Concept Paper

APAC RA-EWG
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1 INTRODUCTION

Since the latter half of the 19th century, the modern health science for medicine began with the invention of acetaminophen and penicillin and has produced numerous chemical drugs. Many people have benefited from these new medicines. On the other hand, there were some cases in which people's health was damaged due to unexpected side effects caused by medicines. These histories have required new medicines to be reviewed and approved by the national health authority based on their risk-benefit balance.

In the 20th century, the World Health Organization (WHO) was established and is working to supply therapeutic drugs to the world. In addition, the International Council for Harmonization of Pharmaceutical Regulations (ICH) was established to standardize the standards for drug screening. Efficient development of effective medicines is progressing, and a framework for delivering these medicines to people all over the world is being established.

In the 21st century, various technologies are being developed to improve people's lives. These technologies have also been applied to health sciences, dramatically improving the modality for research and development of medical products including medicines. Industry and academia are promoting the research and development of innovative medical products based on new modality to provide the world with new treatment opportunities as well as medicines using small molecule compounds as before. Various concepts, science and technology are adopted such as DNA & RNA therapeutics, genome editing, cell/gene-modified cell therapy, oncolytic virus, digital medicine, etc. However, traditional pharmaceutical frameworks may not be sufficient to evaluate innovative medical products based on new modality. In addition, the harmonized standards for reviewing them in each country have not yet been established, and it is difficult to develop and launch them simultaneously or continuously all over the world.

In 2020, which is totally unexpected, the global pandemic of the novel coronavirus has made a strong need to develop new and effective medicines. Although still in the development stage, a new modality, mRNA technology, was applied to vaccine development in a very short period. Through industry-government-academia collaboration, we have realized the urgent development of mRNA vaccines and their launch in various countries around the world.

Our mission is to expedite the launch of innovative medicines for the people in Asia. We are promoting efforts to bring innovative medical products based on new modality to people in Asia not only in emergencies but also in normal times for the health and benefit of people. It's an unexpected pandemic experience, but we need to apply this experience as well to establish an integrated process and approach to deliver innovative medical products based on new modality.

2 OBJECTIVE

To recommend the health authorities to establish a robust regulatory framework to facilitate access to innovative medical products based on new modality for people in Asia.

3 SCOPE

The Regulations and Approvals Expert Working Group (RA-EWG) under the Asia Partnership Conference of Pharmaceutical Association (APAC) will work for facilitating efficient regulatory scheme from high-level platform to daily operational process. Representative scopes are summarized in this section.

3.1 Regulatory Platform

3.1.1 Regulatory agility

Existing regulatory procedure may make difficulty to evaluate medical products based on new modality. Establishment of agile approach by health authorities is strongly expected for developing medical product based on new modality.

3.1.2 Reliance pathway between/among health authorities

Health authorities always take their best efforts to improve citizen's health, suggesting the necessity of much resource allocation to various types of health-related issues. To reduce the burden on their workload, cooperation/collaboration scheme based on regulatory/scientific reliance between/among health authorities is expected.

3.1.3 Good Registration Management

Capability for not only critical thinking but also agile thinking for review of medical products based on new modality should be intentionally and continuously cultivated. The APEC Good Registration Management is expected to be one of best practices to pursue capacity building of the Good Review Practice for health authority as well as the Good Submission Practice for industry.

3.2 Enhancement of Digitalization/Digital Platform/Real-World Evidence in the Pharmaceutical Area

3.2.1 E-documents

Globally developed digital platform including computer networking, smart media, etc. provide many types of options for administrative procedures and documents preparation. Efficient paperless regulatory process can be achieved if we allocate resource on it and change mind on adoration to original paper documents with wet stamp and signature. Implementation of following e-documents is recommended.

For example, eCTD, e-submission, single e-platform to submit common technical documents to various countries, e-labeling, e-certificates, e-signature, etc.

3.2.2 Digitalization/Digital platform

Since WHO initial the eHealth 16 years ago, the need for deploying the digital health is critical. Especially, the during the Covid-19 pandemic, the digitalization is rapidly and widely accepted by the public, and many regulators have advocated to leverage the digital

technology to modernize the regulatory system, with a lot of discussion about the Cloud-based submission. Moreover, the regulators have also gradually accepted the digital endpoints, digital tool/apps, to facilitate the clinical trial development, such as De-centralized Clinical Trial (DCT), etc.

3.2.3 Real-World Data/Real-World Evidence

The Real-World Data (RWD) and Real-World Evidence (RWE) are emerging hot topics in the world. In the USA, the RWE has been addressed in the 21st Century Cure Act, and FDA published draft RWD guideline in November 2021 for public comment. In EU, EMA just finalized its RWD guideline, and in Asia, PMDA published 2 RWD/RWE-related guideline in 2021, NMPA issued 3 relevant RWD/RWE guidelines in 2020/2021, Taiwan FDA also issued RWE-related guideline in 2021, and many other regulatory agencies have or in process of working on RWE guideline. More and more RWE are used in regulatory decision making.

3.3 Adequately Integrated and Streamlined Regulatory Processes throughout Product Life Cycle

3.3.1 Regulatory & scientific requirements

The development and launch of medical products require filing with various regulatory agencies. For example, clinical trial applications, new drug applications, life-cycle management applications for new indications/manufacturing variations. Although the technical requirements for evaluating a medicine are discussed and defined by the ICH, each country still has its own technical requirements for medicines. Administrative regulatory requirements are also diverse among health authorities.

This situation makes it even more difficult to clarify the regulatory requirements for reviewing innovative medical products based on new modality.

3.3.2 Regulatory classification and requirements for combination medical products

Innovative medical products based on new modality often require a complex of multiple technologies. For example, commercial products for cell therapy require processes for biopsy, gene transfection, cell culture, cell preparation, and administration. They are not subject to existing regulations, and it is difficult to identify the application classification. Before submitting, a huge and long discussion with the health authorities is required on the framework for the application.

3.3.3 Regulatory manufacturing framework

Some health authorities do not allow small molecule chemical product licenses to cover multiple manufacturing sites. However, manufacturing sites for medical products based on new modality are not limited to drug substance/drug product manufacturing sites but are

more complex and may need to cover many manufacturing sites. Efficient evaluation for Good Manufacturing Practice should also be established.

4 APPROACH

Through the activities of our parent organization, the APAC, and each member association, we, the RA-EWG, promote discussions with national health authorities on the themes covered in the concept paper.

4.1 APAC annual conference

This is our flagship opportunity for disseminating our proposals to the stakeholders, the health authorities, and academia. The conference is usually held in April of every year and invites the stakeholders for discussing selected topics for achieving the APAC mission "To expedite the launch of innovative medicines for the peoples in Asia."

4.2 APAC letter to authority

The RA-EWG publish APAC letters to health authorities to recommend areas where regulatory improvements are needed. The first APAC letter was issued in July 2020 to propose health authorities to address regulatory agility under the pandemic of the new coronavirus.

4.3 APAC RA-EWG daily activities

The RA-EWG member associations discuss with their health authorities about their regulations and propose improvements to regulations as needed. The APAC RA-EWG Position Paper(1) published in April 2022 by the RA-EWG lists representative discussion items with the health authorities. In addition, the RA-EWG aim for publication to share the knowledge gained through the activities of the member association. The publication also serves to celebrate regulatory milestones successes achieved through strong partnerships between regulators and member associations, ultimately inspiring future regulatory reforms within APAC region.

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4.4 APEC GRM COE workshop

The RA-EWG continue to facilitate the APEC GRM COE workshop with the Taiwan FDA and the PMDA for intending capacity building of both applicants and regulators in the APAC region.

5 TIMELINE

2022-2031

6 ANTICIPATED OUTCOME

Innovative medical products based on new modality reach people in Asia quickly after critical review of national health authorities.

To that goal, health authorities in each country have established a system to agilely accept applications and promote evaluation for innovative medical products based on new modality.

7 CONTACT INFORMATION

E-mail address for contacting us:

ra-ewg@apac-asia.sakura.ne.jp

URL where this concept paper located:

https://apac-asia.com/images/achievements/pdf/11th/APAC_RA-EWG_ConceptPaper2022.pdf

8 LIST OF ABBREVIATIONS AND DEFINITIONS OF TERMS

Abbreviation	Term
APAC	Asia Partnership Conference of Pharmaceutical Association
APEC	Asia Pacific Economic Cooperation
COE	Center of Excellence
DCT	De-centralized Clinical Trial
DNA	deoxyribonucleic acid
eCTD	Electronic Common Technical Document
EMA	European Medicines Agency
EU	European Union
FDA	Food and Drug Administration
GRM	Good Registration Management
ICH	International Council for Harmonization of Pharmaceutical Regulations
mRNA	messenger ribonucleic acid
NMPA	National Medical Products Administration
PMDA	Pharmaceuticals and Medical Devices Agency
RA-EWG	Regulations and Approvals Expert Working Group
RNA	ribonucleic acid
RWD	Real-World Data
RWE	Real-World Evidence
USA	United States of America
WHO	World Health Organization

9 REFERENCES

(1) APAC RA-EWG Position Paper
URL: https://apac-asia.com/images/achievements/pdf/11th/APAC_RA-EWG_PositionPaper2022.pdf

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