



Strengthening the veterinary profession in India to improve food security:

**Working together to base practice on evidence, and to provide
information and support in developing the veterinary curriculum**

NASC Complex, PUSA, New Delhi, India. 25th – 26th November, 2011

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DR. R.K. KHETARPAL

An Expert Consultation
"Strengthening the Veterinary
Profession in India"

25th - 26th Nov
NASC Complex

Organised by
Animal Science Division,
ICAR



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1. Executive Summary

Veterinarians play a vital role in safe-guarding both human and animal health, by securing an adequate supply of safe food and protecting humans and animals from the spread of zoonotic diseases. They are also vital to improving the productivity of livestock for the benefit of producers in particular and for the wider population in general.

The overall aim of this expert consultation was to identify ways to strengthen the veterinary profession's role in improving food security, food safety and public health, and in increasing its impact on the livelihoods of producers, which is of primary importance to India and its future development.

The workshop was designed to be the first step in developing proposals to strengthen the veterinary profession in India by improving information support for practising veterinarians to enable them to base practice on the best available evidence, and to help it to develop the curriculum in the veterinary schools based on practical problem solving. The workshop focused on livestock and dairy veterinary medicine.

Objectives of the Expert Consultation:

1. Bring together key organizations in the Indian Veterinary profession, to gain their insights and to identify support and engagement in strengthening the curriculum and accessibility of information resources in practice.
2. Identify key stakeholders in the provision of veterinary services in India, and the Continuing Professional Development needs of the profession.
3. Establish the information needs of the veterinary profession in India and any gaps in current information provision.
4. Identify appropriate sources of information, both national and international.
5. Review appropriate delivery mechanisms (mobile phone, internet, print)
6. Identify the benefits of increasing problem solving within the Indian veterinary curriculum.
7. Agree follow up actions to the meeting and identify resources needed to strengthen veterinary professional development and support, e.g. funding requirements and potential funding sources.

The meeting was organized jointly by the Animal Science Division of the Indian Council for Agricultural Research (ICAR), CABI, the Royal (Dick) School of Veterinary Studies at the University of Edinburgh and the WikiVet team at the Royal Veterinary College, with support from Pfizer Animal Health. The consultation was attended by over 100 experts from across the veterinary sector in India, including the Veterinary Council of India, National Academy of Veterinary Sciences, as well as vice chancellors and deans from the veterinary schools, and representatives from the National Dairy Development Board, Non-Governmental Organizations and private sector. There was also representation from international organizations including the OIE, FAO, WHO, ILRI, and GALVmed.

The key conclusions of the expert consultation were as follows:

- The Government of India recognises the important role of the veterinary profession in:
 1. achieving the agricultural production growth targets of the Twelfth Five-Year Plan
 2. supporting livelihoods in the rural economy
 3. improving public health, and controlling zoonotic diseases (such as rabies) .
- Access to current international scientific knowledge is essential to strengthening the veterinary profession in India, and enabling practice to be based on evidence.
- The veterinary curriculum in India should be modernised to develop problem solving skills and an evidence-based approach in both teaching and learning.
- Continuing professional development is a vital part of raising the standards of the profession: a greater emphasis on life-long learning within the profession should be encouraged and veterinarians provided with the opportunities and the tools to achieve this.
- Public-private partnerships should be encouraged to maximise all available resources and capabilities in raising standards in the veterinary profession in India.



2. Introduction and Background

The International Consultation on strengthening the veterinary profession in India was organized jointly by the Animal Science Division of the Indian Council for Agricultural Research (ICAR), CABI, The Royal (Dick) School of Veterinary Studies at the University of Edinburgh and the WikiVet team at the Royal Veterinary College. It was supported by Pfizer Animal Health.

The meeting brought together representatives from key veterinary organizations in India, including the Veterinary Council of India, National Academy of Veterinary Sciences, as well as vice chancellors and deans from the veterinary schools, and representatives from the National Dairy Development Board, NGO's and industry. There was also representation from international organizations.

The workshop comprised a mixture of presentations and facilitated discussion. The meeting broke into five 'Breakout Groups' to discuss particular aspects of strengthening the veterinary profession, and to present recommendations for further action.

3. Inaugural Session

In the inaugural session Dr S. Ayyappan (Secretary DARE, Director General ICAR) and Shri Rudhra Gangodharan (IAS Secretary, Department of Animal Husbandry, Dairying & Fisheries, and Ministry of Agriculture) made the following key points:

1. A roadmap for the development of the veterinary profession in India is needed.
2. Veterinarians are important in supporting livelihoods and trade, and will play a part in achieving the growth objectives in the 12th 5-Year-Plan (2012-2017).
3. India needs more veterinarians, probably more than double current numbers
4. More veterinarians are needed to meet the increased domestic demand for food, and export opportunities
5. Food safety and public health are key areas for greater veterinary input
6. Developments should include private sector participation
7. There is a greater need for Continuous Professional Development (CPD) and for veterinarians to develop skills in business management and communication
8. The profile of veterinary education and of the profession as a whole needs to be raised
9. The meeting should produce 3-4 action points, and identify next steps

These insightful presentations set the scene for the rest of the meeting, and were referred to on many occasions.



4. Meeting Report

The meeting was attended by 105 persons on Friday 25th November and over 60 on Saturday 26th November. There were representatives from ICAR, Indian veterinary schools (mainly Deans and Vice Chancellors), research institutes, Veterinary Council of India, the military, NGOs, industry, and producers (including the National Dairy Development Board. (A full list of attendees and their institutes is contained in Appendix ii.)

The following international organizations were also represented:

- Pfizer Animal Health
- CABI
- The Royal (Dick) School of Veterinary Studies, University of Edinburgh
- Royal Veterinary College / WikiVet
- OIE (World Organisation for Health)
- ILRI (International Livestock Research Institute)
- GALVmed
- WHO (World Health Organization)
- FAO (Food and Agriculture Organization of the United Nations)

The agenda had been planned and agreed between ICAR, CABI, Pfizer Animal Health, Edinburgh University, and RVC in meetings held throughout 2011. Practical arrangements were organized by ICAR and CABI.

Day One – Friday 25th November, 2011

4.1 Inaugural Session

The meeting was opened by Professor K.M.L. Pathak (Deputy Director General, Animal Science Division, ICAR), who introduced the main speakers, and put the meeting in the context of the World Veterinary Year. He acknowledged the contribution that veterinarians make to public health, food safety and food security and said that a clear roadmap for the veterinary profession was needed. More diversified planning was required to cope with new diseases and with the increasing demand for meat and milk. The current ratio of 1 veterinarian to every 20,000 animals needed to be increased to 1 per 4,000 animals.

Dr S. Ayyappan (Secretary DARE, and Director General ICAR) outlined the requirements of the 12th 5-year-plan (2012 – 2017), which would be concentrating on improving livelihoods and trade. India is aiming to increase its expenditure on higher education from 11% to 15%. For the veterinary profession the emphasis should be on zoonotic diseases, and the profession should look again at private sector participation. He also emphasised the fact that decisions can have a regional impact and that developments in India can have benefits for the whole of South Asia. He challenged the workshop to come up with 3 or 4 action points that ICAR can focus on delivering.

Shri Rhudra Gangodharan (IAS Secretary, Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture) pointed out the challenges of a growing population, with the increasing demand for animal products, and the current unmet demand for milk. Currently 48% of milk produced in India is consumed by the producers. India has some of the world's largest populations of animals, and therefore has a high risk of zoonotic disease outbreaks. Veterinarians need to be able to advise on the breeding, selection, and nutrition of animals, and should concentrate on preventing rather than on curing disease. Veterinarians need to develop skills in business management, communication, and psychology to meet the challenges of the future. There is a need for Continuing Professional Development in the veterinary profession to ensure that all skills are kept up-to-date.

The vote of thanks was delivered by Dr Ravi Khetarpal (Country Director, India, CABI).

4.2 Keynote speeches

The next presentations were delivered by Dr. R.M. Acharya (former Deputy Director General, ICAR) who took the place of Dr V. K. Taneja (Vice-Chancellor, GADVASU, Ludhiana) for the presentation on the contribution of the livestock and dairy sector in the economic development of India, and by Dr R. S. Sharma (President, Indian Veterinary Association), who identified the increasing expectations that society had of the veterinarian. Dr Sharma noted the lack of support for livestock producers, and recommended that there should be a separate ministry for livestock.

Dr Mahesh Kumar (Executive Director, Global Biologics R&D, Pfizer Animal Health) delivered a presentation on behalf of Dr T. Kanellos, who sent his apologies, on the globalization of animal diseases and the significance of the veterinary profession in advancing the 'One health' concept. He said that there is a need to develop veterinarians, medical doctors and scientists who will be competent in the interface of human/animal diseases (including control/vaccines). He also noted that the path to developing new medicines and vaccines is getting longer.

Mrs Andrea Powell (Executive Director, Publishing, CABI) spoke on the on the challenge of information delivery to support the veterinary profession in a technologically-enabled world.

Professor Neil Sargison (Head of the Farm Animal Section, Edinburgh University) delivered a presentation on the evolution of veterinary education in the UK, and the role of evidence-based and problem-based training in developing the curriculum (in place of Professor E. Watson who sent her apologies).

Dr G. K. Sharma presented the perspective of the National Dairy Development Board in describing what the Indian dairy industry expects from the veterinary profession. He spoke about how milk production in India is not keeping up with demand. To help meet this demand the veterinarians need to educate farmers, seeing their role as dispensing knowledge, not just drugs.

The final presentation on the first day was provided by Dr Christie Peacock of Sidai International, describing the establishment of a veterinary franchise model for rural veterinary practices in Kenya. The need for veterinarians to work in partnership with livestock technicians, rather than in opposition, was emphasised.

After the formal presentations on Friday 25th November, a networking reception was provided for all delegates.

Day Two – Saturday 26th November 2011

4.3 Session One – Defining the issues

A number of changes were made to the original programme for the beginning of the second day. The session on defining the issues included presentations from Dr Goswami (Assam Agricultural University), who identified emerging areas of interest including disease surveillance, biotechnology, biosecurity, integrated fertility management, and growth in domestic animal ownership, which requires development of both skills and equipment. He recommended strengthening the curriculum and developing CPD modules to create a "knowledge society among vets". For this he recommended partnerships to develop new programmes, and training to enable teachers to create e-learning courses.

Dr Abdul Rahman, who was representing the World Organization for Animal Health (OIE) at the meeting, also highlighted where improvements to the curriculum could be made. Having access to credible information is very important to veterinarians. He also emphasised the need for public-private partnerships, and the role of good governance in the profession. He reported that India had yet to utilise the OIE tools to carry-out a PVS-Gap Analysis. As India has an effective system of veterinary legislation, it can provide leadership to other countries in the region. India could also benefit from the OIE Twinning programme.

Dr Pradhan of the World Health Organisation stated that the veterinary profession needs the "power of knowledge", as well as more research and improvements in their record on publications. He said that control of zoonotic diseases requires more investment, and that there was a need for more information about key diseases such as rabies and brucellosis. The fact that there are no veterinary epidemiologists in India should be rectified, and that the emphasis should be on food safety, food security, and environmental health.

At this stage, a number of delegates from the meeting came forward to add points to the discussion. Lt Gen (Retd) (Dr) Narayan Mohanty of the Veterinary Council of India (VCI) stated that education and

service delivery in the profession are the two key roles of the VCI. He identified a gap between what is being taught and what is needed in practice, and that there was plenty of knowledge but not enough skill in its delivery. An increase in investment in the infrastructure to improve educational materials and equipment was needed, as well as a system to incentivise vets to keep up their skills and develop new knowledge through CPD.

Professor Gahlot, (Vice-Chancellor, RajUVAS) said that each state in India should have a veterinary university. He emphasised the issues of zoonotic diseases and rural health, as well as the need for more veterinary specialists in nutrition, epidemiology and other areas. The syllabus and the examination system needs to be overhauled, and vets should be given the skills required by industries (pharmaceutical, food processing) and research.

Professor Honnappagol (Vice Chancellor, KVAFSU, Karnataka) said that regulatory authorities should be more proactive, and that a central veterinary university should be established. The role of the veterinarian in public health needs to be highlighted by ICAR.

Siddharth Shah (Senior Manager, Business Development & Global Alliances, Asia Pacific, Pfizer Animal Health) delivered a presentation on industry-academic partnerships. Academia possesses knowledge of local needs, and has access to local resources, whereas industry has management skills, technology, R&D skills, and commercial skills. Partnerships bring benefits to both sides. The challenge is to align the visions, in sharing knowledge, and financial returns. He described the Indian Academic Alliance programme – a collaborative initiative that supports the advancement of strategic areas of basic & applied research at the University level in the field of pharmaceutical sciences. The key objective of this alliance is to create a platform for fostering common goals in research areas and to tap into a readily available talent pool. Currently there are 3 collaborative programmes in progress backed by funding in excess of \$100,000.

Deepak Mathur (Senior Consultant, Confederation of Indian Industry) identified the need to focus on food safety and quality. Meat exports need to meet global standards of quality, and there is currently a great shortage of veterinarians with necessary skills in this area. Closer links between the meat industry and veterinary schools with student visits to increase their appreciation of 'farm-to-fork' food safety would help address this issue. Slaughter and transport facilities also need to be modernized.

4.4 Session Two – Potential ways forward

Prof. N. Sargison (University of Edinburgh) presented on the need for a more holistic approach to dealing with animal health issues, looking at primary health issues such as nutrition, housing and management as well as secondary issues including helminths, and other diseases. Under the Indian Veterinary Education Project, which he heads, a number of 'monitor farms' have been set up to demonstrate the benefits of a whole farm management approach.

Professor Natalie Waran (Jeanne Marchig Centre for Animal Welfare, University of Edinburgh) made the clear link between animal welfare and food security. There is increasing consumer demand throughout the world for higher welfare standards. Animal welfare needs to be based on sound science and evidence, is fundamental to the veterinary curriculum and should be a core element in veterinary education.

Dr N. Short (Royal Veterinary College/WikiVet) described the use of technology in e-learning, and the importance in understanding how to use technology to teach the next generation of students. He demonstrated how the WikiVet collaboration is used to support self-directed learning, and could be used as a support in lifelong learning.

A number of other points were made from delegates including Professor Garg, Dr Nitin Bhatia (Intas Polivet), Dr S. Ramkumar (Director of Entrepreneurship, KVASU, Kerala), and Dr. Hameed Nuru (GALVmed).

4.5 Session Three – Developing partnerships to raise standards in the veterinary profession in India, for both future and current practitioners

At this stage, the meeting broke into 5 groups for facilitated discussion. Each group was asked to consider an aspect of strengthening the veterinary profession, and to address the following questions:

- Who are the key stakeholders, and how are they prioritized?
- What are the top priorities?
- What are the best opportunities for development?
- What are the main recommendations?

Each group then reported back to the meeting, which had been joined by Dr A. S. Nanda (Animal Husbandry Commissioner).

Breakout Group 1: What changes to the curriculum are required to meet the challenges of the future? What partnerships could help achieve them? Facilitator: Professor N. Sargison.

Recommendations

1. India Curriculum – problem is the delivery of the curriculum – quality, well qualified professionals are required in sufficient numbers to deliver it.
2. Curriculum needs freshening, which should be tailored to the changing needs of the stake holder's
3. Infrastructure facilities are a critical factor which should be adequately addressed to enable effective delivery
4. Curriculum provides for minimum expertise (competence) for vet practice – every college has its own – one uniform national competence examination is needed
5. Database development (learning tools and approaches) and sharing of it is needed
6. Students should be provided with context specific learning opportunities

Breakout Group 2: What developments in provision of continuing Professional Development are needed to strengthen the veterinary profession in India? What partnerships could help achieve them? Facilitator Dr. N. Short

Who are the key stakeholders, and how are they prioritized?

- Rural poor (70% of population) – they are in most need
- Paravets – they need formal training so that they can provide more first aid services at the state level
- Governments (national and state) – they have the power to establish the regulatory framework
- VCI – they have the reputation and national influence to operate and monitor CPD programmes

What are the top priorities?

- Central legislation to establish compulsory CPD, as the states will do nothing without Gol action
- Need to explain the importance of animal health and husbandry to the rural poor, and need to equip the vets to do this
- Establish an evaluation and incentive scheme for vets to do CPD
- Ensure that Government of India establishes minimum standards for providing in-service training, and then allows the vets to attend training courses
- Develop need-based curriculum (e.g. international trade, food safety, animal welfare, emerging diseases, project management, business skills, and communication skills)

What are the best opportunities for development?

- Build on existing CPD programme run by VCI
- Commission specialist modules from specialist institutions in India (e.g. horse treatment)
- Send a consistent message to the Government of India – lobby for change
- Emulate extension system operated in USA, which creates a stronger link between universities and rural areas
- Capture indigenous knowledge which can be shared with the farmers

What partnerships could help to achieve this?

- Public/private partnerships, including NGO's, pharmaceutical companies, information providers – could provide sponsorship for events and CPD programmes
- Directors of Extension at veterinary institutes and universities

Recommendations:

- Work together to influence governments (national and state) to establish minimum standards for providing compulsory and time-bound in-service training (monitored through universities & Veterinary Council of India)
- Identify CPD curriculum based on regional-specific needs, with a national committee of Deans to supervise
- Centralise funding and provision of CPD through Veterinary Council of India
- Establish minimum standards of veterinary delivery systems (infrastructure development)
- Achieve this through Public/private partnerships, including NGO's, pharmaceutical companies, information providers – could provide sponsorship for events and CPD programmes
- Achieve this through Directors of Extension at veterinary institutes and universities

Breakout Group 3: What support is needed by veterinarians in industry and what partnerships with industry would be beneficial to the veterinary profession?

Facilitator, Yash Goyal (Pfizer Animal Health)

Who are the key stakeholders, and how they are prioritized?

- Academic & Research institutes
- Statutory Bodies (VCI, ICAR etc)
- Industry
- Animal Husbandry Departments

What are the top priorities?

- To raise the self-esteem and respect for veterinarian as professionals
- To prepare a veterinarian right from his undergraduate days to face the practicalities of the real world.

What are the best opportunities for development?

- Competency Building for Veterinarians
- Need and evidence based curriculum
- Technological support from the industry

What are the main recommendations?

- Develop and implement curriculum in collaboration with industry
- Industry assisted hands on/real time practical training as a part of the course
- Career counselling for the graduating veterinarians for the possible industry careers
- Productivity enhancement and extension support through creating entrepreneurial opportunities
- Support veterinary researchers through from “concept to commercialisation”

Breakout Group 4: Information provision, access and use. What are the main information needs of the veterinary profession in India? What partnerships could help achieve them?

Facilitator, Robert Taylor (CABI)

- We recommend that ICAR bring together a group of interested parties and task them to produce a plan on how to deliver, through the VCI, the comprehensive information support, including CPD, required by a modern veterinary profession.

Breakout Group 5: What partnership opportunities are there between international and national organizations in support of livestock educational programmes?

Facilitator Professor Gaya Prasad, Assistant Director General (Animal Health)

Who are the Key Stakeholders?

GALVmed

FAO

OIE

Veterinary Council of India

Ministry of Environment and Forests

Animal Welfare Board of India

ICAR

State governments

Finance Departments

Loans agencies

VCs of Universities

State Agricultural Universities

What are the Partnership opportunities?

Exchange students – postgraduate

Joint PhD supervision

Support to community animal health networks

Public Private Partnership

Faculty exchange – entrepreneurial skills – running businesses

Information networks

Collaboration to train lecturers in Animal Welfare

International and national pharmaceutical companies could help to subsidise private veterinary services development

South-South technology transfer?

Recommendations

1. Create international partnerships to strengthen teaching in veterinary schools in India.
2. To address changing emphasis on animal husbandry and welfare ICAR, Animal Welfare Board of India, National Institute Animal Welfare will evolve a policy of training faculty in animal welfare.
3. Animal welfare should be transferred from Ministry of Environment and Forests to Ministry of Agriculture (ICAR).
4. Veterinary Council India to support integration of business skills in to the curriculum
5. Pharmaceutical and local government to give soft loans to improve private veterinary service provision
6. Strengthen veterinary professional's communication skills through working with NGOs

Appendix 1. Agenda

(Original) Programme

Friday 25th November 2011

1:30 -2.30 PM

Registration

3.00pm – 3.30pm

**Chair: Professor K.M.L. Pathak Co-Chair: Dr Elizabeth Dodsworth
and Reporters: Andrea Powell & Robert Taylor CABI**

Welcome address

Professor K. M. L. Pathak,
Deputy Director General, (Animal Science Division), ICAR

Inaugural Session

Dr. S. Ayyappan, Secretary (DARE) & DG (ICAR)

Husbandry,

Shri Rudhra Gangodharan, IAS, Secretary, Department of Animal

Dairying & Fisheries, Ministry of Agriculture, GOI

Vote of Thanks

Dr R.K. Khetarpal, Regional Director, CABI South Asia

Keynote speeches

3.30pm – 4.00pm

“How will the livestock and dairy sector contribute to the economic development of India?”

Dr. V.K. Taneja, Vice Chancellor, GADVASU

4.00pm – 4.20pm

“The challenges facing the veterinary profession in India in the livestock and dairy sector”

Dr J.S. Bhatia, Former ADG (Education) ICAR,
Veterinary Council of India representative

4.20pm – 4.45pm

“The globalisation of animal diseases and the significance of the veterinary profession in advancing the “One health One medicine” concept”

Dr Theo Kanellos, Pfizer Animal Health Global Alliances

Break (25 mins)

5.10pm – 5.30pm

“The challenge of information delivery to support the veterinary profession in a technologically-enabled world”

Ms. Andrea Powell, Executive Director, Publishing, CABI,

5.30pm – 6.00pm

“The evolution of veterinary education in the United Kingdom; the role of evidence-based and problem-based training in developing the curriculum”

Professor Elaine Watson, Dean, Royal (Dick) School of Veterinary
University of Edinburgh

Studies,

6.00pm – 6.20 pm

“What does the Indian Dairy Industry expect from the veterinary profession?”

Dr G.K. Sharma, National Dairy Development Board

6.20pm – 6.40 pm

Developing a veterinary franchise model

Dr Christie Peacock, Chair of Sidai International

6.40pm – 6.55 pm

Academia-Industry partnerships

Siddharth Shah, Business Development & Global Alliances,
Pfizer Animal Health – Asia Pacific

6.55 – 7.00 pm

Chairs remarks and close of session

7.00- 8.30

Reception and buffet supper

Saturday 26th November

**Chair: Prof. K.M.L. Pathak Co-Chair: Dr Elizabeth Dodsworth
and Reporters: Andrea Powell & Robert Taylor CABI**

9.00am to 10.30am

Session 1: Defining the issues

Short presentations illustrating where the current curriculum and information support to the profession need strengthening:

Speaker 1: Dr K. M. Bujarbaruah, Assam Agricultural Univ.

Speaker 2: Dr AS Nanda, Animal Husbandry Commissioner, Dept Animal Husbandry, Min Agric, G.of I.)

Speaker 3: Dr AK Bhramic, Secretary VCI

Speaker 4: Mr Prem Singh, University Library

Followed by:

Facilitated discussion, to define the main issues to be addressed.

Break

11.00 am – 11.45am

Session 2: Stakeholder analysis, led by Dr E. Dodsworth CABI

Stakeholder analysis to identify the key stakeholders involved in livestock and dairy veterinary medicine. Interrelations and interactions with the livestock industry

11.45 am – 1.00pm

Session 3: Potential ways forward.

(Three short presentations followed by facilitated discussion)

1. Professor Neil Sargison:

Developing the curriculum to meet future needs.

2. Professor Natalie Waran: Animal welfare in education and practice.

3. Nick Short: Using technology in the field (including mobile phones).

Facilitated discussion

Identifying resources and tools currently available.

Modern ways of delivering training material, in school and for CPD:

Identifying the gaps. Mobile phone delivery of information – appropriate for the veterinary profession in India now and in the future?

1.00pm – 2.00pm

Lunch

2.00pm – 3.00pm

Session 4 “Developing partnerships to raise standards in the veterinary profession in India, for both future and current practitioners”:

Break-out discussions

– Academic Curriculum development (led by Neil Sargison, Royal (Dick) Veterinary School

– Continuing professional development (led by Nick Short, WikiVet)

– Support to veterinarians in industry (led by Yash Goyal, Pfizer)

– Information provision (led by Robert Taylor, CABI)

– Partnership opportunities between international and national organisations in support of livestock educational programmes (Led by Prof. Gaya Prasad, ADG, ICAR)

Break

3.15pm – 4.00pm

Session 5: Report back from break-out groups

4.00pm – 5.00pm

Session 6: The way forward: next steps.

Wrap-up and summary of recommendations, Identifying the resources needed in veterinary education and in practice to make the improvements recommended.

Venue

ICAR Lecture Hall, 2nd Floor, NASC Complex, DP Shastri Marg, Opp. Todapur Village, PUSA, New Delhi – 110 012, India

Appendix ii. Attendee List

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