participating CR Services, with 26 persons failing to engage in their chosen program. Uptake of the home-based and hybrid CR programmes was unexpectedly low, with two of the services reporting 6% and 7% participation in the home-based programme respectively, and none at the 3rd service. Only one service had five patients selecting to partake in the hybrid CR offering. Home-based patients were generally younger (58±9 years) than the centre-based (64±11 years). All CR programmes were found to be effective, with improvement in functional capacity (6-Minute Walk Test) and Heart Quality of Life in all patients, albeit failing to reach statistical significance in the home-based programmes due to small sample size. Discussion: Delivering a variety of CR programme options was envisaged to improve overall CR service use. However, even though overall participation increased to some extent, uptake of home-based programmes was lesser than anticipated, indicating lower than expected adoption. So, are we there yet? It seems not. Who/what do we blame? m-Health supported home-based CR programmes have been shown to overcome geographical barriers and improve patient health outcomes. Therefore, a conjugal between CR services and m-Health perhaps not. Who/what do we blame?

1111 How mHealth apps improves access to cardiovascular care in Mainland China?

J. Hsu, F.F. Wang, F.W. Jia, X.H. Liu, Y. Lv, W. Chen. Peking Union Medical College Hospital, Cardiology Department, Beijing, China. People’s Republic of Background: Difficult access to healthcare in Mainland China has been documented for many years and places a severe burden on the population. The Chinese Government has taken many initiatives to tackle difficult access such as implementing universal health insurance, and introducing hospital networks for easier referrals to elite hospitals. mHealth services are another modality to improve healthcare access in China. Recently, an overview of mHealth apps in China reported that the most common service among apps targeted access to medical care. The purpose of this study is to examine how mHealth apps and services improve access to cardiovascular care in Mainland China.

Methods: mHealth services with the keywords “appointment making” (in Chinese) were sampled from the major app stores in Mainland China in October 2017. This study involved mHealth services provided by hospitals that included cardiovascular care in Mainland China. For each mHealth service we also examined the hospital’s location, hospital ranking (as issued by the Chinese Ministry of Health), ability to select specific physicians, online payment availability, and presence of patient identity verification. Standard descriptive statistics was used.

Results: There were 437 hospitals throughout Mainland China offering appointment making through mHealth services, of which 309 hospitals’ mHealth service were in operation. 229 hospitals were considered level 3A (highest rating), accounting for nearly 20% of all 3A hospitals in the country. The majority of the hospitals were located in major cities such as Beijing, Shanghai, Guangzhou and Chongqing. We also found that in additional to appointment making, nearly all the apps provided online payments, the ability to select specific doctors, and patient identity verification.

Conclusions: The universality and abundance of mHealth apps and services can provide the Chinese population a more convenient way to access cardiovascular care. Further review of usage rates, especially in rural areas and among the elderly is important to understand the impact of mHealth on access to medical care.

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1112 Fda database as a potential data source to assess the public perceptions of medication side effects

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Background: Recently, the Food and Drug Administration (FDA) public datasets were provided using application programming interfaces (APIs). The openFDA provides open access to FDA datasets. Over the past two years, several reports and studies showed that vitamin supplements were associated with common side effects, such as headache, metallic taste, loss of appetite, dryness of the mouth, diarrhea, nausea, vomiting, and constipation. However, serious cardiovascular-related side effects have never been reported.

Purpose: We hypothesized that vitamin supplements may be associated with serious cardiovascular-related side effects using a direct report from the openFDA database.

Methods: We conducted a systematic search of the openFDA using the custom source code and the FDA’s new public cloud computing infrastructure (https://open.fda.gov/drug/event/), from database inception through May 2017. Vitamin supplements included were vitamin D, C, B12, multivitamins, and fish oil. An investigator created the custom source code, and two independent investigators reviewed the data. The χ² test was used to compare the characteristics of individuals who reported adverse effects with other drugs. All p-values were two-sided, and statistical significance was determined at the level of p<0.05.

Results: All vitamin supplements have the same side effects, including constipation, diarrhea, headache, and weight gain. Among the vitamin D-associated cases, 110 and 165 cases also reported chest pain and increased blood pressure; vitamin C- and B12-associated side effects, respectively. Moreover, people who take multivitamin had the highest proportion of self-report atrial fibrillation, compared with other groups of vitamin supplements (p<0.05).

Conclusions: This study demonstrates that the use of openFDA potentially determines the uncertainty association between vitamin supplements and cardiovascular-related adverse events. Further studies on openFDA data mining are needed to explore uncommon cardiovascular disease side-effects related to common medications, such as statin, acetaminophen, or cough medications.

1113 iCaring: cognitive impairment and arrhythmia assist iwatch application with instant caring features

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Introduction: Cognitive impairment is common in the elderly and increasingly prevalent.

Purpose: The iCaring application is a novel iWatch application with instant caring features in order to help maintain independence and bridge the distance and time burden gap between cognitively impaired individuals, their health care providers and their children/caregivers.

Methods and results: The iCaring application is composed of three main functions via the iWatch, which is registered and worn by the patient. The first function detects motion and records the patients’ activity, gait and tremor. If abnormalities are noted or patterns substantially change from baseline, information can be relayed to the patient’s health care provider and caregiver. The locator function integrates global positioning systems to identify the geographical location of the individual with a prompt to the caregiver providing recent route details. This will allow the receiving caregiver to track the location of their elder, particularly if that person may be not responding to calls or has lost their way home. (Figure). Finally, the device can detect new onset arrhythmias which can be recorded and transmitted to patient’s medical record.

Conclusions: The iCaring application is an innovative tool to help cognitively impaired patients and their families without geographical restriction. Into the future, this can be united with artificial intelligence assistance systems to enhance and accelerate the care of these patients.