veterinary Services in the Ministry of Agriculture has the mandate to carry out both clinical and preventive livestock health in Kenya. Under this mandate the Government met the costs of disease treatment, control and surveillance, employment
and deployment of personnel and all other costs associated with these activities. These services, which were initially free then heavily subsidized, are on the verge of collapse due to the inability of the State to fund both recurrent and capital expenditures. Among the first measures instituted by the State to tackle this decline in funding were cost recovery and the use of revolving funds. These, however, did not work as the funds were either insufficient for the funds to run as true revolving funds or the funds were diverted to other uses (officially or unofficially) (Kahiu, personal comm; 1999). The only recourse left for the Government was to reduce the level of its participation and increase that of the private sector. The liberalization of trade and other policies has led to increased commercial activity in the veterinary field and especially the establishment of private veterinary services in urban and high potential areas (KVAPS, 1998).

In areas with low to poor agricultural potential (agro-ecological zones 4-6) the situation is very different, in that the private veterinarians have not been able to establish the traditional model of veterinary practice because it has not been economically viable (KVAPS, 1998). To aggravate the situation the veterinarians and AHTs in State services in the ASAL areas receive little, if any funds for development and capital expenditures, which essentially means that they are grounded at divisional or district headquarters with little or nothing to do all year round. To occupy themselves gainfully these veterinarians and AHTs have taken to “black market”, selling pharmaceuticals to livestock producers and traders (Kahiu personal comm, 1999; Leyland, 1997).

The livestock producers and traders, though extremely experienced in disease diagnosis, indigenous knowledge and ethno-veterinary medicines, lack the knowledge to determine the ethical use, dosage rates, route of administration and quality the available veterinary pharmaceuticals (Munyua et al., 1996; 1998; Leyland, 1997). Thus in a region where the available veterinarians and animal health technicians are under utilized (or not utilized at all) animals continue to suffer from poorly managed/treated diseases and conditions, while drug abuse is rampant and easily controllable diseases are wrecking havoc (Mukwana, 1993; Munyua 1996). There is an urgent need to empower the veterinarian in, whether in private or public sector, in the ASAL areas to train livestock producers as individuals or organized groups/producer associations, to participate in the delivery of animal health services (Mukwana, 1993; Munyua et al., 1996; Leyland, 1997, Stem, 1998). This paper discusses the current structure of the State veterinary services, the delivery constraints and the need for change, some suggested service delivery approaches and factors that may determine viability and sustainability of the community based veterinary services delivery programmes.

2. The current structure of veterinary services and livestock population in the arid and semi-arid areas of Kenya

The current structure of the veterinary services, staffing in some districts in ASAL areas and the livestock population are shown (Figure 1; Tables 1 and 2). For comparison data from Embu and Meru, which are high potential areas are included.
Figure 1. The current structure of the Department of Veterinary Services (and their counterparts in Livestock Production (LPD) and Marketing Departments (LMD)).

DIRECTOR OF VETERINARY SERVICES  
(Counterparts in LPD)

→

DEPUTY DIRECTORS OF VETERINARY SERVICES  
(Counterparts in LPD)

→

ASSISTANT DIRECTORS / PROVINCIAL DIRECTORS OF VETERINARY SERVICES (Counterparts in LPD and LMD)

→

DISTRICT VETERINARY OFFICERS (Counterparts in LPD and LMD)

→

DIVISIONAL VETERINARY OFFICERS (Counterparts in LPD and LMD)

→

VETERINARY OFFICERS (Counterparts in LPD and LMD)

→

LIVESTOCK OFFICERS (Counterparts in LPD and LMD)

→

FRONTLINE EXTENSION OFFICERS (AHT and JAHT and their counterparts in LPD and LMD)

→

LIVESTOCK FARMER AND TRADER
Table 1. The administrative structure and the distribution of veterinary personnel and support staff in some districts in the arid and semi arid areas of Kenya (GoK –1999).

<table>
<thead>
<tr>
<th>District</th>
<th>Divisions</th>
<th>Locations</th>
<th>Sub/locations</th>
<th>Los</th>
<th>VOs</th>
<th>LHAs</th>
<th>JAHAs</th>
<th>SSS</th>
<th>Drivers</th>
<th>Mechan</th>
<th>Artisan</th>
<th>Area in km²</th>
</tr>
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<td>Mwingi</td>
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<td>32</td>
<td>115</td>
<td>-</td>
<td>3</td>
<td>17</td>
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<td>3</td>
<td>-</td>
</tr>
<tr>
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<td>64</td>
<td>187</td>
<td>-</td>
<td>5</td>
<td>12</td>
<td>6</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Meru North</td>
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<td>7</td>
<td>21</td>
<td>12</td>
<td>16</td>
<td>6</td>
<td>4</td>
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<td>-</td>
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<tr>
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<td>64</td>
<td>230</td>
<td>11</td>
<td>9</td>
<td>68</td>
<td>67</td>
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<td>8</td>
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<td>63</td>
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<td>89</td>
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<td>45</td>
<td>4</td>
<td>6</td>
<td>16</td>
<td>5</td>
<td>14</td>
<td>6</td>
<td>4</td>
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<td>-</td>
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<td>2</td>
<td>0</td>
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<td>-</td>
</tr>
<tr>
<td>Pokot</td>
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<td>-</td>
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<td>3</td>
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<td>0</td>
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<td>4</td>
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<td>2</td>
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<td>3</td>
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<td>1</td>
<td>1</td>
<td>1</td>
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<td>30</td>
<td>94</td>
<td>2</td>
<td>4</td>
<td>3</td>
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<td>-</td>
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<td>2</td>
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<td>168</td>
<td>0</td>
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<td>3</td>
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<td>4</td>
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<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>37</td>
<td>70</td>
<td>209</td>
<td></td>
<td>122</td>
<td></td>
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<tr>
<td>Meru Central</td>
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<td>55</td>
<td>151</td>
<td>4</td>
<td>9</td>
<td>25</td>
<td>59</td>
<td>30</td>
<td>5</td>
<td>3</td>
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<tr>
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<td>129</td>
<td>2</td>
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<td>20</td>
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<td>0</td>
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<td>52</td>
<td>5</td>
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<td>32</td>
<td>9</td>
<td>7</td>
<td>1</td>
<td>2</td>
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</tbody>
</table>

The above personnel numbers excludes all technical and support staff stationed in the provincial headquarters.
LOs – Livestock officers, VOs – Veterinary officers, AHAs – Animal health technicians, JAHA – Junior animal health technicians, SSS – support staff and Mechan – Mechanic(s).
Table 2. Estimated livestock population (in ,000) in some districts within the agro-ecological zones 4-6 (ASAL) in Kenya 1994.

<table>
<thead>
<tr>
<th>District</th>
<th>Zebu cattle</th>
<th>Dairy cattle</th>
<th>Sheep</th>
<th>Goats</th>
<th>Camels</th>
<th>Donkeys</th>
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<tr>
<td>Baringo</td>
<td>325.48</td>
<td>108.25</td>
<td>238.09</td>
<td>703.00</td>
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<td>Embu</td>
<td>139.75</td>
<td>51.97</td>
<td>34.97</td>
<td>144.88</td>
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<td>Garissa</td>
<td>375.35</td>
<td>0.15</td>
<td>50.00</td>
<td>238.00</td>
<td>73.32</td>
<td>3.65</td>
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<td>Isiolo</td>
<td>193.50</td>
<td>0.50</td>
<td>213.00</td>
<td>188.00</td>
<td>33.00</td>
<td>0.40</td>
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<tr>
<td>Marakwet</td>
<td>178.86</td>
<td>57.90</td>
<td>214.10</td>
<td>160.55</td>
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<td>Kajiado</td>
<td>966.39</td>
<td>100.00</td>
<td>96.34</td>
<td>948.11</td>
<td>0.29</td>
<td>221.00</td>
</tr>
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<td>Kilifi</td>
<td>223.33</td>
<td>23.98</td>
<td>23.24</td>
<td>199.39</td>
<td>0.24</td>
<td>0.68</td>
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<tr>
<td>Kitui</td>
<td>165.55</td>
<td>0.65</td>
<td>48.05</td>
<td>345.01</td>
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<td>1.94</td>
<td>67.80</td>
<td>134.69</td>
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<td>0</td>
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<td>31.20</td>
<td>228.00</td>
<td>151.00</td>
<td>2.3</td>
<td>4.57</td>
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<tr>
<td>Lamu</td>
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<td>2.06</td>
<td>8.75</td>
<td>38.40</td>
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<td>38.93</td>
<td>113.57</td>
<td>250.52</td>
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<td>2.74</td>
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<td>51.00</td>
<td>216.00</td>
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<td>3.35</td>
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<td>0</td>
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<td>242.08</td>
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<td>0.05</td>
<td>321.7</td>
<td>481.54</td>
<td>123.67</td>
<td>24.70</td>
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<td>62.70</td>
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<td>0</td>
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<tr>
<td>Samburu</td>
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<td>288.16</td>
<td>347.13</td>
<td>15.36</td>
<td>8.36</td>
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<td>Tharaka Nthi</td>
<td>125.21</td>
<td>32.21</td>
<td>44.50</td>
<td>165.21</td>
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<td>4.51</td>
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<td>Tana River</td>
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<td>.02</td>
<td>.30</td>
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<td>316.96</td>
<td>950.88</td>
<td>63.15</td>
<td>28.90</td>
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<td>230.00</td>
<td>194.55</td>
<td>0.8</td>
<td>42.00</td>
</tr>
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<td>Wajir</td>
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<td>210.61</td>
<td>333.88</td>
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<tr>
<td>Total in ASAL</td>
<td>6,836.53</td>
<td>682.43</td>
<td>5,894.83</td>
<td>8,484.75</td>
<td>569.61</td>
<td>745.12</td>
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<tr>
<td>Total in all AEZ</td>
<td>9,161.37</td>
<td>3,069.29</td>
<td>7,871.45</td>
<td>1,007,2.32</td>
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<td>% in ASALs1-4</td>
<td>74.6</td>
<td>22.2</td>
<td>74.9</td>
<td>84.20</td>
<td>100.00</td>
<td>95.50</td>
</tr>
<tr>
<td>% in AEZs1-4</td>
<td>25.4</td>
<td>77.80</td>
<td>25.10</td>
<td>15.80</td>
<td>0</td>
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</table>

From tables 1 and 2 it is apparent that an estimated 10% of the departmental personnel (an estimated 100 veterinary surgeons, 50 livestock officers, 270 animal health technicians and 200 junior animal health assistants), are serve 70% of Kenya’s land mass and 75% of the animals population (agro-ecological zones 4-6). While the bulk (60%) of veterinary staff to offer their services to 30% of Kenya, which is in the in the medium and high potential areas (agro-ecological zones 1-4) and holds about 25% of the national animal population. An estimated 30% of veterinary surgeons, livestock officers and animal health technicians are found in State administrative structure, training and research institutions and in the private sector including private practice and pharmaceutical industry. On the ground this translates to a maximum of 6 veterinary surgeons per district.

Assuming that the veterinarian, livestock officers, AHTs and junior animal health technicians (JAHTs) were provided with adequate resources including manpower, transport and sufficient fuel through out the year, there would still be some major huddles to be overcome in the delivery of veterinary services in the ASAL areas. Among the main problems would be the inability to physically to reach all animals due to the shear size of the areas to be covered, high mobility and dispersion of the livestock producers and poor access roads and the high degree of insecurity in these areas.

Other problems that pastoralists have to contend with include:- high cost of delivery of services, communication barriers and low level of literacy, poor returns from livestock, inadequate supplies of veterinary inputs, inadequate storage facilities for drugs and vaccines, cattle rustling, domestic and wildlife interactions, fragrant breach of quarantine regulations, large-scale outbreak of controllable diseases and malnutrition and a dying indigenous information base and ethno-veterinary practices (Kariuki and Letitiya, 1996, Munyua et al. 1998).

To reduce the high cost associated with delivery of services to the pastoral areas and guarantee its sustainability an “all inclusive approach” in designing, developing, testing, implementing and monitoring an appropriate service delivery system is needed. This participatory approach entails the involvement of all the stakeholders including the sociologists, administrators, veterinary surgeons, livestock officers, animal health technicians and the communities receiving the service (Munyua et al. 1996; Leyland, 1997; Forse, 1999; Buttoud, 1999). The target communities could participate through nominated traditional organizational representatives or through producer associations/groups.

3. Participatory planning in livestock production and health

Most livestock production and health policies, which are currently being revisited in Kenya, claim to be based on bringing together the interest groups that represent the various cadres of service and input providers, producers and livestock traders. Just as in other sections of the society, the notion of participation has come to dominate the thinking of planners. It is a novelty in Kenya and other developing countries, long accustomed to the State taking decisions without any consultation.
In livestock production and health, as in forestry, a long-term vision is needed with regard to public intervention, and strategic planning has an essential role to play (Buttoud, 1999; Forse, 1999). According to Buttoud (1999) participation thrust its way in the developing countries during the 1980’s, following the realization that the State systems were unable to deliver services. This observation underscored the need to involve the consumers of services to fund and offer the services.

Several approaches have found favour, varying according to the country and the agency (community based organization or non-governmental organization) backing them. Initially the participation was passive, with the service user representatives being involved in solely providing information about their needs. This attitude has gradually changed to allow for real exchange of ideas, respecting each other’s position and negotiations. Now one of the key conditions of leading funding agencies and donors, along side an emphasis on training, is that there must be community participation during the drawing up of livestock policies and programmes. This involves massive and often expensive consultations, discussions and negotiations from the bottom to top on livestock problems, how to resolve them and on how to permit the communities to assume their proper responsibilities (Stem; 1998; Buttound, 1999). Under taken with transparency and mutual respect for each others position, this process also helps the State to affirm its independence in decision-making and to avoid having to follow international prescriptions based on wrong premise (Buttound, 1999). The former situation is found to be an unacceptable and humiliating by many economically disadvantaged countries.

3.1 Principles of community participation

The development of participatory rural appraisal tools (PRAs) was in response to the lessons learnt in earlier extensions approaches and the recognition that participation of community in programmes was essential if they were to succeed (McCraken et al., 1988). Used in the livestock sector these tools would permit the producers and facilitators to better record, count, measure, problem pose, discuss and analyze their existing situation in order to:- analyze and document the existing information on ethno-veterinary practices and existing veterinary service delivery systems with the ultimate objective of building on them, collect baseline production and marketing data for use in future monitoring and evaluation programmes, determine priorities and funding options, allocate available resources and assign roles for each of the stakeholders.

3.2 Participatory model of veterinary service delivery system in the pastoral areas - the OAU/IBAR/PARC-VAC and ITDG models

There are several prototypes of community delivery of veterinary services in Eastern Africa that are either failing, faltering or moving towards being self-sustaining (Leyland, 1997; Stem, 1998). To economically free these “community based service providers” from the donors, the OAU/IBAR/PARC-VAC, Intermediate Technology Development Group (ITDG) and other organizations have developed ideas, policy initiatives and projects, which will lead to privatized community based veterinary practices. The two driving forces for this approach is the need to improve the earning ability of the
veterinarian, the AHT and the willingness and ability of the pastoral producer to pay for veterinary services and inputs (Winrock, 1992; Stem, 1998).

In OAU/IBAR/PARC-VAC and ITDG model the veterinarian trains and equips selected animal health workers (CAHWs) and agrees to monitor, re-stock and supply inputs to CAHWs and other producers and provide consultancy services. In return the communities will select persons to be trained and agree to utilize their services. The trained CAHWs will undertake to practice within their group or community and source his/her inputs from the contact veterinary surgeon (or animal health technician). It is also expected that the CAHW will attend all future refresher courses scheduled in his/her area. The cost of the services and inputs and mode of payment can be discussed within the community (Figure 2). This organization can be further built on in terms of developing other sectors such as conflict management and livestock marketing (Leyland, 1997). The question of who will fund the training programmes after the donors have withdrawn needs to be addressed early.

Figure 2a. A possible veterinary supervised community based animal health delivery in pastoral areas.

Unlike the ITDG model, the OAU/IBAR proposed model provides for the inclusion of the AHTs and advocates for some monitoring and regulatory mechanisms.
Figure 2b. The structure of delivery of veterinary services in the pastoral areas proposed by the authors.

**PHARMACEUTICAL SUPPLIERS**

Drugs (through vet stores)    ↓    Cost and built-on profit

**VETERINARY SURGEON/AHT**

(In private practice through vet stores/pet care services)    →    (In State service allowed to operate vet stores in groups)

Drugs, training and monitoring    ↓    Cost and built-on profit

**CAHWs**

(Selected by livestock producers –trained in preventive medicine and stock valuation)

Drugs and extension messages    ↓    Cost and built-on profit

(Supplies from vet stores)

**LIVESTOCK PRODUCERS**

(Trained in stock valuation, increased production and offtake)

Livestock    ↓    Cost and built-on profit

**LIVESTOCK TRADERS**

In the models proposed by the authors and the OAU/IBAR, the State will continue to play regulatory roles including monitoring the delivery of services and inputs, enforcing laws governing the supply and use of ethical drugs, disease surveillance, livestock movement and control and enforcement of meat hygiene regulations through the redrafted animal diseases act.

To augment the State efforts it is suggested that the Kenya Veterinary Board, Kenya Veterinary Association and the Faculty of Veterinary Medicine would offer continuing education programmes to government and private veterinarians and livestock technicians.

**4. Application of the proposed models in Kenya**

For the structure proposed by the authors to work in Kenya, however, there are some inherent constraints that have to be overcome including:

a. Amendments of legislations governing disease control, drug distribution, veterinary practice and preparation herbal concoctions for use in animals,
b. The expected resistance by the administrators, veterinarians and the animal health technicians.

4.1 Statutes that need to be reviewed to regularise community participation in the delivery of veterinary services.

The Kenya Veterinary Board (KVB) and the Kenya Veterinary Association (KVA), among other stakeholders have recommended that the repeal or amendment or removal of certain sections of the Acts that may limit the preparation and distribution of ethno-veterinary products*, the distribution and handling of commercially available veterinary drugs and chemicals,* the practice of veterinary medicine† and the cropping of farmed game‡ be given a priority (Figure 3). The KVB and KVA, have also suggested that a standard traceable branding** system be introduced to control cattle rustling.

Figure 3. Statutes that need to be reviewed and be amended or repealed to decentralise the delivery of veterinary services in the ASAL areas.

1. Witchcraft act Cap 67
2. * Liquor Licensing Act Cap 121
3. * Traditional Liquor Act Cap 122
4. * Compounding of portable spirits Act Cap 123
5. Public health Act Cap 242
6. Pharmacy and Poison Act Cap 244
7. * Dangerous Drug Act Cap 245 (Psychotropic & Narcotic drugs Act)
8. * Use of Poisonous substances Act Cap 247
9. * Food drug and Chemical substances Act Cap 254
10. Fertilizer and animal food stuffs Act Cap 345
11. Pest Control products Acts Cap 346
12. **Stock produce and Theft Act Cap 355
14. **Branding of Stock Act Cap 357
15. Cattle cleansing Act Cap 358
16. Hide and Skins and Leather Trade Act Cap 359
17. Prevention of cruelty to animals Act Cap 360
18. †Animal Diseases Act Cap 364
19. †Veterinary Surgeons Act Cap 366
20. ††Wildlife Conservation and Management Act Cap 376
21. * Standards Act Cap 496
22. **Stock traders Licensing Act Cap 498
† Proposed Veterinary Medicines Act.

It is expected that the re-written laws will be brief with provisions for rules and schedules. This will make it easier to amend any rules that are thought to be repugnant or redundant in future without affecting the core act.
4.2 **Resistance by administrators, veterinarians and animal health technicians**

Possible reasons for the resistance

There are several factors which are expected to give rise to resistance to change in the mode of provision of veterinary services including:

i. **Insecurity.** A change of environment often brings uncertainty, because no one knows what to expect. The feeling of insecurity surrounds people when they move from one stage or status or pattern of life to another.

ii. **Possible social loss.** If the change causes an individual from an informal group such as personnel in a district headquarters to be transferred, the remaining members of the group may view this as a reduction in their power and a loss of status symbol in the administrative area. They will most likely resist any further changes.

iii. **Economic losses.** With the Kenyan economy in a nosedive, many individuals are afraid of being phased out of their jobs, in this case by the training a new cadre of service providers. This revolves around the fear of reduced income, being declared redundant (down or right sizing), fear of demotion and fear of reduced wages/income.

iv. **Inconvenience.** Change represents a new way of doing things and as such new procedures and techniques may have to be learnt – this may be inconvenient to those who hold on to conventional procedures and are unwilling or unable to adopt.

v. **Resentment of control.** Although the change of the veterinary service delivery system may be for the better, a certain amount of resentment may arise when the administrators, veterinarians and livestock technicians realize (rightly or wrongly) that they may do not have the final control over their destiny.

vi. **Unanticipated repercussions.** Because the veterinary department is part of a larger system, a change in one area will most certainly have unforeseen repercussions in another parts of the system eg. if the working hours were to be extended - an administrator, veterinarian or livestock technician may not like it and would work towards the failure of the system.

vii. **Resistance by professional associations.** Professional associations often oppose any changes proposed without their involvement or those that threaten the welfare of their members. The proposed training and equipping of CAHWs to “practice alongside veterinarians and animal health technicians is no different. Uncontrolled opposition, and presumed goal incompatibility, may breed discontent, which may act to dissolve common ties and eventually leads to destruction of this very worthy cause.
viii. **Other causes of resistance are:**
   a. Obsolescence of skills.
   b. Ego defensiveness.
   c. Desire to maintain status quo.
   d. Resource constraints.
   e. Organizational structure i.e. bureaucracy.
   f. Peer pressure.

**Possible ways of overcoming or reducing the level of the anticipated resistance**

a. **Provide information in advance.** As far as possible to the “movers of the change” should provide the reasons for change, its nature, timing and the impact on the veterinary department and the various cadres of administrators and service providers as individuals. This needs to be done in continuously to prepare the current lot of administrators and service providers.

b. **Encourage participation.** It is imperative that the current administrators and service providers are involved and encouraged to participate at all stages of the development and implementation of the intended change. They are likely to support change and therefore its ultimate success. It is important that all stakeholders are given an opportunity to air their views freely at all stages of development of the programme.

c. **Guarantee against loss.** There has to be truthful guarantees that there will be no lay-offs or pay reduction as a result of the change. And if there is going to be lay-offs or reduction in pay this should be stated in advance. If the changes will lead to lay-offs, by any other name, the person(s) should be prepared in advance.

d. **Provide technical counseling.** The provision of counseling may not prevent a rebellion but is likely to improve the chances of voluntary adaptation. The role of the counselor would be one of advising rather than directing.

e. **Attempt to maintain useful customs and informal relationship.** In as far as is possible the changes being made should be made to coincide with culture of the personnel in the department and the stakeholders.

Among the strategies to be avoided at all stages of development and implementation of the community based veterinary services delivery system include:-

1. Manipulation.
2. Co-optation.
3. Explicit or implicit coercion
4. Any other unethical means.

5. **Other possible determinants of success of the community based delivery of veterinary services**

There are several factors that may affect/influence the sustainability of the proposed community based delivery of veterinary services including:-

a. Insufficient appropriately trained personnel,
b. Unnecessary suspicion.
c. Poor motivation of the available frontline extension workers,
d. Deterioration of security and infrastructure.
e. Unwillingness of practitioners to invest in the ASALs,
f. Marketing channels and support services to cater for the increased offtake rates,
g. Availability of good quality and affordable drugs, chemicals and vaccines.

5.1 Lack of appropriately trained personnel

In a continuing education needs assessment undertaken among 350 practicing veterinarians in both public and private sector (Munyua and Kahiu, 1999) commercial courses, such as basic book keeping, marketing, accounting and use of computers were listed as priority training areas. In the study basic book keeping marketing and accounting was listed as a priority by over 80% of the veterinarians while only 20% opted for purely veterinary continuing education programmes. The veterinarian in the arid and semi-arid areas of Kenya in addition requested for courses on “resource conflict resolution.” It is expected that the Kenya Veterinary Board, Kenya Veterinary Association (KVA-KVAPS) and the Veterinary School (through the Clinical Studies Department, University of Nairobi), will meet these training needs with the launching these and other courses.

To respond to these needs the FVM introduced business management in the 5th year undergraduate and 1st year postgraduate curricular in 1997. Other courses in the pipeline including herd health and PRA methodologies, that are important for one to effectively practice in the ASAL areas, will go along way in enhancing the delivery of services in pastoral areas. This will also make the veterinarian “a more complete, competitive and versatile / flexible professional”, who will be able to wither and survive the current stiff competition from other professionals and quacks (Munyua and Kahiu, 1999).

The Kenya Veterinary Board (KVB), Kenya Veterinary Association (KVA) and the Faculty of veterinary medicine (FVM) need to adopt a similar stand to rejuvenate veterinary education in Kenya.

5.2 Misplaced suspicion

“In Africa I believe you have a style and operation of veterinary service delivery, which will require a number of specific initiatives to provide the type of veterinary services your communities will need in the years ahead. Clearly you are the best people to determine how this is best achieved” (Bryden, 1993).

This view has, however, been overtaken by events, as the majority of African States are currently unable to fund most of the basic services. A situation that has forced majority of the donor nations, international financial institutions, regional and international non-governmental organizations (NGOs) and some 60 or so local NGOs to strengthening communities to provide some of these services. To attain these goals in the livestock sector the funding these agencies have embarked on “empowering the grass-root livestock producers to be service providers” under the titles:- Community Animal Health
Workers (CAHWs), Paravets, Primary Veterinary Health Care Assistants (PHVCA) and Primary Veterinary Care Assistants (PVCA).

The greatest fear, (real or imagined), of the local administrators, veterinarians and animal health technicians is that these donor nations and agencies, most of which are also funding the structural adjustment programmes, have the same cure for all countries in the region and are determined to see their will done. There has been little or no consultation. What then is the best possible option that may leave the Kenyan policy makers, administrators veterinarians and animal health technicians in deeply involved in the process of change, which will ensure that the changes survive long after the donors are gone or their priorities have changed? In our opinion it is important that discussions on the proposed changes be undertaken with representatives of all stakeholders including the DVS, KVB, the Faculty of veterinary medicine (FVM), KVA (KVAPS) and the Kenya Association of Livestock Technicians (KALT), NGOs, CBOs and other funding agencies. This team should collectively address the shortcomings of the current system, look at what is being suggested and objectively analyze how best to fit it to the existing situation on the ground. The involvement of all the stakeholders from the very beginning will reduce chances of conflict(s) to manageable levels while putting in place mechanisms of conflict resolution.

The Director of Veterinary Services and Kenya Veterinary Board should insist that all CAHWs training in Kenya be undertaken by qualified and duly registered veterinary surgeons in private or public sector for their own gain. The frontline extension workers should be re-trained to be able to train the CAHWs in their respective areas.

The Kenya Veterinary Board on the other hand should ensure that all prospective trainers are trained to offer same quality and level training, are registered as trainers and are issued with guidelines of the minimum fees chargeable per course or attendant. The KVB, KVA (KVAPS) and the KALT would ensure that members of the profession play within the laid down regulations. In this way the trainers would be able to earn for training the service providers, equipping and re-stocking their practice kits with quality drugs and chemicals. This relationship will be mutually beneficial to both the trainers and CAHWs. This will only be possible if there was a change in government policy to allow the state veterinarians and AHTs to open veterinary stores and practice on part time basis. The KVB would also have to amend its code of ethics to allow veterinarians to open part time veterinary clinics.

For the DVS, KVB, KVA (KVAPS) and KALT there will be an added advantage in that they will know the NGOs funding livestock programmes, when they are on and where they are being held through returns from trainers – This information is currently difficult to come by.

5.3 Poor motivation of the available frontline extension workers

The central hierarchic structure and operation of the veterinary services with delayed communication and administrative procedures and extremely critical financial situation
has led to a reduction in field activities and a build up in job frustration and dissatisfaction. This has eventually culminated in low motivation, apathy and poor productivity. Motivation in this context would be defined as a dynamic process aimed at producing goal-oriented behaviour.

Motivation in field personnel far from close observation is not an easily described phenomenon and one can only observe an individual’s actions and then interpret the observed behaviour in terms of underlying motivation – this process leaves a wide margin for error. In the case of policy makers, administrators, veterinarians and animal health workers increased wages or incomes, the job itself or accomplishment of set objectives may be the motivators. Analysis of dissatisfiers and motivators is made more complex by the fact that the individual may be unaware of the motivating or dissatisfying factors himself/herself and that only a small part of the human being is conscious and visible, the rest is beneath. This below the surface concept is unconscious motivation, which explains why man cannot verbalize his motivation to attain goals or even tell what his goals are.

Figure 4. BLENDING OF MASLOW’S HIERARCHY OF NEED AND HERZBERG TWO-FACTOR THEORY OF MOTIVATION

<table>
<thead>
<tr>
<th>Maintenance factors</th>
<th>Motivators</th>
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<tbody>
<tr>
<td></td>
<td>Self-fulfillment</td>
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<td></td>
<td>Esteem</td>
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<td></td>
<td>Social</td>
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<td></td>
<td>Security</td>
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<td></td>
<td>Physiological</td>
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</tbody>
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In the context of the veterinary service deliverers in Kenya, change in behaviour may be brought about by changes at two levels – State and individual.

1. At State

   a. Security and basic infrastructure– Problems of insecurity including rapes, murders and cattle rustling, and lack of basic infrastructure have to be addressed to urgently, honestly and with a lot of political good will. No amount of changes in laws or policies or empty political rhetoric will improve the situation on the ground unless there is a genuine desire to attain lasting peace and security. Practitioners and traders of all shades
and persuasion will be reluctant and unwilling to invest in the ASALs as long as the current level of insecurity persists.

b. Control and authority – Districts need to be given more autonomy and room to experiment on new innovations and causes of action. This would ascertain that the usually applied standardized programmes eg. Disease control methods may locally be modified to suit the local production system – thus in pastoral areas the State personnel would have the authority to use or incorporate the CAHWs in delivering services. It also anticipated that the decentralization of authority would enhance human resource management, individual and group level guidance, inter and intra-group consultations and harmonious sharing of responsibilities.

c. Posting of personnel – Posting in the current system does not always correspond to requirements on the ground or qualifications. This is frustrating as the posted personnel lack in professional skills, including conflict management, gender issues, PRA methodologies, business management and strategic planning, to effectively serve in the ASAL areas. There is an urgent need to introduce regular refresher or advanced training courses to address observed skill deficiencies.

d. Policies and laws – Changes in policies and laws to enable veterinarians and animal health technicians in the public sector in the ASAL areas to open private practices including veterinary pharmacies is important if practices are to survive in the ASAL areas. Under this policy such personnel would be allowed to practice in this state for 2 years after which s/he would be expected to quit the paid employ of the State. Should the practitioner be transferred, the KVB would be expected to allow the sale of the practice to the in-coming official, unless the outgoing one chooses retain ownership. These changes are expected to attract more veterinarians and animal health technicians willing to invest in practices that run alongside drug stores.

The Kenya Veterinary Association Privatization Scheme (KVAPS) on the hand would participate in training in commercial courses and arranging for ASAL friendly funding/financing.

2. At individual level (the veterinarian, animal health technician and the community animal health worker)

a. It is expected that with improved physical and job security and income the service providers shall be motivated enough to improve their performance and to create opportunities to accomplish something significant in his/her work.

b. It is expected that the individual will get job satisfaction with the new or increase in responsibility.

c. It is also expected the individual will treat this new status as an opportunity to grow and develop on the job and business.
5.4 Unwillingness of practitioners to invest in the ASAL areas

The remote pastoral and low agricultural potential areas often lack basic services such as education and medical and are often famine and bandit prone. It is therefore difficult, unless the returns warrant it, to attract trained professionals to risk investing their time and money in the area. This fact holds true whether the professionals are locals or otherwise. The notion that professionals from the local area can put up with the level of insecurity currently being experienced in the ASAL areas is misplaced – they will also move from such areas to more secure ones.

The situation, however, is bound to change if policy and legal changes suggested above are effected and the KVAPS develops a programme tailored for funding the establishment of businesses in the pastoral areas.

5.5 Marketing channels and support services to cater for the increased offtake

Alleviation of production constraints is expected to improve livestock productivity and therefore the offtake rates. This may encourage the producers to offer more animals to the market than is current the case.

Marketing of livestock including cattle in the range lands begin when animal(s) part with the primary producer and through one or more distribution channels the final product – meat, reaches the consumers in the main trading centres including Nairobi, Mombasa, Nakuru and Kisumu (Mweya, 1986, Njiru, 1986). These workers, among others, pointed out that the almost absolute control of the livestock trade by the middlemen, who do not add any value to the product, has made it difficult for the primary producers to make meaningful living out of livestock production. There is, however, an old marketing saying, which states that “you can eliminate the middlemen but you cannot eliminate their functions”.

Some of the functions performed by middlemen in the livestock trade include:-
1. Serving as special agents for both the producer and customer,
2. Providing financial and material services to the producers on credit,
3. Taking the risk of collecting animals from individual producers and holding on to them until they are bought off-them or collected for transportation to distant or eventual markets,

By the very nature of livestock trade the middlemen also obtain important market information, which they fail or selectively choose to pass on to both the consumer and producer. It is this latter function that gives the middlemen an edge in the market place. It is imperative therefore that the livestock prices, like those of other agricultural commodity prices are included in the prime time Swahili, English and local language radio and television broadcasts and the CAHWs are trained in livestock valuation. Information support services for livestock marketing can be provided by a “livestock marketing intelligence unit”, which could be under the Livestock Marketing Division, of the
Ministry of Agriculture. This and the formation of producer associations, will in a small but very significant way, mean that the livestock producers (with the assistance of the CAHWs) will enter the market place better informed.

It has been observed that while in transit the animals suffer hunger, loss of weight, bruising, diseases, and many die en-route before reaching the final markets because the holding grounds in the traditional trade routes have either been taken or lack basic facilities. These holding grounds are properties of the common and should revert to commons wherever they were taken over by individuals. This is critical if the livestock producers’ returns are to improve, since the price paid for the animals by the middlemen will always include anticipated losses while in transit, which will loaded on the producer and the customer.

The losses while in transit can be reduced further, by training the loaders and transporters in animal handling and basic animal welfare.

5.6 Availability of good quality and affordable drugs, chemicals and vaccines

Quality control of drugs, chemicals and vaccines used in animals is under the control of various statutory bodies including the Pharmacy and Poisons board, Pesticide Control Board and Kenya Bureau of Standards. These units need to be strengthened to enable them to control the quality of veterinary drugs, chemicals and vaccines being produced or imported into Kenya. Alternatively an independent statutory body should be set up to address itself to availability and quality of veterinary vaccines, drugs and chemicals.

It is suggested that the Kenya Veterinary Vaccine Production Institute (KEDEVAPI) be privatized to improve its performance and accountability to the Kenyan livestock farmers. It would be ideal if this strategic industry was sold off to livestock farmers who are the main consumers of its products.

6. Possible reasons that may lead to poor implementation of the proposed changes

a. Isolated planning. Though strong central planning is easier to co-ordinate, especially in strong leadership, the plans are often unrealistic and are a poor reflection of understanding on the problems faced by the lower cadre personnel. It is doubtful if the situation will be any different if the same were to be applied in the delivery of veterinary services and inputs.

b. The trade off between short term and long term objectives of the livestock industry: If the change agents target the short term gains they are bound to loose in the long run – there should be a careful balance between the short term and long term objectives of all stakeholders.
c. Lack of specific implementation plans – Failure due to lack of detailed implementation plans. Often the details of the ensuing changes are only made available to managers – all stakeholders need to know the plans including activities, time schedules and those responsible. It is imperative that the change agents provide all stakeholders with detailed implementation plans including the activities, time schedules and those responsible. The planning and implementation should be inclusive and participatory.

d. The more different is the strategy is to the current structure the more is the resistance expected. All attempts should be made to build the future structure on the present.

The key to any meaningful and sustainable change is honesty by all stakeholders and participatory planning and implementation of the plans arrived at.

7. CONCLUSIONS

1. Security in the ASAL areas is the cornerstone on which all future development is hinged – it is therefore imperative that it is restored if basic survival and any meaningful development is to be realized in the region.

2. Any proposed changes to the veterinary service delivery systems should be built on the existing system to reduce the development period and investment costs. The State should continue to play a regulatory role including monitoring the delivery of services and inputs, enforcing laws governing the supply and use of ethical drugs, disease surveillance, livestock movement and control and enforcement of meat hygiene regulations.

3. To augment the State efforts it is expected that the KVB, KVA (KVAPS) and the Faculty of Veterinary Medicine would offer area specific continuing education courses to government and private veterinarians and livestock technicians. These practitioners should be trained as trainers and licensed/registered to train CAHWs.

4. The DVS, KVB and KVA (KVAPS) should facilitate the establishment of appropriate practices (businesses) by public veterinarians and animal health technicians in the ASAL areas while they are still in State employment.

5. There is an urgent need to train the community representatives to provide other services including livestock valuation and marketing in the ASAL areas. The empowerment should be accompanied by the revitalization of trade routes and holding grounds and availability of good quality veterinary inputs.

6. The State should continue to meet the cost of personnel and gathering and provision of livestock marketing information.
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