REPORT

GOVERNMENT OF INDIA
Ministry of Health and Family Welfare

WORKSHOP on

"GMP Regulatory Inspection Using Quality Risk Management Approach (Basic)"

Organized by

Central Drugs Standard Control Organization
in collaboration with
World Health Organization

3rd- 7th November, 2014
Venue: Hotel Marigold, Begumpet, Hyderabad

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BACKGROUND

As a part of NRA strengthening activities and capacity building, CDSCO had recruited 90 Drugs Inspectors in the year 2013. The Institutional Development plan which was made with WHO for the year 2012-2015 included GMP Regulatory Inspection (Basic and advanced).The Drugs Inspectors appointed in Central Drugs Standard Control Organization have duties and responsibilities to discharge the functions under Drugs & Cosmetic Act and Rules and other job responsibilities such as inspections for certification of Pharmaceutical products as per WHO norms etc. The workshop of this nature helps in focusing on various aspects of the job description of Drugs Inspectors by way of interaction with experts from pharmaceutical industry, &vaccine industry by way of audio visual presentation and hands on experience practically by field visits. This first Basic GMP workshop of 2013 was planned at Hyderabad from 23rd to 27th September 2013. Participants of the workshop were the newly recruited CDSCO inspectors presently posted in CDSCO Zonal offices and CDSCO (HQ) and have completed the induction training programme of newly appointed Drugs Inspectors. Also five inspectors (one each) have been nominated from the States viz. Andhra Pradesh, Telangana, Tamilnadu, Karnataka and one participant from CDL Kasauli.

OBJECTIVE OF THE WORKSHOP

All the Drugs Inspectors (DIs) recruited in the recent past at CDSCO Zonal, Sub- Zonal Offices and at CDSCO (HQ), are often deputed to participate in the Joint Inspection with DIs from state Drug Control Departments & experts from CDL Kasauli to various vaccine manufacturing facilities located under the jurisdiction of CDSCO Zonal Offices. The workshop has been envisaged to impart training to these DI's of CDSCO for inspection of the vaccine units as per Basic GMP norms so as to enable them to maintain the safety, efficacy and standards of vaccines in the country.

THE OTHER OBJECTIVES OF THIS WORKSHOP ARE AS GIVEN BELOW:

1. Ensure that the Regulatory inspection functions of the NRA in the India will be performed against the WHO recommended standards.

2. Update the NRA IDP in order to ensure proper enforcement of GMP in all Indian vaccine manufacturers.

3. All regulatory inspectors supervising vaccine manufacturing firms will improve their skills in conducting competent and efficient GMP inspections using risk management approach,

4. All regulatory inspectors supervising vaccine manufacturers will improve and update their knowledge on GMP requirements,

5. Newly recruited DIs can grasp the basics of vaccine manufacturing, risk based approach of inspection and fulfilling the gaps in existing Schedule M and the WHO GMP

INTRODUCTION

The workshop was started with the opening address by Mr. P. B. N. Prasad, Deputy Drugs Controller (I), CDSCO-Hyderabad zonal office by welcoming dignitaries and the briefing of the workshop and the meticulous planning of the training in the form of lectures by experts from WHO/NRA and practical experience by field visits. The inauguration of the workshop was started by lighting the lamp by all dignitaries of the dias. WHO experts have highlighted to all the participants the need for training and the various issues pertaining to monitoring the quality of drugs. Deputy Drugs Controller (I), Hyderabad has also stressed the importance of this workshop and highlighted the mandate, mission and vision of CDSCO, including the objective and expectation from this workshop.

DESCRIPTION OF THE TRAINING HELD:

The workshop on Basic GMP using Quality Risk Management Approach held at Hyderabad from 3-7 November 2014 was organized by CDSCO, DGHS, FDA Bhawan, New Delhi in collaboration with WHO and CDSCO-Hyderabad Zonal Office, as Local Organizer.

The Directorate has nominated 17 Drugs Inspectors from different CDSCO (HQ) as participants, 5 Drugs Inspectors from different States and one participant from CDL Kasuali and nominated 3 facilitators one from CDSCO(HQ) and other two from CDSCO Hyderabad Zone for the Workshop.

THE LIST OF PARTICIPANTS, FACILITATORS ARE AS PER THE GIVEN BELOW TABLE

List of Participants, Facilitators and Secretarial Assistance for Basic GMP workshop at Hyderabad from 3 to 7 November 2014		
Sl. No.	**Name**	**Designation**
Facilitators from WHO		
a.	Emma Uramis Diaz	WHO(HQ)
b.	Victor Maqueda	WHO, Consultant
c.	Mohamed Refaat Mohamed Abdelfattah	WHO, Consultant
d.	Madhur Gupta	WHO (CO)
Facilitators from CDSCO (HQ), New Delhi		
1	Smt. Swati Srivastava	Asst. Drugs Controller (India)
2	Sh. Rahul Shakhapure	Drugs Inspector
Participants from CDSCO (HQ), New Delhi		
3	Sh. Rakesh Negi	Drugs Inspector
4	Sh. Devendra Nath	Drugs Inspector
5	Sh. Fahim Khan	Drugs Inspector
6	Sh. Haribabu J	Drugs Inspector
7	Sh. Mohan R.	Drugs Inspector
8	Sh. Pushpraj Kumar Singh	Drugs Inspector
9	Sh. Surender Kumar Kaswan	Drugs Inspector
10	Smt. C. Thiruvidha	Drugs Inspector
11	Sh. Sri Babu	Drugs Inspector
12	Sh. Manoj Choudhary Jatav	Drugs Inspector
13	Sh. Avinash Kumar Yadav	Drugs Inspector
14	Dr. Bikash Roy	Drugs Inspector

15	Sh. Parthiban J	Drugs Inspector
16	Sh. Bikramaditya Chowdhury	Drugs Inspector
17	Sh. J.Sureshkumar	Drugs Inspector
18	Sh. Abhinav Kapoor	Drugs Inspector
19	Sh. Hemant Madhukar Patil	Drugs Inspector
20	Sh. Bidya Sekhar Mishra	Drugs Inspector
Participants from CDL, Kasauli		
21	Sh. Devender Kumar	Technical Supervisor
Participants from State Drugs Control Departments		
22	Ms. S.K. Rabia	Drugs Inspector, Andhra Pradesh
23	Sh. G. Anil	Drugs Inspector,Telangana
24	Sh. C. Vivekananda Reddy	
25	Thiru. MI. Mohammaed Muhiyideen	Asst. Director of Drugs Control, Zone-II, Chennai Tamil Nadu
26	Smt. Namrata Hallur	Drugs Inspector-8 Karnataka
Observers from Vaccine Manufacturing Organizations		
27	Sh. C. Balaji	Dy. Manager Quality Assurance M/s. Shantha Biotech, Hyd.
28	Sh. Putikam Srinivas	Manager-Production M/s. Indian Immunologicals, Hyd.
29	Sh. K.Srinivas	M/s. Bharat Biotech
30	Sh. Siva Chytanya	Manager QA Validation M/s. Biological E. Ltd., Hyd.
31	Sh. D. Srinivasa Raju	Director, M/s. Dano Vaccines & Biological Pvt. Ltd, Hyd.
Facilitators from CDSCO HYDERABAD		
32	Sh. PBN Prasad	Deputy Drugs Controller (I)
33	Sh. S. John Gerard	Drugs Inspector
Local Organizers, CDSCO, HYDERABAD		
34	Sh. Vinod Kumar Gupta	Drugs Inspector
35	Omkar Beera	Accounts Officer
36	Srinivasa Reddy Bhavanam	Technical Data Associate
37	D. Shravani	Technical Data Associate

On behalf of WHO 3 Facilitators were posted who had conducted and monitored the complete Workshop including site visit between 3 and 7, November, 2014.

The detailed scheduled programme of the workshop with day wise events is as per the given agenda.

PROGRAMME OF THE WEEK

Day 1	Day 2	Day 3	Day 4	Day 5
Welcome/ Inauguration	Warm up	Warm up	Transportation to the vaccine manufacturer facility	Warm up
Introduction and warm up Expectations & Objectives	Programme of the day/ Question-Answer Session	Programme of the day/ Question-Answer Session		Post- workshop questionnaire
	Module 4 Validation. Principles	Module 8 GMP requirements for aseptic processing	Mock Inspection	Finalization of the reports
TEA/COFFEE BREAK				
Pre- workshop questionnaire	Module 5 Validation. Process validation	Module 9 Simulation study. Media Fill	Mock Inspection	Finalization of the reports
Regulatory inspection in India				
Module 1 Ensuring vaccine quality. WHO policy				
LUNCH BREAK				
Warm up	Warm up	Warm up	Mock Inspection	Warm up
Module 2 GMP Main concept	Module 6 Clean room and HVAC system	Module 10 Risk based inspection process		Presentation of the reports
TEA/COFFEE BREAK				
Module 3 Quality Risk Management (concept and basic principles)	Module 7 Water for Pharmaceutical purposes system	Module 11 Planning for mock inspection	Preparation of an overview of findings	Presentation of the reports
Evaluation of the day	Evaluation of the day	Evaluation of the day	Presentation of findings by teams in closing meeting with manufacturer	Workshop evaluation
Facilitators' meeting	Facilitators' meeting	Facilitators' meeting	Start preparation of inspection final report and presentation by teams	Distribution of WHO certificates and closing

DAY-WISE PROCEEDING OF THE WORKSHOP IS AS FOLLOWS:

DAY ONE: 03-11-2014

After registration of all the participants, the inaugural speech in the morning session was delivered by Ms. Emma, the WHO sponsored observer and followed by Mr. P. B. N. Prasad, DDC(I), Hyderabad., at the Workshop venue. The pre workshop questionnaires were given to all Drugs Inspectors as a test of their basic knowledge on vaccine manufacturing and GMP standards. The agenda topics viz. Ensuring vaccine quality WHO policy, Regulatory inspection in India, GMP Main concept and Quality Risk Management (concept and basic principles) deliberated and discussed in the first day session. Two warm-up sessions were included during the session one at the beginning of the Module-1 and one after lunch break. Day ended with evaluation of the day by Md. Refaat.

DAY TWO: 04-11-2014

The session was started with warm-up exercise followed by deliberation and discussion on Validation Principals, Process validation, Clean room and HVAC system and Water system. Day two Session ended with evaluation of the day to get the participants feedback about the previous sessions discussed and regarding suggestions for any further improvements.

DAY THREE: 05-11-2014

The session was started with warm-up exercise followed by deliberation and discussion on GMP requirements for aseptic processing, Simulation study, Media Fill, Risk based inspection process and Planning for mock inspection for the next day. Session ends with evaluation of the day to get the participants feedback. The representative of Vaccine Manufacturing which is chosen for mock inspection has given a technical briefing to all the participants on the manufacturing area and Quality Control activities of DTP Vaccine and the arrangements for the mock inspection for the next day.

DAY FOUR: 06-11-2014:

All DI's were divided in 5 groups with assignments to visit the manufacturing facilities M/s. Biological E ltd, Hyderabad, India to conduct a mock audit. The leaders of each team who visited the manufacturing facilities made power point presentations of their findings and suggestions were presented to the firm and the session continued up to 5:30 pm. By the evening after completion of the mock audit all DI's returned back to Hotel, Hyderabad. The participants, facilitators and organizers has expressed their gratitude to M/s. Biologicals E. Limited for having the extend co-operation for the visit as well as hospitality.

BLUE TEAM	GREEN TEAM	RED TEAM	YELLOW TEAM	ORANGE TEAM
Emma Uramis	S. John Gerard	Mohamed Refaat	Rahul Shakhapure	Victor Maqueda
Filling & Packing	**QC**	**Formulation**	**Bulk Production P & HVAC**	**Bulk Production D & WFI**
Mohan R.- Team leader	Hari Babu -Team leader	Avinash Kumar Yadav -Team leader	Sri Babu Team leader	Bikash Roy-Team leader
Fahim Khan	Manoj Choudhary Jatav	C. Vivekananda Reddy	Hemant Madhukar Patil	Devender Kumar
Devendra Nath	J. Sureshkumar	Pushpraj Kumar Singh	Mohammed Muhiyideen	Rakesh Negi
S.K. Rabiya	C. Thiruvidha	Parthiban J.	Surender Kumar Kaswan-	Namrata Hallur
Bikramaditya Chowdhury	G. Anil	Abhinav Kapoor	Bidya sekhar Mishra	--

DAY FIVE: 07-11-2014

Post workshop questionnaire is given to all the participants and the result of the pre and post questionnaire marks ware displayed before all the participants & which has shown improvement of the participants who are attended the Workshop and Team leader of each group finalized the reports, prepared presentation and presented before WHO Observers. After presentation feedback was given by the WHO team about final assessment of participated DI's.

A feedback form was distributed among the participants to give their feedback on the overall conduct of the workshop. The programme was ended with closing ceremony and distribution of training certificates for successful participation.

OUTCOMES OF THE WORKSHOP:

1. Knowledge on WHO Policy on ensuring quality of vaccines imparted to participants.

2. Knowledge on regulatory inspection process in India and the mechanisms used by CDSCO to enforce GMP to vaccine manufacturers.

3. Knowledge on Quality Risk Management (QRM) principals, QRM process (risk identification, assessment, control review) including communicating the risk and tools to manage the risk.

4. Imparted knowledge on Trend Analysis to identify hazards of the aseptic process, to understand the critical steps and critical process parameters in the aseptic process.

5. Imparted knowledge on identification of critical point on a HVAC design and taking considerations on critical elements includes production process, type of antigen, risk of handling the antigen/ MS/ WS for risk based approach of utilities.

6. Imparted knowledge on requirement and risk of decontamination issues, bio safety level in vaccine production facility.

7. Knowledge on importance of risk assessment in changes made by manufacturer and classification of levels of change and their impact.

8. Updated the knowledge of participants on sterile manufacturing requirements and regulations.

9. Imparted knowledge on the source of data to be used for trend analysis, analysis of trend of data, critical quality to be observed in trended data, content of APR as source of important information of the product and its trend analysis.

10. Knowledge in production and testing of vaccines imparted to participants.

11. Detailed procedures with critical control points in production and testing enabling the GMP inspectorate to identify the risk in production and quality control in vaccines.

12. Application of knowledge of critical control points in production and testing in assessment of application, production process flow, in review of documentation during actual inspection for verification of manufacturing, process flow, upstream, downstream and quality control.

13. Knowledge imparted on critical process validation with practical examples in respect of critical processes like sterilization, aseptic simulation, air handling units, water system/ pure steam for application of this knowledge while inspection of these utilities, system, processes and identification of risks involved.

14. Detailed training in planning, preparing, conducting GMP inspection with specific emphasis to vaccine manufacturing facilities. Detailed discussion on SOPs for inspection was made.

15. The facility tour/ mock audit in Vaccine facility enabled the participant to have hands on practical experience of inspection. The total participants were divided into groups and each group was assigned specific area of inspection to cover the entire facility.

16. Thus the inspectors gained both practical and theoretical knowledge of GMP inspection involving critical control points, critical control parameters, identification, assessment of risk and implementing risk-based approach in inspection with specific emphasis of vaccine manufacturing facilities.

17. The extensive training was a preparative step for the GMP inspectorate for WHO observed audit of selected manufacturing facilities.

18. The training is an ongoing process as part of IDP and it is required to impart further advanced GMP training including current GMP Guideline for using Risk based approach in inspection especially for Vaccine & Biologicals. The training for inspectors should also include quality management system for identification of the role of QMS in the overall GMP environment of the company.

19. The training on Risk-based approach to be used in inspection should be imparted to all the inspectors joining CDSCO after induction.

ANNEXURES

- Allocation & Expenditure: Refer to Annexure-I
- Presentations of the Experts: Refer to Annexure-II
- Pre & Post Programme Questionnaires.
- Statement of Expenditure