Ministry of Health & Family Welfare
(Government of India)

# REGULATORY FRAMEWORK OF POULTTY VACCINES IN INDIA


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***for***
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CDSCO

# INTRODUCTION

- Drugs fall under the **Concurrent list** of the Constitution of India
- Drugs regulated under the **Drugs and Cosmetics Act 1940 and Drugs Rules 1945**
- The Act is a **Central Act**, enforced by both Central and State Governments.
- **CDSCO** is the CLAA for all Vaccines
- **IPC** an autonomous institution under the Ministry of Health and Family Welfare, Government of India is responsible for publication of **Indian Pharmacopoeia** (official book of standards for drugs manufactured and marketed in India)

# VISION

## VISION

**To protect and promote public health in India**

# MISSION

## MISSION

**To safeguard and enhance the public health by assuring the safety, efficacy and quality of drugs, cosmetics and medical devices.**

CDSCO

# CDSCO – Geographical Location Zonal /Sub Zonal Offices

CDSCO North Zone (Ghaziabad)

CDSCO West Zone (Mumbai)

CDSCO South Zone (Chennai)

CDSCO East Zone (Kolkata)

CDSCO Zone (Ahmadabad)

CDSCO Zone (Hyderabad)

CDSCO Zone (Baddi)

CDSCO Sub Zone (Bangaluru)

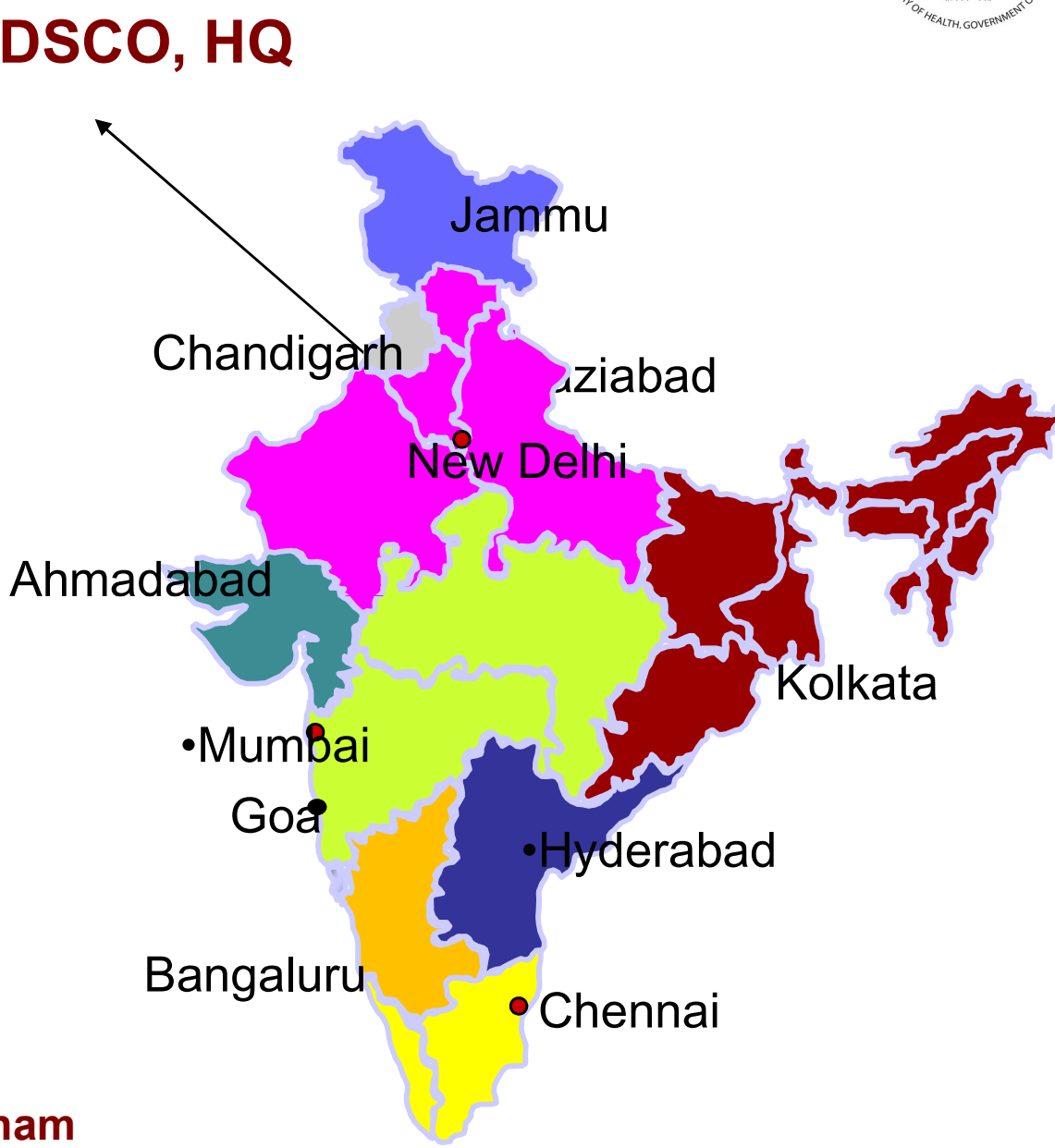
CDSCO Sub Zone (Jammu)

CDSCO Sub Zone (Goa)

CDSCO Sub Zone (Guwahati)

CDSCO Sub Zone (Indore)

CDSCO Sub Zone (Vishakhapattnam



# Indian Pharmacopoeia - Update on Veterinary products


| Fourth Edition | Fifth Edition | Sixth Edition | Seventh Edition | Eighth Edition | Ninth Edition |
|---|---|---|---|---|---|
| 1996 | 2007 | 2010 | 2014 | 2018 | 2022 |
| Veterinary Supplement in 2000 – 42 veterinary monographs | 144 veterinary monographs | 144 veterinary monographs | ➢Separate Veterinary Volume<br>➢290 veterinary monographs | 300 veterinary monographs | 300 veterinary monographs |

Journey of Veterinary Product Monographs in IP

# INTRODUCTION

**The Act and Rules are to regulate Manufacture, Sale, Distribution and Import of**

- **Drugs (Human and Animal Use) which included Biological (Vaccines), Medical Devices etc**
- **Cosmetics**

A **Vaccine** is a biological preparation that provide Immunity to a particular disease.

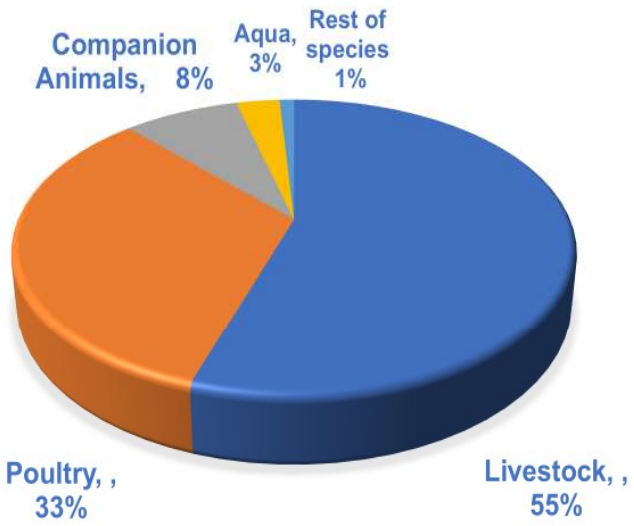
A vaccine typically contains an agent that resembles a diseases causing microorganism and is often made from weakened or killed form of the microbes.

All vaccines including Veterinary vaccines are always considered as **New Drugs** & are required to be characterized and manufactured in compliance with the **Good Manufacturing Practices (GMP)** as per the provisions of Drugs & Cosmetics Act, 1940 & Rules made thereunder. Manufacturing processes of every vaccine are validated, defined and controlled adequately to ensure batch to batch consistency.

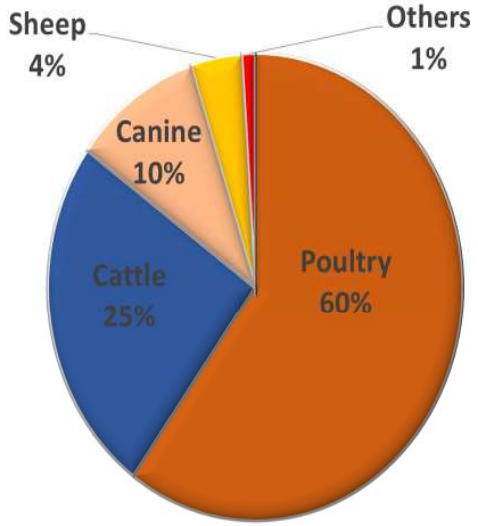
# Vaccine Market

## Animal Health Industry in India

AH Market in India (%)




Vaccine Market in India




- Industry size: INR 7300 Cr (USD 890 Million)

# Legal Enactments to Regulate the Import, Manufacture & Sale of Drugs

**Drugs and Cosmetics Act, 1940 and Drugs Rules, 1945**

**Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954**

**Drug Price Control Order (DPCO), 2013 under the Essential Commodities Act, 1955**

# Agencies involved in the approval process of Veterinary Vaccines

Ministry of Health & Family Welfare (DGHS)

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CDSCO

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Roles of CDSCO

- Enforcement & GMP Inspections
- Quality Control Division- IVRI/CDTL
- Veterinary Div.
- Approval of Veterinary vaccines in consultation with Subject Expert Committee (**SEC**)
- Pharmacovigilance

Ministry of Fisheries & Animal Husbandry & Dairying

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Department of Animal Husbandry & Dairying

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[To recommend on New Drug Permission and Field Trials in consultation with Empowered Committee for Animal Health (**ECAH**)]

Ministry of Science & Technology Department of Biotechnology

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The review committee on genetic manipulation for recommendation on r-DNA vaccine (**RCGM**)

Ministry of Environment & Forest & Climate Change

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Genetic Engineering & Appraisal Committee (**GEAC**)

CDSCO

# Functions of CDSCO

## Functions of CDSCO

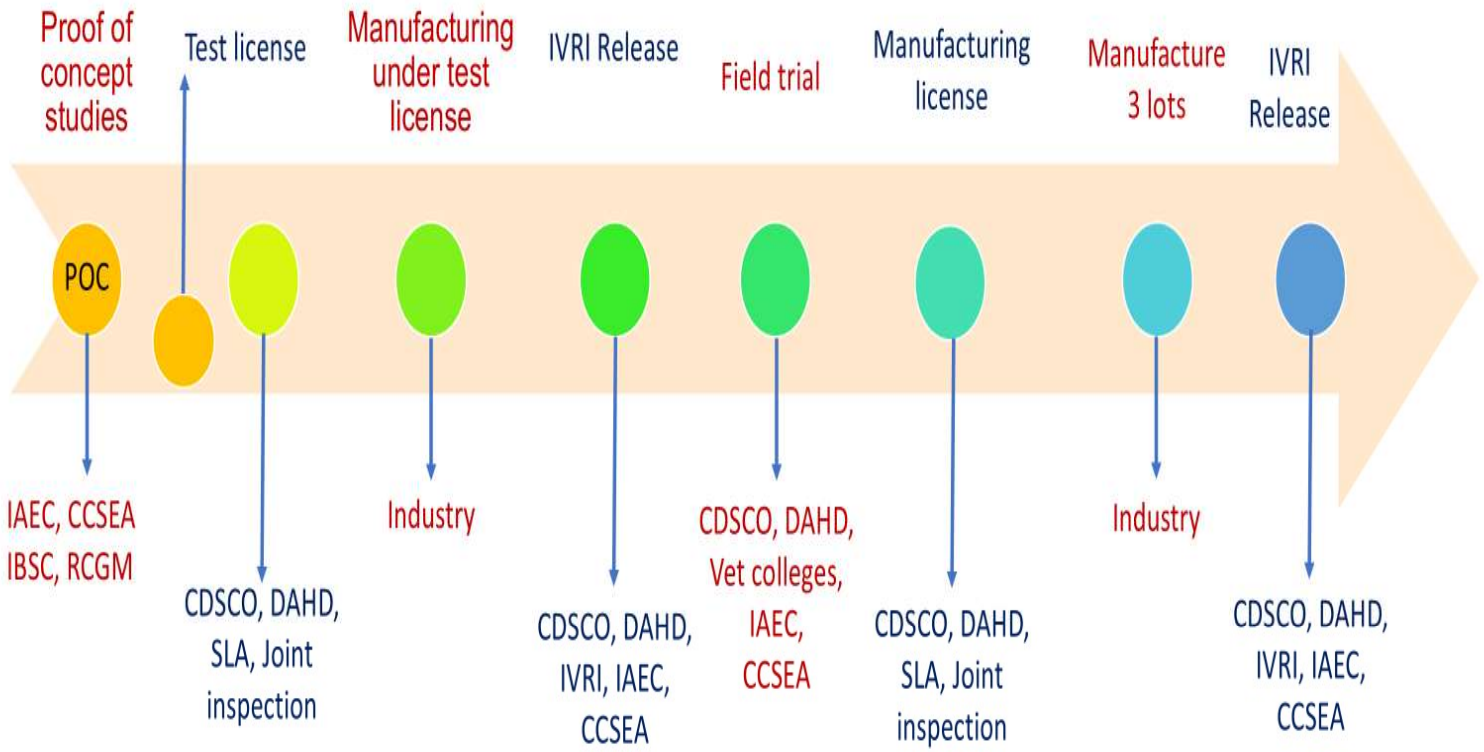
- Approval of New Drugs and Clinical Trials
- Import Registration and Licensing
- Licensing of Blood Centers, LVPs, Vaccines, r-DNA Products & Medical Devices (Class C and D)
- Amendment to D & C Act and Rules
- Restriction or Prohibition of Drugs and Cosmetics
- Grant of Test License, Personal License, NOCs for Export
- GMP Inspections and monitoring by surveillance and sampling

# Functions of State Licensing Authorities

## Functions of State Licensing Authorities

- Licensing of Manufacturing Site for Drugs including API and Finished Formulation
- Licensing of Establishment for sale or distribution of Drugs
- Approval of Drug Testing Laboratories
- Monitoring of Quality of Drugs and Cosmetics marketed in the Country
- Investigation and Prosecution in respect of contravention of legal provision
- Recall of Sub-standard drugs

# Regulatory Pathway for Vaccines




- CDSCO – Central Drugs Standards Control Organization
- DAHD - Department of Animal Husbandry and Dairying
- CCSEA - Committee for the Control and Supervision of Experiments on Animals
- IVRI – Indian Veterinary Research Institute
- RCGM – Review Committee on Genetic Manipulation
- GEAC – Genetic Engineering Appraisal Committee
- SLA – State Licensing Authority
- IAEC – Institutional Animal Ethics Committee
- IBSC – Institutional Bio-safety Committee

# Import, Registration and Licensing of Drugs

**Mfg sites and Products are required to be Registered**

**Issue of Import License in Form 10 / 10A**

**Part IV (Rules 21 to 30)** → **Rules related to grant of Registration Certificate and Import License**

**Schedule D(I) & D(II)** → **Information required for registration of Mfg site and Product**

**Timeline as per D & C Rules**

**For RC: Rules, 9 Months**

**For Import License: 3 Months**

**Registration Certificate (RC) and Import License - Valid for 3 years**

# Legal Forms involved in various approval process of Drugs

| Sl. No. | Forms | Purpose of the application | Approval Granted by CDSCO/SLA |
|---|---|---|---|
| 1 | **Form 12** | Application for license to import Drugs for purpose of Examination, Test or Analysis. | **Form 11** |
| 2 | **Form 30** | Application for license to Manufacture Drugs for the purpose of Examination, Test or Analysis. | **Form 29** |
| 3 | **Form 44** | Application for grant of permission to manufacture and market in the country a New Drug | **Form 46** |
| 4 | **Form 44** | Application for grant of permission to import and market in the country a New Drug | **Form 45** |
| 5 | **Form 40** | Application for grant Registration certificate (RC) for import of Drugs | **Form 41** |
| 6 | **Form 8** | Application for grant Import License of Drugs for sale and distribution in India | **Form 10** |

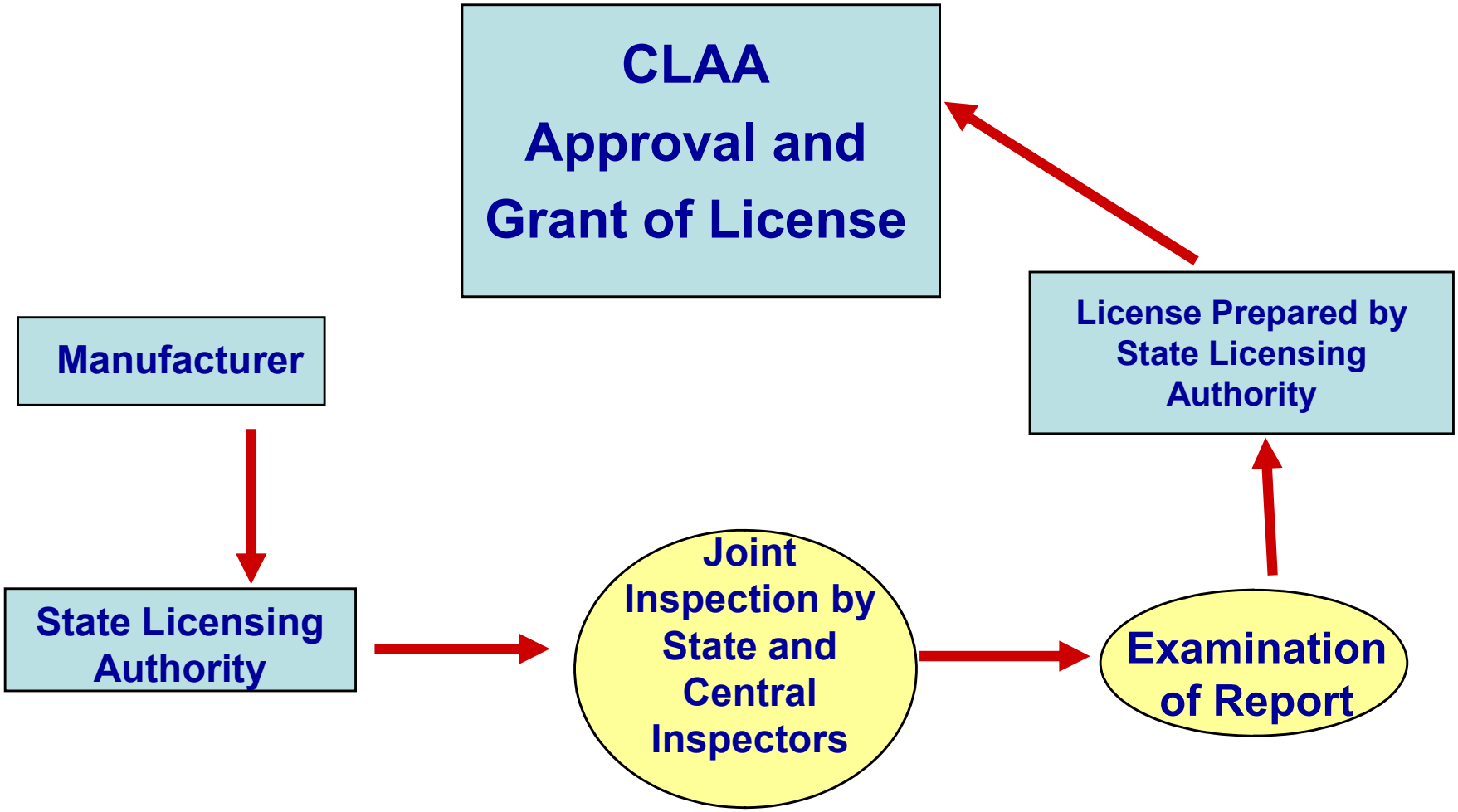
# Requisite Fees for various Applications

| Types of Application | Requisite Fees as per D & C Act,1940 & Rules thereunder |
|---|---|
| **Import License in Form 11** (For examination, Test or Analysis purpose) | **5000/-** Rupees for first product and Rs 2000/- for of each additional product (irrespective of strength dosage form and pack size). |
| **Form 29 license** (Manufacturing License examination Test or Analysis purpose) | **250/-/-** Rupees to be submitted to the concern SLA |
| **Form 46** (Manufacturing Permission) | **50,000/-** Rupees per Product |
| **Form 45** (Import Permission) | **2,50,000/-** Rupees per Product |
| **Import Registration Certificate in Form 41** | • **10,000** USD (or its equivalent to Indian Currency) for the Manufacturing premises<br>• **5000** USD (or its equivalent to Indian Currency) single drug and additional fee of 5000 USD for each additional drug in case the manufacturing site remains the same.<br>• **1800** US Dollars (or its equivalent to Indian Currency) for making amendment in the registration certificate and for a duplicate copy of the registration certificate, if the original is defaced, damaged or lost. |
| **Import License under Form 10** | **1000 Rs** for 1 proposed Drug and **100 Rs** for each additional Drug |

# Registration Certificate & Import License

- Submission of application for, New Drugs Permission for use in the Country (Form 44), Registration Certificate (Form 40) and Import License (Form 8) of approved Veterinary Vaccines to Central Drugs Standard Control Organisation (CDSCO) through SUGAM online portal system (www.cdscoonline.gov.in) for Central Licensing Authority in Form 45, Form 46, Form 41 & Form 10.

# Central Licensing Approving Authority - Functioning



# Role of DAHD in Providing Considered Opinion to CDSCO

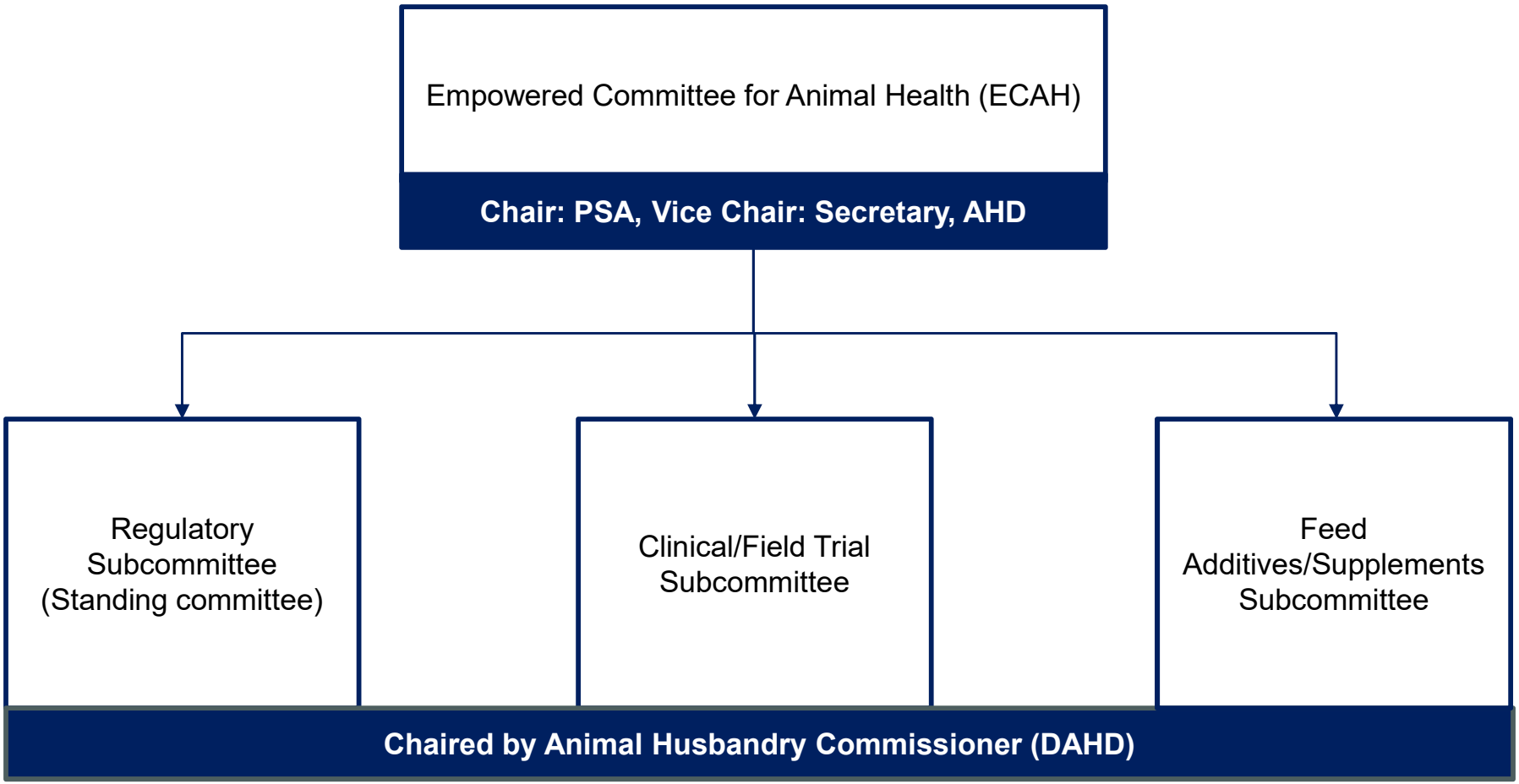
CDSCO seeks the considered opinion of DAHD in order to take necessary action on proposals received on import, marketing, manufacturing and test & analysis purposes. The regulatory approval process consists of several stages and DAHD is involved in advising at various stages to ensure **Essentiality and Desirability** of the proposals to which NOC will be granted. Review of applications is done by **standing regulatory Subcommittee** appointed by ECAH of DAHD.

## ECAH Key Activities

- Policy Inputs on national programs
- Assessing threats of emerging diseases in AH Sector
- Review ongoing flagship programs in livestock health
- Assess / Provide Recommendations on Submissions of Veterinary products and streamlining approval process

***Initiatives under ECAH to expedite approval process:*** *NANDI, Regulatory Subcommittee, Clinical / Field Trial Subcommittee to develop guidelines, Disease Modelling and Environment Surveillance Subcommittee.*

# Overview of ECAH and Its Subcommittees



# Role of Institutes

## CCS-NIAH

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Chaudhary Charan Singh National Institute of Animal Health (ISO 9001:2015) serves as the Central Drugs Laboratory for veterinary biological quality control in India, under the Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry, and Dairying, Government of India.

To act as a nodal institute to recommend licensing of veterinary vaccines in the country.

To make available facilities for quality control of veterinary vaccines and diagnostics.

To make available standards for veterinary biologicals and diagnostics

## IVRI

- **Regulatory Functions**: Regulating both manufactured and imported veterinary biological products. Research on standardization of protocols for testing of veterinary vaccines, antigens and antisera.

- **Quality Control:** Quality testing of veterinary vaccines, diagnostics and antigens under the provisions laid down in the Schedule F1 of the Drug and Cosmetics Act (1940).

- **Review the minimum requirements of the standards for veterinary immunobiologicals** and to deliberate on issues related to the Drug and Cosmetics Act (1940) and Indian Pharmacopoeia (Veterinary Supplement).

- **Nodal agency for veterinary type cultures for supply of strains of bacterial/viral/protozoan cultures for production**, standardization and quality control of vaccines and, for research and training.

# Flowchart of Regulatory Approval Process (1/2)

## For Indigenously Developed Vaccines

### Product development and clinical trial batch manufacturing

- Strain development / strain source document and process development
- Safety, potency and non-reversal to virulence (as applicable) testing as per IP
- Manufacturing of three trial batches (under cGMP) after obtaining Form 29 approval
- Testing of the clinical/ field trial batch in a CDSCO approved laboratory (IVRI, CCSNIAH, etc)

### Clinical trial / field trial approval

- Application to CDSCO in Form 44
- CDSCO refer the application to DAHD for opinion
- CDSCO issue approval for initiating clinical trial based on the opinion of DAHD
- Applicant can conduct trials after getting approval from CDSCO, batch release from testing lab and animal ethical approval

### Conducting Clinical/ field trial and obtaining product license

- Conduct trials
- Submit the trial results to CDSCO
- CDSCO refer the Clinical/ field trial to DAHD for opinion
- CDSCO issue approval in Form 46/46A based of SEC and/or opinion of DAHD
- Obtain approval in Form 28D or 28DA as the case may be from State Licensing Authority (SLA) and CDSCO
- Firm is required to submit first three commercial batches to CDSCO approved testing labs for release (for consistency of manufacturing process and quality of the product) and before marketing

# Flowchart of Regulatory Approval Process (2/2)

## For Import and Use in the Country of Vaccines

### Import of vaccine for clinical trial purpose

Overseas manufacturing site and the vaccines to be imported shall be registered with the CDSCO in Form 41

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For import of Vaccines for the purpose of examination, test or Analysis and conduct of clinical trials, the applicant may apply in Form 12 to CDSCO on SUGAM Portal

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CDSCO refer the application to DAHD for opinion

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CDSCO issue approval for import in Form 11 based on the opinion by DAHD

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Import of vaccine for examination, test or Analysis and to conduct of clinical trials in a CDSCO approved laboratory (IVRI, CCSNIAH, etc.)

### Approval for Clinical trial/ field trial

Application to CDSCO in Form 44

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CDSCO refer the application to DAHD for opinion

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CDSCO issue permission for initiating clinical trial based on the opinion of DAHD

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Applicant can conduct clinical / field trials after getting approval from CDSCO, batch release from testing lab and animal ethics committee approval

### Conducting Clinical/ field trial and obtaining product license

Conduct trials

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Submit the trial results to CDSCO

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CDSCO refer the application to DAHD for opinion

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CDSCO grant permission in Form 45/45A based on the opinion of SEC and/or opinion of DAHD

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Obtain registration in Form 41 for the oversees manufacturing facility

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Obtain import license in Farm 10 for import and marketing of Veterinary vaccines

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Submit first three batches to CDSCO approved testing labs for release (for consistency of manufacturing process and quality of the product) and marketing

# Approved Vaccine for Poultry Use - Indigenously

| Sl. No. | Name of Vaccine | Name of the Firm | Indication |
|---|---|---|---|
| 1 | Salmonella vaccine inactivated IP | M/s Indovax Pvt Ltd | For protection of commercial layers and breeders against Fowl Typhoid Disease. |
| 2 | Ranikhet Disease Vaccine Live (Lentogenic Strain),IP | M/s Institute of Animal Health and Veterinary Biologicals, | For Prophylactic Vaccination against Ranikhet Disease in Chickens and/or other avian species. |
| 3 | Marek's Vaccine Live IP Frozen SB1 Strain | M/s Hester Biosciences Limited, | To be used against the marek's disease in day old chicks. |
| 4 | Avian Infectious Bronchitis Vaccine, Live, IP | M/s Indovax Pvt Ltd, | Recommended for initial vaccination of chickens for prevention of infectious bronchitis disease |
| 5 | Marek's Disease vaccine (turkey herpes virus) live. IP | M/s Indovax Pvt Ltd, | Use in healthy one day old chicks for the prevention of Marek's disease. |
| 6 | Reo Virus Vaccine, Inactivate I.P. | M/s Elanco India Pvt. Ltd | Recommended for the vaccination of breeder hens and replacement pullets as an aid to provide passive |
| 7 | Fowl Pox Vaccine, Live, IP (Vet) | M/s Indovax Pvt Ltd., | Recommended for prevention against Fowl pox infection in chickens. |
| 8 | Infectious Coryza Vaccine Inactivated IP | M/s Indovax Pvt. Ltd | Recommended for protection of commercial layers and breeders against Avian infectious Coryza. |
| 9 | Infectious avian encephalomyelitis epidemic tremor and fowl pox vaccine live | M/s Venkateshwara Hatcheries pvt ltd., | For prevention/control of infectious avian encephalomyelitis epidemic tremor and fowl pox virus infection in poultry. |
| 10 | Infectious chicken anemia vaccine live | M/s Intervet India pvt ltd. | For passive immunization of chicks, via active immunization of breeders, against infections caused by chicken anemia virus |

# Approved Vaccine for Poultry Use - Imported

| Sl. No. | Name of Imported Vaccine | Name of the Firm | Indication |
|---|---|---|---|
| 1 | Fowl Cholera Vaccine, Inactivated I.P. | M/s Elanco India Pvt. Ltd., | Recommended for the vaccination of chickens and turkeys as an aid in the prevention of fowl cholera cuased by pasteurella multocida, type 1 infection in chickens and types 4 and type 3x4 in turkeys. |
| 2 | Coccidiosis Vaccine, Live oocysts, having live oocysts of Eimeria Acerulina, Eimeria Maxima, Eimeria Nectrix, Eimeria Tenella for chickens (Eimeriavax 4 m) | M/s Huvepharma SEA (Pune) Pvt Limited | Aids in the control of four major species of eimeria that cause coccidiosis in breeders, broilers and layer chickens. |
| 3 | Mycoplasma Gallisepticum Bacterin Vaccine, Inactivated | M/s Elanco India Pvt Ltd | Recommended for the vaccination of chickens as an aid in the control of signs associated with mycoplasma gallisepticum infection by providing a suitable humoral response. |
| 4 | Infectious Coryza, Inactivated Vaccine I.P | M/s Elanco India Pvt Ltd | Recommended for the vaccination of healthy chickens as an aid in the prevention of infectious Coryza disease due to avibacterium paragallinarum. |
| 5 | Coccidiosis Vaccine- Live oocysts of Eimeria species. | M/s Intervet India Pvt. Ltd., | For the vaccination of healthy chicken at one-day age be spray cabinet administration as an aid in the prevention of coccidiosis due to E. Mivati and E. Tenella and as an aid in the reduction of lesions related to E. Acervulina and E. Maxima. |
| 6 | Reo virus vaccine live , I.P. | M/s Intervet India Pvt Ltd | Intended for prevention of tenosynovitis viral arthritis in chickens of five days or older it is also intended for priming of breeder replacement stock |
| 7 | Marek's Disease Newcastle Disease vaccine serotype 3 live marek's disease vector | M/s Zoetis India ltd. | For vaccination of healthy chickens as an aid in preventing marek's disease and Newcastle disease it has been recommended for subcutaneous injection of one day old chickens or in ovo vaccination of 18 to 19 days old embroyonated chickens egg. |
| 8 | Avian infectious bronchitis vaccine live IP gallivac IB88 NEO | M/s Boehringer Ingelheim India pvt ltd | active immunization of chickens against infectious bronchitis caused by the Coronavirus variant of group CR88 |
| 9 | Combined inactivated vaccine of Newcastle diease of genotype VII and infectious bronchitis multi strains in oil emulsion | M/s Japfa Comfeed India Pvt. Ltd | Use vaccination in chickens and other birds of all ages to protect them against ND and IB by stimulating high immunity against these disease. |

# As per the revised Sch M (Para 6.11, Part 1)

- A **pharmacovigilance system** shall be in place to **collect, process, and forward reports on adverse drug reactions (ADRs)**.
- The processing of ADRs are done through a Pharmacovigilance Programme of India (PvPI), recasted by the Ministry of Health and Family Welfare, Govt of India.
- IPC designated as the National Coordination Centre for PvPI since 15th April 2011.

# Key Institutions & their Achievements

- ICAR-IVRI: Development of multiple vaccines incl. Brucella, Goat/Sheep pox, LSD etc
- NIHSAD (National Institute of High Security Animal Diseases): Research on exotic & emerging pathogens, Avian Influenza vaccines.
- NRCE (National Research Centre on Equines): Lumpy Skin Disease vaccine.
- NIFMD (National Institute of Foot and Mouth Disease): Foot and Mouth Disease vaccine, National Animal Disease Control Programme (NADCP).
- NIVEDI (National Institute of Veterinary Epidemiology and Disease Informatics): Surveillance, forecasting, AI/ML in livestock disease control.
- Similarly institutes like NIAB, NIAH are also engaged in research of animal health products.

# Key Institutions & their Achievements

- Numerous institutions across India contribute to veterinary drug research, providing education and training in veterinary pharmacology and therapeutics., like
  - The Tamil Nadu Veterinary and Animal Sciences University (TANUVAS)
  - Lala Lajpat Rai University of Veterinary and Animal Sciences (LUVAS) Hisar.
  - Guru Angad Dev Veterinary and Animal Sciences University (GADVASU)
  - The Maharashtra Animal & Fishery Sciences University (MAFSU)

*Committed to ensure Quality of Medicines through strict regulatory enforcement*

# *Thank you*