

06 November 2021



Pengalaman Rumah Sakit dalam Mengimplementasikan Smart Hospital dalam Era Covid-19 dan Revolusi Industri 4.0

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Hospital Engineering Forum 2021
Indonesian Association Hospital Engineering



Curriculum Vitae

Drg. Rina Setiawati

Chief Operating Officer Eka Hospital Group

- Eka Hospital Group 2019 – now
- Siloam Hospitals Kebon Jeruk 2008 – 2018
- RS Immanuel Bandung 2004 – 2007
- Puskesmas Serang Panjang Subang 2000 – 2003
- Akademi Kesehatan Gigi 1998 - 1999
- Faculty of Dentistry – Padjadjaran University, 1990

OUTLINE

1. How do you know a hospital is smart
2. A digital-first future
3. Embarking on the journey to smart
- 04** Thoughtful patient centric design
- 05** Key assets for smart hospitals





BSD – Pekanbaru – Cibubur - Bekasi

MT Haryono – Juanda – Depok – Eka Tjipta Widjaja Cancer Center



1

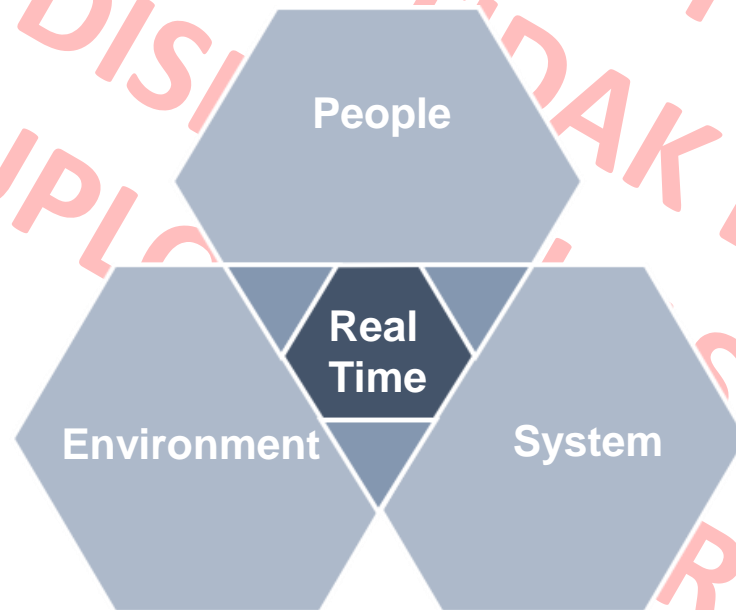
Smart Hospital

How do you know a hospital is smart

Hyper-connected, Intelligent, Human-centred

- State-of-the-art hospital design + Latest virtual care technology + AI driven decision support + IoT sensors + Robotics
- Interconnected real time by digital platform
- Smartphones to a smart hospital

Smart Hospital



1. Improve patient experience
2. Personalize medical treatment
3. Minimize errors

2

A digital-first future

The Vision of A Smart Hospital

- Investing in technologies that deliver a more targeted set of high-value specialized services within a broader network.
- Pathways extend beyond traditional hospital into the community and home (moves to anywhere and anytime care)

Paket Homecare Medical Check Up

EKA HOSPITAL BSD

Jantung Sehat 950

- Konsultasi dokter umum via telemedicine
- Pemeriksaan labo (lipid panel) lengkap, kolesterol total, HDL, LDL, direk, trigliserida, agragan trombotik, glukosa puasa

Lansia Sehat 1,250

- Konsultasi dokter umum via telemedicine
- Pemeriksaan labo (hematologi lengkap, NBT, AC, Anil Dengue (Ig G, IgM)

Screening Diabetes 850

- Konsultasi dokter umum via telemedicine
- Pemeriksaan labo (glukosa puasa, HbA1C, AB-C Ratio (ACR)

Screening DBD 850

- Konsultasi dokter umum via telemedicine
- Pemeriksaan labo (hematologi lengkap, NBT, AC, Anil Dengue (Ig G, IgM)

Jam pelayanan Senin-Sabtu, 08.00-17.00 WIB (kecuali hari libur nasional)
Area pelayanan Jabodetabek
Pendaftaran WhatsApp 0821-1477-9339 | 08:00-15:00 WIB

Committed to Excellence WA: 0-8888-90-5555 EKA HOSPITAL

Paket Homecare Kunjungan Dokter

EKA HOSPITAL BSD

850 Per kedatangan, per orang

Jam pelayanan Senin-Sabtu, 08.00-17.00 WIB (kecuali hari libur nasional)
Area pelayanan Jabodetabek
Pendaftaran WhatsApp 0821-1477-9339 | 08:00-15:00 WIB

- Kunjungan dokter umum
- Konsultasi dokter umum via telemedicine
- Laboratorium Hematologi lengkap
- Pemeriksaan Gula Darah
- Gula Darah puasa
- Pemeriksaan Kolesterol Kolesterol total, HDL, LDL, Direk, trigliserida
- Pemeriksaan Ginjal Asam urat, kreatinin
- Pemeriksaan Liver SGOT, SGPT

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Eka Hospital BSD

HOME HEALTH CARE
Bringing Excellence Home

Rapid Antigen & PCR

Paket Kunjungan Dokter

Paket Perawatan Luka

Paket Rehabilitasi Medik

Paket Medical Check Up

Paket Isolasi Mandiri

Paket MCU Pasien Stroke

Paket MCU Prevaksin Lansia

Paket Vitamin Booster

Jam pelayanan Senin-Sabtu, 08.00-17.00 WIB (kecuali hari libur nasional)
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Swipe untuk detail

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Central of Smart Health Concept

- The use of advanced technologies to optimize and automate processes to improve existing procedures and support new models of treatment and care.

First in South-East Asia

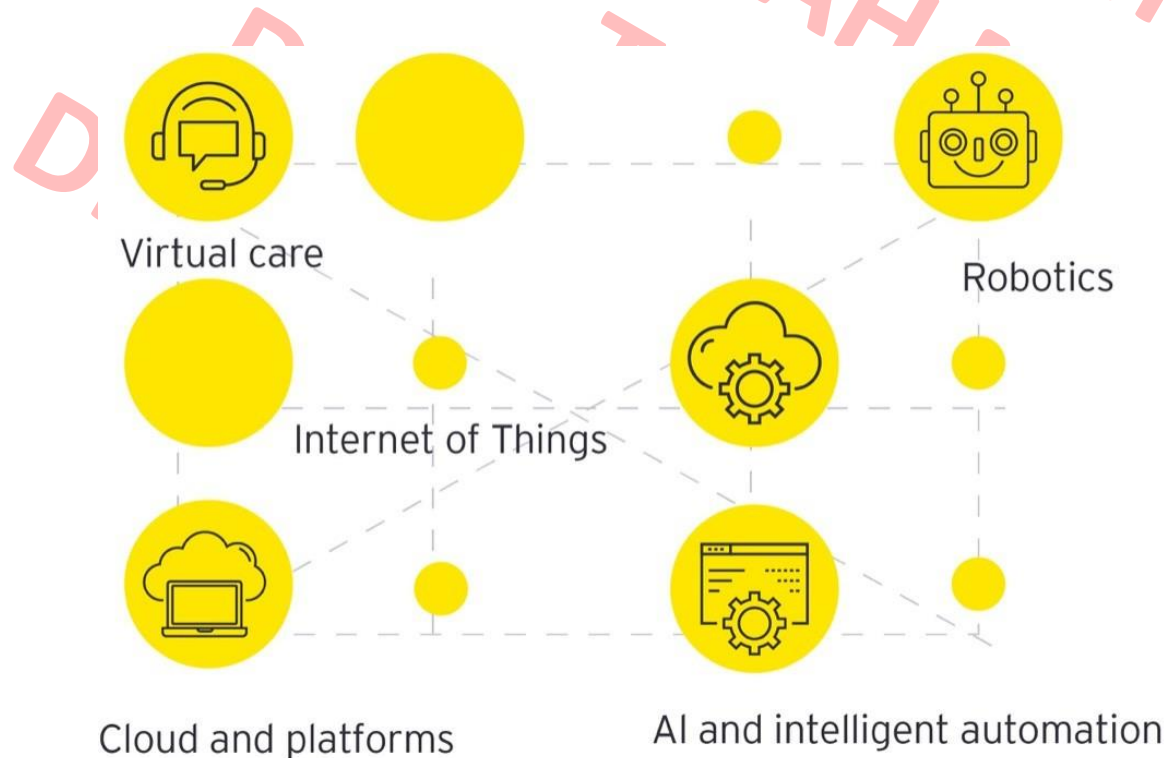
Robotic navigation orthopaedic surgery



Surgery Outcomes and Evaluation



Features of A Smart Health Service

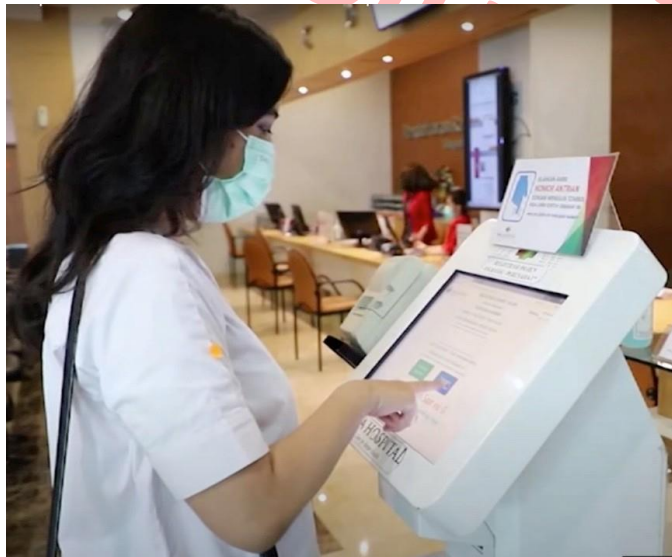


- ▶ Highly personalized, holistic care driven by data
- ▶ Smart imaging and early diagnosis through AI
- ▶ Home becomes the center of care through virtual care models and IoT technologies
- ▶ Platforms provide on-demand access to a shared pool of resources (data, knowledge and staffing) and interconnect the ecosystem
- ▶ The right patient, in the right place at the right time through sensor tracking enables seamless patient flow
- ▶ Seamless supply chain and inventory management are facilitated by IoT and blockchain

Operational Efficiencies

- The consumer experience is highly data driven to make it **targeted, personalized, integrated care.**
- Process automation:
 - Front – middle –back office activities (virtual care models)
 - Automated supply chain
 - Digital inventory management

Operational Efficiencies



Operational Efficiencies



Operational Efficiencies



3

Embarking on
the journey to smart

Begin with Exploring the Art of the Possible

- What kind of experience does the hospital want to provide for patients and employees?
- Greenfield hospitals:
 - 20 years ahead design
- Existing hospitals
 - By phase transition to new tech
 - Redesign care models
 - Automation of operational activities and processes
 - Driving cultural change

4

Thoughtful patient centric design

Patient-centric Design

- The patient experience is the starting point even before the patient enters the physical space or the virtual waiting room
 - Guiding visitors to available parking
 - Digital wayfinding
 - Personalize patient environment, including room ambience, menu selections
 - Reduced potential errors

Patient-centric Design



Patient-centric Design



eDPMP

Admin Online

Navigation

- Dashboard
- Patient Meal Order List
- Doctor Panel
- Dietician Panel
- Setting
- Patient
- Privileges Management

Panel Doctor

- New Patient
- Change Diet
- Change Bed
- Change Status
- Ala Carte

Patient Meal Order List

Tanggal: 2021-11-04 Filter Print

Show 10 entries

| Ward | Room-No.Bed | Account Class | MR | Title | Full Name | Diagnosa | Status | Texture | Therapeutic Diet | Allergy | Note | Payment Source |
|------|-------------|---------------|----------|-------|----------------------|------------------|-------------|--|---|---------|------|----------------|
| UGD | ugd 1 | Standard | 10518456 | | GREGORY JOSE VLERICK | test test febris | Pasien Baru | Biasa , Lunak , Bubur Lauk Cincang (BLC) , Saring, SV Mix , SV , Cair Tube , Cair Oral , Polos | DM , RP20gr , DH , DJ1 , DJ3 , R.Pur , RG1 , DL , RS (Rendah Serat) , RG3 , BC1000cc , BC1200cc , | | | Private |

Showing 1 to 1 of 1 entries

E-TICKET
EKA HOSPITAL CIBUBUR
Thursday, 04 November 2021 Breakfast
03W5 03587A VIP Asuransi

Nama : Nyonya. khairunnisa
MR/RM : 0010207800
Biasa-R.Pur-#penunggu

DOB/Usia : 02-Apr-1984/37Y7M

ALERGI: TIDAK ADA

Menu :

- mashed potato (150 gr) [1 porsi]
- roasted chicken [2 porsi]
- sauteed zucchini carrot [1 porsi]
- buah : melon [1 porsi]

279kkal Kalori
34g Karbohidrat
14g Protein

10g Lemak
46mg Kolesterol
3g Serat

Sebaiknya makanan segera dikonsumsi maksimal 1 jam setelah disajikan — managed by mymealcatering.com

Patient-centric Design



Foundational Design Principles for Smart Hospital

1. Hyper-connected
Connectivity with other care settings
2. Intelligent
Fast, accurate, real time decisions (clinical, operational)
3. Human-centered
Patient, family, staff
4. High reliability
Predictive analysis to minimize errors
5. Sustainable
Clinical, financial, economical

5 Key assets for smart hospital

Key Assets of Smart Hospitals

1. Patient centric for a better patient experience
Patients are at the heart of a smart hospital design.
2. Technologies that enable fast, flexible, and reliable care
 - AI and intelligent automation
 - Virtual care
 - Robot, 3D printing
 - Augmented reality



Key Assets of Smart Hospitals



Key Assets of Smart Hospitals

3. Partnership with ecosystem

4. Smart infrastructure

- Command centre
- Hospital at home



Not just a tech project

Smart hospital is a transformation, not just a tech project:

- *Requires thoughtful considerations of challenges*
- *Involves all stakeholders*
- *Requires change management and strong leadership*
- *Right combination between wanted vs needed*





Thank You

