



# **The RPSG**

**The Renal Patient Support Group**

**Electronic Patient Records (EPRs)**

## Role of Information Communication and Technology (ICT)

- ICT plays a major role in improving the access, the efficiency, the quality, and the effectiveness of any process related to healthcare.
- The concept of e-health, as the application of ICTs to healthcare, is now common-place.
- ICT allow on introducing new applications and rejuvenating or reinventing the classical ones. Co-operation amongst different practitioners is enhanced.
- Treatment methods can be improved - all health professionals can manage activity more efficiently, and the quality of hospitals and medical services can be better.



Aceto, G., Persico, V., Pescape, A. (2018). The role of Information and Communication Technologies in Taxonomies, Perspectives, and Challenges, Journal of Network and Computer Applications

## Role of Information Communication and Technology (ICT)

- Health professionals can effectively work together, coordinating activities, sharing knowledge about patients.
- Health systems enable patients to have more control on of well-being, by accessing personalised and qualified health information and accessing appropriate clinical care.
- Treatment methods can be improved, health professionals can manage activity more efficiently, and the quality of hospitals and medical services can be monitored.



## eHealth in Nephrology Care

- eHealth is health service and information delivered through the internet and related technologies.
- eHealth has potential to extend kidney care beyond traditional care that is integrated into daily life.
- Public health emergency caused by Covid-19 brings new urgency to the integration of eHealth into patient care and wherein there has been a requirement to limit direct face-to-face contact at healthcare facilities.



## eHealth in Nephrology

- eHealth is potentially used to transform renal screening.
- Health Information Technology Working Group has been established to facilitate the identification and management of patients with CKD using electronic patient records (EPRs).



## Electronic Patient Records (EPRs)

Digital version of patient medical records, contain:

- Demographic Information
- Diagnoses
- Biometric and Vital Sign Measurements
- Care Plans
- Polypharmacy & Medication Information
- Laboratory Investigations
- Radiology Investigations



## Electronic Health Records (EPRs)

- EPRs can be accessed by patients or providers through portals with functions to support care-related activities.
- EPRs are used to provide alerts and decision aids for management of AKI and CKD.
- Allows for screening for CKD.
- Help in the identification of potential candidates for research and clinical trials.
- Self-management by tracking and presenting data and providing individualised recommendations



## Telehealth

- The use of digital devices and applications such as video conferencing and digital stethoscopes to allow interactions between service providers and patients can bridge geographic barriers.
- Telehealth allows remote visits for CKD patients.
- Multidisciplinary care visits for patients with multiple service providers can be advantageous.
- Video consultations with Allied Health Professionals and Service Providers can be helpful.
- Telehealth for urgent visits with service providers for example, patients pre/ post transplanted recipients can be advantageous.





## Mobile eHealth

- The use of mobile devices such as personal digital assistants, mobile phones, tablets, and smartphones can be used to provide clinical care.
- Methods of care can include text messaging and mobile apps.
- Mobile apps for polypharmacy surrounding CKD.
- Educational app for care pre-post transplantation.



## Mobile eHealth

- Smartphone camera to read of urine test strips for urinary tract infection or proteinuria detection.
- Blood pressure monitoring and transmission of data to health-care providers.
- Mobile app for dietary monitoring ( salt and potassium intake).
- Electronic pillboxes for medication adherence monitoring and reminders.
- Fluid overload monitoring via bioimpedance sensors.



▪ Wang, C-S., Ku, E. (2020). eHealth in kidney care, Nat Rev Nephrol., April (1), 1-3

## Website Healthcare

- A programme delivered through a website and internet-connected devices such as computers and smartphones can be advantageous.
- Educational modules for patients with CKD is important.



- Wang, C-S., Ku, E. (2020). eHealth in kidney care, Nat Rev Nephrol., April (1), 1-3

## Social Media

- Website and mobile applications that serve as platforms for sharing understanding and lived experiences (clinical and non-clinical).
- Discussion platforms for patients on different forms of RRT.
- Promotion of CKD awareness.



## Challenges for Adopting eHealth

- eHealth can enhance disease detection and monitoring, but can introduce safety concerns owing to design, technological failures or invalid data.
- Patients with kidney disease have complex needs that can make remote monitoring via eHealth tools less suitable than traditional face-to-face care.
- Certain aspects of physical exam, such as examination of catheter exit sites, may be difficult to perform via video consultation.
- Providing CKD education via online/ website modules, mobile apps or text messaging may not fully address the complexity of patient questions.



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