instant feedback about their current health status; 2) Personalized advice: patients want a system that can adapt medication, sport activities and food recommendations to their current health status; 3) Transparency: patients want to know the source, reasons, and individualized interpretation of any recommended changes to the management of their condition. Additionally, patients have a desire to adapt their lifestyle to the needs of HF, but they require help to remain motivated to achieve this goal.

Conclusion These findings provide valuable information for the development and implementation of eHealth solutions. Patients want reassurance 24/7, independently of the availability of healthcare services, combined with personalized medical advice regarding day-to-day management of their HF. In a next step, we are planning a multicentre clinical trial to test the first prototype of the eHealth product (DoctorMe).

Background Patients with Duchenne muscular dystrophy (DMD) typically exhibit cardiac dysfunction and arrhythmia. With increasing life expectancy due to advances in respiratory support, cardiomyopathy and associated dysrhythmia are fast becoming the primary cause of morbidity and mortality in this patient group. Despite advances, the correlation between genotype and cardiac phenotype remains poorly understood and individual registries small, with implementation of device therapy often delayed due to poor diagnostic image quality.

Methods A single-center registry for DMD patients was established and data including genotyping, medical therapy and investigations such as cardiac MRI, nt-Pro BNP levels, echocardiogram and holter monitor was analysed. The aim was to potentially identify predictors associated with a more severe cardiac phenotype.

Results A total of 22 patients (age 17 -31) with DMD were reviewed (demographics summarised in table 1). All patients were evaluated with echocardiography on at least one occasion (mean EF 44.3%). Cardiac MRI was attempted in six patients, however due to contractures preventing access to the scanner only three were completed. 14 of 22 patients (64%) demonstrated an impaired left ventricular ejection fraction (EF) < 50% (mean EF 41%). Proximal ‘hot spot’ deletions/mutations (exon 2–19) appeared to be associated with a more pronounced reduction in EF – all those patients with proximal mutations demonstrated an EF < 45% (mean 41%). Seven of the eight patients (87.5%) with mutations involving >1 exon deletion demonstrated more severely impaired EF (mean EF 37.5%) compared to those with single exon deletions (mean EF 52%). Interestingly, one patient with a proximal mutation (exon 3–6 deletion) remains mobilising to distances up to 70 m, however CMRI performed has shown a moderate degree of fibrosis with an EF of 42%. Correlation between nt-Pro BNP levels and reduced EF (rEF) was not uniform, however a level < 100 was associated with EF >55% in 89% of cases. Of those on steroid regimes, 6 (54%) had impaired LVEF compared to 5 (83%) of those not on steroid therapy. All patients are taking at least one class of heart failure modification, with 79% on two and 37% on three. Only one patient in the registry has had an ICD implanted. This patient has had a device for 10 years and in this time there have been no therapies delivered.

Conclusion Correlation between predictors and cardiac phenotype in a Duchenne population remains unreliable. Location and size of exon alteration appears to be indicative of more markedly impaired LV function, however larger studies are required to characterise this further and challenges remain with regard to accurate assessment of EF. The use of predictors in future may help to guide appropriate provision of device therapy.