Digital transformation enables superior healthcare at Mandaya Hospital

To achieve its breakthrough in patient-centered care, Mandaya Royal Hospital Puri (MRHP) recognized the transformative benefit of digitalization – of integrated patient administration and record-keeping, of AI-based prognosis and treatment, and of continuous patient monitoring and evaluation – to achieve its vision as a state-of-the art facility in Indonesia's capital city, Jakarta.

A crucial component in Mandaya's patient care is the hospital's ability to manage treatment of critical patients by using the Philips IntelliSpace Critical Care and Anesthesia (ICCA) solution. The ICCA system has already earned recognition from Mandaya's team -- from its CEO, its doctors, and its nurses -- for enabling the hospital to unlock better patient care and treatment.

Adding the Philips ICCA system has brought a new level of digitalization to the hospital's core systems and services. Integrating these together into a single, continuous, live source of actionable information transforms clinical data into actionable information and helps doctors make precise and quick medical decisions that save patients' lives.

"The Philips IntelliSpace Critical Care and Anesthesia software brings together the different information channels and sources into an integrated capability that provides a better situation for the hospital, the HealthCare Practitioners and patients."

**Dr. Ben Widaja, MBChB (UK),
President Director,
Mandaya Royal Hospital Group**

Drawing on experience in real estate and retail, the Mandaya Group is pioneering a new concept of healthcare in Indonesia that puts the comfort and convenience of the patients -- and their loved ones -- as the key priority in delivering superior healthcare services and achieving better patient outcomes.

Mandaya Royal Hospital Puri (MRHP) seeks to be a world-class private hospital in Indonesia. With an inpatient bed capacity totaling more than 250, six operating theaters, more than 100 outpatient examination rooms and advanced equipment such as Spectral CT Scan, High Gradient MRI, an advanced Catheter Lab with Intravascular Ultrasound and much more, Mandaya Royal Hospital Puri is expecting to treat more than one thousand patients every day.

MRHP will rely on advanced healthcare technology such as the Philips ICCA system to deliver patient-centered care that improves patient outcomes and thereby distinguish itself as a hospital "like no other."

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to handle more than **1,000 patient visits** every day

"When saving lives depends on making informed decisions in high-pressure, high-stakes situations, Philips digital technology plays an increasingly significant role in providing superior healthcare at modern hospitals like Mandaya Hospital."

Dr. Ben Widaja, MBChB (UK), President Director, Mandaya Royal Hospital Group

Philips aims to improve people's lives through meaningful innovation. In hospitals around the world, clinicians and clinics use Philips solutions to simplify clinician workflow, improve financial outcomes, and help save lives.

Access to comprehensive patient information is vital in the clinical decision-making process. Nowhere is this more evident than in the hospital critical care environment, where patient care generates a massive amount of data. Yet the ability to integrate, aggregate, and analyze this data remains a tedious and time-consuming process for most healthcare facilities.

Philips IntelliSpace Critical Care and Anesthesia (ICCA) is an advanced clinical decision support and documentation solution. Specializing in the complex critical care environment, ICCA works with other hospital information systems e.g. EMR, and features interoperability that supports patient documentation throughout the continuum of care.

ICCA centralizes and organizes patient data, including admissions documents, vital signs,

labs, and consult notes — to put the clinical information that you need front and center. Through embedded clinical decision support, ICCA transforms patient data into actionable information, helping you make informed decisions, highlighting and identifying adverse events, and enhancing the quality of patient care.

Increase focus on what matters most

ICCA helps turn full focus toward the patient, eliminating intraoperative manual documentation. The solution takes advantage of seamless integration with clinical IT systems and devices — including anesthesia machines, ventilators, and patient monitors – to transform patient data into actionable insight, so the hospital team can spend more time on patients and less time on documentation.

"Patient's data in the Intensive Care Unit is very complex and needs to be monitored continuously. We often have to spend a lot of time documenting this data because it will be used by doctors and other medical teams. The Philips IntelliSpace Critical Care & Anesthesia system, which is integrated with patient monitors and ventilators, automatically and continually records and summarizes patient administrative data, which makes our task easier. Moreover, we can also pull a patient's historical data any time for us to study in more detail, as well as all of the patient's medical data that has already been recorded in the system. With this solution we can set aside more time to do what makes us happy, which is serving and caring for our patients."

Nurse Dela Yusuf Maulan
Critical Care Head Nurse

Data analysis and reporting

There are numerous benefits from a digital charting system, but one of the greatest values in a clinical information system comes from what the team can do with the information. ICCA collects rich clinical information and helps use it efficiently and effectively.

Due to the visionary ICCA architecture, the reporting database doesn't interfere with documentation at the patient point of care, meaning that speed and efficiency is not affected when running a query.

ICCA comes with over 30 standard reports, and with its easy to use, drag-and-drop interface, the team can readily create the custom reports that the research, quality, and administration departments need.

Whether wanting to measure, analyze, and report by unit, time, person, disease, process, or in a number of combinations, or to report on surgical improvements, case types, medication costs, or regulatory filings, ICCA can help turn the hospital's patient data into a format to meet business and clinical needs.

- Reduces manual documentation, allows clinical team to focus on patients
- Transforms clinical data into actionable information through focused and purposeful centralization, combined with care coordination
- Access to relevant patient information when and where it is needed
- Enhances diagnostic confidence through clinical decision support
- Reduces clinical variation through standardized, structured documentation across units, institutions and hospitals

Benefits of Philips ICCA solution in general and at MRHP Medical and financial advantages to Philips ICCA solution

There are many ways in which Philips ICCA system simplifies day-to-day workflow.

Quick access to the right information

With the extensive data collected on critical care patients, it can be difficult to focus on the specific information medical staff need. ICCA's Patient Summary provides filtered overviews of the patient's condition drawn from the vast amounts of information. The Patient Summary displays multiple parts of the chart on a single screen, presenting a current picture of patient condition at a glance.

Create an ongoing record

The Care Continuum feature allows the easy flow of information from the ICU flowsheet to the anesthesia record, and vice versa. Patients who receive care in both the OR and the ICU benefit from a constant, ongoing record of care, focusing on intake sites, output sites, fluid totals, and key intake therapies.

Integrated order management

With ICCA, orders for infusions, IV drips, and medications, as well as interventions, are automatically reflected throughout a patient's chart and on nurses' worklists. Plus, thanks to the Philips focus on delivering interoperable clinical IT solutions, the solution integrates with any HL7-based, in-house Computerized Physician Order Entry (CPOE) and pharmacy information system.

Adverse Drug Event (ADE) identification

When a drug order is entered, ICCA's Medical Reference module displays adverse drugs, allergy contraindications, or inappropriate drug therapies. These potential adverse events are defined and identified by a third-party medical reference vendor. One study found an ADE incidence of 8.5 per 100 admissions,[1] highlighting the value of a system that alerts staff to potential problems at the ordering stage.

Easy distinction among drug lists for different units

Because different drugs are used depending on the unit and clinical situation, Philips made it easy to configure multiple medication lists for discrete dose medications and drips.

Fixed volume dosing for NICU drip orders

Fixed volume dosing allows the smallest patients to receive the prescribed amount of fluid. When adjusted to the infused drug rate, the concentration changes while the infused volume rate remains constant.

Increased mobility

ICCA adapts to hospital IT and mobility strategies. Access patient charts securely from virtually wherever the team is – in the office, on the IntelliVue patient monitor at the bedside, on a wireless tablet during rounds, on a laptop at home. It is all about making relevant, actionable information accessible at the point of need, wherever that may be.

"Monitoring the patient's vital signs continuously is very important in the operating room and the Intensive Care Unit. The IntelliSpace Critical Care & Anesthesia system from Philips, which is integrated with not only the patient monitors but also with other medical devices such as the anesthesia machine and ventilator, makes it very easy for us to monitor patient conditions live in one integrated system."

"This system can summarize and integrate the patient's vast and complex medical data, live and non-stop, in the operating theaters and Intensive Care Units into one easy-to-read dashboard display.

This of course can reduce the burden of information overload, minimize errors, and help us doctors to make precise and quick medical decisions to resolve a patient's condition properly.

Patient's data in the Intensive Care Unit is very complex and needs to be monitored continuously. We often have to spend a lot of time documenting this data because it will be used by doctors and other medical teams. The Philips IntelliSpace Critical Care & Anesthesia system, which is integrated with patient monitors and ventilators, automatically and continually records and summarizes patient administrative data, which makes our task easier. Moreover, we can also pull a patient's historical data any time for us to study in more detail, as well as all of the patient's medical data that has already been recorded in the system. With this solution we can set aside more time to do what makes us happy, which is serving and caring for our patients."

Dr. Katon Adi Nugroho
Critical Care Resident
Medical Officer

Results from customer testimonies and studies are not predictive of results in other cases. Results in other cases may vary.

1. Klopotowska, et al. BMC Health Services Research 2011, 11:124