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TAMILNADU PHARMACEUTICALS SCIENCES WELFARE TRUST

25 Years

Pharma Web

Newsletter of Tamilnadu Pharmaceutical Sciences Welfare Trust

Jul. - Aug. - Sep. 2021

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Tamilnadu Pharmaceutical Sciences Welfare Trust

Pharma Web

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TAMILNADU PHARMACEUTICAL SCIENCES WELFARE TRUST
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EDITORIAL

Dear Readers,

We are happy to publish the 51st issue of Pharma Web Newsletter for **Jul – Sep 2021.**

We have celebrated the World Pharmacist Day on 25th September 2021, on the theme "Pharmacy: always trusted for your Health". Our Trust published about the importance of this day in leading news papers in association with IPA & IPGA (TN) branches and TANIPA Trust etc. IPA TN branch and IPGA TN branch celebrated this world pharmacist day in a grand manner by conducting blood donation camps and seminars and workshops.

This 51st issue of news letter contains the program highlights as well as the series of Webinar on the topic QbD, organized by IPA TN branch. We publish the same in order to benefit all our professionals.

- Pharmaceutical "Quality by Design" (QbD):

  I) Tools, Perspectives and Challenges

  ii) Development of the Quality Target Product Profile (QTPP) for Semisolid Topical Products - **Dr. Vellaian Karuppiah**, Global Head – Manufacturing Science and Technology, Strides Pharma Science Limited, Bangalore

We have published the various Gazette Notifications pertaining to the amendment of Drugs & Cosmetics Act & Rules and also important circulars issued by DCGI.

Important news items connected to our Pharmacy profession appeared in various national news papers are published in this issue.

We are very much thankful to M/s. Delvin Formulations, M/s. Medopharm, M/s. Tablets (India) Ltd., M/s. Acid India Ltd., for the continuous support by giving advertisement, in order to sustain the cost of publishing of this newsletter.

Our special thanks to M/s. Fourrts (India) Laboratories Pvt. Ltd., for supporting Pharma Web advertisement and also awarding meritorious award for B. Pharm Students of The Tamilnadu Dr. MGR Medical University, Guindy, Chennai.

Hope this Newsletter will benefit our Pharma professionals. Any suggestions to improve our news letter are welcome.

With Best Regards,
R. NARAYANASWAMY
Chief Editor

ARTICLES

QUALITY BY DESIGN (QbD) IN PHARMACEUTICAL INDUSTRY TOOLS, PERSPECTIVES AND CHALLENGES

by

Dr. Vellaian Karuppiah.
Global Head – Manufacturing Science and Technology, Strides Pharma Science Limited, Bangalore

Lecture Delivered during Webinar organized by of IPA, Tamilnadu, on 21st Aug 2021

Background

1.Definition
2.Key characteristics of QbD
3.Benefits of QbD
4.Key elements of QbD
1. Define the Quality Target Product Profile
2. Identify the Quality Attributes
3. Perform a Risk (Assessment) Analysis
4. Determine the Critical Quality Attributes and Critical Process Parameters
5. Determine the Design Space
6. Identify a Control Strategy

5.Challenges
6.Conclusion

Introduction

QbD

Quality

Quality cannot be tested into products; it has to be built in by design

Definition

Systematic approach to development that begins with predefined objectives and emphasizes product & process understanding and process control, based on sound science and quality risk assessment management

Concepts and Background of QbD

- Quality by Design is a concept first outlined by Joseph M. Juran in various publications
- He supposed that quality could be planned. The concept of QBD was mention in ICH Q8 guidelines, which states that, “To identify quality can not be tested in products, i.e. Quality should be built in to product by design.

ICH guidelines for QbD

ICH - Primarily ICH Q8 through Q11

- Q8 - Pharmaceutical Development
- Q9 - Quality Risk Management
- Q10 - Pharmaceutical Quality System
- Q11 - Development and Manufacture of Drug Substances

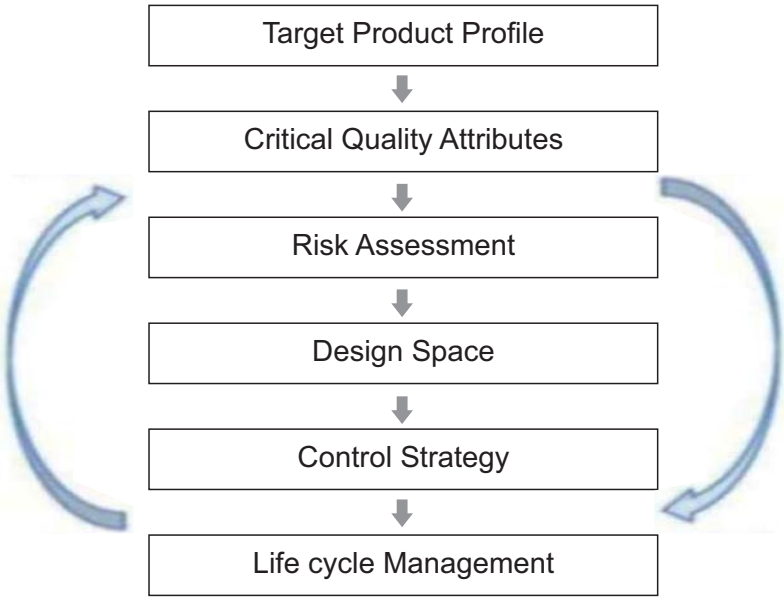
Key characteristics of QbD

- A tool for focused & efficient drug development
- Dynamic and systematic process
- Relies on the concept that Quality can be built in as a continuum
- It is applicable to Drug Product and Drug Substance development (chemicals / biologics)
- It is applicable to analytical methods
- Can implemented partially or totally
- Can bu used at any time in the life cycle of the Drug
- Always encouraged by Regulators

Benefits of QbD

- Eliminate batch failures
- Minimize deviations and costly investigations
- Avoid regulatory compliance problems
- Empowerment of technical staff
- Efficient, agile, flexible system

Key elements of QbD



QTTP: Quality Target Product Profile

QTPP	According to ICH Q8(R2), QTTP is "Prospective summary of the quality characteristics of a drug product that ideally will be achieved to ensure the desired quality, taking into account safety and efficacy of the drug product".
	Basically, it is a tool for setting the strategy for drug development. QTTP is widely used in development planning, clinical and commercial decision making, regulatory agency interactions, and risk management.
	It is the quality characteristics that the drug product should possess in order to reproducibly deliver the therapeutic benefit promised in the label. The QTTP guides formulation scientists to establish formulation strategies and keep the formulation effort focused and efficient. QTPP is related to identity, assay, dosage form, purity, stability in the label

QTTP: Quality Target Product Profile

QTPP	For example, a typical QTPP of an immediate release solid oral dosage form would include –Tablet Characteristics –Identity –Assay and Uniformity –Purity/Impurity –Stability, and Dissolution
	QTPP should only include patient relevant product performance elements. For example, tablet density or hardness may be included as a specification for process monitoring but may not be included in QTPP. Also, if particle size is critical to the dissolution of a solid oral product, then the QTPP should include dissolution but not particle size

Critical Quality Attributes (CQAs)

CQA is defined as "A physical, chemical, biological or microbiological property or characteristic that should be within an appropriate limit, range, or distribution to ensure the desired product quality".

CQAs are generally associated with raw materials (drug substance, excipients), intermediates (in-process materials), and drug product.

Drug product CQAs are the properties that are important for product performance, that is, the desired quality, safety, and efficacy

This indicates that CQAs are subsets of QTPP that has a potential to be altered by the change in formulation or process variables

Critical Quality Attributes (CQAs)

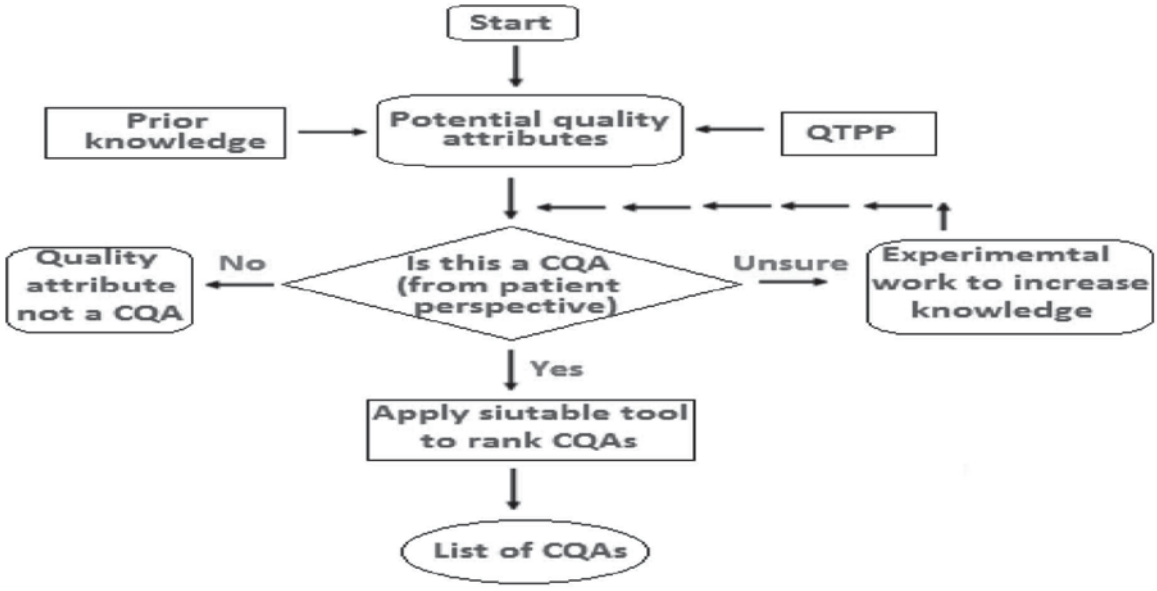
QTPP may include additional quality attributes of the drug product such as strength and dosage form, which are not the part of CQA as it will not change during drug development process

QTTP attributes such as assay, content uniformity, dissolution, and permeation flux will also be a part of CQA as they may be altered by formulation or process variable

Identification of CQAs is done through risk assessment as per the ICH guidance Q9.

Prior product knowledge, such as the accumulated laboratory, nonclinical and clinical experience with a specific product-quality attribute, is the key in making these risk assessments.

Decision tree to decide CQAs



Typical CQAs for Drug Substance and Drug Product

For Drug Substance (chemical)	For Drug Product (tablet)
Appearance Particle size Morphic forms Water content Residual solvents Organic impurities Inorganic impurities Heavy metals Residue on ignition Assay	Appearance Identification Hardness Uniformity of dosage Physical form Dissolution Degradation products Water content Assay Microbiological limits

QRM: Quality Risk Management

QRM The FDA defines a Risk Management as, a strategic safety program designed to decrease product risk by using one or more interventions or tools

QRM It is systematic process for the assessment, control, communication and review of risks to the quality of the drug product across the product lifecycle

QRM The ICH Q9 guideline: Quality Risk Management provides a structure to initiate and follow a risk management process

QRM Tools (as per ICH Q9: Quality Risk Management)

FMEA: Failure Mode Effects Analysis

FMEA FMEA is one of the most commonly used risk-assessment tools in the pharmaceutical industry.

It is a systematic and proactive method to identify and mitigate the possible failure in the process

FMEA Once failure modes are established, FMEA tool evaluates the effect of these failures and prioritizes them accordingly

FMEA This tool is further advanced with studying criticality of the consequences and providing clear indication of situation

FMECA: Failure Mode, Effects and Criticality Analysis

FMECA Extension to FMEA

Extending FEMA to incorporate an investigation of the degree of severity of consequences, their probabilities of occurrence and their detectability is Failure mode, effects and criticality analysis

FMECA In FMECA, each failure mode of the product is identified and then evaluated for criticality.

This criticality is then translated into a risk, and if this level of risk is not acceptable, corrective action must be taken

FMECA This can be utilized for failure and risk associated with manufacturing processes.

The tool can also be used to establish and optimize maintenance plans for repairable systems and/or contribute to control plans and other quality assurance procedures

FTA: Fault tree analysis

FTA This tool assumes failure of the functionality of a product or process.

FTA The results are represented pictorially in the form of a tree of fault modes

FTA can be used to investigate complaints or deviation in order to fully understand their root cause and ensure that intended improvement will resolve the issues and not cause any other different problem.

HACCP: Hazard Analysis and Critical Control Points

HACCP Detailed documentation to show process or product understanding through identifying parameters to control and monitor

The definition of hazard includes both safety and quality concern in a process or product

HACCP It involves hazard analysis, determining critical control point, establishing critical limit, establishing a system to monitor critical control point and establishing a record keeping system.

This might be used to identify and manage risk associated with physical, chemical and biological hazards.

HACCP The output of a risk assessment may be a combination of quantitative and qualitative estimation of risk. As part of FMEA, a risk score or Risk Priority Number (RPN) may be assigned to the deviation or to the stage of the process that is affected; this helps to categorize the deviation. RPN is calculated by multiplying Probability (P), Detectability (D) and Severity (S), which are individually categorized and scored. Rating scales usually range from 1 to 5.

RPN = probability score ×severity score ×detectability score

Where, the score was defined prior to the risk analysis stage. A RPN of < 40 was considered a low risk; a RPN of 40–99 was identified as an intermediate risk; and a RPN of ≥ 100 was defined as a high risk

Determination of Critical Process Parameters

CPP A critical process parameter (CPP) is any measurable input (input material attribute or operating parameter) or output (process state variable or output material attribute) of a process step that must be controlled to achieve the desired product quality and process consistency

CPP A parameter is critical when a realistic change in that parameter can cause the product to fail to meet the QTPP.

Thus, whether a parameter is critical or not depends on how large of a change one is willing to consider.

Therefore, the first step in classifying parameters is to define the range of interest which we call the Potential Operating Space (POS).

The POS is the region between the maximum and minimum value of interest for each process parameter.

CPP Criteria for identifying critical and non-critical parameters are that a parameter is non-critical when there is no trend to failure within the POS and there is no evidence of interactions within the Proven Acceptable Range (PAR), which is the range of experimental observations that lead to acceptable quality

Different critical process parameters with potential quality attributes during tableting

Operations during tableting	Critical Process Parameters	Potential quality attributes
Wet granulation	Mixing time Impeller speed Binder fluid addition rate & time Method of binder addition Temperature	Blend uniformity Granule size & distribution Moisture content
Drying	Drying time Inlet air flow Exhaust air temperature & flow	Bulk/tapped density Moisture content Granules strength & uniformity
Milling	Milling speed Screen size Feeding rate	Flow properties Particle size distribution Bulk/tapped density
Mixing	Mixer type Mixing time Order of addition	Blend uniformity
Compression	Pre compression force Main compression force Dwell time Hopper design Punch penetration depth Roller type Auger screw rate Ejection force	Weight variation Hardness Friability Content uniformity Assay Dissolution Disintegration
Coating	Inlet air flow Time Temperature Spray pattern & rate	Thickness Hardness % of weight gain Appearance

Design Space

DS ICH Q8(R2) defines design space as "the multidimensional combination and interaction of input variables (e.g., material attributes) and process parameters that have been demonstrated to provide assurance of quality.

Working within the design space is not considered as a change. Movement out of the design space is considered to bea change and would normally initiate a regulatory post approval change process.

Design space is proposed by the applicant and is subject to regulatory assessment and approval

DS Design space may be constructed for a single unit operation, multiple unit operations, or for the entire process.

Though according to FDA guideline, defining design space is optional since the product and process understanding can be established without a formal design space, nevertheless, such approach can assist to better understanding and attain overall control of a system

DS The Design Space is linked to criticality through the results of risk assessment, which determines the associated CQAs and CPPs. It describes the multivariate functional relationships between CQAs and the CPPs that impact them and should include their linkage to or across unit operations. Such relationships are arrived at by iterative application of risk assessment and experimental design, modeling, as well as the use of literature and prior experience.

Methods for determining design space included: one-variable-at-a-time experiments, statistically designed experiments, and modeling approaches. Methods for presenting design space included graphs (surface-response curves and contour plots), linear combination of parameter ranges, equations, and models.

Alternatively, the design space can be explained mathematically through equations describing relationships between parameters for successful operation

Control Strategy

CS ICH Q10 defines a control strategy as "a planned set of controls derived from current product and process understanding that assures process performance and product quality.

The controls can include parameters and attributes related to drug substance and drug product materials and components, facility and equipment operating conditions, in process controls, finished product specifications and the associated methods and frequency of monitoring and control."

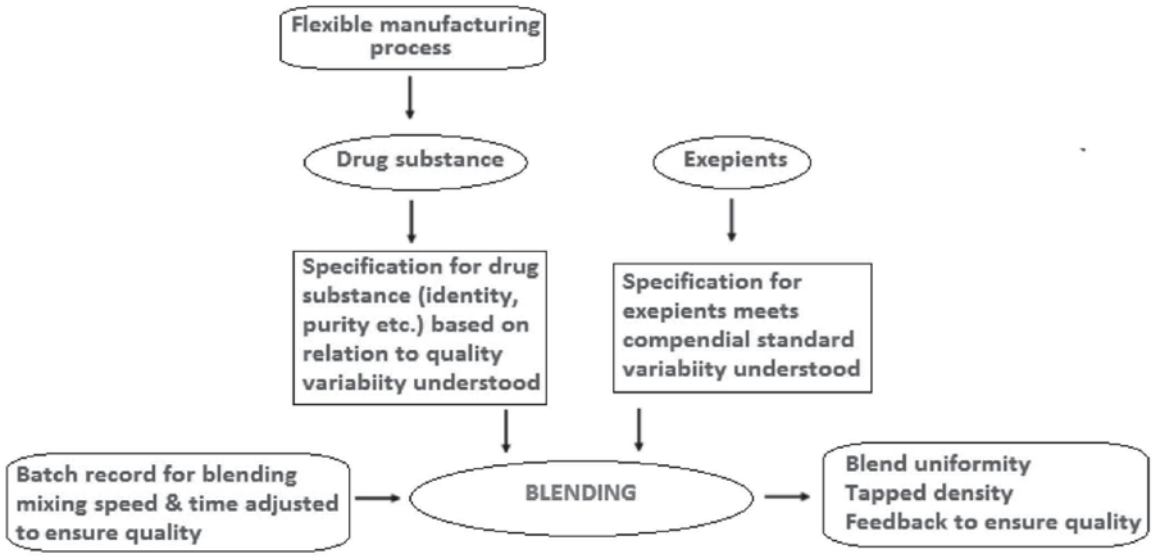
CS A control strategy normally include input material controls, process controls and monitoring, design space around individual or multiple unit operations, and/or final product specifications used to ensure consistent quality.

The finished drug products are tested for quality by assessing if they meet specifications. In addition, manufacturers are usually expected to conduct extensive in process tests, such as blend uniformity or tablet hardness.

CS Pharmaceutical quality is assured by understanding and controlling formulation and manufacturing variables to assure the quality of the finished product.

The end producttesting only confirms the quality of the product.

Control Strategy for QbD Process



Conventional vs.QbD Approach

CurRent approach vs qbd

CURRENT APPROACH	QBD APPROACH
Quality measured by testing and inspection	Quality built into the product
Data intensive submission	Knowledge rich submission
Specification based on batch history	Specification based on product performance requirement
Frozen process discouraging changes	Flexible process within design space, allowing continuous improvement
Focus on reproducibility	Focus on robustness

Challenges

Challenges	Though Quality by design is an essential part of the modern approach to pharmaceutical quality, but Lack of understanding regarding the pharmaceutical process is the cause and alsothe major limitation for QbD implementation. Pharmaceutical companies are traditionally tuned to care more about the end product, with little emphasis on the science-based understanding of the process involved
	The majority ofpharmaceutical companies feel that there is a need for an easier guidance on how to implement QbD. Companies wanted clarification from FDA on QbD terminologies, acceptable methods, criteria to select and deselect critical quality attributes, standards by which to judge adequacy of controls, and criteria for analytical method substitution
	10 key challenges are the most problematic for QbD adoption. These challenges are evaluated by their relevancy against different drug types as well as different levels of adoption

Challenges

Challenges	The first 4 challenges occur within companies: 1. Internal misalignment (Disconnect between cross functional areas, e.g., R&D and manufacturing or quality and regulatory)
	2. Lack of belief in business case i.e.there is a lot of uncertainty over timing of and investment requirements for QbD implementation
	3. Lack of technology to execute (e.g., Difficulty managing data, limited understanding of Critical Quality Attribute (CQA) implications)
	4. Alignment with third parties (i.e., How to implement QbD with increasing reliance on suppliers and contract manufacturers)

Challenges

Challenges	The next 6 challenges are directly related to the regulatory authority: 1. Inconsistency of treatment of QbD across regulatory authority
	2. Lack of tangible guidance for industry
	3. Regulators not prepared to handle QbD applications
	4. The way promised regulatory benefits are currently being shared does not inspire confidence
	5. Misalignment of international regulatory bodies
	6. Current interaction with companies is not conducive to QbD
	It is accepted that the challenges and concerns associated with the implementation of QbD can only be resolved if there is efficient communication between the industry and the regulatory bodies.

Significance of QbD

- Quality by Design means - designing and developing formulations and manufacturing processes to ensure a predefined quality.
- Quality by Design requires - understanding how formulation and manufacturing process variables influence product quality.
- Quality by Design ensures - Product quality with effective control strategy.

Conclusions

Conclusions	QbD is increasingly becoming an important and widely used technique in pharmaceutical product development. While QbD is most effective when it is employed at a product/process design level, it should also be accomplished in the manufacturing and quality assurance environments.
	QbD concept in product development provide quality medicines to patients, production improvements to Manufacturers with significantly reduced batch failures and drug regulatory bodies will have greater confidence in the robust quality of products
	"This approach allows the establishment of priorities and flexible boundaries in the process” “As such QbD is becoming a promising scientific tool in quality assurance in pharmaceutical industry"

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QUALITY BY DESIGN DEVELOPMENT OF THE QUALITY TARGET PRODUCT PROFILE (QTPP) FOR SEMISOLID TOPICAL PRODUCTS

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Lecture Delivered during Webinar organized by of IPA, Tamilnadu, on 25th September 2021

World Pharmacists Day: September 25

- This day is to celebrate and recognize the important role pharmacists play. The World Pharmacists Day is celebrated by Pharmacists to promote their commitment to organize activities that promote and advocate for the role of the pharmacist in improving health in all parts of the world
- The World Pharmacist Day theme 2021 is "Pharmacy: Always Trusted For Your Health".
- International Pharmaceutical Federation (FIP) established the World Pharmacist Day

World Pharmacists Day: September 25

- The International Pharmaceutical Federation (FIP), the global federation of national associations of pharmacists and pharmaceutical scientists, came into existence on September 25, 1912.
- The FIP Council in Istanbul, Turkey, in 2009 suggested to observe the Pharmacist Day on September 25 because on this day FIP came into existence.
- Hence, we celebrate World Pharmacist Day on September 25.

What To Expect From World Pharmacist Day

- Every individual on this planet including students should know the objectives behind celebrating the World Pharmacist Day on September 25.
- The primary objective is to improve the health services for patients through the effective usage of therapeutic products.
- Increasing the importance of pharmacists in the medical team.

Background

1. Introduction
2. QTPP
3. CQAs
4. CMAs
5. CPPs
6. RiskAssessment&RiskControl
7. Conclusions

Introduction

- "Quality by Design" (QbD) approach used for developing pharmaceutical formulations.
- Particularly important for complex dosage forms such as topical semisolid products.
- The first step for developing a product using this efficient approach is defining the quality target product profile (QTPP), a list of quality attributes (QAs) that are required to be present in the final product.
- These quality attributes are affected by the ingredients used as well as manufacturing procedure parameters. Hence, critical material attributes (CMAs) and critical process parameters (CPPs) need to be specified.
- Possible failure modes of a topical semisolid product can be determined based on the physiochemical properties of ingredients and manufacturing procedures.
- The skin is the largest organ of human body and the primary site of action of topical products.

Introduction

- Semisolid dosage forms, including creams, gels, ointments, lotions, emulsions, suspensions and solutions, are the most commonly used topical formulations.
- Quality assurance of topical semisolid products is one primary tool in guaranteeing their acceptable performance.
- Skin morphology and biophysiologyvaries greatly between individuals and between different body sites.
- Hence, for products that need to elicit their effects within the skin, an intrinsic assertion of certain quality attributes (QAs) is imperative.
- Therefore, it is necessary to have quality built into the product.

QTPP

- In the previous decade, the US FDA announced a new pharmaceutical regulatory concept, Quality by Design (QbD), which has challenged the pharmaceutical industry to design the quality of the final product instead of testing the product.
- The ICH guideline Q8 definition for QbD is "A systematic approach to development that begins with predefined objectives and emphasizes product and process understanding and process control, based on sound science and quality risk management".
- This modern aspect of product design starts with defining a list of quality requirements named the Quality Target Product Profile (QTPP).
- ICH Q8 defines QTPPas "A prospective summary of the quality characteristics of a drug product that ideally will be achieved to ensure the desired quality, taking into account safety and ecacy of the drug product".

QbD and QTPP

- QbD identifies the critical quality characteristics from the patient's point of view and translates them into the CQAs that the final product should have.
- Formulations are then developed using specific CMAs and CPPs that improve manufacturing processes [4].
- A comprehensive understanding of CMAs and CPPs as variables in product development is required to control them and to ensure the predefined quality of a product
- Design of experiment (DoE) is one such structured method that takes into accountthe effects of the CMAs and CPPs on the CQAs of the final dosage form
- In summary, the essential components of a successful QbD approach for topical dosage forms include

- Defining a QTPP;
- Specifying CMAs;
- Identifying and developing CPPs;
- Identifying CQAs;

} "DoE"

- Controlling product and manufacturing procedures to produce final products with consistent required quality over time [11,12].

QbD and QTPP

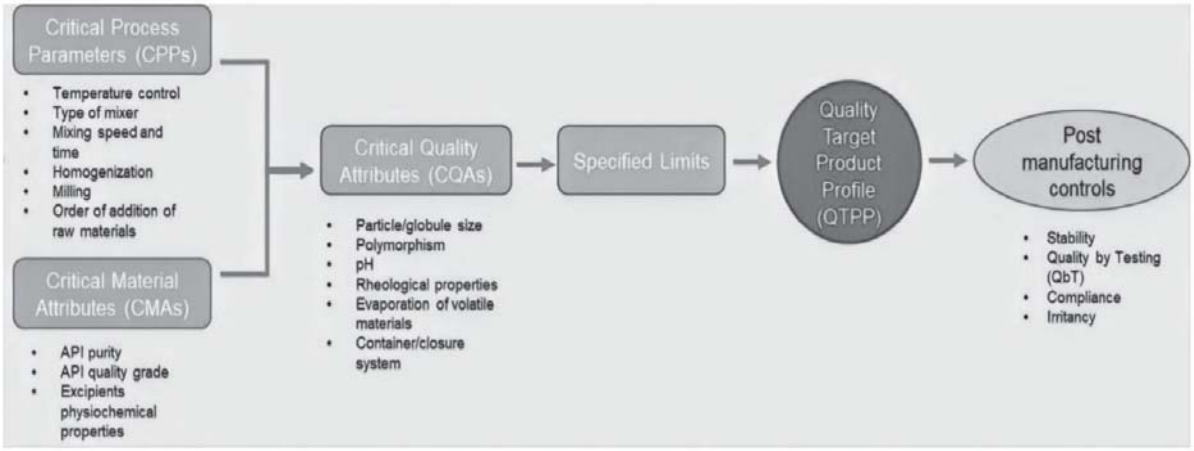


Figure 1. The quality by design (QbD) approach for the development of topical semisolid products, critical process parameters (CPPs) and critical material attributes (CMAs) govern the individualized QTTP for a product.

Quality target product profile (QTPP) for a topical cream

Table 1. Quality target product profile (QTPP) example for a topical cream

QTPP Elements	Target	CQAs	Justification
Dosage form	Crema	-	-
Route of administration	Topical semisolid product	-	Skin targeted without systemic side impacts
Dosage strength	% w/w	-	-
Stability	Atleast 12 months shelf life at Room temperature	Yes	Affected the product quality
Particle / globule size		Yes	Affect the drug permeation
Molecular weight of Active Pharmaceutical		Yes	Affect the drug permeation Ingredient (API)
Polymorphism		Yes	Affect the formulation uniformity and rheological properties
pH		Yes	Affect the physiochemical stability
Solubility		Yes	Affect the drug permeation
Log P		Yes	Affect the drug release and skin retention
	Viscosity as a functionof shear stress and shear rate	Yes	
	G' (Storage modules)	Yes	
Rheological Properties	G" (loss modules)	Yes	
	LVR region (linear Viscoelastic region)	Yes	
	Yield stress	Yes	Affect the formulation performance
Volatile materials content		Yes	Affect the physiochemical stability
Container closure system		-	Affect the formulation Performance
Content uniformity		Yes	
Microbial limitation		Yes	Affect the formulation stability and safety

G'=Storage modules; G"=Loss modules; LVR=linear viscoelastic region; Log P = partition coefficient

CQA

- Quality requirements are called as quality attributes, and in order to accurately characterize the differentcomponents of QTPP, i.e., physicochemical properties, it is imperative to understand which of these can potentially be the critical quality attributes (CQAs) of a formulation.

- The ICH Q8 definition of CQA is "a physical, chemical, biological, or microbiological property or characteristic that should be within an appropriate limit, range, or distribution to ensure the desired product quality".

- To develop a final product with desired CQAs, the quality needs to be designed into the product based on an understanding of critical material attributes (CMAs) and Critical Process Parameters(CPPs), concepts which have been developed by the QbD approach.

- A CMAis a physical, chemical, biological or microbiological property or characteristic of an input material that should be within an appropriate limit, range, or distribution to ensure the desired quality of output material.

CQAs of Topical Dosage Forms

- Critical Quality attributes (CQAs) are chemical, physical, biological and microbiological characteristics that need to be defined in QTPP and presented in the final product. The QAs a affecting the pharmaceutical, therapeutic and sensorial or perceptive performance of the formulation are defined as critical quality attributes (CQAs)

- QAs below that may have a significant impact on the quality and performance of the final product

    - Particle size
    - Globule size
    - Polymorphism
    - pH
    - Rheological properties
    - Evaporation of volatile materials
    - Container/closure system

Product Design and Development

- CMAs
- CPPs
  - In process temperature control
  - Type of mixer
  - Mixing speed and time
  - Homogenization
  - Milling
  - The order of addition of raw materials

CPP

- A CPP is defined as "A process parameter whose variability has an impact on a critical quality attribute and therefore should be monitored and controlled to ensure the process produces the desired quality".

Risk Assessment and Risk Control

- Variations in raw material sources and proposed manufacturing processes are considered to be risk factors which can affect the critical quality attributes of the formulation and subsequently cause product failure in topical semisolid formulations.
- The likelihood and potential severity of these risk factors and resulting failure modes should be identified to develop action plans towards the CMAs and CPPs, leading to mitigation of the risk factors.
- Some potential risk factors, resulting failure modes and the influential CMAs and CPPs.

Risk Assessment and Risk Control

Table 2. The possible failure modes affected by changing CMAs and CPPs.

CQAs	Related to CMAs	Related to CPPs	Failure Mode
Particle/Globule size	• Change in raw material particle sizes	• Low- or high-speed mixing • Low or high duration of mixing time	• Changes in content uniformity, drug release and dermal distribution of the drug • Patient compliance due to perceptive attributes of the product
Rheology - Viscosity -Yield stress - Tan γ	• Variations in viscosity of liquid/semisolid raw materials	• The order of addition of rheology modifying materials • Low- or high-speed mixing • High duration of mixing	• Changes in skin retention of the formulation and drug penetration through the skin • Changing in patient acceptability/compliance • Impact on sensorial attributes of the product
Evaporation of volatiles	• Change in proportion of volatile and non-volatile substances in the formulation	• Process temperature • High duration of mixing	• Changes in formulation microstructure (crystallization or polymorphism) • Changes in skin retention and permeation of the active • Impact on sensorial attributes of the product
Homogeneity and uniformity	• Impurity in API or excipients	• Low- or high-speed mixing • Low duration of mixing • Low temperature • Use of improper mixer type	• Differences in distribution of active through the product affecting skin permeation and therapeutic performance
Precipitation/aggregation	• Dependent on the type of emulsifier, gelling agent or volatiles	• The order of addition • High duration of mixing	• Influence on API partitioning within the formulation • Amount of drug permeating through the skin
Microbial limitations	• Contaminated materials • Ineffective preservative system	• Contaminated manufacturing and packaging equipment • Lack of or un-validated cleaning protocols for the manufacturing plant and equipment	• Microbiological contamination and both physically and chemically unstable product

CQAs = citical quality attributes, CMAs = critical material attributes, CPPs = critical process parameters, and Tan γ = loss tangent.

Conclusions

- Topical semisolid products are one of the fastest growing product markets globally.
- Ensuring the quality and performance of these products requires well-thought-out designs in manufacturing and process.
- In summary, using the QbD approach for developing topical semisolid products can promote achieving the desired quality of the final product.
- In order to define a QTPP for a topical semisolid product, not only the CQAs but also the CMAs and CPPs should be taken into account.
- The potential product CQAs that are derived from QTPP and prior knowledge must be used as a guide for the development and manufacture of the products.
- Further, quality risk management can help to assess the extent of variation of the CQAs that can affect the quality and performance of the product.

PHARMACISTS - THE VITAL LINK BETWEEN PRESCRIBERS AND PATIENTS

by

Ms. Ms. Hemamalini. B.
Faculty of Pharmacy, Dr MGR Educational and Research Institute, Chennai

Note: This article was awarded 3rd prize in the Essay Competition conducted by our Trust

INTRODUCTION:

The affiliation in-between the prescribers and the patients is a verifiably dubious one. Customarily there is next to no in the method of organized association bringing about two players being viewed as totally self ruling bodies with the drug specialist called pharmacist liable for compounding and administering medicines and screening for mistakes while the specialist called physician or doctor being liable for diagnosing, endorsing and governing. The Pharmacist is an open contact to whom patients can talk and interact without an arrangement. The alliance among specialists and drug specialists has consistently been a fairly provisional one, all around regularly based on an establishment of animosity with correspondence between parties kept to an absolute minimum. There are without doubt endless explanations behind such stressed relations yet plainly the various leveled arrangement of the well being administration fills the role of hero.

However the role of the pharmacist, both within the hospital setting and community pharmacy has always been altogether more ambivalent. Pharmacists are primarily concerned with drug therapy and patients obtaining optimum benefit from drug therapy. However, to dutifully carry out this role, the pharmacist often has to impinge upon and question the authority of the doctor. This is often the only form of contact between the pharmacist and doctor thus often rendering their working relationship a difficult one.

BRINK OF FINANCIAL SITUATIONS:

Anyway the part of the drug specialist, both inside the clinic setting and network drug store has consistently been through and through more conflicted. Drug specialists are principally worried about medication treatment and patients getting ideal profit by drug treatment. Notwithstanding, to obediently do this job, the drug specialist regularly needs to encroach upon and question the authority of the specialist. This is frequently the lone type of contact between the drug specialist and specialist along these lines regularly delivering their working relationship a troublesome one.

Nevertheless financial plans become increasingly stressed and the focal point of medical affliction influences towards ongoing illnesses requiring long haul the board, specialists areturning out to be progressively overwhelmed both in essential and optional consideration terms. Hence, the drug specialist is the conspicuous decision to attempt to share and mitigate this heap. In any case, the two players should initially endeavor to conquer their issues. The pharmacist is in an ideal place to do as such, as of now, as a calling, they are looking for more noteworthy duty and a more extensive assortment or jobs which regularly infringe on those of the specialist. The drug specialist should attempt to have a clearer job determination with the goal that the specialist comprehends their relative position. Additionally, the drug specialist should audit their associations with specialists, both in the clinic and network drug store setting, viewing them as friends who they can gain from and connect with, instead of simply mysterious voices to counsel by means of a call when a mistake happens on a remedy.

THE POTENTIAL OVERLAP OF PHARMACISTS:

The verifiable model that clinical professionals analyze sicknesses and endorse medication while drug specialists compound and apportion prescriptions keeps on being the desire for most clinical specialists and to be sure the overall population. Notwithstanding, the function of the drug specialist at present is a dynamic and advancing one. The customary functions of the drug specialist include:

- Compounding, planning and administering drugs
- Taking prescription narratives and keeping up patient medication profiles to evaluate patient's medication treatment for potential associations with current drugs and ailments
- Guiding patients and guardians on protected and suitable utilization of medications and the significance of consenting to the endorsed drug treatment
- Checking patients to forestall or limit the potential for unfavorable medication reactions

While the entirety of the above jobs are related with drug treatment, the capability of drug specialists to play a substantially more focal function in the medical care framework has as of late been perceived. The PSI as of late distributed its Pharmacy 2020 activity which supported huge

numbers of the proposition of the recently distributed Barry Report. Such recommendations included well being screening programs in drug stores, a minor infirmities plot where certain normal prescriptions are given through drug stores instead of G.P medical procedures, and inoculation centers in pharmacies. Pharmacists are the most available of all medical services experts, without any lines or arrangements required. The way that individuals call into their drug specialist and accept the guidance may imply that an expensive visit to A&E or a GP's office might be evaded. In addition to the fact that this saves the patient cash, it additionally demonstrates practical for the public authority. The more mindful general society are as far as the aptitudes that drug specialists have regarding the board of medical services implies that more individuals will initially counsel a drug specialist before quickly counseling a specialist.

CONCLUSION:

In whatever various ways plainly by attempted such undertakings, the function of prescribers and drug specialists are combining. Great correspondence between the two players is basic in this occurrence with the goal that the specialist doesn't feel subverted or undermined as the drug specialist shares a portion of their obligations, hence lightening the weight on specialists. Likewise, drug specialists remain to pick up much regarding schooling on issues, for example, wellbeing screening and autonomous recommending through the conveyance of courses from specialists. Basically, openness is of the atmost importance for permit the two players to see that they remain to profit by each others abilities and mastery. The pharmacists form a main bridge which connects the patients and prescribers. They play an essential role in monetizing the needs queries of patients and also multi tasks the needs of the specialists and suggests them in recent advances in field of Pharma medicines .On Priority the community pharmacists plays a major hand role in organizing and managing even assisting the patients and doctors. Thus pharmacist make proud of Pharma field in every sectors.

INFORMATION

PG PHARMACY FELLOWSHIP AWARD (M.Pharm & Pharm D) 2020-21
CONDUCTED BY TNPSW Trust

Profile of 3rd Rank

PHARMACEUTICS

Name: Mr. A. Manikandan
Project Title: Design, Optimization and Characterization of Targeted Drug Delivery of carbon quantum dots from a natural precursor for cancer treatment.
College: COP, SRIPMS, Coimbatore
Guide's Name: Dr. Amutha Gnana Arasi. M. A.

PHARMACEUTICAL CHEMISTRY

Name: Ms. Banupriya. S
Project Title: Insilico Docking Studies of Sudarshan Churna, Ayush Kwath and Azodicarbonamide and Estimation of Immunosuppressive agent Azodicarbonamide by Novel RP-UPLC method.
College: COP, Madras Medical College, Chennai
Guide's Name: Dr. P. G. Sunitha

PHARMACEUTICAL ANALYSIS

Name: Mr. Dronavajhula Sai Manohar
Project Title: Bioanalytical Method Development and validation for Simultaneous Quantification of Vitamin D3 and K2 (MK-4 & 7) in spiked Human Plasma by LC-MS/MS.
College: JSS College of Pharmacy, Ooty
Guide's Name: Dr. N. Krishna Veni

PHARMACOLOGY

Name: Ms. Shreya Suryawanshi
Project Title: CD44 Targeting hyaluronic acid nanoparticles for inhibition of COX-2 pathway In triple negative breast cancer.
College: JSS College of Pharmacy, Ooty
Guide's Name: Dr. Anand Vijaykumar

PHARMACOGNOSY

Name: Ms. V. Selvakumari

Project Title: Phyto Pharmacognostical investigation and development of formulation for anti Hyperlipidemic activity of leaves of Garcinia gummi - gutta (L) Robs.

College: Periyar College of Pharmaceutical Sciences, Trichy

Guide's Name: Dr. T. Shri Vijaya Kirubha

PHARMACY PRACTICE

Name: Mr. K. Premkumar

Project Title: Comparative study of Timolol, Brimonidine and Timolo/ Brimonidine fixed combination in patients of primary open angle glaucoma.

College: Periyar College of Pharmaceutical Sciences, Trichy

Guide's Name: Mrs. A. Jayalakshmi

PHARM D

Name: Ms. Sindhu. S, Ms. Asharani. S, Ms. Kalaiselvi. D

Project Title: Knowledge Attitude & Practice about Pharmacovigilance among Community Pharmacist in India – A Questionnaire Study.

College: Faculty of Pharmacy, SRIHER, Chennai

Guide's Name: Mr. S. Karthik

PHARMACIST CAREER JOURNEY

Dr. Sujatha Menon., M. Pharm, MS. Pharm, PhD.

Note: The above career details and information, presented on World Pharmacist Day Celebration, organized by IPGA, Tamilnadu, held on 25th September 2021

My Journey...
Chennai to Connecticut

Educational Journey

Madras Medical College, **Chennai** (B. Pharm)

UDCT, University of Bombay, **Mumbai** (M. Pharm)

University of Texas at Austin, **Texas** (MS Pharmacy)

University of Michigan, Ann Arbor, **Michigan** (PhD)

Professional Journey

Hoffmann-La Roche, Nutley, NJ (5 yrs)

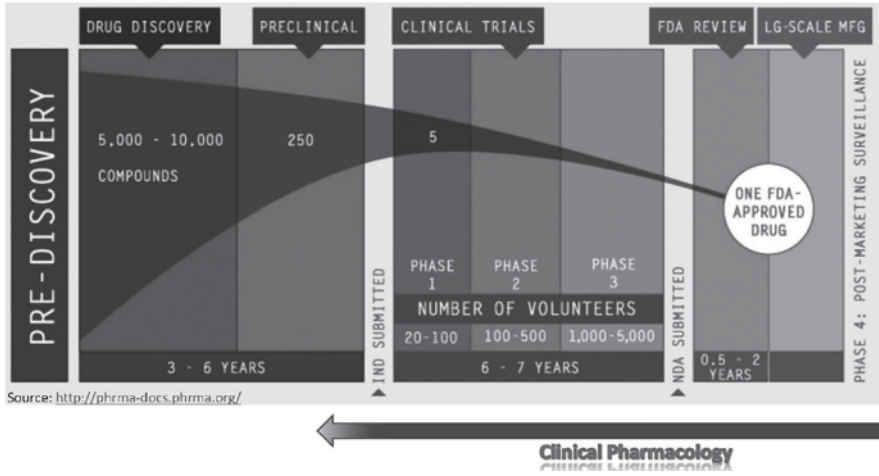
Schering-Plough, Kenilworth, NJ (3 yrs)

Pfizer, Groton, CT (17 yrs....)

Reflections/Learnings

Hurdles? Of course!!
Plan well and **work hard** !!
Remember - **Life happens** !!
The best-made plans can still change
Be adaptive; use change as a stepping-stone
A **positive** attitude can go a long way !
Everyone can be an influencer !
Success is defined by you !!
"**Pay it forward**" –
Be kind, be generous, be yourself !

Drug Development
Where does Clinical Pharmacology fit in?



Impact of Clinical Pharmacology

- **Key Role in Clinical Development Team** - E2E Broadly guide overall program for NME
- Emphasis on **Phase 1 Studies**
  - Healthy Volunteer Studies: FIH, SAD, MAD, DDI, BA/BE
  - Special Populations
- Clinical Pharmacology helps find right "dose" for the patient (safe & efficacious)
  - Design/Interpret Phase 2 Dose-Ranging Studies
  - Dose-Selection for Phase 3 (using quantitative / MBDD*)
  - Gain Regulatory buy-in for planned Phase 3 program
  - Post Phase 3 read-out quantitative methods to support proposed posology for NDA
  - Determine dose-adjustment recommendations in special populations for NDA
- Prepare **eCTD components for NDA** (comprehensive package)
- **Regulatory** meetings & queries throughout development - **APPROVAL** - beyond
- **Publish**: Conferences, Manuscripts
- As **SME**, advise other functional lines (ie Medical Affairs)
- ***Model-Based Drug Development has HIGH impact**

Typical Educational Background

- Many have a Pharmacy background
- Others: Biol. Sciences, Chem Eng, Biomedical Eng
- Most have doctoral degrees
  - Primary PhD Area of Specialization:
    Pharmacokinetics/Biopharmaceutics
- Relevant / very useful secondary skills
  - Modeling or quantitative skills (PK/PD models)
  - Solid Foundation in Statistics
- MS / M. Pharm / Pharm D - often with extra training

General Pointers for Students

- **Plan, plan, plan** –(cannot be overstated)
  - Long and the short-term goals; Iterative process –so review, revise often
- **Being curious is a "good" thing**
  - Study the landscape -Figure out what topics motivate you
  - Set target career(s)/work toward those
- Consider **higher education** (this offers more opportunities)
- Seek out **internship/co-op** opportunities
- Find **Professional Organizations** in area of interest
  - Conferences, Publications, Networking, Career Workshops/Jobs
- Hone your **soft skills:** Language, Presentation, Writing; Leadership Skills
- **Reach out** to all resources -leave no stone unturned
- Be an academic all your life (develop **love for learning** and stay informed)
- Be an **engaged professional** (dynamic participation)
- **Be adaptive, be positive** "Change is constant"
- Know your **strengths & weaknesses**
- Set **high personal standards**
  - Solid work ethic, discipline, time management, self-awareness, etc
- Think **"Outside-the-Box"**

Higher Education Pointers

- **Strong interest and motivation**
- Build a solid foundation: **Academic Knowledge/Performance**
- **Build your resume**
  - Seek **research/internship/co-op** opportunities
  - Seek independent/collaborative **projects**
  - Communicate/build **rapport with advisor/faculty**
- **Select area of study based on opportunities AND your interest**
- **Research the Institutions/Universities** well before applying
- **Plan and prepare for entrance exams**
  - GATE, GRE, GMAT
- Take a **gap year** if needed **Seek out contacts** if any (i.e., seniors)
- Use **professional channels** for networking (i.e., Linked In)
- Pay attention to **application requirements** and apply **well in advance**

Resources

- **Professional Organizations:**
  - APhA -American Pharmacists Association
  - ACCP –American College of Clinical Pharmacology
  - AAPS -American Association of Pharmaceutical Scientists
  - ASCPT –American Society of Clinical Pharmacology and Therapeutics
  - ACoP –American College of Pharmacometrics (Modeling)

- **Journals**
  Journal of Clinical Pharmacology (JCP)
  Clinical Pharmacology and Therapeutics (CPT)
  Clinical Pharmacology and Drug Development (CPDD)

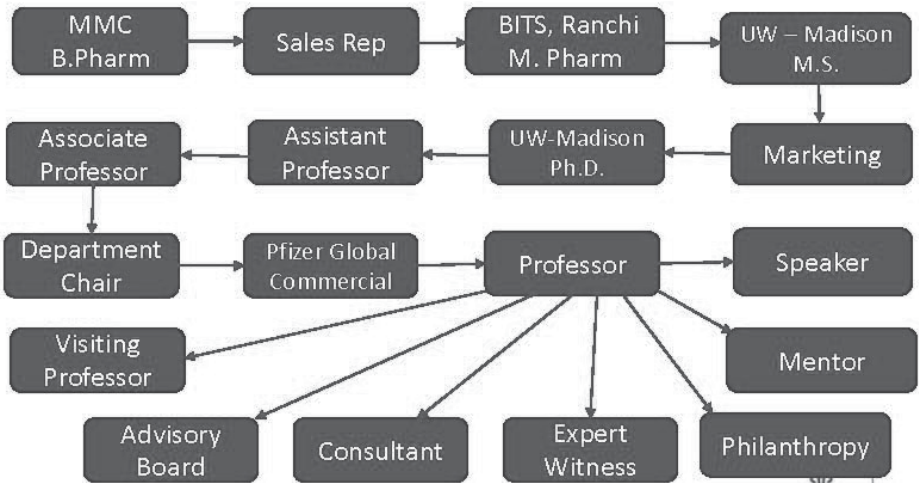
- **Regulatory agencies: Guidances/Drug Information**
  - FDA (USA)
  - EMA (EU)

PHARMACIST CAREER JOURNEY

Dr. J. Thanigaivelan., M.Pharm, M.S. Ph.D.

Note: The above career details and information, presented on World Pharmacist Day Celebration, organized by IPGA, Tamilnadu, held on 25th September 2021

Background



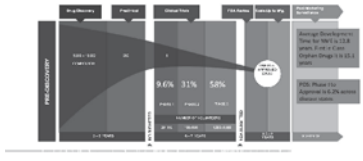
Key Learning from my Journey

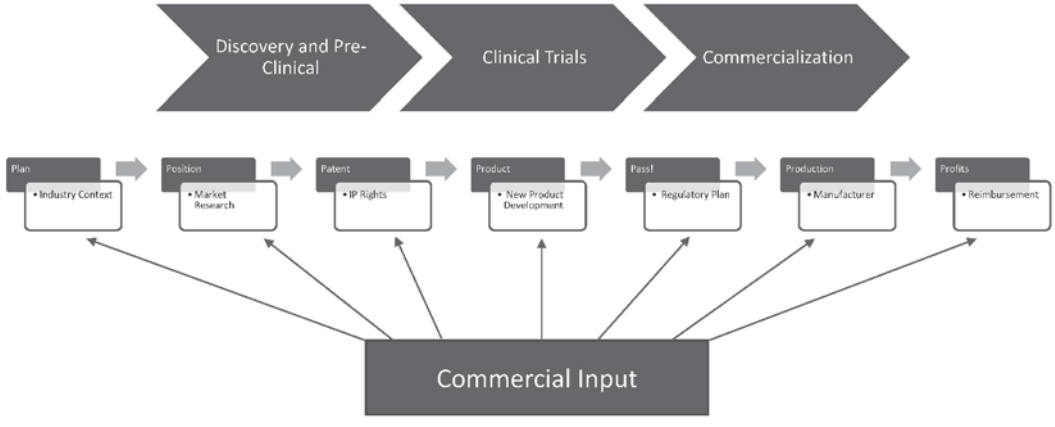
- No linear path… interests change, go with the flow
- Be open minded
- Do what you like not what others like. Be a Change Maker
- Success is defined by you… not others!
- Don't do things because it is easy! Do if because it is hard!
- Be adaptable and resourceful. When opportunities come your way take advantage of it! Have mentors who are motivational and positive!
- What ever you choose to do be passionate about it
- Ask the question "what is purpose of my life?"

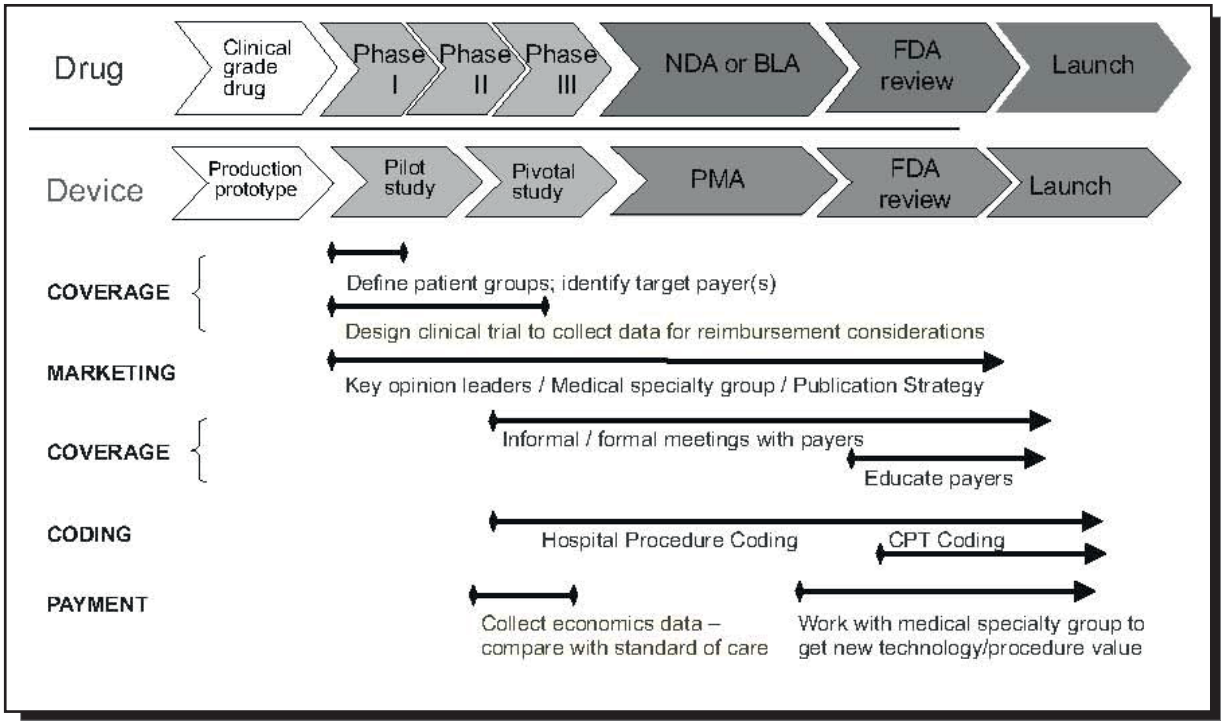
Key Learning from my Journey

- You need money… but money is not everything
- Read about successful people for motivation
- As much possible be helpful to others. You do not have to be a CEO or have an elite job to have an impact!
- Enjoy life Every Day! Remember life is short! Earn Respect, Trust, Good Will, Friendship and Love… and move away from Revenge, Anger, and Dishonesty!

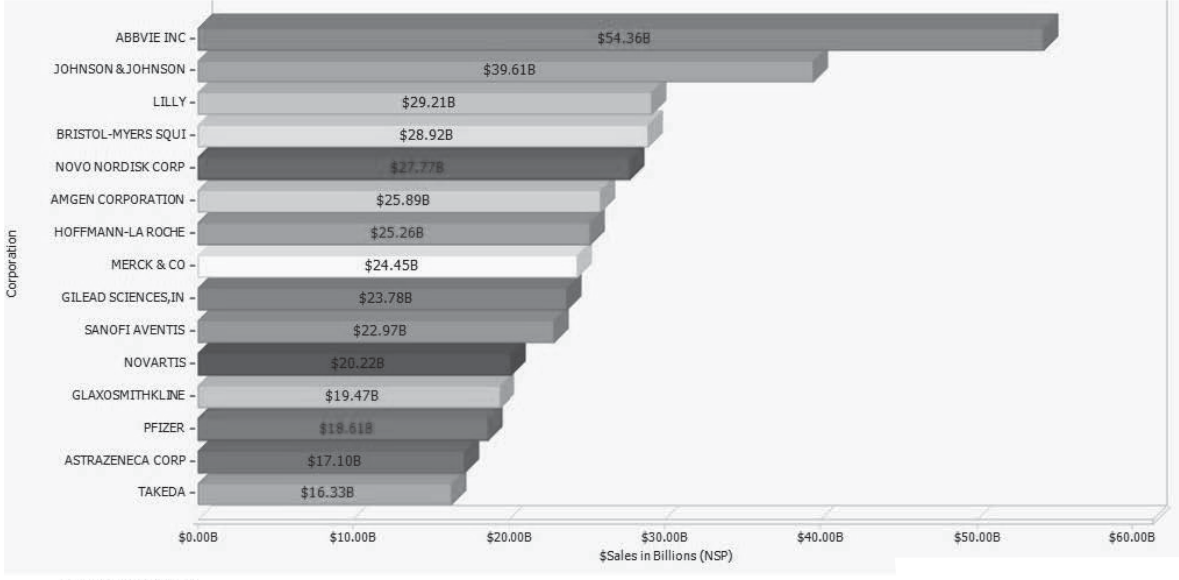
Discovery to Market







Top Pharma Companies



Source: IQVIA

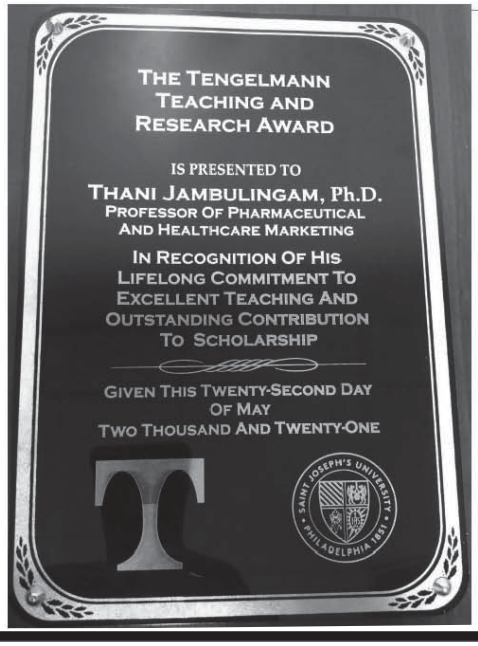
Commercial Opportunities

- Sales Rep
- Medical Science Liaison
- Sales Operations
- Business Analyst
- Consultant
- Marketing Research
- Business Intelligence
- Customer Insights
- Competitive Intelligence
- Vendor Management
- Brand Manager
- Portfolio Manager
- Phase III Team
- Launch Coordinator
- Strategic Marketing
- Pharmacoeconomics
- Pricing and Reimbursement
- Trade Relations
- Ad Agency Liaison
- Medical Communications
- Alliance Manager
- Business Development
- Long Range Planning
- Forecasting
- Data Scientist
- Country Manager
- Market Access Manager
- Many More….

Others Jobs

- Practicing Pharmacist
- Pharmacy Owner
- Pharmacovigilance
- Health Policy
- Claims Adjudicator
- Lawyer (IP, Litigations)
- Bioinformatics
- Journalist
- Historian
- Government
- FDA Reviewer
- Academia
- Board Member
- Investment Banker
- Regulatory Affairs
- Manufacturing
- Quality Testing
- Pharmacy Association
- Chief Executive Officer
- NGOs
- Patient Advocacy Orgs
- Drug Inspector
- Compliance Manager
- Distributor Sales
- Many More…

Tangelmann Award



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This issue of Pharma Web is also available online at the Trust website : www.pictrust.com

EVENTS

World Pharmacist Day Celebration – IPGA TN

Blood donation camp held in
Rajiv Gandhi Govt. General hospital, MMC, Chennai

Blood donation camp held in
Madurai Medical College, Madurai

Indian Pharmacy Graduates Association, Tamilnadu Branch celebrated the world Pharmacist Day on 25th September 2021. They organized Blood donation camp in Chennai and Madurai. In Chennai, the Blood donation camp was organized in Madras Medical College (Rajiv Gandhi Hospital), which was inaugurated by Dr. J. Radhakrishnan, Health Secretary, Govt. of Tamilnadu, More than 100 volunteers mostly students from various pharmacy colleges donated the blood.

The Blood donation camp was also organized in Madurai Medical College, inaugurated by Dr. A. Rathinavel, Dean, Madurai Medical College. There are 100 volunteers mostly student community from pharmacy colleges donated blood.

They also organized a webinar inaugurated by Shri R. Narayanaswamy, President of IPGA TN branch. About the theme “Pharmacy: Always trusted for your Health”. Prof. Dr. Guru Prasad Mohanta, former Professor and Head, Department of Pharmacy, Annamalai University, enlighten through a presentation

During the webinar, 3 eminent Pharmacist from USA who studies B.Pharm from Madras Medical College, Chennai shared their experience in career journey and enlighten the new drug approval and job opportunities in USA.

World Pharmacist Day Celebration – Periyar College of Pharmaceutical Sciences

World Pharmacist Day was celebrated in Periyar College of Pharmaceutical Sciences, Trichy on 25th September 2021 in virtual mode. Prof. Dr. R. Senthamarai, Principal delivered the welcome address. In her speech she emphasized the importance of celebrating Pharmacist's Day and the role of Pharmacist for improving the Pharmaceutical care and Management of diseases

Dr. M.Tamizhmozhi, Registrar, Tamil Nadu State Pharmacy Council, Chennai, delivered the Pharmacist Day address. In her speech she explained the importance of the pharmacist in health care team. She also added latest Pharmacy council regulations to implement more job opportunities for pharmacist in pharmaceutical care areas and pharmacy education She insisted that Pharmacist should be aware of the complete information about Drug interactions and Adverse Drug Reactions

Prof. Dr. A.M. Ismail, Distinguished Professor and Prof. Dr. G. Krishnamoorthy, Vice Principal felicitated the programme. The Pharmacist oath was sworn by the entire pharmacist recited by Dr. T. Shri Vijaya Kirubha, Head of the Department of Pharmacognosy. The Staff & Students of the college participated in the programme. Mr. K. Sakthivel, Head i/c, Department of Pharmacy Practice proposed the vote of thanks.

Meeting with DCGI – Discussion and suggestion for New D & C Act

Mr. R. Narayanaswamy, President, IPGA, TN Branch, and Dr. G. Selvaraj, legal advisor IPGA TN branch attended the virtual meeting called by Drugs Controller General of India (DCGI) on 18/09/2021 for preparing a new Drugs and Cosmetics and Medical Devices Act. The following points were given by us during the meeting.

1) The present Drugs & Cosmetics Act enacted in 1940 have all the nomenclature and is good enough in terms of law for the enforcement of the Drugs & Cosmetics Act for all these rules.

2) No court has so far struck down any portion of the Act. Hence, we may utilize the same Act with certain amendments for better enforcement.

3) We had gone through the draft of the Drugs & Cosmetics Act Bill, 2015, which is an amendment to the existing Act. However, we have no idea whether the Government is going to only amend the existing act or completely doing away with it.

4) We would like to suggest that a nominee from IPGA Association shall be included in the Drug Technical Advisory Board (DTAB).

5) The nomenclature/renaming of Drug Inspector into Drug Control Officer need to be properly worded as the higher officers to them are called as Deputy & Asst. Drug Controllers. Hence there is a contradiction.

6) In the new bill, the qualification of the DCGI should be at a minimum a Graduate in Pharmacy with 15 years of experience in enforcement of Drugs & Cosmetics Acts and Rules.

7) The competent technical person for manufacture of drug formulation, cosmetics shall be only Pharmacy Graduate in order to ensure the quality of the product to the consumer. Likewise, the quality control and quality assurance technical staff should also have the minimum qualification of only Bachelor of Pharmacy, not any other degree holders.

8) The consumer sampling section in the existing Section 26 need to be re-defined in order to have a simpler procedure for the consumer to send the samples to any approved testing lab without testing fees.

9) The present products, so called Dietary Supplements, are in the dosage form of either tablet or capsules. These dietary supplements are prescribed by the RMP for curing the ailments in human beings. At present, this is being controlled by FSSAI. In order to ensure the quality of these products, these dosage form supplements shall be enforced through the new Drugs & Cosmetics Act.

10) We appreciate the inclusion of Medical Devices in the new act. The Medical Devices Technical Advisory Committee need to be formed separately with more members of stakeholders and proper associations.

11) In the present Medical Devices Rules, the inspection of Class A & B devices by the notified body becomes mandatory. Most of the Medical Devices manufacturers in our country are in small scale industry, particularly Surgical Dressings etc. The State and Central Drugs Inspectors already have sufficient knowledge about the formulation of surgical dressings in our country. Hence, it is suggested that inspection of manufacturers of medical devices may be done by state or central drug inspector with or without notified body according to the manufacturing technology.

12) Further, we suggest a definition of counterfeit of Drugs, Cosmetics, and Medical Devices may be added in the new Act with penal section.

13) The qualified person in dealing drugs in wholesale shall be a registered pharmacist only.

14) Good transportation practices guidelines may be added in the rules

15) Necessary Rules about destruction expired drugs and cosmetics and medical devices.

16) A provision may be made for compounding of offences

NOTIFICATION

F. No. 04-146/2007-DC (Part-I)
Government of India
Directorate General of Health Services
Central Drugs Standard Control Organization
(FDC Division)

FDA Bhawan, Kotla Road,
New Delhi
Dated: 27/8/2021

To,

All State/UT Drugs Controller

Subject:- Procedure to be followed for regularisation of FDCs (Fixed Dose Combinations) declared as rational in respect to 294 FDCs by the DTAB which were licensed to manufacture and market by State Licensing Authority (SLA) without prior approval from DCG(I)-regarding.

Sir,

This is in continuation to this Directorate letter of even number dated 27.02.2019 and 08.09.2020 whereby a detailed pathway was issued for obtaining permission from this Directorate in respect of 83 FDCs and subsequently 03 FDCs declared as rational.

As per the report of DTAB dated 13.04.2021 and recommendations of subcommittee of DTAB as approved, 31 more FDCs have been considered as **rational** under 294 FDCs category. The list of these 31 FDCs is enclosed as **Annexure - A**.

All the manufacturers who are already holding licenses from State Licensing Authorities for such FDCs and did not obtain NOC from DCG (I) are required to submit their applications to this Directorate at the earliest within 06 months.

In view of above, you are requested to direct all concerned stakeholders for submission of application in Form CT-21 as per the defined pathway for clearance of the cases. You are also requested to ensure that product license in respect of these 31 FDCs are issued after the approval of DCG(I) in favour of the applicant.

Yours faithfully,

Vkg

(Dr. V. G. Somani)
Drugs Controller General (India)

Copy to:-

1. PS to JS(R), Ministry of Health and family Welfare, Nirman Bhawan, New Delhi
2. CDSCO Zonal and Sub-Zonal offices
3. Drug Manufacturing Associations: IDMA/OPPI/IPA/CIPI/FOPE/Indian Drug/ Pharmaceuticals Association Forum
4. Website of CDSCO

Annexure - A

S. No.	Name of the FDC	Recommendations
1.	Amoxicillin+ Cloxacillin+ Lactic acid bacillus	Rational.
2.	Amoxycillin+ Clavulanic acid+ Lactic acid bacillus	Rational.
3.	Amoxycillin+ Lactic acid bacillus	Rational.
4.	Amoxycillin+ Lactobacillus acidophilus+ Flucloxacillin Sodium	Rational.
5.	Ampicillin+ Cloxacillin+ Lactic acid bacillus	Rational.
6.	Ampicillin+ Lactic acid bacillus	Rational.
7.	Calcium dobesilate+ Lignocaine+ Hydrocortisone	Rational for short term use.
8.	Cefadroxyl+ Lactic acid bacillus	Rational
9.	Cefdinir+ Lactic acid bacillus	Rational
10.	Cefixime+ Lactic acid bacillus	Rational
11.	Cefixime+ Lactobacillus+ Dicloxacillin	Rational if Dicloxacillin is in sustained release form in twice daily doses schedule and Indication of the FDC should be restricted to skin & soft tissue infections.
12.	Cefpodoxime prozetil+ Lactic acid bacillus	Rational
13.	Cefpodoxime+ Cloxacillin+ Lactobacillus	Rational if Cloxacillin is in sustained release form in twice daily doses schedule and Indication of the FDC should be restricted to skin & soft tissue infections.
14.	Cefprozil+ Lactobacillus	Rational
15.	Cepodoxime+ Cloxacillin+ Lactic acid bacillus	Rational if Cloxacillin is in sustained release form in twice daily doses schedule and Indication of the FDC should be restricted to skin & soft tissue infections.
16.	Dicyclomine+ Ranitidine	Rational
17.	Domperidone+ Paracetamol	Rational. FDC is indicated for management of acute migraine.
18.	Domperidone+ Paracetamol+ Tramadol	Rational provided that dose of paracetamol is 325mg. FDC is indicated for management of acute migraine.
19.	Doxycycline+ Lactobacillus	Rational
20.	Drotaverine+ Nimesulide	Rational. FDC is indicated for dysmenorrhoea.
21.	Drotaverine+ Paracetamol	Rational. FDC is indicated for dysmenorrhoea.
22.	Lincomycin+ Lactobacillus	Rational
23.	Ofloxacin+ Lactic acid bacillus	Rational
24.	Ondansetron+ Ranitidine	Rational
25.	Torsemide+ Spironolactone	Rational
26.	Allantoin+Dimethicone + Methylparaben+ Propylparaben	Rational
27.	Aloe vera+Vit-e acetate	Rational if FDC is in cream and lotion dosage form only.
28.	Aloe+ Tocopherol	Rational if FDC is in cream and lotion dosage form only.
29.	Aloevera+Glycerine+PEG 100 stearate+Vit E	Rational if FDC is in cream and lotion dosage form only.
30.	Ampicillin+Flucloxacillin Sodium Salt	Rational
31.	Ampicillin+Flucloxacillin Sodium Salt+ Lactobacillus Acidophilus	Rational

F. No. 04-146/2007-DC (Part-I)
Government of India
Directorate General of Health Services
Central Drugs Standard Control Organization
(FDC Division)

FDA Bhawan, Kotla Road,
New Delhi
Dated: 27/8/2021

To,

All State/UT Drugs Controller

Subject:- Manufacturing and Marketing of certain FDCs as per directions of Hon'ble High Court, Maharashtra, Nagpur Bench - regarding.

Sir,

As you are aware while reviewing the directions of the Hon'ble High Court, Maharashtra, Nagpur bench on following FDCs which are already approved by DCG(I) in specific dosage forms and strengths, DTAB in its meeting held on 27.08.2019 also referred these FDCs to the Prof. Kokate Committee :-

Sr. No.	Fixed Dose Combinations (FDCs)
1.	Cefixime + Cloxacillin
2.	Cefixime + Cloxacillin + Lactobacillus
3.	Cefadroxil + Clavulanic acid

As per the report of DTAB dated 13.04.2021 and recommendations of subcommittee of DTAB as approved, the above FDCs have been considered as **rational** with certain conditions.

As regard to the FDC of Cefixime + Cloxacillin and FDC of Cefixime + Cloxacillin + Lactobacillus, these have been considered as rational if cloxacillin is in sustained release form in twice daily doses schedule. The indication of the FDC should be restricted to skin and soft tissue infections.

As regard to the FDC of Cefadroxil + Clavulanic acid, firms should prove the efficacy of the combination by conducting in-vitro study in GLP complied laboratory for all the approved indications with respect to the infections caused by susceptible microorganisms including S. aureus. The study should compare cefadroxil alone and in FDC. Accordingly the study protocol should be submitted for approval within 3 months of the notification.

In view of above, you are requested to direct all the manufacturers of above FDCs to manufacture and market the above FDCs at S. No. 2 & 3 only for the indication as

mentioned above. Further as regard to the FDC at S.No.1, you are requested to direct manufacturers to submit the protocol for conducting in-vitro study to prove the efficacy of this combination to this office for approval.

Yours faithfully,

(Dr. V. G. Somani)
Drugs Controller General (India)

Copy to:-

1. PS to JS(R), Ministry of Health and family Welfare, Nirman Bhawan, New Delhi
2. CDSCO Zonal and Sub-Zonal offices
3. Drug Manufacturing Associations: IDMA/OPPI/IPA/CIPI/FOPE/Indian Drug/ Pharmaceuticals Association Forum
4. Website of CDSCO

MINISTRY OF HEALTH AND FAMILY WELFARE

(Department of Health and Family Welfare)

NOTIFICATION

New Delhi, the 17th August, 2021

S.O. 3364(E).—Whereas, there has been an outbreak of COVID-19 pandemic in India and worldwide;

Whereas, the Central Government is satisfied that making available suitable COVID-19 vaccines is essential to meet the requirements of emergency arising due to pandemic COVID-19, and in public interest it is necessary and expedient to regulate the testing of COVID-19 vaccines for prevention and treatment of COVID-19 infection;

Whereas, the Central Government is of the considered view that supply of COVID-19 vaccines may not get affected and the vaccines must remain available to the public;

Now, therefore, in exercise of the powers conferred by sections 6 and 26B read with section 33P of the Drugs and Cosmetics Act, 1940 (23 of 1940) and rule 3 of the Drugs Rules, 1945, the Central Government, hereby directs that the National Institute of Animal Biotechnology (NIAB), Hyderabad, in addition to their existing functions, shall perform the function of Central Drugs Laboratory as an additional facility in respect of COVID-19 vaccines and the functions of the Director in respect of COVID-19 vaccines shall be exercised by the Director of the said Institute.

2. In case of any inconsistency between this notification and any rule made under the said Act, the provisions of this notification shall prevail over such rule in the public interest so as to meet the emergency which has arisen due to COVID-19 pandemic.

3. This order shall come into force on the date of its publication in the Official Gazette and shall remain valid for a period of twelve months.

[F.No. X.11014/18/2021-DR]
Dr. MANDEEP K. BHANDARI, Jt. Secy.

MINISTRY OF HEALTH AND FAMILY WELFARE

(Department of Health and Family Welfare)

NOTIFICATION

New Delhi, the 31st August, 2021

G.S.R. 605(E).— Whereas a draft of certain rules to amend the New Drugs and Clinical Trials Rules, 2019, was published as required by sub-section(1) of section 12 read with sub-section(1) of section 33 of the Drugs and Cosmetics Act, 1940 (23 of 1940), vide notification of the Government of India in the Ministry of Health and Family Welfare (Department of Health and Family Welfare) number G.S.R. 99 (E), dated the 5th February, 2021, in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (I), inviting objections and suggestions from persons likely to be affected thereby, before the expiry of a period of fifteen days from the date on which the copies of the Official Gazette containing the said notification were made available to the public;

And whereas copies of the Gazette were made available to the public on 5th February, 2021;

And whereas, objections and suggestions received from the public on the said rules have been considered by the Central Government;

Now, therefore, in exercise of the powers conferred under section 12 and section 33 of the Drugs and Cosmetics Act, 1940 (23 of 1940), the Central Government, after consultation with the Drugs Technical Advisory Board, hereby makes the following rules further to amend the New Drugs and Clinical Trials Rules, 2019, namely:—

(1) (1) These rules may be called the New Drugs and Clinical Trials (Amendment) Rules, 2021.

(2) They shall come into force on the date of their publication in the Official Gazette.

(2) In the New Drugs and Clinical Trials Rules, 2019, in rule 2, in sub-rule (1), in clause (g), for the words “either clinical part or for both”, the words “either clinical part or analytical part or for both” shall be substituted.

[F.No. X.11014/1/2021-DR]
Dr. MANDEEP K. BHANDARI, Jt. Secy.

Note: The principal rules were published in the Gazette of India vide notification number G.S.R. 227(E), dated the 19th March, 2019.

MINISTRY OF HEALTH AND FAMILY WELFARE

(Department of Health and Family Welfare)

ORDER

New Delhi, the 2nd September, 2021

S.O. 3596(E).—In exercise of the powers conferred by sub-section (2) of section 20 of the Drugs and Cosmetics Act, 1940 (23 of 1940) read with sub-rule (1) of rule 18 of the Medical Devices Rules, 2017, the Central Government hereby amends the notification of the Government of India in the Ministry of Health and Family Welfare (Department of Health and Family Welfare) number S.O. 3400(E), dated 11th July, 2018, published in Part II, section 3, sub-section (ii) of the Gazette of India, Extraordinary, dated the 11th July, 2018, namely:—

In the said notification, in the TABLE, for serial number 15 and the entries relating thereto, the following shall be substituted, namely:—

(1)	(2)	(3)	(4)
"15. 16. 17. 18.	Shri Amar Jyoti Chamuah Shri Dilip Kr. Sarkar Smt. Rinku Kalita Shri Arun Kumar Das	Regional Drugs Testing Laboratory, Guwahati, Assam	Disposable Hypodermic Syringes, Disposable Hypodermic Needle, Disposable Perfusion Sets and Intravenous Cannulae ".

2. This Order shall come into force from the date of its publication in the Official Gazette.

[F.No. X.11014/13/2020-DR]
Dr. MANDEEP K. BHANDARI, Jt. Secy.

Note: The principal notification was published in the Gazette of India, Extraordinary, Part II, section 3, sub-section (ii) vide number S.O. 3400(E), dated the 11th July, 2018.

NEWS

India Among Top 10 Countries in Pharma, Healthcare: Report

India is among the top 10 countries in pharma and healthcare sector with exponential growth recorded in the last five years, according to a report by Sagacious IP, a global IP research and consulting firm. The report stated that patents with Indian publication having Indian priority grew from 2,548 in 2015 to 7,399 in 2020.

Such numbers are indicative of increased patent filing activity by Indian companies and MNCs with research centres based in India. The pharma and healthcare sector has also seen massive growth in global patent filings in the last five years, from over 24,000 in 2015 to over 1,50,000 in 2020.

In terms of the origin of patent applications in the pharma sector globally, India is among the top 10 countries, followed by Italy, Australia, Taiwan and Sweden. The applications originating from India are majorly filed in the US, European Parliament and APAC region.

The top Indian filers who filed patents in India during the last five years (2015-2020) include the Council of Scientific and Industrial Research(CSIR), ITC Life Sciences,Lovely Professional University,Colgate Palmolive (India), Tata Consultancy Services (TCS)Limited, IIT Bombay, Cadila Healthcare, Lupin, Amity University, and Wockhardt Limited, the report said.

CSIR, a research institute, leads in these filings. Among companies, ITC (ITC Life Sciences and Technology Centre) is on top.

The report stated that pharmaceutical companies face major challenges dealing with IP rights and the competition provided by the generics. Further, the biggest challenge in developing approved drugs is the long time spent in research and the investments required for the same.

Also, due to increased awareness and digital connectivity, self-medication has been rampant, which does not go down well in terms of returns on R&D and IP investments in drug discovery.

Recently, the industry has shown a focus shift towards preventive healthcare and therefore the players must align with this shift.

Lastly, stringent guidelines by governments globally and low returns on generics are the other few limiting factors to R&D in this sector.

On a positive side, India is notably a preferred destination and market for healthcare innovation as is evident by global companies securing many of their global patents in India, it said.

India is one of the largest manufacturers of generic medicines and vaccines, holding 20 per cent and 62 per cent volume share, respectively.

Source: *ET Healthworld,* 27th July 2021

IPC Extends Implementation of IP 2018 Addendum 2021 by Three Months

Considering the impact of ongoing Covid-19 pandemic, the Indian Pharmacopoeia Commission (IPC) has extended implementation of Indian Pharmacopoeia 2018 Addendum 2021 by three months.

This comes after the drug industry's appeal to IPC to defer the implementation of IP 2018 Addendum 2021 by six months in the wake of current situation of Covid-19 pandemic making it extremely difficult for the industry to launch products in market complying with monographs of IP 2018 Addendum 2021.

"Considering the impact of the current Covid-19 pandemic, a one time extension of three months in the effective date of Addendum 2021 to the IP 2018 is being provided to the stakeholders for implementation of the standards included therein. IP Addendum 2021 shall be effective from December 31, 2021," said Dr Rajeev Singh Raghuvanshi, secretary cum scientific director, IPC in a notification on July 26, 2021.

IPC sent a notice to concerned stakeholders in this regard which included Drugs Controller General of India, all zonal offices and port offices of CDSCO, all state drug controllers, directors of central drugs laboratories, members of scientific body of IPC, government analysts, industry associations—IDMA, BDMA, OPPI, FSSAI, small scale industry associations.

The Addendum 2021 to IP 2018 was slated to be implemented from October 1, 2021.

It comprises a total of 66 new drug monographs (including 59 chemical, 5 herbal products, and 2 blood-related products) and 4 new general chapters. In addition, a total of 260 monograph amendments have also been included in IP Addendum 2021 that would further upgrade the quality of drug standards included in the IP.

Last month IDMA submitted a representation to IPC, DCGI, Directorate General of Health Services (DGHS) requesting them to provide additional transition time of six months for implementation of Indian Pharmacopoeia 2018 Addendum 2021, that is March 1, 2022 as launch of products in market in compliance with monographs of IP 2018 Addendum 2021 is very challenging due to Covid-19 pandemic.

In a bid to launch a product in market with IP claim, a lot of work needs to be done by drug makers ranging from procurement of required materials or equipment, testing as per monograph to reformulation of product to make it compliant to monograph of IP. Subsequently, printing of labels takes a minimum 20 days. Also, in these struggling days, there will also be destruction of packaging inventory for products requiring revision in label claim, which will have financial and environmental impact and is not in national interest, stated Mahesh Doshi, national president, IDMA.

Several drug firms have already started the evaluation of monographs as appeared in this new edition. However, to evaluate, understand and then to implement the monographs of Indian Pharmacopoeia, will definitely take more effort and time than usual in these difficult times. Hence, extension is needed for smooth transition by pharma manufactures to maintain business continuity, ensure availability of safe and essential medicines in India market, stated Doshi.

Source: *Pharmabiz,* 28th July 2021

Working on Nasal Vaccine as Booster Dose, says Bharat Biotech CMD

Bharat Biotech is working on a combination of Covaxin followed by nasal vaccine which if administered can act as a booster dose and protect a person from getting infected, according to its chairman and managing director Dr Krishna Ella.

The company expects significant data on the combination in the next two months which can then drive the future course of action based on regulatory approvals and policy decision regarding booster shots.

"We are working on a combination of Covaxin followed by nasal, so that Covaxin primes the system of innate immunity and then the boost by the nasal which produces three immune responses — the IGG, the IGA and then mucosal immunity. All three immunities are powerful and can protect a person from getting infected," Ella said

Even as Covaxin is found to be significantly effective against the dominant Delta virus, the government will take the final call on whether there is a need for a third dose of Covaxin to enhance the immune response for a longer time, Ella said underlining that data will be submitted to the government. "I think we have done a booster dose also. We are waiting for the results, but if you recommend a booster dose, there will be a shortage of vaccine. So, it's a complicated situation. We are therefore adopting an innovative method," he said.

According to Ella, if the nasal vaccine works out well, production capacity is also likely to double. At present, Bharat Biotech is supplying around 2 — 2.5 crore doses of Covaxin per month, which is projected to increase to around 5.8 crore doses over the next few months.

Amid concerns about limited supply of Covaxin and a slow ramp up of production as compared to other anti-Covid jabs, Ella highlighted how manufacturing an inactivated vaccine and expanding production capacity is reasonably difficult as compared to other platforms.

"The mRNA vaccine can be produced with one of the easiest technologies in the world. You can produce in a week, and you can produce 20 million doses with mRNA. Coming to the adenovirus, which is a vector-based vaccine, I can manufacture in less than seven days. Whereas the same inactivated vaccine that we produce to be used in children, that can take 120 days to produce. The other two platforms,

it is easy to scale up to 2,000 litres, 5,000 litres, whereas when it comes to inactivated vaccines, nobody has scaled up more than 1,000 litres in the world and we are the first company trying to scale it to 5,000 litres in our Bengaluru facility. People have not understood how complicated this technology is, and this is one of the oldest technologies and the best," he said.

Ella also clarified that WHO approval for Covaxin got delayed as the company had to do efficacy trials separately and during the second wave, which involved cases of Delta variant.

Source: *The Times of India,* 16th August 2021

Pharma to Hit $60bn Mkt Size in 2 Yrs on Generics

The domestic pharma industry is expected to grow about 11% over the next two years to cross $60 billion in market size, driven by generic opportunities available globally, according to a study. With an existing market size of around $45 billion in FY21, the industry ranks third globally in terms of volume, and 13th in terms of value.

The main drivers, said the study by CARE Ratings, include ability to leverage the opportunity available for Indian pharma companies due to patent expiries of drugs globally, ebbing of regulatory risks and de-risking strategies from dependency on China for key raw materials. The solid fundamentals of the industry and increasing trend of PE investments will also contribute to the growth, it adds. Exploiting these opportunities, CARE Ratings expects the credit risk profiles of its rated entities to remain stable to positive during FY22 and Fy23.

The domestic pharma market, which was about $18 billion during FY17, has exhibited a compounded annual growth rate (CAGR) of 4.5% to reach $21 billion during FY21. Further, pharma exports, which totalled $17 billion during FY17, have reported a CAGR of 10% to touch $24 billion during FY21. Especially during the last fiscal, on account of the increase in the demand for Covid-related drugs, exports have grown by 18%. Thus, on account of better export growth rate, the contribution of domestic to exports has changed from 52:48 during FY17 to 47:53 during Fy21.

CARE Ratings expects that with better prospects in regulated and semi-regulated markets, the contribution of domestic to exports would widen to 45:55 by Fy23.

Source: *The Times of India,* 27th August 2021

Terra Pharma: A New Drugs Legislation Must keep the Pharma Sector Growing while Safeguarding Consumer Interest

GoI's move to draft a new law for drugs, medical devices, cosmetics and e-pharmacies recognises changing dynamics in the pharmaceutical sector, which the 1940 vintage Drugs and Cosmetics Act was inadequately addressing. DCA and its rules, through many amendments and periodic revisions, witnessed Indian pharma globally ranking third in terms of production volumes (14th in value) and become second largest in terms of workforce. Economic Survey 2020-21 estimated threefold growth for the industry from its $40 billion current market size by this decade's end.

The DCGI-headed eight-member panel drafting the new law must ensure that leading industry voices and health experts are extensively consulted. Among the present regime's major flaws is the dual regulation by CDSCO and states. This allows malpractices wherever state officials look the other way. Given the large pharma ecosystem, comprising several thousand drug companies and manufacturing units, enforcing uniform standards and preventing circulation of substandard drugs and devices is impossible with disjointed regulatory outlooks. The Ranbaxy manufacturing malpractice episode was one among quite a few reminders that Indian pharma's reputation and exports need continuous quality manufacturing.

At the retail end, e-pharmacies are steadying after conflicting judicial decisions and an uncertain regulatory environment on online drug sales. Still, foreign investors would need more statutory clarity even as public health worries over forged prescriptions linger. But with many traditional brick-and-mortar pharmacies operating without licensed pharmacists, regulating the retail end needs a rethink. Consumer interest will also be served well by indemnity protection especially after the J&J hip implant mishaps. Plus, over-the-counter antibiotic and schedule-H drug sales remain a serious issue. A mature pharma ecosystem means prescriptions must become the norm. With the Covid pandemic, nations are recognising a robust domestic pharma sector's importance. The new law must streamline manufacturing rules, quality control and R&D norms to help Indian companies meet new challenges.

Source: *The Times of India,* 9th September 2021

77 Pharmacies across the State Face Action for Over-The-Counter Sale of Drugs

The Drugs Control Department has cracked down on over-the-counter sale of prescription drugs in the State. A total of 77 pharmacies across the State now face action for selling “habit-forming” drugs without prescription from a registered medical practitioner.

Following specific information and through a special drive, the State's Drugs

Control Department found several cases of over-the-counter sale of prescription drugs in August and October.

"We formed special teams across the State and conducted surprise inspections. We have initiated action on 77 retail outlets for sale of 'habit-forming' drugs without prescriptions from registered medical practitioners," said K. Sivabalan, Director of Drugs Control Department.

Drugs specified under Schedule H, Schedule H1 and Schedule X of the Drugs and Cosmetics Rules should be sold only on the prescription of a registered medical practitioner. "We have booked these pharmacies under Section 65 (9) (a) of the Drugs and Cosmetics Rules, 1945 and Section 27 (d) of the Drugs and Cosmetics Act 1940. This has provisions for both imposing fine and imprisonment for the offences. We have initiated action against these outlets," he said. Officials found that prescription drugs such as tramadol, tapentadol, nitrazepam, zolpidem, alprazolam were sold without valid prescription.

Mr. Sivabalan said such checks were conducted every month. "Every year, at least 400 cases are booked against pharmacies for various violations. Of these, nearly 200 cases are for sale of drugs without prescription," he said. Some drugs were prescribed for patients with cardiac illnesses and psychiatric patients. "We cannot ask pharmacies not to stock up these drugs as there should be no situation in which these drugs are in short supply as they are required by patients. We will continue to keep a close watch on over-the-counter sale of such drugs," an official said.

Source: *The Hindu,* 13th October 2021

Domestic Pharma Market Expands 18% in August

The domestic pharmaceutical market delivered a robust growth of nearly 18% in August, buoyed by sales of acute therapies. The acute medication grew around 17% year-on-year (YoY) in August on a low base, while chronic therapies rose about 12.5% YoY, India Ratings and Research (Ind-Ra) said.

After the normalisation of the high growth this year in the months of April (51.5%) and May (47.8%) led by the lockdown-related lower base last year and higher volume growth, the average Indian pharma market (IPM) growth from June to August 2021 stood at 15.2% YoY. In terms of growth drivers, price, new product launches and volume stood at 9%, 5.9% and 2.9% YoY, respectively, which led to an overall IPM size of Rs 1.63 lakh crore in August (July was Rs 1.61 lakh crore). The market had posted a growth of nearly 14% in July.

Acute therapies including anti-infectives reported a growth of nearly 17 YoY (June and July was over 20% each YoY), while chronic and sub-chronic therapy reported stable growth at 10.8% YoY (6.4% YoY; 7.8% YoY) and 15.3% YoY (11.3%; 11.2%), respectively, in August 2021. During FY21, Ind-Ra said the acute therapy segment reported negative

growth on account of Covid, while the chronic therapy segment reported average growth of 7% in the same period.

The contribution of top five therapies to the IPM stood at 58%. These include cardiac (chronic; 13.2% of IPM), anti-infectives (acute; 14.3%), gastro-intestinal (acute; 11.5%), anti-diabetic (chronic; 9.5%) and vitamins (acute; 9.2%).

Source: *The Times of India,* 24th September 2021

'Medical Devices Park will attract Rs. 3,500 cr. in investments'

The Medical Devices Park that will come up at Oragadam will attract investments to the tune of Rs.3,500 crore and is expected provide direct and indirect employment to about 10,000 people, Chief Minister M.K. Stalin said.

The park would be set up at an estimated cost of Rs.450 crore. The Union government has granted its in-principle approval after accepting the State government's request, and would grant up to Rs.100 crore for the park in Kancheepuram district, he said in a statement.

Spread over 350 acres in the SIPCOT Industrial Complex at Oragadam, the park would manufacture ventilators, blood pressure monitors, pacemakers, equipment for surgeons and other requirements of the medical fraternity, he said.

The State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT) would create world-class facilities in the park to make it one of the major manufacturing hubs of medical devices in the world, Mr. Stalin added.

In the Budget for 2021-22, the State government announced the setting up of a Medical Devices Park. A proposal was made to the Department of Pharmaceuticals of the Union government on behalf of the State government, the Chief Minister recalled.

Source: *The Hindu,* 29th September 2021

DCGI asks State DCs to Ensure Uninterrupted Supply of Medical Devices as Compulsory Registration Begins

The Drugs Controller General (India) has asked the State drug controllers to ensure uninterrupted supply of medical devices even as it is considering the medical devices industry's request regarding relaxation on the deadlines for the registration of the products with the authority. The move comes closer to the initiation of compulsory registration regime for the Class A & B medical devices in the country, which will be starting from October.

The Central Drugs Standard Control Organisation (CDSCO) has also announced classification of 48 medical devices pertaining to Oncology, 153 devices related to gastroenterology, and another 110 related to neurological therapy.

According to the ministry of health and family welfare's notification on February 11, 2020, the medical devices were under voluntary registration scheme from April 1, 2020 till end of September, 2021. From October 1, 2021, Class A & B Medical Devices will be under compulsory registration scheme up to September, 2022 and Class C & D medical devices will be under compulsory registration scheme up to September 2023. After the compulsory registration period, these classes will respectively move to the licensing regime.

However, the ministry has received various representations from stakeholders recently informing that complete preparedness of industry in this regard remains to be achieved, in light of disruption due to Covid-19 pandemic situation.

"The representations are under consideration of the ministry of health and family welfare, Government of India. You are requested to take note of the same with a view to ensure uninterrupted supply of such medical devices and access to the patients till a decision is taken on the representations," said a letter from Dr V G Somani, Drugs Controller General (India) to all drug controllers.

The industry has raised concerns on the regulation moving to a compulsory registration regime from October, this year, since there are companies yet to register their products. The CDSCO has also published the list of eight notified bodies registered with the Organisation under the Medical Devices Rule, 2017, to carry out audits of manufacturing sites under the provisions of the said rules.

Rajiv Nath, forum coordinator, Association of Indian Medical Device Industry (AiMeD), in a recent conference said that many manufacturers don't have the ISO/IS 13485 certification, which is a requirement for registration of the medical devices. Many of them are feeling challenged to get the certification, especially in Covid-19 times and the industry is seeking certain concessions from the government on that.

"Our request is that all Class A non sterile products can be asked to fulfill a simple checklist. For instance, the surgical instruments manufacturers are challenged, they can give a self declaration form and undertake that in one year's time they will achieve ISO 9000 certification and on that basis they can be registered. We need not delay registration, we can still go forward, but based on an undertaking," he said.

"Similarly, in Class A sterile, Class B, C and D, if people have ISO/IS 13485 that is good, if they don't they may be asked to submit an undertaking that they will achieve this in one year's time and they can be taken forward for registration. It is important that the certification comes from the National Accreditation Board for Certification Bodies (NABCB) or an International Accreditation Forum (IAF) accredited certification body, in order to avoid any fake or unrecognised certification," he added.

On October 18, certain implants and seven electronic medical devices are going to be regulated and put under manufacturing license. But there is still no conformity

assessment ecosystem in the country for the manufacturers to prove compliance. Test laboratories are still not there, and the industry and the regulator need to discuss that.

"We request that a nine months' transition period be provided to achieve the manufacturing license, to August 2023. Meanwhile, if somebody is ready with these products, give them the license. We seek a nine month transition period to switch the packaging material also, to put the registration number on packaging material. In certain cases the packaging needs to be changed," maintained Nath.

The CDSCO, industry and other stakeholders need to work together to build competence of auditors, medical devices officers and manufacturers in the MSME levels. There should be clarity on the testing laboratories, for each product family. Government can look at incentivising private laboratories to provide testing services. When QCI's voluntary QA certification is available with manufacturers, both Indian and Overseas, then there should be reduced regulatory oversight for all the four classes of medical devices. There is also a need to expedite adoption of ISO standards and BIS standards, he said.

Source: *Pharmabiz,* 30th September 2021

Medical Devices Industry asks Govt to Frame Separate Act for Medical Devices Sector

The medical devices industry has urged the Central government to frame a separate Act for medical devices sector in the country, similar to the introduction of Food Safety and Standards Act for the food industry.

Asking the government to frame a separate Act at the earliest in order to help the medical devices industry grow better and innovate faster, Rajiv Nath, forum coordinator, Association of Indian Medical Device Industry (AiMeD) said that the current approach of keeping the Medical Devices Law under the drug regulations is restricting the industry in various levels as both are different in nature.

"We seek earliest passage of a Separate Medical Device Law as done for FSSAI in food, that is reasonable and implementable for our products as medical devices are not medicines," Nath sought in a letter to Union minister of health and family welfare Mansukh Mandaviya recently.

"We are opposed to a piecemeal approach of amendment of the Drugs & Cosmetics Act by giving a separate chapter of Medical Devices with shared punitive and penal criminal actions as for Drugs," he added.

The draft bill by Niti Aayog needs to be pursued as the shifting stand of the ministry of health and family welfare creates unpredictability that negatively impacts much needed investments in medical devices.

These issues need to be discussed before finalising the Bill. The existing rules need to be transplanted into the new Act. The advantages of a separate Act will be that there will be less criminal action, most offences can be decriminalised which cannot be done in

the pharmaceutical industry. When both medical devices and pharmaceuticals are treated under the same Act, this is a constraint to the industry, he added.

Innovation on medical devices is happening so fast and the CDSCO and the government needs to have a different mindset on that. But if they do that, the pharmaceutical industry and the regulators will not allow that. It is a different requirement for engineering. Like innovation in the automobile industry is different from that in food, which again, is different from drugs.

According to earlier reports, Niti Aayog almost two years back proposed a move to bring all the medical devices under a single regulatory framework and have a separate Medical Devices Administration. The aim for the Medical Devices Bill was to bring in ease of doing business and treat medical devices as separate from drugs.

Currently, the medical devices are regulated under the Medical Devices Rule, 2017, under the Drugs and Cosmetics Act, 1940 and the drug regulator is going ahead with its plans to move the medical devices into a licence regime in a phased manner. The drug regulator has classified almost all the medical devices into four categories based on the risk involved.

According to the government's plan, the medical devices regulatory process starts with voluntary registration, which began in April, 2020, which will move to compulsory registration, for Class A and B products, starting from October 1, 2021 and Class B and C it will start from October 1, 2022. All the classes will eventually move to the licensing regime one year from there.

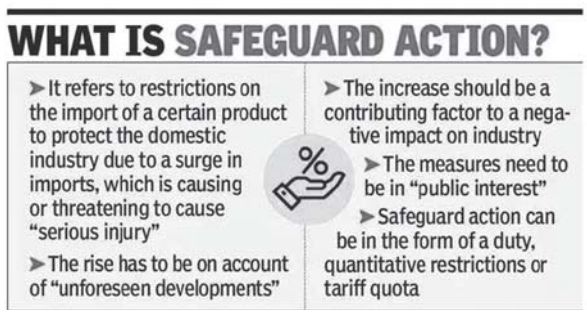
Source: *Pharmabiz,* 11th October 2021

Govt May Check Import of Key Sanitiser Ingredient

India's trade remedies directorate has recommended the use of safeguard measures for two years on a key ingredient used in making hand sanitisers and cosmetics to check imports if they go past a specified level — marking the first time that quantitative restriction has been proposed.

In its recommendations to the government, the Director General of Trade Remedies (DGTR) noted that there has been a surge in imports, which was undercutting domestic prices.

"The domestic industry has suffered serious injury, as established by significant deterioration in its overall performance, in respect of parameters such as market share, production, sales, capacity utilisation, and profitability, which have sharply declined in the most recent period," it said, adding that the increase was due to unforeseen situation. While acknowledging the increase was partly driven by the demand for hand sanitisers during Covid, DGTR said that the proposed action on isopropyl alcohol could be put on hold by the government in case the pandemic flared up.

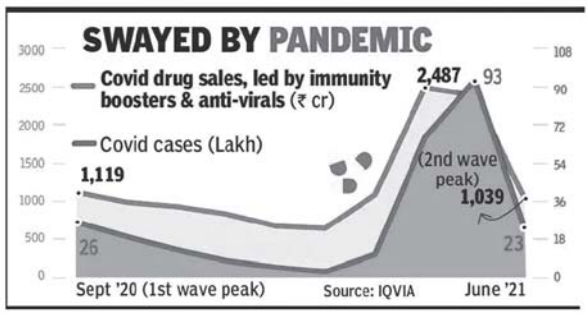


Source: *The Times of India,* 18th October 2021

Low Covid Cases Sink Vitamin Sales

As Covid cases reduce and the severity of its impact wanes, consumers appear to be popping lesser immunity supplements. Sales of health and multi-vitamin supplements — including the widely sold and highly popular Zincovit, A to Z and Becosules — have plummeted after May-June as the Covid caseload declined in most parts of the country. This was one of the fastest-growing therapies in the organised pharma retail market last year, with sales of Zincovit among the top pecking order.

The latest data culled from a pharma research firm by TOI, along with a survey on patient billings of health supplements, indicate that purchases have nearly halved during the July-August period from the corresponding period of the previous year. Immunity supplements witnessed a downslide, from being present in 92% of bills in June 2020 to around 49% in August this year.



For instance Zincovit, manufactured by Chennai firm Apex Labs, after hitting the highest monthly sales ever of over Rs 80 crore in May, dropped by over 60% in July. Last year in October, the 30-year-old brand dethroned the largest-selling Human Mixtard (insulin). Experts said substantial sales of multi-vitamins assume significance in a market where the top order is dominated by anti-diabetic therapies, indicating a strong need to prop one's immunity during a raging pandemic.

During May, other supplements like Becosules (Pfizer), A to Z (Alkem) and Shelcal (Torrent) also recorded high sales of Rs 30-50 crore, according to healthcare service provider IQVIA. Vitamin D plain & combinations, and Vitamin C also witnessed high sales after the resurgence of Covid this year.

A similar trend had played out in August last year, with 74% of retail billings having at least one immunity booster, while this year it declined to 49% in the same month. In the first week of September, it further reduced to 43%, a study of over 2 lakh bills by research firm Pronto Consult showed.

Pronto Consult founder Karishma Atul Shah said, “There was a nearly 58% drop in the purchases of immunity boosters in August as compared to the corresponding period last year. However, there was an increase in antibacterials and derma-related brands. Chronic brands were also purchased, but lower as compared to August last year.” Though there's been a drop over the last few months, sales of vitamins and immunity supplements are still 20-30% higher than the pre-Covid level, a top executive with a market player said. Presumably, companies ramped up production to meet the higher demand.

The Pronto Consult study says that increase in cases of viral infections, dengue, stomach-related ailments, headache, itchy eyes and sneezing seem to have pushed purchases of acute-related therapies. Hygiene products have seen huge spurts and continue the trend of being present in bills. Overall, the pharma retail market jumped nearly 14% to Rs 1.73 lakh crore (12-year period ended July), buoyed by higher sales of acute therapies of anti-infectives and respiratory drugs, and certain chronic medication including anti-diabetics.

Source: *The Times of India,* 13th September 2021

Aromatherapy Spray Imported From India Linked to Deaths in US, Faces Recall

US health officials may have solved the mystery of how four people in different states came down with a serious tropical disease even though none had travelled internationally: an aromatherapy spray imported from India.

The Centres for Disease Control and Prevention said that investigators found the same type of bacteria that causes the disease, melioidosis, in a spray bottle found in one of the patients' homes.

The four people were from Georgia, Kansas, Minnesota and Texas. Two of them, one a child in Georgia, died.

The agency said it was testing to confirm the bacteria in the bottle is the same strain as that seen in the four patients. It previously said lab analyses showed all four infections were closely related.

The spray found in the Georgia patient's home was made in India. The genetic profile of the bacteria in the bottle is similar to that of strains usually found in South Asia, the agency said.

The contaminated product is labelled 'Better Homes & Gardens Lavender & Chamomile Essential Oil Infused Aromatherapy Room Spray with Gemstones,' the CDC said. It was sold for $4 in 55 Walmart stores and on Walmart's website starting in February and until Thursday.

The Consumer Product Safety Commission and Walmart issued a recall for 3,900 bottles of the spray in six scents. Officials are investigating whether other scents and brands may pose a risk.

Walmart issued a statement Friday, saying the company took immediate action when federal agencies told the retailer of their findings.

Melioidosis is a rare in the United States, with about 12 cases reported annually. People can get it through direct contact with contaminated soil and water. The CDC said the infection is treatable if caught early and treated correctly.

Source: *The Indian Express,* 23rd October 2021

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