



Tantangan & Kesempatan Digitalisasi Layanan Kesehatan Setelah COVID-19

Lia G Partakusuma

*Perhimpunan Rumah Sakit Seluruh Indonesia

**RS Jantung Harapan Kita Jakarta

***Gugus Tugas Covid-19

PERSI MEDTECH PODCAST 1.0 – 26 JUNI 2020

Lia GP Juni 2020

poi.id › berita › pola-penularan-covi... Translate this page
Pola Penularan COVID-19 Bagi Tenaga Kesehatan - Voice of ...
Apr 22, 2020 - JAKARTA - Tenaga medis paling rentan menjadi korban virus corona atau COVID-19. Beberapa di antaranya meninggal dunia setelah ...

theconversation.com › normal-baru-... Translate this page
Normal baru di depan mata, tapi 3 faktor penyebab kematian ...
Jun 12, 2020 - Tenaga kesehatan harus benar pakai APD. ... pakaian pelindung diri untuk mencegah penularan COVID, 12 Mei 2020. ... Normal baru di depan mata, tapi 3 faktor penyebab kematian tenaga medis akibat COVID-19 masih ...

www.liputan6.com › News › Peristiwa Translate this page
Kasus Positif Covid-19 di Semarang Meningkat, Terdapat ...
4 days ago - Dia mengungkapkan tidak menyebutkan jumlah tenaga kesehatan yang terpapar positif Covid-19 hingga menjadi klaster penularan. Lonjakan ...

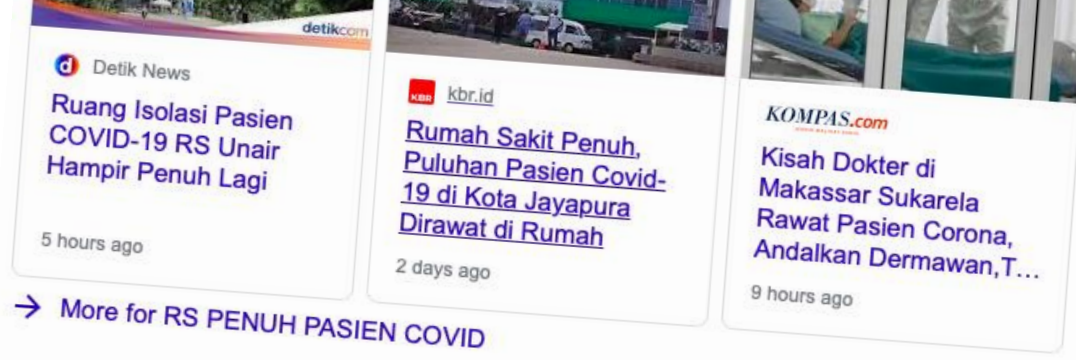
surabaya.liputan6.com › Surabaya Translate this page
Riwayat Penularan Corona Covid-19 Tenaga Kesehatan di ...
May 27, 2020 - Liputan6.com, Surabaya Tenaga kesehatan yang tertular Corona Covid-19 di Kabupaten Probolinggo bertambah. Lima orang tenaga medis ...

www.vivanews.com › ... › Nasional Translate this page
Virus corona: Mengapa tenaga kesehatan terus tertular Covid ...
Apr 27, 2020 - Te wilayah Indonesi... terinfeksi Covid-19 di Indonesia terus bertambah. ...

www.okezone.com › tag › curhat-pa... Translate this page
Kumpulan berita curhat pasien takut ke rumah sakit - Okezone ...
2 Juni 2020. Curhat Pengidap Diabetes Ogah ke RS karena Takut Ketularan Corona. Pandemi virus corona Covid-19 telah memengaruhi kehidupan manusia .

sulsel.idntimes.com › News › Sulsel Translate this page
RS di Makassar Rumahkan Karyawan Karena Kurang Pasien
Jun 11, 2020 - Minimnya kunjungan pasien selama pandemik membuat keuangan rumah sakit di Makassar goyang, sehingga ... Data per 18 Juni 2020 ... Menurunnya kunjungan pasien diduga karena masyarakat takut ke rumah sakit.

akurat.co › id-1049028-read-takut-k... Translate this page
News | Takut Kehilangan Pasien, Pemerintah Benarkan Ada ...
Takut Kehilangan Pasien, Pemerintah Benarkan Ada RS yang Tolak Penderita Corona. Bayu Lia GP Juni 2020
2020-11-57 WIB. Wabah Corona.



→ More for RS PENUH PASIEN COVID

www.jawapos.com › surabaya › pasi... Translate this page
Pasien Covid-19 Membeludak, RS di Surabaya Penuh
May 22, 2020 - Ruang perawatan untuk pasien korona sudah penuh. Ketua Perhimpunan Rumah Sakit Seluruh Indonesia (Persi) Jatim Dodo Anondo ...

lombokpost.jawapos.com › NTB Translate this page
RS Mulai Kewalahan, Dokter Tertular, Ruang Isolasi Pasien ...
Jun 5, 2020 - RS Mulai Kewalahan, Dokter Tertular, Ruang Isolasi Pasien Korona di Lombok ... rumah sakit rujukan Covid-19 di Pulau Lombok sudah penuh.

ISUE TERKINI

- Pasien NON-COVID kurang mendapat perhatian ?
- Pasien takut ke RS ?
- Pelayanan RS terlalu selektif ?
- Tenaga Kesehatan tertular COVID-19 ?
- Kurangnya Alat Pelindung Diri ?
- Uji laboratorium kurang banyak ?

Dampak Pandemi Global akibat COVID-19



???



- Peningkatan kasus COVID-19 di Indonesia
- Tenaga Kesehatan meninggal dunia akibat COVID-19
 - Ketersediaan Alat Pelindung Diri
- Kewaspadaan Tenaga Kesehatan – Masyarakat
- Pengujian terhadap COVID-19 belum optimal

→ MANAJEMEN RUMAH SAKIT HARUS MENGUBAH STRATEGI PELAYANAN

TUJUAN PELAYANAN KESEHATAN

- Menurunkan angka kematian
- Menurunkan angka kesakitan
- Menurunkan angka penularan penyakit
- Informasi kesehatan
- Pendidikan kesehatan
- Penelitian kesehatan
- Melindungi pasien, staf dan pengunjung
- Menjaga lingkungan / daerah sekitar
- Menjadi bagian Sistem rujukan

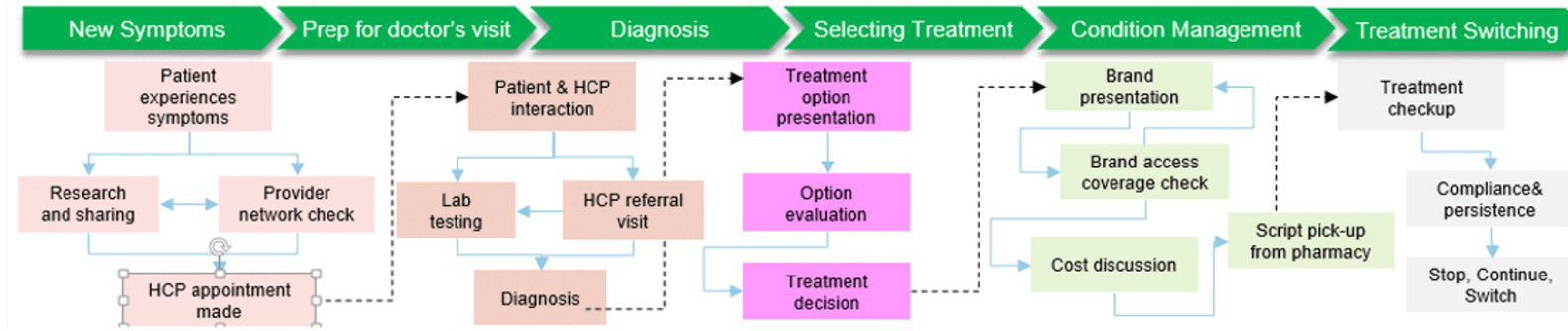


➤ **PERLU SISTEM YANG MUMPUNI → INTEGRATED HEALTHCARE SYSTEM**

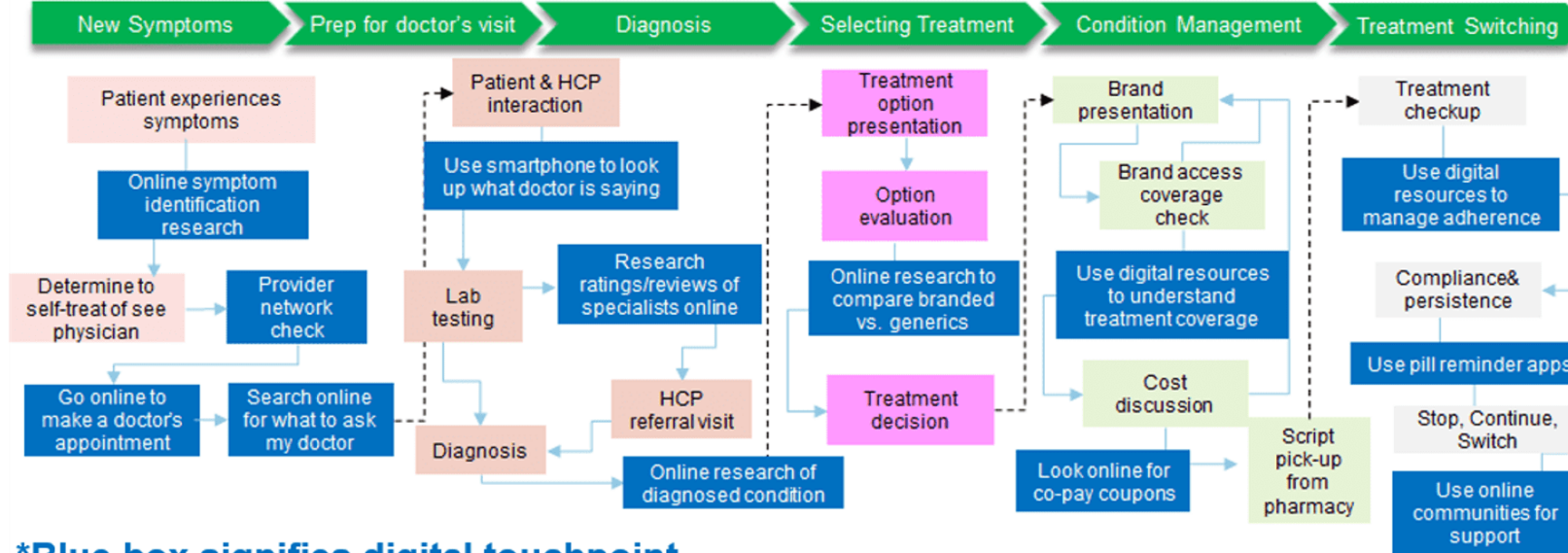
DIGITALISASI LAYANAN KESEHATAN



Traditional Patient Journey



Digitally-Powered Patient Journey



*Blue box signifies digital touchpoint

Communities Preparing for COVID-19

Healthcare professionals



- Develops guidance for healthcare professionals
- Conducts clinical outreach and education

Healthcare systems

- Develops preparedness checklists for health systems
- Provides guidance for PPE supply planning, healthcare system screening, and infection control
- Leverages existing telehealth tools to redirect persons to the right level of care



The average person is likely to generate more than one million gigabytes of health-related data in their lifetime. Equivalent to 300 million books.

IBM Watson Health

National Consortium of Telehealth Resource Centers

COVID-19 Telehealth Toolkit

March 18, 2020

What is COVID-19?

What is Telehealth?

HOSPITAL'S NEW POST COVID-19 PROTOCOL



- **Max occupancy limits** in lobbies are monitored at all times to prevent overcrowding and ensure social distancing guidelines are met. **A virtual lobby** is created which extends to patients outside the building and provides automated text communication to them when it is their safe time to enter.
- Patients are **streamlined through the care process** with expedited rooming to avoid unnecessary delays and minimize total visit and exposure time in the clinic.
- Every treatment room is **verified clean** before and after each patient encounter.
- All **patient flow data** and room cleaning activities are captured and **recorded for comprehensive contact traceability and compliance protection**.
- **COVID-19 Protocols** in all hospital's activities / area

CONTOH



Technology Helps Fight the Pandemic and Safeguards Public Health

After the COVID-19 breakout in 2019, Bao'an People's Hospital actively uses the latest science and technology in diagnosis and treatment for pandemic prevention and control :

- Internet + technology for Internet diagnosis and treatment
- 5G transmission + smart healthcare data cloud platform technology for videoconferencing and online consultation
- Robotic technology for unattended drug transportation
- Intelligent translation for foreigner diagnosis and treatment
- Traditional Chinese medicine for pandemic prevention and control

With the help of science and technology, we achieved good results in fighting the pandemic and protecting public health.



Open Internet Hospital Services



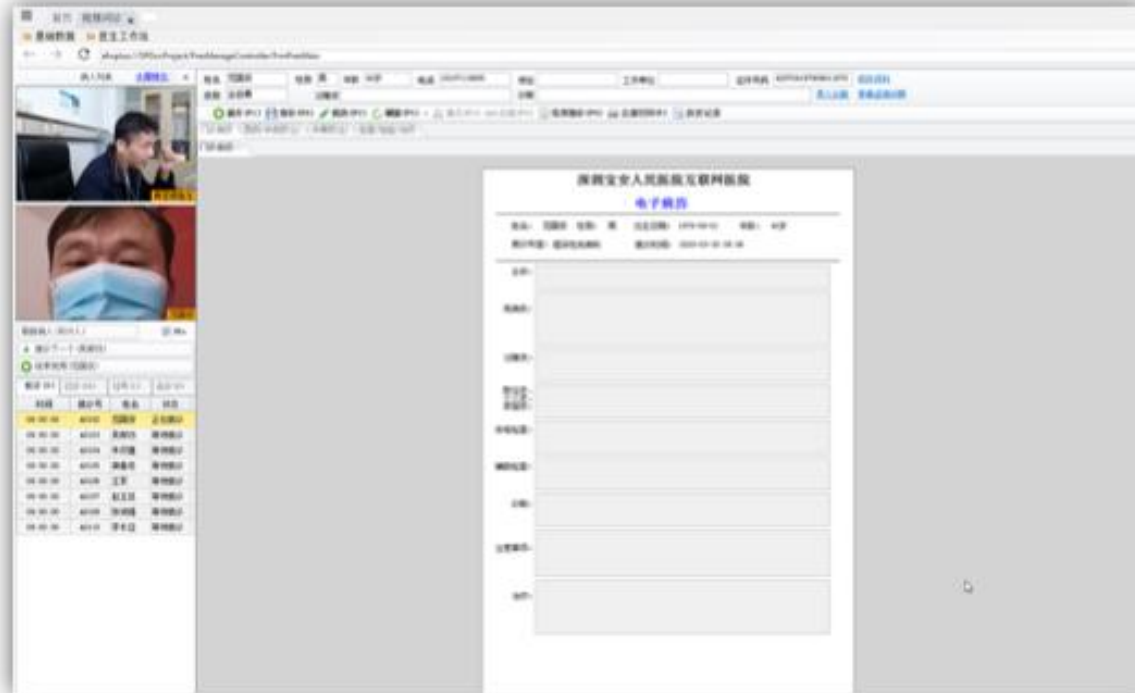
For example, Mr. Lee returned from Shenzhen to his hometown in Xiangyang city for the Spring Festival. He was supposed to return to Shenzhen after the festival but was stuck at his home by the pandemic. He is a chronic hepatitis B patient and has been taking antiviral drugs for a long time. Mr. Lee's home is in a remote village, and the local hospital does not have hepatitis B antiviral drugs. He uses our Internet hospital services to perform video-based diagnosis. The doctor issued an electronic prescription for him. The pharmacy of the hospital delivered the medicine to his doorsteps by express delivery. Mr. Lee successfully got the drugs he needs, avoiding the risk of a recurrence of the disease.

We provide Internet hospital services for patients who have chronic and common diseases, and are isolated (or cannot visit the hospital) during the pandemic. Through online doctor appointment, video-based consultation, electronic prescription, mobile phone payment, and medicine delivery to home, we meet chronic patients' medical needs. In addition, these services reduce the crowd gathering in hospitals, helping us avoid the risk of cross infection.



Internet + Healthcare

PC client



Mobile app



- Patients can make appointments with doctors through smart phones. Doctors can receive patients through PCs or mobile apps, and issue electronic prescriptions. Medicines will be delivered to patients' homes after payment (which can be done on mobile phones).
- From February 2 to the end of March, we completed 3995 picture and text consultations, performed 1947 video consultations, and issued 743 electronic prescriptions, bringing significant convenience to patients.

RS Online Sistrute Siranap



Cloud Hospital System

RS A RS B RS C



Admisi



Perawat



Dokter



Farmasi



Lab



Billing



Radiologi



Apps
- Registrasi
- Billing



Payment



Delivery System



**Zi.Care Sehatpedia
Cloud Hospital System**

Back

25 Apr 20 - 14:00 WIB

Proposal anda dalam tahap penilaian Verifikasi RAB

Status Penilaian : PROSES PENILAIAN

24 Mar 20 - 08:46 WIB

Proposal anda dalam tahap penilaian Paparan / Visitasi

Status Penilaian : LULUS

09 Mar 20 - 15:13 WIB

Proposal anda dalam tahap penilaian Desk Evaluasi

Status Penilaian : LULUS



PROPOSAL PENELITIAN
VOICE TO TEXT
RSJPDHK – BPPT
RISPRO B1 -2020

KEMENTERIAN KESEHATAN REPUBLIK INDONESIA

PUSAT JANTUNG Nasional
National Cardiovascular Center Harapan Kita

RSJPDHK
POLIKLINIK ONLINE

"Konsultasi dokter spesialis cukup dari rumah"
#dirumahaja

Contact Center 1500034
Pendaftaran 24 Jam

Jadwal Praktek & Informasi lain Kunjungi
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Six Major Health Industry Trends in 2020

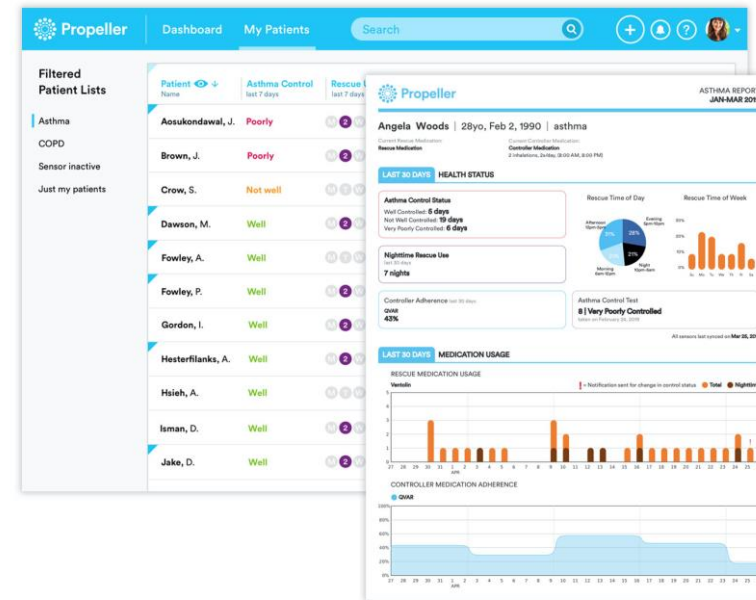
Panner M, Forbes Technology Council, March 2020

1. Artificial Intelligent Tools to Increase Efficiency
2. Using Cloud to Break Down Silos and Move Data Faster
3. Ensuring Patient Consent in Big Data
4. Virtual Solution For Busy Medical Professionals
5. Demystifying Healthcare Data for Patients
6. Home-Based Health Care



Internet of Things

1. Cancer Treatment
2. Smart Continuous Glucose Monitoring & Insulin Pens
3. Closed Loop Insulin Delivery
4. Connected Inhaler
5. Ingestible Sensor
6. Connected Contact Lenses



- 7. The Watch that monitor depression
 - 8. Coagulation System
 - 9. Research Kit and Parkinson's Disease
 - 10. Asthma / ECG Monitor
- Etc



PROBLEM TELEHEALTH

- PERENCANAAN YANG BAIK
 - ✓ RUANG LINGKUP, INTEGRASI, SDM, SOFTWARE/HARDWARE
- PERLU DATA BERKUALITAS, BERSIH, AKURAT, AMAN
- SHARING DATA LINTAS INSTANSI & ORGANISASI
- REGULASI, PROTOKOL, TATA ATURAN DATA
- MEKANISME TRANSMITING/ SHARING DATA
- JARINGAN
- PEMAHAMAN & KONSISTENSI PENGGUNA



Command Center PLATFORM

Platform terintegrasi untuk memudahkan tenaga medis mengambil keputusan berdasarkan data, yang tervisualisasi dalam bentuk grafik ataupun peta



Data Integration



Big Data Analytics



IoT Monitoring



Geospatial Visualization



Dashboard Analysis



Early Warning System



INTELLIGENT VIDEO ANALYTICS



HOSPITAL SURVEILLANCE

- Face Recognition
- Crowd Analytics



TRAFFIC AWARENESS

- Cross Line Analytics
- People Counting



EARLY WARNING SYSTEM

- Patient Monitoring
- Emergency



PARKING GATE

- License Plate Recognition
- Vehicle Classification

INTELLIGENT VIDEO ANALYTICS

Use Case for Outdoor Environment

Jenis Kelamin: Pria
Umur: 23 Tahun



Face Recognition

Crowd Analytic
People Counting

Jumlah Orang: 10
Jenis Kelamin Pria: 8
Jenis Kelamin Wanita: 2



License Plate Recognition (LPR)
Vehicle Counting and Classification

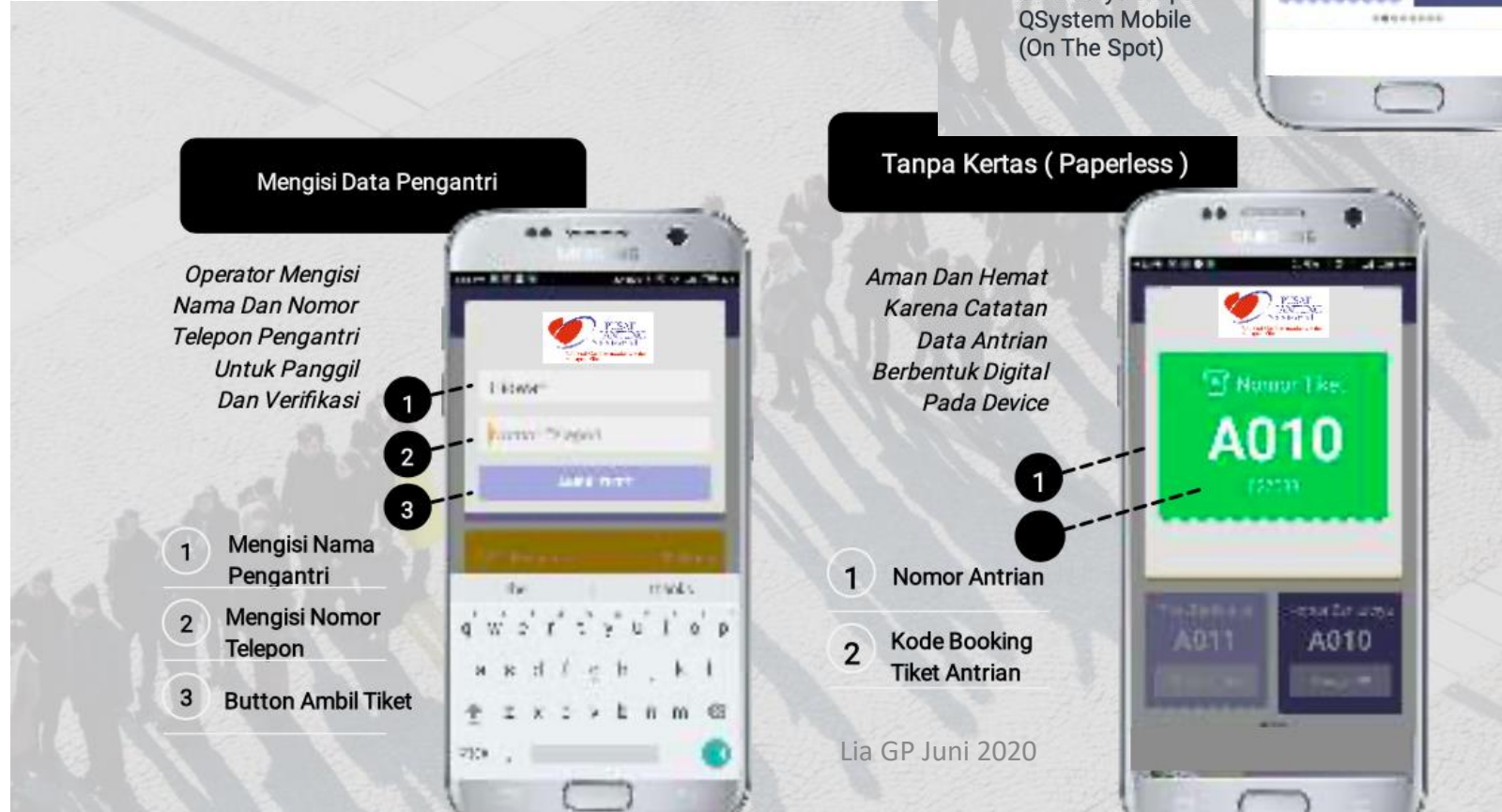
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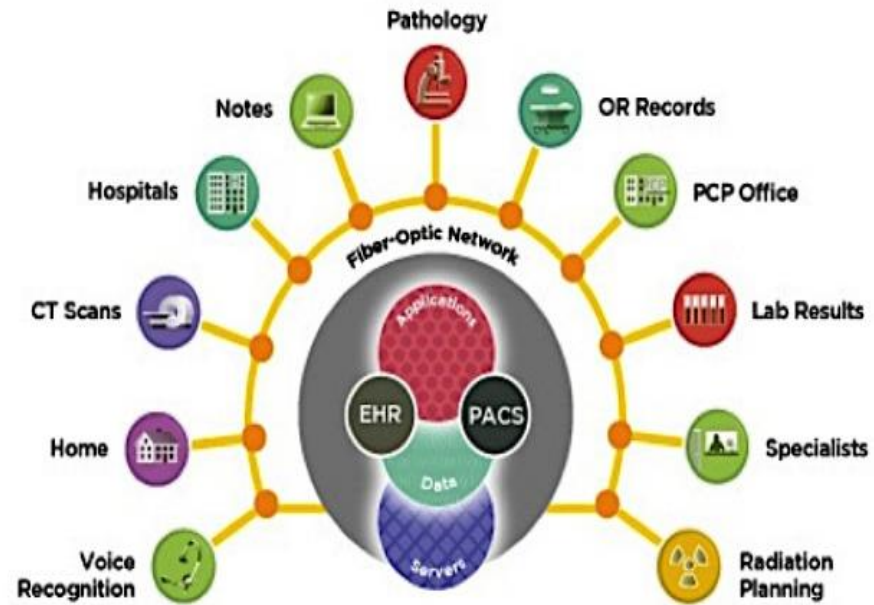
Sedan : 1



CONTOH APLIKASI SISTEM ANTRIAN



Smart Technology



Hospital Interoperability Data

KEBUTUHAN PELAYANAN KESEHATAN SAAT INI

1. TELEKONSULTASI PRA-HOSPITAL
2. PENDAFTARAN *ON-LINE*
3. TRIAGE / PEMILAHAN PASIEN SAAT MASUK RS (*SUSP COVID-19* ATAU BUKAN) – SUHU TUBUH, FORM KHUSUS
4. PENEMPATAN PASIEN DI RUANG KHUSUS / ISOLASI → *LAB SCREENING TEST*
5. REKAM MEDIK TERINTEGRASI
6. LAYANAN EDUKASI *ON-LINE* DAN FASILITAS ANTAR OBAT
7. POLIKLINIK VIRTUAL ATAU DENGAN PENGAMANAN KHUSUS
8. PEMANTAUAN PASIEN DI RUANG ISOLASI
9. ALAT MEDIS & DIAGNOSTIK TERINTEGRASI UNTUK KEPUTUSAN MEDIS
10. KOMUNIKASI ANTAR TENAGA MEDIS / PERAWAT / MANAJEMEN
11. PASCA-HOSPITALISASI / KONTROL VIRTUAL / NASIHAT MEDIS
12. PELAYANAN TINDAKAN / OPERASI YANG AMAN
13. *SIGNED* RUMAH SAKIT / SEKALIGUS EDUKASI – INFORMASI
14. SISTEM KEAMANAN RS (*BUILDING MANAGEMENT SYSTEM* – TATA UDARA DLL)
15. *EARLY WARNING SYSTEM* – DATA TERPADU - GAMBARAN SITUASI TERKINI – KAPASITAS / *LAY-OUT* RS
16. LAPORAN TEPAT WAKTU KEPADA *STAKE HOLDERS*



KESIMPULAN

1. PERLUNYA DIGITALISASI PELAYANAN KESEHATAN DI ERA COVID-19 & SETELAHNYA
2. PERLU KEBIJAKAN TERPADU
3. PERLU PEMAHAMAN SELURUH PEMANGKU KEBIJAKAN UNTUK DATA TERINTEGRASI
4. PERLU KEMUDAHAN PENGGUNAAN SISTEM OLEH PELANGGAN
5. DIGUNAKAN SEBAGAI PEMUTUS MATA RANTAI PENULARAN
6. PENTING UNTUK MELINDUNGI TENAGA KESEHATAN, PASIEN & MASYARAKAT
7. PELAYANAN DIGITAL SANGAT DIBUTUHKAN OLEH MASYARAKAT





Terima kasih Atas Perhatiannya

Lia G Partakusuma, 25 Juni 2020

Lia GP Juni 2020