Presenter's profile

Dr Suhail Chughtai FRCS
Orthopaedic Surgeon, UK

Microsoft Certified Specialist &
Telehealth Expert (UK, USA, UAE, Pak)

Chairman
Medical City Online UK

CEO
Citrus Health Pakistan

Book Author: "Telemedicine"
A Novel Way To Fight a Pandemic

TELEMEDICINE

ONLINE DOCTOR

Director of Telehealth Dept
Association of Pakistani Physicians & Surgeons, UK
Adam Global, Healthcare Division, UAE

European Ambassador
Patientory Healthcare Blockchain Association, USA

Telehealth International Faculty Lead
University of Health Sciences, Lahore, Pakistan

Chairman
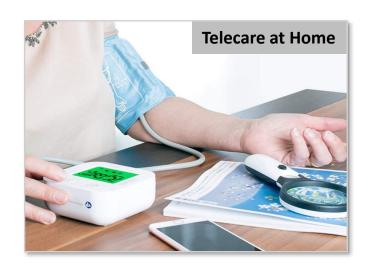**Pan Arab Telemedicine & Artificial Intelligence Conference, 2019**
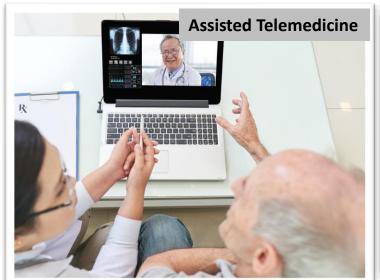
Our Telemedicine Service Models

Technology by Medical City Online UK, delivered via Local Partner in the region

Direct Telemedicine

Telecare at Home

School based Telemedicine

Assisted Telemedicine

Workplace based Telemedicine

Hotel based Telemedicine

Our Telemedicine Service Models
Technology by Medical City Online UK, delivered via Local Partner in the region

Mobile Spoke (Telemedicine Van) OR **Fixed Spoke (Telemedicine Room in Hospital)**

Designated parking space in or near the Hospital

Single room needed for conversion into Tele-OPD
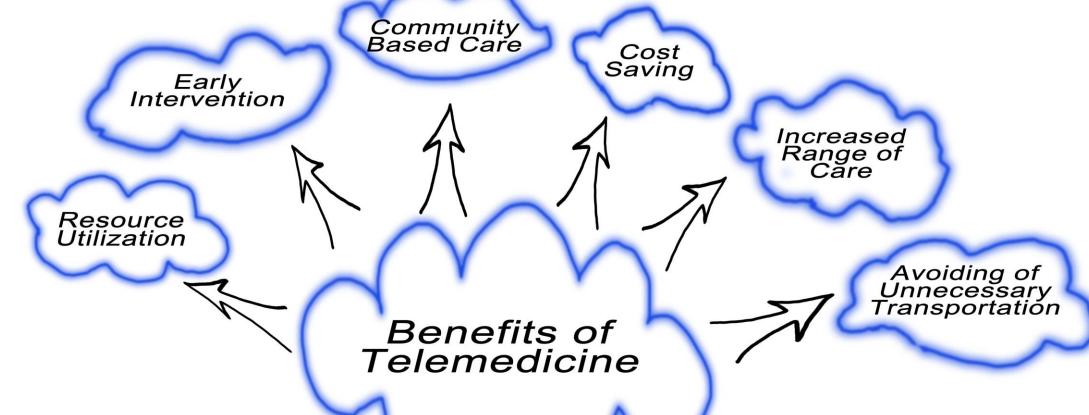
Mobile Spoke (Telemedicine Van)　　OR　　Fixed Spoke (Telemedicine Room in Hospital)
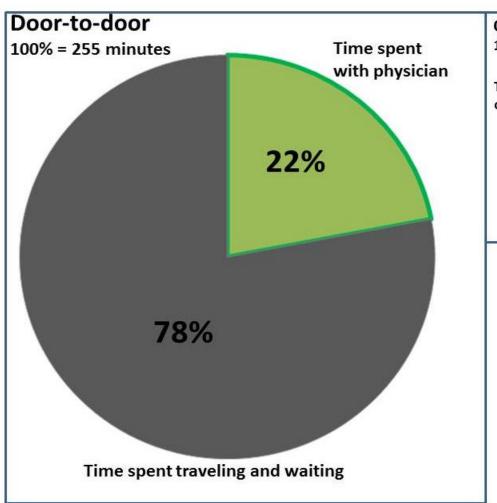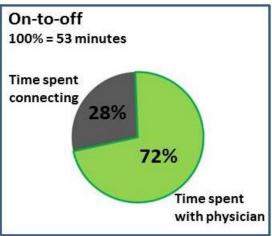
THE IMPACT OF TELEMEDICINE

Dr Bilal Ahmed   MD FRCP FACP

PROFESSOR OF MEDICINE

University of Rochester

New York, USA
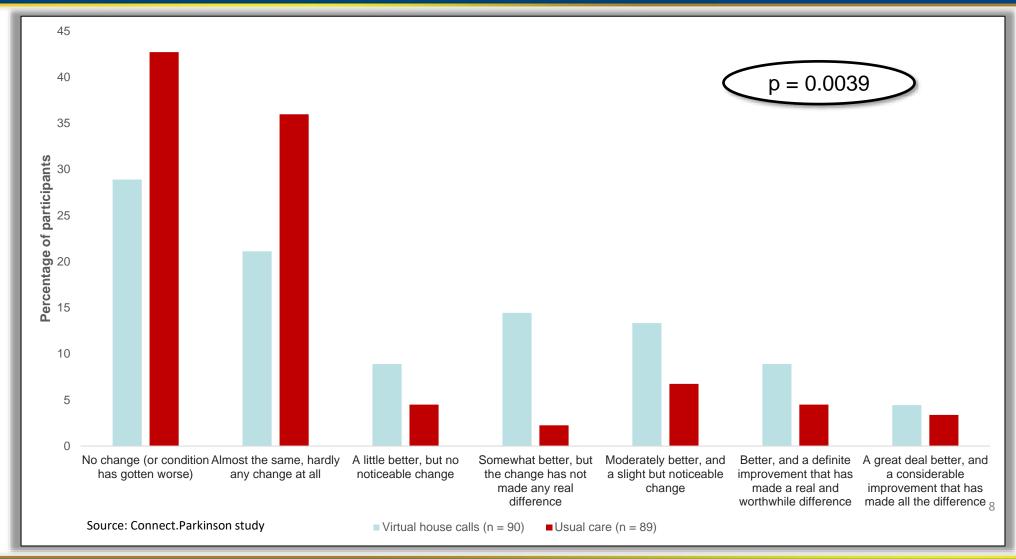
Virtual Visits flip the Care Paradigm

Patient time spent on In-person versus Telemedicine visits

Door-to-door
100% = 255 minutes

Time spent with physician

22%

78%

Time spent traveling and waiting

On-to-off
100% = 53 minutes

Time spent connecting

28%

72%

Time spent with physician

Patients receiving Virtual House Visits indicated a greater improvement in Healthcare Outcome

p = 0.0039

Percentage of participants

No change (or condition has gotten worse) | Almost the same, hardly any change at all | A little better, but no noticeable change | Somewhat better, but the change has not made any real difference | Moderately better, and a slight but noticeable change | Better, and a definite improvement that has made a real and worthwhile difference | A great deal better, and a considerable improvement that has made all the difference

Source: Connect.Parkinson study

■ Virtual house calls (n = 90)   ■ Usual care (n = 89)

8

UNIVERSITY of ROCHESTER
MEDICAL CENTER

MedicalCity.online
Healthcare over Internet

TELEMEDICINE CAN IMPROVE THE OVERALL STANDARD OF CARE

A national study in the UK indicated that "if correctly used", Telehealth can deliver:

- 15% reduction in accident and emergency visits
- 20% reduction in emergency admissions
- 14% reduction in elective admissions
- 14% reduction in bed days
- 8% reduction in tariff costs
- 45% reduction of mortality rates

Gornall, J. (2012). Does Telemedicine deserve the green light? *BMJ*, 345(jul10 1), pp e4622

TELEHEALTH IMPROVES OVERALL HEALTHCARE OUTCOME

- **IMPROVES CLINICAL GOVERNANCE**

- **PROVIDES EVIDENCE BASED CARE**

- **BRIDGES GAPS OF RURAL HEALTHCARE SERVICES**

- **IMPROVES ACCESS TO MODERN HEALTHCARE SERVICES AND EXPERTISE**

- **REDUCES ADVERSE EVENTS**

- **GIVES PATIENT AN INCREASED CHOICE OF HEALTHCARE SERVICES**

Wade, V.A., Eliott, J.A. and Hiller, J.E. (2012). A qualitative study of ethical, medico-legal and clinical governance matters in Australian telehealth services. *Journal of Telemedicine and Telecare*, 18(2), pp.109–114

TELEHEALTH IMPROVES HEALTHCARE ECOMONY

Telemedicine adoption improves the cost efficiency of a healthcare system

- Use of Telemedicine for Retinal Screening as a study case
- Shown to be beneficial and cost-effective for diabetes management
- Telemedicine empowered Healthcare system improves the "Quality Adjusted Life Year" (QALY) ratio

Lee, J.Y. and Lee, S.W.H. (2018). Telemedicine Cost–Effectiveness for Diabetes Management:
A Systematic Review. *Diabetes Technology & Therapeutics*, 20(7), pp.492–500

Telemonitoring was cost-effective in diabetes management (Lee and Lee, 2018).

TELEMEDICINE MAKES HEALTHCARE GREENER

Telemedicine adoption reduces the Carbon Footprint of the region

- Reduces the use of transport for patient
- Minimizes Paperwork consumption
- Lowers the need of In-office services

TELEHEALTH IMPROVES EPIDEMIC CONTROL

Telemedicine as a tool to fight epidemics

- Helps limit disease transmission
- Ensures continuity of care despite access limitations
- Regulates Disease prevalence
- Collects reliable data
- Protects Healthcare workers (Doctors, Nurses, Paramedics)
- Protects Patients from mutual contact in waiting rooms
- Overall pathogen burden is lowered making strategies work

Telemedicine Helpline

"www.Doctors247.online"

Launched on 18-03-2020
At University of Health Sciences
Lahore, Pakistan

First Announcement of the National Telemedicine Corona Hotline by Dr Suhail Chughtai, Chairman Medical City Online, followed by formal inauguration by the CM and VC-UHS
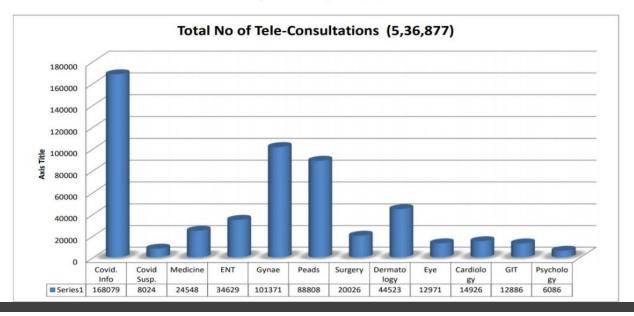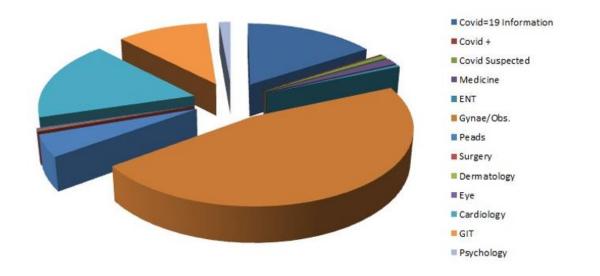
Governor & Chief Minister Punjab Telemedicine Helpline
Graphical Presentation of Tele-Consultations Data
Report Date: 25 September 2020

Total No of Tele-Consultations (5,36,877)

	Covid. Info	Covid Susp.	Medicine	ENT	Gynae	Peads	Surgery	Dermato logy	Eye	Cardiolo gy	GIT	Psycholo gy
Series1	168079	8024	24548	34629	101371	88808	20026	44523	12971	14926	12886	6086

1 University of Health Sciences, Lahore

- Covid=19 Information
- Covid +
- Covid Suspected
- Medicine
- ENT
- Gynae/Obs.
- Peads
- Surgery
- Dermatology
- Eye
- Cardiology
- GIT
- Psychology

Governor Punjab, Ch Muhammad Sarwar being briefed by the Vice Chancellor UHS, Lahore at a VC Committee Meeting

President Pakistan Dr Arif Alvi being briefed upon the project of Doctors 24/7 Online Telemedicine Helpline

BBC UK films the Tele ICU demo at **www.TeleWardRound.com** for a feature report – Pak end

BBC World News reports Telemedicine Services in Pakistan setup by Dr Suhail Chughtai, arranging Virtual Teleward Rounds by UK Specialists through a special Telemedicine software to help patients in Corona ICU wards in Pakistani Hospitals.

https://www.youtube.com/watch?v=9KP_yKR8VT0

Prof Angus Wallace at BBC East Midlands Channel gives a prelude on Telemedicine's role in fighting a Pandemic, exemplifying www.Doctors247.online as a model software for the purpose
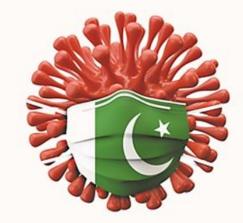

Dr Humayun Baig and Dr Farwah Rubab walk through the Telemedicine Helpline Hub setup at University of Health Sciences, Lahore in a short interview at TV Channel of Voice of America, Pakistan.

https://youtu.be/3VVhnWBlvIA

TELEMEDICINE
A NOVEL WAY TO FIGHT A PANDEMIC

A SUCCESS STORY FROM PAKISTAN

Authors

PROF W ANGUS WALLACE

DR SUHAIL CHUGHTAI

Foreword by PROF JAY SAUNDERS MD

Founder: American Telemedicine Association

Professor of Medicine: John Hopkins School of Medicine, USA

Prof Dr Jay Sanders M.D., FACP, FACAA&I, FATA

Founder & President Emeritus: American Telemedicine Association

Professor of Medicine (Adj): Johns Hopkins School of Medicine

Former Director of Telemedicine: Medical College of Georgia, USA   CEO: The Global Telemedicine Group, USA

Mr CHARLES LOWE   MBA

Past President of the Royal Society of Medicine UK's Telemedicine & eHealth Section. CEO Digital Health & Care Alliance, Chair of the Board of Trustees, Citizens Online, Business Development Advisor of Medical City Online, UK.

Charles has a background in digital health, working in both public & private sectors. His recent work has centred on the regulation & assessment of mHealth apps. He is also a Contributing Editor to

Mr Jonathan M Fuchs FACHE

Mr Fuchs is the Chief Operating Officer of The Kidder Street Consulting Group, a US-based IT and HIT consultancy. He is a veteran health care executive with significant experience in managed care, health care management and operations.

Prof (WILLIAM) ANGUS WALLACE

FRCS (Ed & Eng), FRCSEd (Orth), FFCI(UK), FFSEM(UK)

QUALIFICATIONS

MB ChB	University of St Andrews (1972)
FRCS (Ed)	Royal College of Surgeons of Edinburgh (1977)
FRCSEd (Orth)	Royal College of Surgeons of Edinburgh (1985)
FRCS(Eng)	Royal College of Surgeons of England (1996)

Corresponding Fellow, American Shoulder & Elbow Surgeons (ASES - 1996)

DR. SOHAIL CHUGHTAI

Ministry of Foreign Affairs

Nominated for the Honours List of Overseas Pakistanis for outstanding services to the country for Covid-19 Fight via Telemedicine Services

Sehat Ghar project to be started in seven districts of southern Punjab: Dr. Yasmin

June 27, 2020

Tweet   Share 2

Punjab Minister for Health, Dr. Yasmin Rashid has said that Sehat Ghar project will be started in seven districts of the southern Punjab.

She stated this while addressing a meeting in Lahore today (Saturday).

On this occasion, Special Secretary Ajmal Bhatti briefed her about functionality of Urban Primary Healthcare System and Sehat Ghar project.

The Minister said that Sehat Ghar will be functional after provision of facilities and the project will help provide better medical facilities to the masses.

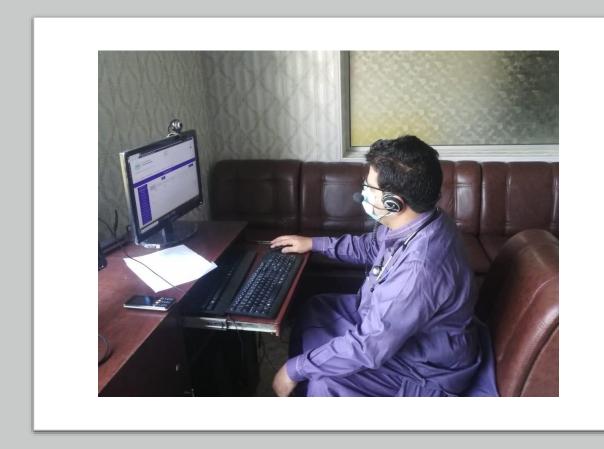She said that the Pilot Project of Tele Medicine will be run in Lahore.

She said that clinical audit is tremendously important which will improve the situation in public hospitals.
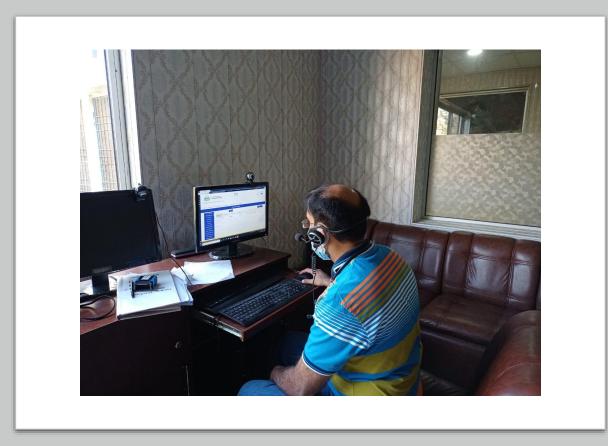
She said that recovery of patient is the key to success of doctors.

Dr Yasmin Rashid said that the patient ratio have been increased in public hospitals of province after better medication and health facilities there.

Field Tests in Pakistan on standard Windows' PC or Android Tablet
350 KB/sec upload speed required

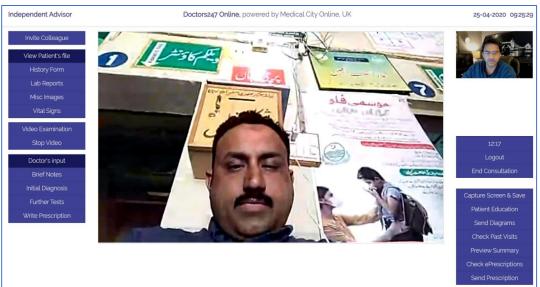**Satisfactory Result of Live Medical Tele-consultations with Medical Data Sharing**

Field Tests in Pakistan on Android Tablets at Patient's end
350 Kb/sec upload speed required – 3G Telecom Network sufficient
Live Medical Tele-consultations done in remote areas of Pakistan

Technology Limitation Challenges in Rural Areas
Troubleshooting by Medical City Online Team via Software Adaptations

- Intermediary data placement to prevent latency of information loading
- Tiny push-code technology to prevent bottleneck of bandwidth limitation
- Data Fragmentation and Reassembling with minimal latency using advanced algorithms
- Using processor power of the device, rather than bandwidth quality
- Simplicity of page loading and optimization of user interface
- Software language selection (HTML 5 with MVC) and App Optimization
- Fast Data Operation Hardware – Server Micro-Processor and RAM selection
- Minimizing Clicks and Screens – Neat and Lean Code
- Placing Accessory Server nodes in suitable geographical regions
- Using RAID V Server to improve Live Video Delivery
- Code-Loading Time optimization – Trimmed, Lean Software Code

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Online

Dr. 5 UHS Lahore
Offline

Dr. 6 UHS Lahore
Offline

Dr. 09: Sahiwal MC
Online

Dr. 10: Sahiwal MC
Offline

Citrus Telemedicine
17-K, Gulberg III, Lahore, Pakistan
Powered by Medical City Online, UK

MedicalCity.online
Healthcare over Internet

Citrus
TeleMedicine
Powered by Medical City Online, UK

Email: Admin@CitrusTelemed.com

24 Hours Free Online Medical Consultations
Telemedicine Helpline
Financial support by PPAF via Emergency Response Fund
Technical Support by UHS – Project Facilitation by Akhuwat

Telemedicine Technology, powered by Medical City Online UK

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Telemedicine Software for Rural Population with Telemedicine Hub based in Lahore

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PPAF COVID-19 EMERGENCY RESPONSE FUND
Through
TELEMEDICINE HELPLINE CENTER
Implemented By AKHUWAT Through
Technical Facilitation By UHS
Under PPAF Financial Support
یونیورسٹی آف ہیلتھ سائنسز لاہور

Dr. 1: UHS, Lahore — Offline

Dr. 2: UHS, Lahore — Online

Dr. 3: UHS, Lahore — Offline

Dr. 4: UHS Lahore — Online

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Telemedicine Software for Rural Population with Telemedicine Hub based in Lahore
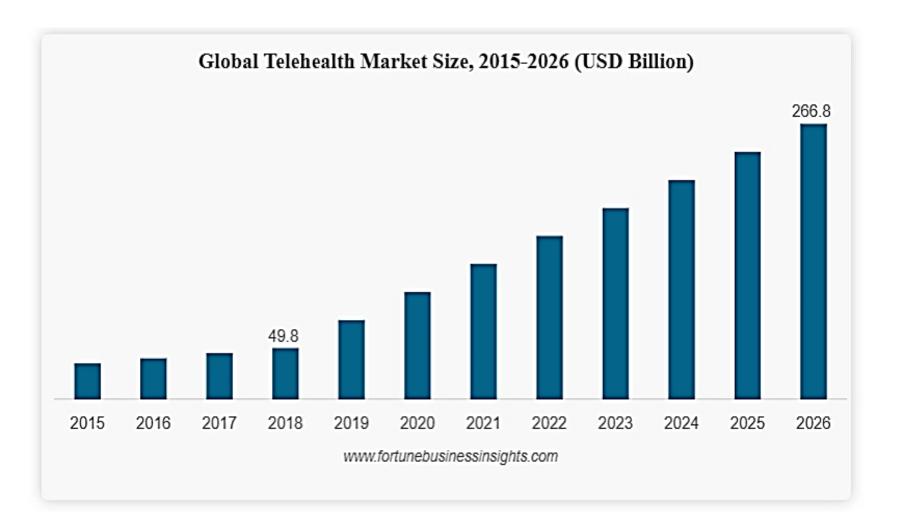
Launch of Department of Telehealth at UHS, Lahore, Pak
Feb 2021 – Faculty Lead: Dr Suhail Chughtai

Telehealth to revolutionize Pak Healthcare

Global Telehealth Market Size, 2015-2026 (USD Billion)

266.8

49.8

2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026

www.fortunebusinessinsights.com

THE OVERALL IMPACT

Telehealth Empowered Healthcare

- Lowered Logistic Burden

- Lowered Social Burden

- Lowered Financial Burden

- Lowered Environment Burden

- Lowered Process Burden

- Lowered Building and People Requirement

- **Lowered Disease Burden**