



Use of mobile devices to support clinical Pharmacy

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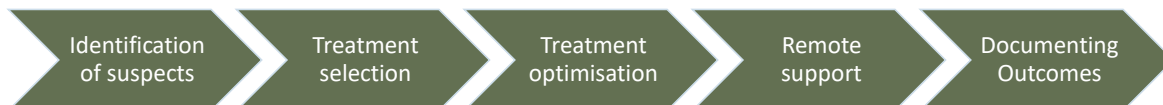
Conflict of interests

- Views expressed during this talk are my own and do not represent any organisation associated with my CV.
- I received no honoraria for presenting at this conference.

Roles

- Associate Professor, Instituto Universitário Egas Moniz (IUEM).
- Invited Professor, Faculty of Pharmacy, University of Lisbon (FFUL)
- Senior Researcher in medicines effectiveness, National Cancer Registry.
- Advisor for the Portuguese Pharmaceutical Society

How can mobile health be useful for clinical pharmacy?



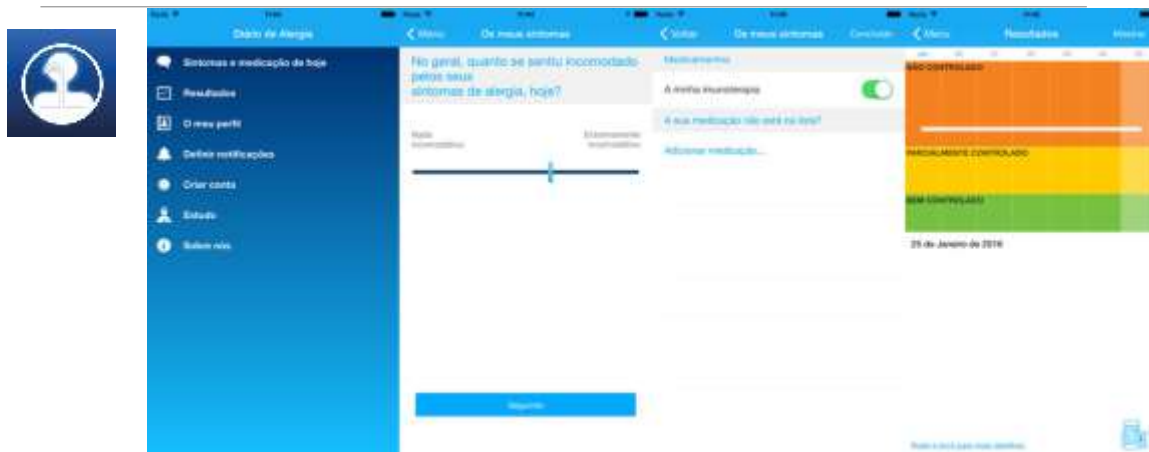
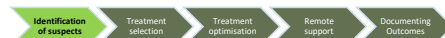
From identification of suspects to early diagnosis



<https://www.fibrichk.com/how-fibrichk-measures-your-heart-rhythm/>

Lobban et al. Identifying the undiagnosed AF patient through "Know Your Pulse" community pharmacy based events held in ten countries during Arrhythmia Alliance World Heart Rhythm Week 2017. *Eur Heart Journal* 2018. Cunha et al. Raising awareness and early detection of atrial fibrillation, an experience resorting to innovative technology and interprofessional collaboration. *Research in Social and Administrative Pharmacy* 2019.

From symptom assessment to early diagnosis



Lourenço et al. Evaluation of allergic rhinitis and asthma control in a Portuguese community pharmacy setting. J Manag Care Spec Pharm 2014.
 Bousquet et al. MASK 2017: ARIA digitally-enabled, integrated, person-centred care for rhinitis and asthma multimorbidity using real-world-evidence. Clin Transl Allergy 2018

Treatment selection

Symptoms suggesting AR

Two or more of the following symptoms present for > 1 hour in most days of the last 2 weeks:

- watery rhinorrhea
- sneezing, especially paroxysmal
- nasal obstruction
- nasal itchy
- conjunctivitis

Classify and evaluate severity

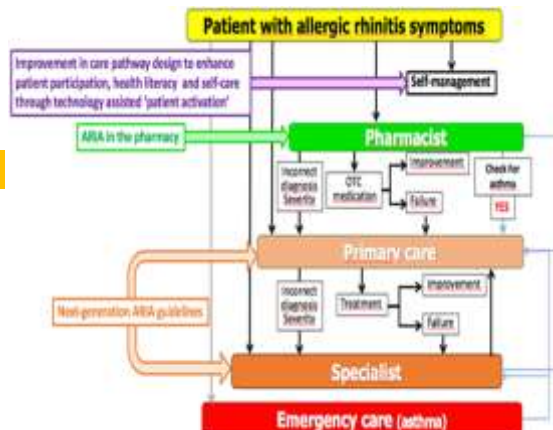
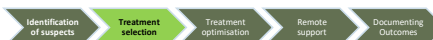
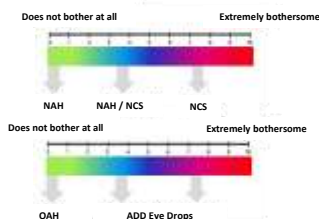
Allergic NASAL symptoms

Allergic NASAL + OCULAR symptoms

Symptoms usually unassociated with AR

- Unilateral symptoms
- nasal obstruction with no other symptoms
- mucus rhinorrhea
- Pain
- recurrent epistaxis
- anosmy

Refer to physician



Paulino E, Fonseca J, Lourenço O, Costa E, Costa F. ARIA in the pharmacy: A national standpoint within a global study. Community Pharmacy poster at FIPSUB-2207.

Treatment access and treatment selection



Apteekin Neuvontatyökalu



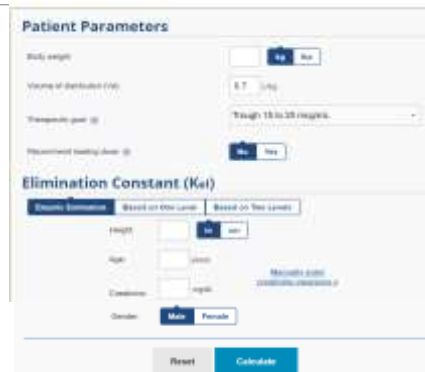
Patient Access. The Pharmaceutical Journal, JUL 2019.

Treatment optimisation



WHO. Improving health system efficiency as a means of moving towards universal coverage. 2010

Treatment optimisation



[Creatinine Clearance and GFR Calculator](#)



[Opioid Equianalgesic Calculator](#)

Treatment optimisation



AVOIDABLE HOSPITAL ADMISSION

Clinical and bidirectional communication with the prescribing doctor



Interprofessional communication mechanism



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 J. Pharm. Med. (2014) 2014, 1-10
 doi:10.1111/j.1365-2746.2014.04444.x

Therapeutical Notes

HOSPITAL DISCHARGE: VIRTUAL CLINICS, LONDON



Remote support and self-care



Smoke Free

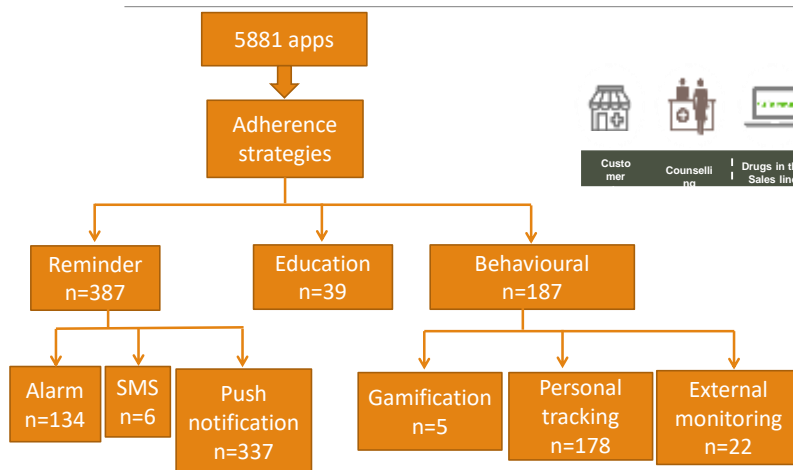


Cancer survivor coach

<https://www.mybreastcancercoach.org/en-US/breast-cancer-app>

e-kvit

Remote support and self-care Medication adherence



MED 180

Posology and safe dispensing



Interconnectivity experiences developing

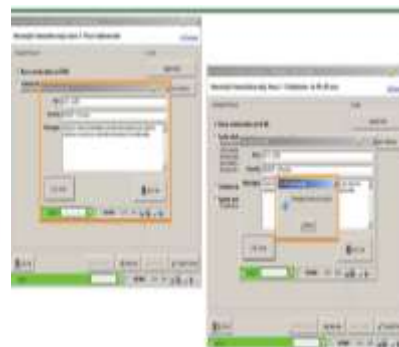
REQUESTING A RX RENEWAL REMOTELY



AUTOMATIC RENEWAL OF PRESCRIPTIONS FOR CHRONIC DISEASE PATIENTS



SCHEDULING A MEDICAL APPOINTMENT



Helping oncology patients navigate the system

Oral Oncolytics



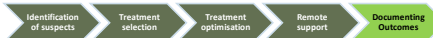
Algorithm based FAQs

- ADRs – what to do?
- Severity evaluation
- What to do when forgetting pill
- Food-drug interactions
- Drug-drug interactions
- Trigger to disease progression symptoms



- 3) Possibility to activate A&E
- 2) When and how to contact:
Nurse
Pharmacist
Psychologist
Oncologist
- 1) Clarification and reassurance

Documentation of care and impact measurement



Value-Based Health Care Delivery

Based on the research of Professor Michael Porter, **Value-Based Health Care Delivery** is a framework for restructuring health care systems around the globe with the overarching goal of value for patients—not access, cost containment, convenience, or customer service.

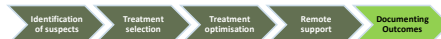
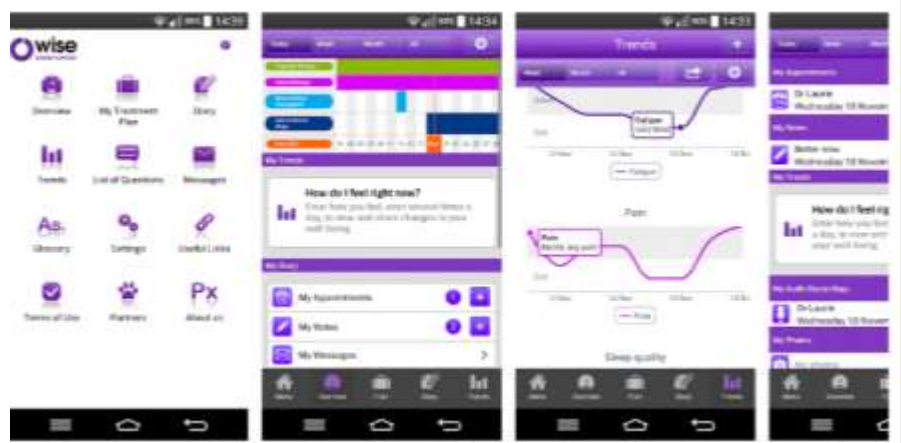


Information Technology Platform

State-of-the-art information technology cannot fix our broken health care system. If we treat technology as a tool, not a solution, we can stay focused on the primary goal of health care reform: value for patients. Moving to better IT systems can



PROs, PREs and impact measurement

Challenges

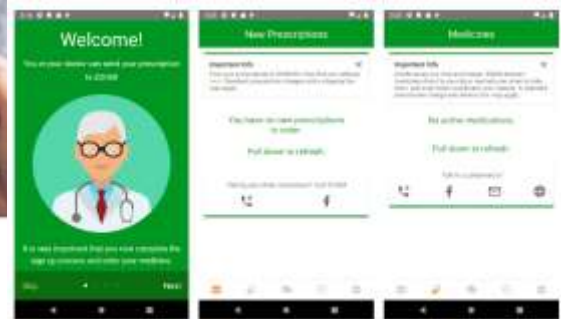
1) Interconnectivity of softwares



GP at Hand to go live in Birmingham after expansion is approved



2) Workforce and payment models



Roland, M. (2019). *General practice by smartphone. BMJ, I4713.* doi:10.1136/bmj.I4713

Challenges



The Redefinition of Pharmacy Jobs. Drug Topics. 2019



Comments & questions



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