



Dept for International Trade:
Digital Technologies in Health
webinar
March 2021



A Digital Future for Heart Failure: *lessons from COVID*

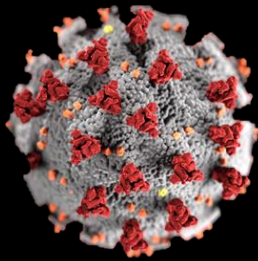
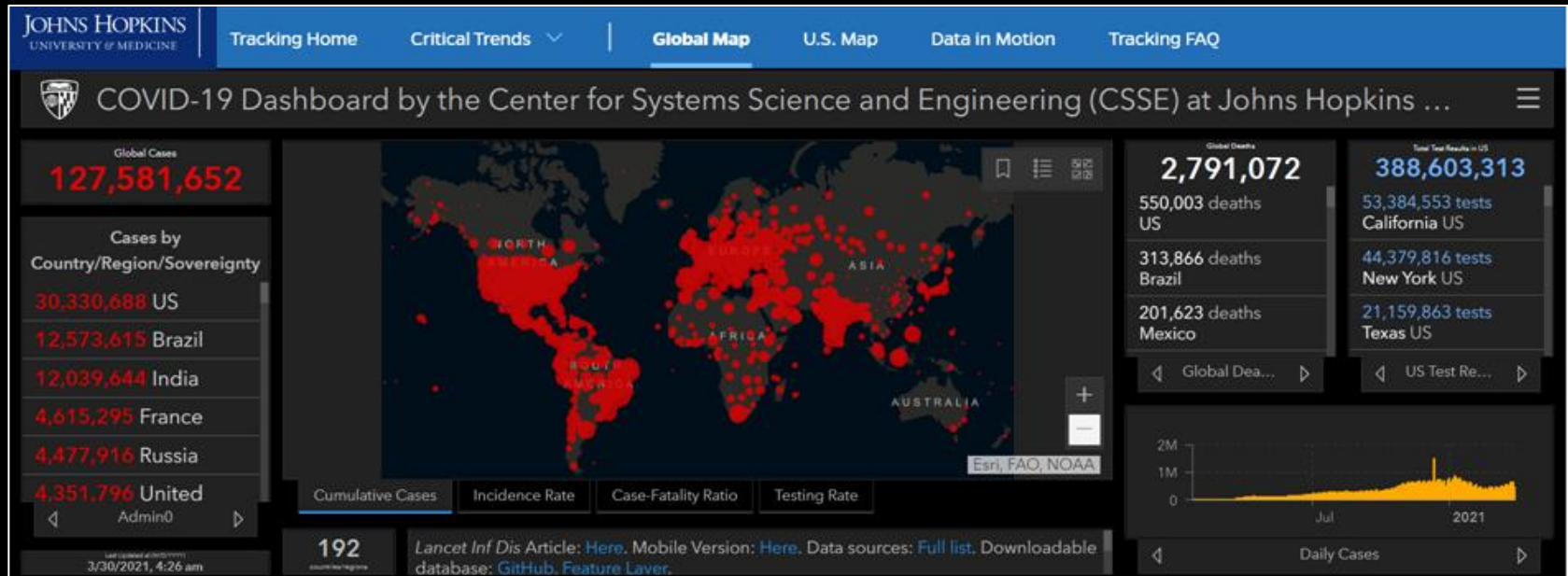


Professor Zaheer Yousef
Consultant Cardiologist

Heart Muscle Diseases & Heart Function Devices
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Conflicts: St Jude Medical, Medtronic, Biotronik, Servier, Takeda, Pfizer, Novartis, BMS, Astra Zeneca

SARS-COVID2: global pandemic

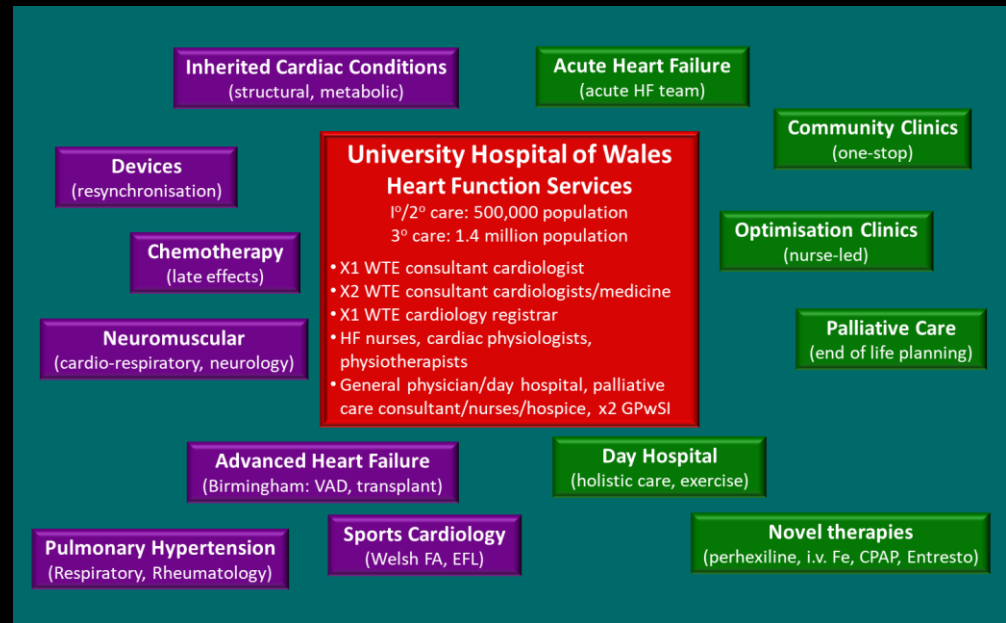


- Single-stranded RNA (125nm, 25-30kb)
- Respiratory distress: ventilator demands
- Highly contagious and airborne spread
- Limit human-human contact
 - Social distancing
 - Lockdown measures

SARS-COVID2: local challenges



- Devolved Nation
- Population ~3.5million
- NHS Wales intranet



High risk population

- *Elderly, multiple co-morbidities*
- *Recurrent hospitalisations*
- *Special populations*

New patients

- *Natural disease prevalence*
- *COVID-related heart failure*

Heart Failure: digital journey

Referral

The screenshot shows a patient management system interface. At the top, there are buttons for 'DALs to sign off (9)' and 'Referrals to prioritise (221)'. The user is logged in as 'Cardiff and Vale UHB | Zaheer Yousef (GMC:3612316)' on '30-Mar-2021 : 7:45'. The interface includes a search bar for 'NHS Number' and 'Inpatient Wards...'. A red box highlights a section for 'Set Advance Care Plan discussion alert'. Below this, there are fields for 'NHS Number', 'Hospital Number', 'Date of Birth', 'Sex', and 'Address'. A notification bar at the bottom indicates 'Highly Sensitive information is DISPLAYED. HIDE for this patient.' and a navigation menu with options like 'Demographics', 'Documents', 'Tests', 'Medicines', 'CP Record', 'Events', 'To Do', 'Handover', and 'Access Log'.

Access to Tests

The screenshot shows a search interface for GE Medical Systems. It features a search bar and a 'Search' button. The text 'ALWAYS use Patient ID number in a MUSE search:' is displayed. Below this, there are input fields for 'Patient ID:', 'Patient Last Name:', and 'Patient First Name:'. A 'Search' button is located at the bottom.

ECG, Holter tapes, 24hr BP, Event monitors, exercise tests



DICOM (echo, MRI, CT)
Cath Lab: all studies

Clinical Decision

- Manage remotely: arrange tests & follow-up as required (40%)
- Make diagnosis and initiate care pathway (30%)
- Virtual consultation (20%)
- See in person (10%)

Heart Failure: digital journey

Optimisation Clinics



- Triage: actual v virtual
- Virtual reviews (80%)
- Home-monitoring
- Exercise rehabilitation
- Medication titration
- Online PROMS: ICHOM

Device Clinics



Device function

- Battery life
- Lead connections/function
- Arrhythmia monitoring

Heart Failure variables

- Heart rate profile
- Activity monitor
- Autonomic function
- Trans-thoracic impedance



High risk patients

- Remote follow-up
- Monitors (Holter/BP/ECG)
- Biomarkers

COVID & Digital Technologies: lessons

What worked well

- NHS: staff and adaptation
- Embracing culture: staff and patients
- Rapid implementation of digital technologies
- Paperless service
- Patient satisfaction
- Environmental benefits
- Reduced patient expenses
- No increase in HF admissions
- Higher in-patient HF mortality

On-going challenges

- IT hardware & software
- IT support
- Multi-provider interfaces
- User licences
- Multiple passwords
- Data governance & security
- Documentation
- Long-term outcomes
- Loss of human contact

“Its all very impressive but I would like to see you in person and shake your hand”

вопросов?



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