anonymity, and permanence of blockchain technology may be ideal for the secure storage of electrophysiologic media such as EKGs, ablation maps, or Holter data. NFTs can be used to uniquely identify patient data while allowing for global access to the data on the blockchain with the patient’s unique wallet address, creating recent interest in their use for this purpose. No real-world examples of using an NFT to store a record of a patient’s EKG have been published. As a proof of concept, here we create an NFT of an EKG.

**Objective:** To create an NFT of an EKG as a proof-of-concept on the Solana blockchain, the blockchain of the Solana Network, a third-generation cryptocurrency that is the third-largest in the world by market cap (over 67 billion USD as of 11/21/2021).

**Methods:** The Solana Programming Language command-line interface (SPL CLI) was used to create a non-fungible token (fig 1). A pull request was made after modifying the code of solana.tokenlist.json on https://github.com/solana-labs/token-list to rename the token “EKG NFT HRS 2022” and link it to the EKG image.

**Results:** The existence of “EKG NFT HRS 2022” can be verified via a first or third-party Solana blockchain explorer by looking up the wallet address (93P9mG9h3sDA4GifEjX5E7J1kkf1FhmiquooDxUMuNERR) containing the NFT or the NFT token address. The entire cost of the creation of this non-fungible token was approximately $1.20 USD and could easily be automated. While web-hosting was required to actually house the media file, in the near-future decentralized storage using blockchain technology can be used to securely house the file. Changing EKGs to high-quality ASCII representations using algorithms created for that purpose would be an immediate way to store the data permanently on the blockchain itself.

**Conclusion:** NFTs may be a way to securely and more permanently store globally-accessible electrophysiologic media for patients at minimal cost in the near future.

**DH-576-03**

**PATIENT ENGAGEMENT AND EXPERIENCE WITH USE OF DIGITAL NAVIGATION PATHWAYS FOR CARDIAC ELECTROPHYSIOLOGY PROCEDURES**

Advay G. Bhatt MD, FHRS; Daniele Volpe RN-BSN; Giuseppina Rose RN-BSN; Charu Madhwani Jain MD, MPH; Sravya Kurra MD; Rudra Pratap Singh Rana; Mohammadali Habibi MD; Tina C. Sichovsky MD, FHRS; Mark W. Preminger MD; Dan L. Musat MD and Suneet Mittal MD, FHRS

**Background:** Patients referred for a cardiac electrophysiology (EP) procedure require education about what happens before, during, and after the procedure. Digital Navigation Pathways (DNPs) are designed for this purpose; however, patient acceptance and the clinical impact of DNPs are not understood.

**Objective:** To measure patient engagement with DNPs and assess patient perception of the impact on their clinical care.

**Methods:** In this prospective study, a procedure specific DNP was dispensed to all patients scheduled for an EP procedure. DNPs were designed using the Rx.Health (New York, NY) platform and consisted of preparation instructions, reminders, hospital directions, micro-learning videos, and educational messaging delivered via text or email. Following their procedure, patients were asked to respond to an experience survey evaluating the impact of DNPs on their clinical care using a five-point Likert scale. Engagement was defined as the proportion of patients clicking or replying within the DNP.

**Results:** A DNP was prescribed to 704 patients, most commonly for catheter ablation (41%) or a device procedure (41%, Figure). The engagement rate was 86.9%. There was a high degree of comfort using the DNPs; in addition, patients felt that the DNP improved their understanding of their procedure and reduced pre-procedural anxiety (Figure). Importantly, 80% of patients agreed that the available information reduced their need to call the office for further instructions.

**Conclusion:** For the first time, the utility of DNPs, prescribed at time of procedure scheduling, to a cohort of over 700 patients in an EP practice was assessed. Our data show a high degree of engagement with DNPs and a favorable impact on care as reported by patients.

**DH-576-04**

**CORRELATION OF ATRIAL FIBRILLATION DETECTION USING OURA RING WITH PHOTOPLETHYSMOGRAPHY IN COMPARISON TO THE APPLE WATCH ELECTROCARDIOGRAPHY ALGORITHM**

Nabeel Syed Saghir MD; Darren Harrison MD; Edgar Torres Fernandez MD; Kristopher M. Heinzman MD, FHRS; Mauricio F. Hong MD, FHRS; Tuomas Kentta MSBME, PhD; Juhanli Junttila MD, PhD and Thomas K. Kurian MD, FHRS

**Background:** Oura Ring (OR) is a ring-based wearable device with an infrared photoplethysmography (PPG) based atrial fibrillation (AF) detection algorithm not yet commercially available. PPG and electrode AF detection currently exists on Apple Watch Series 4 (AW). OR PPG rhythm detection has not been compared to AW.

**Objective:** To review the accuracy of sinus rhythm (SR) and AF detection between OR PPG and AW ECG in patients who have undergone cardioversion or AF ablation to SR in which both PPG and electrocardiographic (ECG) signals are available.

**Methods:** A technology validation study with OR and AW devices were tested simultaneously. OR PPG rhythm detection has not yet been commercially available. PPG and electrode AF detection currently exists on Apple Watch Series 4 (AW). OR PPG rhythm detection has not been compared to AW.

**Results:** For the first time, the utility of DNPs, prescribed at time of procedure scheduling, to a cohort of over 700 patients in an EP practice was assessed. Our data show a high degree of engagement with DNPs and a favorable impact on care as reported by patients.

**Conclusion:** For the first time, the utility of DNPs, prescribed at time of procedure scheduling, to a cohort of over 700 patients in an EP practice was assessed. Our data show a high degree of engagement with DNPs and a favorable impact on care as reported by patients.
was established for data collection. A 3-lead ECG was obtained alongside OR PPG data for >10 minutes. AW ECG alongside standard ECG data were collected for 30 seconds. All device’s datasets were collected both before and after cardioversion or AF ablation. ECG diagnoses were confirmed by an Electrophysiologist. OR and AW made AF or SR predictions using proprietary algorithms.

**Results:** A total of 1455 select 30-second tracings were analyzed by OR algorithms. AF was correctly classified in 812/867 (93.6%) tracings. SR was correctly classified in 586/588 (99.7%) tracings. 45 and 2 tracings during AF and SR, respectively, were inconclusive on OR. Rhythms were correctly classified by OR in 18/19 (94.7%) AF and 17/17 (100%) SR patients. For this dataset, AF or SR diagnoses were counted as likely if >90% of OR tracings agreed on rhythm prediction. 14/19 (73.6%) and 16/17 (94%) computer interpreted AW ECG tracings, respectively, were correctly identified as AF and SR. Specificity and positive predictive value of AF and SR for both devices was 100% in this small data set.

**Conclusion:** OR PPG-based AF and SR detection algorithm is noted to have a high sensitivity and specificity as compared to AW ECG in a concomitant group of patients undergoing cardioversion or AF ablation in a small cohort. Further studies are needed to validate this technology in real-world scenarios.

| Table 1. Per-patient statistical comparisons (n=18) of diagnosing sinus rhythm or atrial fibrillation between Oura Ring PPG and Apple Watch ECG. Gold standard for each device was standard ECG. |
|---|---|---|---|---|
|  | Sensitivity | Specificity | Positive Predictive Value | Negative Predictive Value |
| **Oura Ring** |  |  |  | |
| Sinus Rhythm | 100.0% | 100.0% | 100.0% | 100.0% |
| Atrial Fibrillation | 98.2% | 100.0% | 100.0% | 98.4% |
| **Apple Watch** |  |  |  | |
| Sinus Rhythm | 94.1% | 100.0% | 100.0% | 95.0% |
| Atrial Fibrillation | 73.6% | 100.0% | 100.0% | 77.3% |

**ABSTRACT HP-574:**
*Treating AFib: Care Pathways, and the Effect of Bleeding Events, Sex, and BMI on outcomes*

Saturday, April 30, 2022
2:15 PM - 3:15 PM

**HP-574-01**

** IMPLEMENTATION OF AN ATRIAL FIBRILLATION TREATMENT PATHWAY IN THE EMERGENCY DEPARTMENT ACROSS IN-NETWORK HOSPITALS REDUCES ATRIAL FIBRILLATION HOSPITALIZATIONS**

**Background:** Hospitalization rates for atrial fibrillation (AF) have risen over two decades. An AF treatment pathway in the Emergency Department (ED) may reduce unnecessary hospitalizations.

**Objective:** To evaluate the effects of an ED AF treatment pathway on hospitalization rates across five of ten hospitals within the University of North Carolina (UNC Health) hospital network.

**Methods:** An AF treatment pathway using a decision aid based on hemodynamic stability and AF symptom severity and an AF specialty clinic follow-up within 72 hours was deployed in sequential hospitals via provider education and EMR integration between Oct, 2017 and Feb, 2020. A stepped-wedge design was used to compare admission rate pre- and post-intervention, including hospitals without the intervention in the control group. Hierarchical logistic regression including patient and hospital co-variates with the outcome of admission (vs discharged or held for observation then discharged) was performed.

**Results:** During the evaluation period, 11458 patients presented to the ED with a primary diagnosis of AF. Following the intervention, absolute admission rate was reduced from 60.5% to 48.3% across the five hospitals. The intervention was associated with a 17% reduction in odds of admission (0.83 [0.71,0.97]; Figure) adjusting for patient and hospital level variables. Other factors associated with increased odds of admission included older age, male gender, higher social deprivation index, presence of coronary disease, heart failure, dementia, and lower blood pressure. There was no interaction of the individual hospital with the effect of the intervention.

**Conclusion:** Implementation of an AF treatment pathway in the ED significantly reduces admission rates across multiple hospitals.