

MESSAGE FROM THE CHAIRMAN

We participated actively in many international scientific discussions on vaccine development, and closely monitored and studied developments on emerging vaccine platforms such as messenger RNA (mRNA). We continued to share the latest updates on the development, interim authorisation and safety information of COVID-19 medical devices, medicines and vaccines. Thanks to these partnerships, HSA has kept abreast of the rapidly evolving international situation and contributed to global regulatory efforts to develop and approve high-quality, safe and effective medical devices, medicines and vaccines to address the COVID-19 pandemic.



**PROFESSOR
SATKUNANANTHAM
S/O KANDIAH**

Chairman

There was no let-up to the intensity of the previous year as the pandemic took on a new dimension.

Even with the challenges and surge in workload, we managed to maintain close ties with our partners and counterparts, and pressed on with our transformation journey to streamline our processes and enhance efficiency.

Keeping up to date on the global developments regarding COVID-19 medical devices, medicines and vaccines

We participated actively in many international scientific discussions on vaccine development, and closely monitored and studied developments on emerging vaccine platforms such as messenger RNA (mRNA). We continued to share the latest updates on the development, interim authorisation and safety information of COVID-19 medical devices, medicines and vaccines. Thanks to these partnerships, HSA has kept abreast of the rapidly evolving international situation and contributed to global regulatory efforts to develop and approve high-quality, safe and effective medical devices, medicines and vaccines to address the COVID-19 pandemic.

While vaccinations are being conducted globally, HSA has also been discussing the need for robust post-market pharmacovigilance cooperation and rapid sharing of information about adverse events with our overseas counterparts. Such cooperation will allow regulators to monitor the safety and efficacy of COVID-19 vaccines and quickly take the appropriate actions.

Maintaining our partnerships

As part of the new normal, we kept to virtual meetings to continue our networking with partner agencies and counterparts.

We shared best practices with other blood establishments within the Asia Pacific Blood Network (APBN) during the COVID-19 pandemic. This allowed us to keep up to date on developments involving donor eligibility and management, and strategies to secure the national blood supply.

We also embarked on a Blood Bank User Research Project with Singapore Polytechnic to develop strategies to improve the blood donation experience for both donors and staff, and strategies to engage and retain donors to become regular donors.

Work sharing with our overseas counterparts

In the area of health products regulation, our strong ties with our strategic global partners enabled timely exchange of information and work sharing.

We have an ongoing collaboration with the US Food and Drug Administration (FDA) Oncology Centre of Excellence to provide a framework for concurrent submission and review of oncology products among international regulatory health authorities. Through this collaboration, we have issued regulatory approvals for five applications.

In April 2020, we kicked off our first work-sharing project with Malaysia's National Pharmaceutical Regulatory Agency to evaluate generic medicines. Our progress from parallel review to work-sharing is a significant step towards achieving regulatory efficiency.

Building our knowledge

Due to a lack of data outside the Caucasian population, estimating the number of persons who contribute to a DNA mixture profile can be challenging. To better assist forensic DNA

scientists in the region, we began a study on the use of simulated DNA mixture profiles based on the local Chinese, Malay and Indian populations. Through this study, we now have novel insights about the impact of allele dropout and the differences between intra-ethnic and inter-ethnic DNA mixtures.

Together with other government laboratories from Canada, Germany, UK, Australia, USA, Netherlands and Switzerland, HSA is working on an international collaborative study to determine specific cannabinoids (tetrahydrocannabinol, tetrahydrocannabinolic acid, cannabidiol and cannabidiolic acid) in cannabis products. The results will ensure greater alignment of standards across the board.

Organisation-wide digitalisation initiatives

Digitalisation continued to be a big part of our process improvements. We accelerated the adoption of digital signatures and began working with GovTech to automate and digitalise HSA's internal workflows and processes. Time and manpower savings were also achieved through the implementation of robotic process automation (RPA) to digitalise manual and repetitive tasks.

Improving workflow

We rolled out a new laboratory information management system for our Applied Sciences Group which incorporates many digitalised workflows that enable data to move seamlessly across different laboratories and instruments. Some of the features include paperless submission/collection process for key stakeholders, dispatch of e-reports, and e-inventory for tracking of chemicals, reagents and drug reference standards.

With this system, about 80% of our laboratories' workflows and processes have been digitalised. We have also received positive feedback from users and stakeholders that the system has helped to streamline their operational processes.

Improving efficiency

The laboratories also utilised RPA to replace some of the tasks which previously required human intervention. Such automation greatly reduces human transcription and interpretation errors.

RPA is also used in the blood services labs. Maintaining blood transfusion records used to be a tedious and manual task that took two to three hours a day. With RPA, the task has become much simpler, taking only two to three minutes. Likewise, the manual uploading of blood donation testing reports used to take about eight hours a month, but it now takes only 1.5 hours.

Keeping ourselves relevant

As part of our digital transformation efforts, we also developed the HSA Digitalisation Training Framework to build knowledge and equip staff with basic and specialised digital skills. A training catalogue comprising a list of courses has been curated to help staff identify suitable digital courses that are relevant for their areas of work. Such courses include data analytics, user experience design and agile project management.

Looking ahead

We recognise the importance of strengthening HSA's resilience and agility to cope with unexpected situations and challenges. We will continue to equip ourselves with the skills and knowledge necessary to thrive in this new landscape.

I am confident that we have what it takes to ride out any storm and come out enriched and stronger.