Leveraging 5G to help COVID-19 epidemic prevention and control

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5G Smart Healthcare Concept

**5G smart healthcare**: refers to the information, mobile and remote medical services provided in the areas of disease diagnosis, monitoring and treatment based on the 5G technology, making full use of limited medical human and equipment resources.
Construction of 5G smart medical system for major public health emergencies

- Technology research and development of smart medical technology based on 5G new network architecture
- Build 5G smart medical demonstration network
- Build evaluation and verification environment
- Promote the industrialization of key network equipment and prototype systems that meet the needs of smart medical collaboration
- Accelerate the application and promotion of 5G in outbreak warning, pre-hospital emergency, remote real-time consultation, remote surgery, wireless monitoring, mobile rounds
5G smart medical system for COVID-19 epidemic

- Chinese operators realized **full coverage of 5G networks** in newly built hospitals within **3 days**.
- Realize dozens of 5G medical application scenarios within **20 days**

### Achieve network coverage

- Use existing resources
- Minimalist installation
- Minimal opening: near-end deployment and commissioning, AI acceptance
  - Open the first 5G base station in 7 hours

### 5G medical application scenario landing

- Integrated delivery
- Network joint debugging
  - Public network: operators & equipment vendors
  - Hospital intranet: hospital IT and information department
- Cloud platform
  - Huawei Cloud/Alibaba Cloud/Tencent Cloud/
  - Tianyi Cloud/Wo Cloud/He Cloud

- **Medical treatment scene**
- **Monitoring temperature scene**
- **Video conference scene**
## Applications of 5G in the COVID-19 epidemic prevention and control

From diagnosis and treatment to prevention and control, **18** types of applications can help to suppress the development of the epidemic.

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5G remote diagnosis and treatment

Share doctor resources, reduce doctor exposure risks, and provide patients with efficient and timely diagnosis and treatment.

Teleconsultation

100 hospitals help each other; 3000 patients receive timely treatment

Remote CT

20 hospitals help each other; 2000 patients received timely consultation

Remote ultrasound

Zhejiang People's Hospital performs B-ultrasound examination for patients in Wuhan Fangcang Hospital, 700km apart

Remote ECG monitoring

Reduction of 30,000 examination beds/day per system in medium-sized hospitals

Cloud detection and analysis

Real-time 5G transmission back to the cloud for detection; Mobile laboratory completes 1800+ nucleic acid tests
5G medical assistance

Reduce the labor intensity of hospital workers, reduce the risk of contact infection, and fulfill the needs of hospital patients in a timely manner.

- **Patient Transfer vehicle**: 5G+4K patient transfer vehicle, 15 hospitals, 400+ suspected or confirmed case transfer
- **Disinfection car**: 5G+disinfection truck/medicine delivery/transportation truck: reduce personnel infection risk and labor intensity, 180+ hospitals, 7% reduction in caregiver workload
- **Delivery car**: 5G high bandwidth & mobility supports intelligent rounds, 1100+ ward rounds, 9% reduction in risk exposures
- **Mobile cart rounds**: 5G protective clothing wear self-test/equipment operation guidance, 1000+ medical workers, 20,000+ secondary protection checks
- **Wear protective clothing**:
5G medical care

Relieve patients' panic about the epidemic, relieve the psychological pressure of hospital workers.

**Remote visit**

5G Video Remote Visiting/Psychological Nursing. For patients and relatives: used for remote visits to patients in isolation wards. For the hospital: used for medical care to check the patient's situation; Doctors can also conduct video remote psychological consultation. Has landed in many hospitals, video visits, VR visits.

**Psychological counseling**

**Work deployment and training**

5G response to epidemic situation deployment and new skills transfer. 700+ National Work Deployment Conference. 600+ hospital training. 100+ national training.

**Progress Live**

5G high-bandwidth supports multiple forms of live. Just 16 days, the construction progress of "Cloud Supervisor" was broadcast live, with a total of 115 million views.
5G supervision, prevention and control

Real-time monitoring of the temperature of urban mobile personnel and management of the concentration of personnel

Infrared body temperature monitoring
Patrol robot monitoring
Headset monitoring
Wearing equipment monitoring

Fixed entrance prevention and control in public places. 4000+ hospitals, enterprises, and public transportation hubs has deployed.

5G infrared temperature measurement mobile device, mobile epidemic prevention and control in public places. 5000+ areas have been deployed, including many hospitals and public places.
Thanks!