

# CASE STUDY

**CGM SCHUYLAB**

Laboratory Information System



## Synchronizing Healthcare

In Timor-Leste, the Laboratório Nacional de Saúde—the **National Health Laboratory**—and the Hospital Nacional Guido Valadares are experiencing better patient outcomes thanks to the implementation of the **CGM SCHUYLAB Laboratory Information System**.



**CompuGroup  
Medical**

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**DR. IAN MARR**

INFECTIOUS DISEASE PHYSICIAN & MICROBIOLOGIST  
MENZIES SCHOOL OF HEALTH RESEARCH

## Using lab software to modernize healthcare in Timor-Leste

As the newly independent nation of Timor-Leste takes on the challenges of establishing a strong health system for its citizens, Menzies School of Health Research has assisted Timorese scientists and healthcare professionals in expanding their laboratory diagnostic possibilities.

Timor-Leste is a small, Southeast Asian nation separated from Australia to its south by a few hundred miles of the Timor Sea.

On the island’s northern coast, in the capital city of Dili, the Laboratório Nacional de Saúde—the National Health Laboratory—and the Hospital Nacional Guido Valadares are experiencing better patient outcomes thanks to

the implementation of the CGM SCHUYLAB Laboratory Information System.

## Supporting healthcare around the world

Backed by a grant under The Fleming Fund—a UK aid program supporting countries across Africa and Asia in the fight against antimicrobial resistance, or AMR—the Menzies School of Health Research has assisted the Timorese Ministry of Health in the development of an advanced reference laboratory for diagnostics of COVID-19 and antibiotic-resistant infections.



“Antimicrobial resistance is the next pandemic after COVID,” said Dr. Marr—an infectious disease physician and microbiologist with Menzies School of Health Research—in a video conference with CompuGroup Medical from his office in Canberra, Australia.

“It’s expected to take millions and millions of lives,” he said, “so The Fleming Fund is providing assistance to 25 countries based on need. Many of them are lower-income countries that can’t get the diagnostics up on their own.”

AMR diagnostics require strong information management in addition to technically sound scientists and equipment. With no laboratory information system, or LIS, diagnostic requests were managed manually and on paper, and getting results back to clinicians was sometimes challenging.

To improve the health system in Timor-Leste, finding the right LIS would be key.

## Finding the right LIS

Dr. Marr searched internationally for lab management software to improve the situation in Timor-Leste. He spent months looking at systems from Africa, the US, and Australia, but every system proved to be too complicated, too convoluted, and too expensive.

After nearly four months of searching, “I was pretty depressed thinking this might not be possible, but then I came across **CGM SCHUYLAB**,” he said.

Building on decades of development and laboratory experience, the team behind the **CGM SCHUYLAB Laboratory Information System**, or LIS, had already established interfaces to the instruments being used



in Timor-Leste. Affordable and light on server requirements, **CGM SCHUYLAB** proved to be the best option to modernize the clinical laboratories in this developing country.

Now, the National Health Laboratory in Timor-Leste provides critical health services in microbiology and in the fight against COVID-19.

## Improving access to lab results

After implementing the LIS, Dr. Marr said, “Then, we put in **CGM SCHUYNET**, which really changed the game.”

The **CGM SCHUYNET Laboratory Outreach Solution** is a web portal that gives providers immediate access to laboratory results. Its streamlined design makes it a perfect fit for Timor-Leste, a nation where poor internet speeds

are a major hurdle.

“Doctors are getting results on their phones,” Dr. Marr said. “It just saves lives.”

The immediate access to results means quicker diagnoses and faster treatments.

“We now have doctors accessing **CGM SCHUYNET** for COVID-19 test results and all of the bacteriology,” Dr. Marr said. “We have a full microbiology panel and can easily report and access all of the antibiotic sensitivities. Our instruments are interfaced with the system, and reports can be generated quickly.”

Medical Laboratory Mentor and Senior Microbiology Scientist with Menzies, Tessa Wyllie was onsite at the National Health Laboratory to assist with the implementation of the laboratory information system and the training of the 130 lab employees there.

“It’s user-friendly, and that’s a key thing here. We were able to train people quickly, even if they had not previously used an LIS system,” she said.

Regarding **CGM SCHUYNET**, Wyllie said, “It has been really successful. Smartphones are far more easily accessible than desktop computers here, and having such a simple option for clinicians to access results leads to better patient care. We went live four months ago, and providers have already accessed more than 44,000 reports. It’s been really integral to the COVID response.”

In addition, the surveillance department of the Ministry of Health in Timor-Leste can use **CGM SCHUYNET** reporting to improve the nation’s response to the coronavirus.

“They’re a small organization,” Wyllie said, “and suddenly

they had to take on tracking a pandemic. They’ve done an excellent job.”

## Expanding the impact of the One Health approach

Looking ahead, Dr. Marr hopes to expand these life-changing efforts to more towns in Timor-Leste, including Baucau and Suai, and to more countries throughout Africa and Asia.

By implementing a powerful laboratory information system, the National Health Laboratory and the Hospital Nacional Guido Valadares are able to offer better services, faster turnaround times, and immediate access to results.

“The **CGM SCHUYLAB** lab information system has enabled us to promptly provide highly reliable laboratory results and data to satisfy the needs of clinicians and patients as well as the National Health Laboratory’s responses to COVID-19 and



other microbial threats," said National Health Laboratory Director Endang Soares da Silva.

Soares da Silva described **CGM SCHUYLAB** and **CGM SCHUYNET** as "the perfect set of tools to support the health systems in low- to middle-income countries."

CompuGroup Medical is honored to play a role in this effort, which is part of a global approach known as One Health.

General Manager of the Lab Division at CompuGroup Medical, Carl Smith said, "CompuGroup Medical acquired the **CGM SCHUYLAB Laboratory Information System** in 2020, and it has really opened the door for us to support the international lab community. We recognize the critical role our laboratories play in healthcare worldwide, and that impact is magnified when we focus on the needs of developing countries such as Timor-Leste."

Reflecting on the efforts and contributions of the **CGM SCHUYLAB** team, Dr. Marr said, "We just want to say, 'Thanks for the product, and thanks for the support.' Laboratory information systems have been an under-appreciated portion of the healthcare system in low- and middle-income countries and a massive success for this project."



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