



President's Message

Innovation in Pharmacy: From the “Tiekie Boks” to Artificial Intelligence

When I first arrived at university, innovation looked very different from what it does today. I did not have a mobile phone in my pocket. Communication with home required planning. If you wanted to phone your parents, you had to find a telephone booth, dig through your pockets for coins, and hope the line did not cut out halfway through the conversation. Many South Africans of my generation will remember the familiar sound and feel of the “*tiekie boks*”, a small but essential piece of technology that connected us to the people who mattered most.

A few years later, the first cellphones started to appear. They were bulky, expensive, and had batteries that never seemed to last long enough. Messaging, as we know it today, did not exist. We entered the era of Mxit and BlackBerry Messenger. Communication became faster and cheaper, but it was still far from seamless. Many of us developed our own systems to save airtime. One missed call meant, “Can I visit?” Two missed calls meant, “Yes.” It was innovation shaped by necessity, context, and limited resources.

We have come a long way since then. Today, many of us sit in meetings on Zoom while simultaneously responding to WhatsApp messages and reviewing documents. This is all done from a single device that fits into the palm of our hand. What once required multiple tools, locations, and a great deal of patience can now be done instantly.

Innovation in pharmacy is not new, but its pace has accelerated significantly. Consider dispensing, which is one of the most fundamental activities in our profession. There was a time when medicine labels were typed or handwritten (like during my community service year), carefully checked, and reprinted if even the smallest error occurred. Records were paper-based, filing cabinets were full, and retrieving information often depended on memory as much as documentation.

Today, many pharmacies use integrated dispensing software that links patient records, medication histories, and stock management systems. Labels are printed automatically, warnings are standardised, and clinical checks are embedded into workflows. Robotic dispensing machines, once viewed as futuristic luxuries, are now operational realities in several hospital and community pharmacy settings. These systems improve efficiency, reduce dispensing errors, and allow pharmacists and pharmacy personnel to spend more time on direct patient care.

Innovation has also reshaped how we manage supply chains, cold-chain monitoring, and regulatory compliance. Barcoding, electronic stock control, and real-time reporting have strengthened accountability and improved medicine availability. During public health emergencies,

such as the COVID-19 pandemic, these innovations proved critical in supporting continuity of care and rapid response.

Looking ahead, artificial intelligence (AI) is increasingly part of conversations about the future of pharmacy. AI has the potential to support medication therapy management, identify drug–drug interactions more effectively, assist with pharmacovigilance, and analyse large datasets to inform clinical decision-making. Predictive analytics could help anticipate medicine shortages, while intelligent systems may support adherence monitoring and more personalised care.

However, while technology is impressive, it is important to be clear about its role. AI is a tool, not a replacement for professional judgment. Pharmacy remains a people-centred profession. On the frontline, whether in a busy community pharmacy, a hospital ward, or a primary healthcare clinic, patients do not engage with algorithms. They engage with pharmacists and pharmacy personnel.

Innovation must therefore be embraced in a way that strengthens, rather than weakens, the human connection that defines our profession. Technology should free up time for meaningful patient interaction, not distance us from it. It should support safer practice, better outcomes, and improved access, particularly in a country like South Africa, where health system challenges are complex.

This brings us to an important question: how do we, as a profession, actively embrace innovation rather than simply react to it? Innovation does not only happen in boardrooms or technology companies. Often, it emerges from practice when pharmacists who see inefficiencies, identify unmet needs, and develop practical solutions within real-world constraints.

As the Pharmaceutical Society of South Africa, we believe innovation must be purposeful, ethical, and inclusive. It should enhance professional practice, strengthen the health system, and ultimately improve patient care.

As I reflect on how far we have come, from the “*tiekie boks*” to smartphones, from handwritten labels to robotic dispensing, from paper files to AI-enabled systems, I am reminded that innovation is not something to fear. It is something to shape.

On that note, I must conclude this reflection and send a WhatsApp message to Nitsa at the National Office to arrange flights for my next meeting. Some things, after all, have changed forever.

Renier Coetzee
PSSA President