

# Exercise in the Fontan Population: Provider Recommendations vs Patient Actions

Alyson Pierick, MD¹, Sunkyung Yu, MS¹, Ray Lowery, BA¹, Mark Russell, MD¹, Mark Norris, MD¹, Kurt R. Schumacher MD, MS¹ Division of Pediatric Cardiology, University of Michigan, Ann Arbor, MI

#### BACKGROUND

- Over the last few decades, exercise recommendations for patients with Fontan circulation have dramatically changed.
- Regular physical activity has been shown to improve cardiac output, exercise capacity, and qualify of life.
- The optimal type and intensity of activity to achieve maximal benefit remains unclear.

### PURPOSE

- 1. Determine self-reported exercise frequency and type in individuals with Fontan circulation.
- 2. Investigate pediatric cardiologist exercise recommendations for individuals with Fontan circulation, as reported by patients/parents.

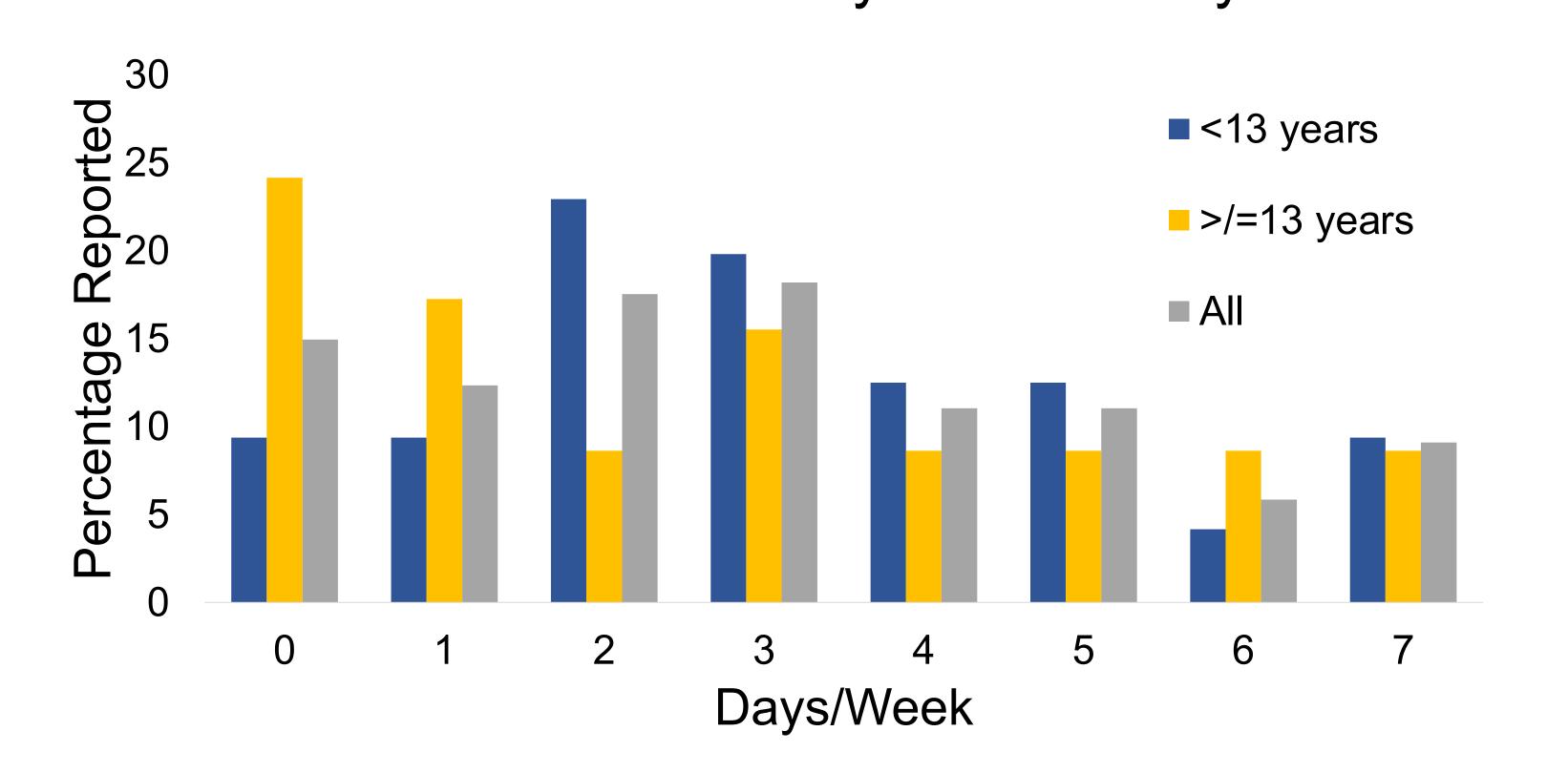
#### METHODS

- Electronic survey was designed to assess physical activity habits of individuals with Fontan circulation and recommendations about physical activity from their cardiologist.
- A Qualtrics survey was disseminated via a social media campaign to a minimum of 11 major centers.
- The survey was administered 11/13/2020 3/4/2021.
- Included individuals with Fontan circulation aged 3-55 years old, completed by the individual or a parent.

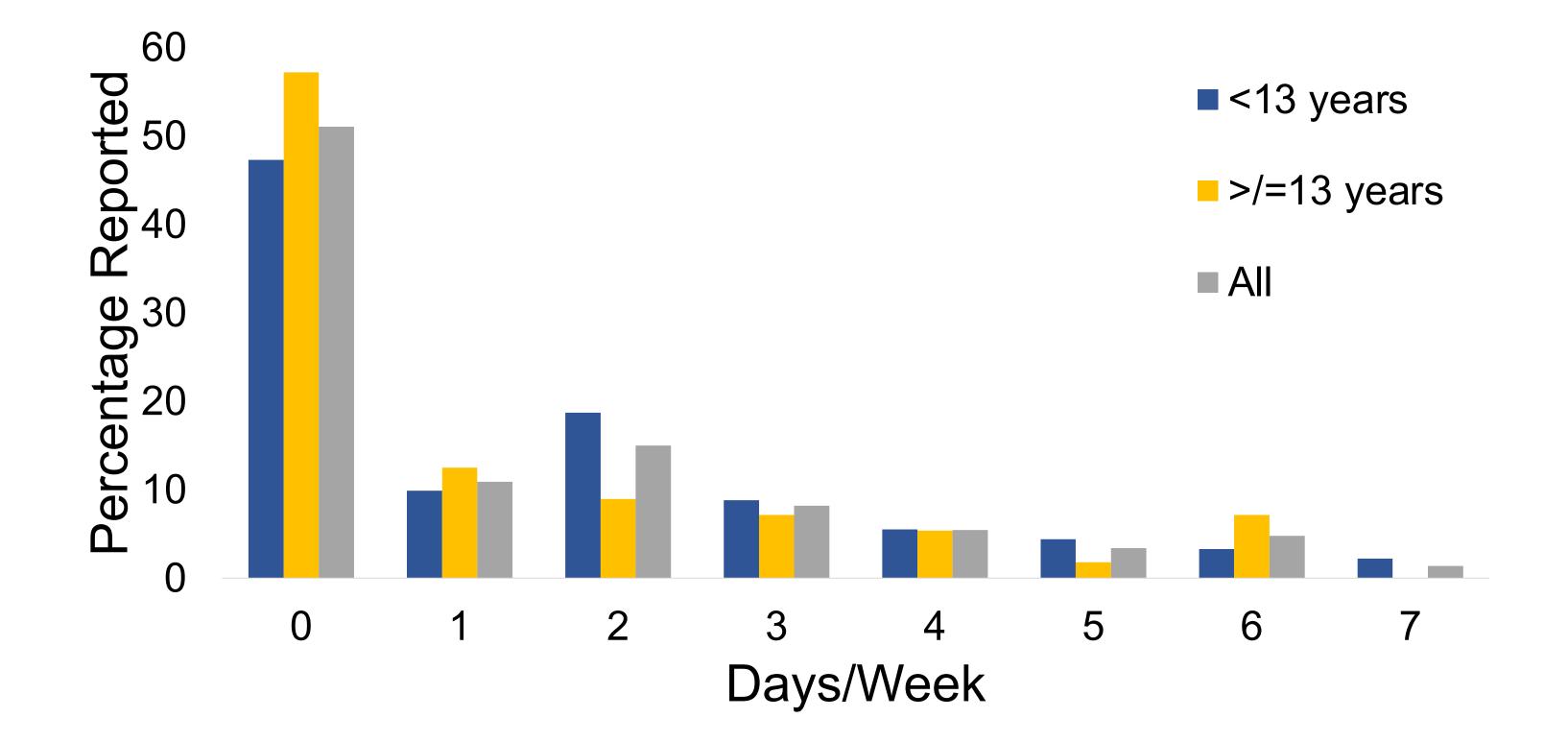
#### RESULTS

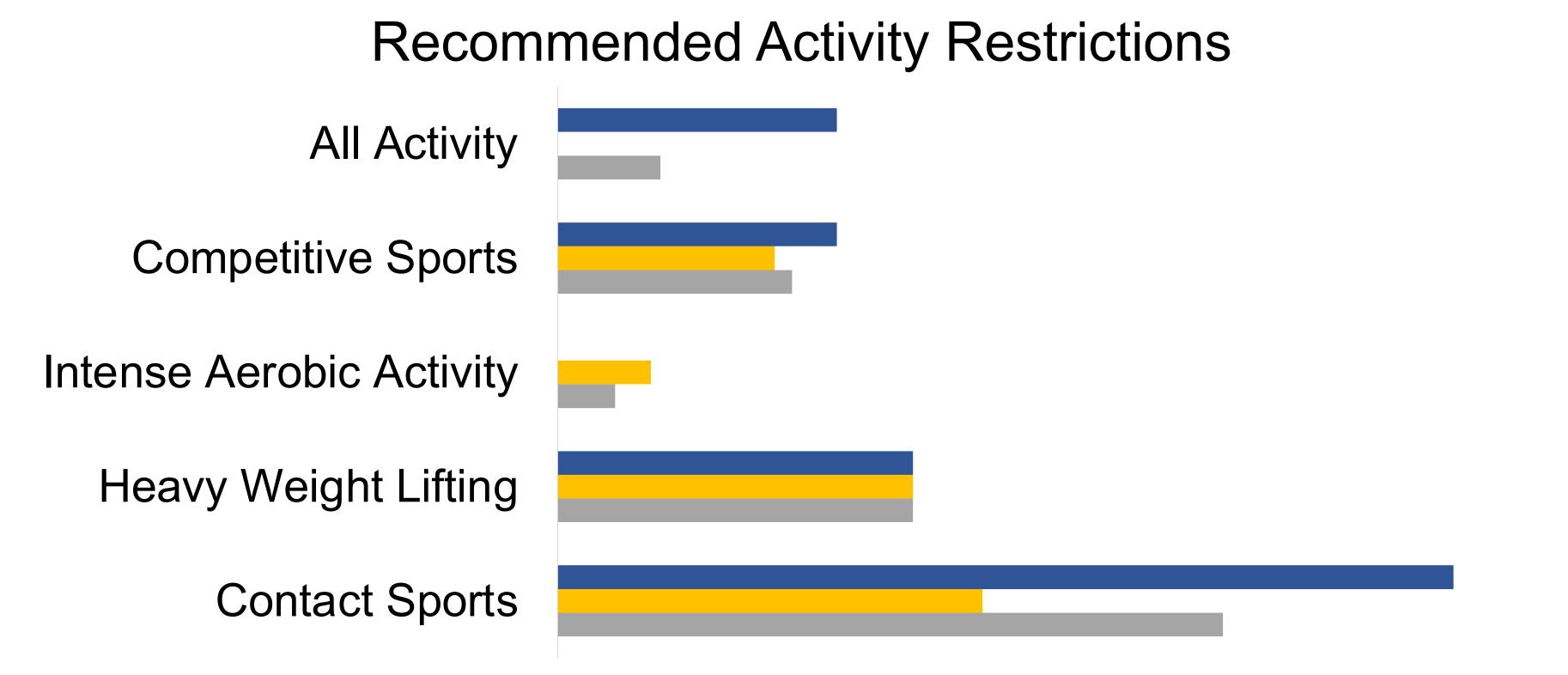
- 168 individuals were included in the study
  - 129 parents of participants with Fontan circulation
- Median age of the participant was 10 years (IQR 7-18)
- 62% saw their cardiologist more than annually
- 33% were also evaluated in a separate Fontan clinic
- 20% of participants reported musculoskeletal co-morbidity and 1/5 reported respiratory co-morbidities limiting their activity level

# Low-Exertion Activity <30 Min/Day



## High-Exertion Activity >30 Min/Day





- 57% reported receiving activity recommendations from their cardiologist
- Participants report that over the past 5 years,
  recommendations from their cardiologist have changed:
  - Discussing benefits of physical activity (22%) and recommending more specific activities (44%)

<13 years</li>
 <=>/=13 years

 All

- Typically report the reason to be the benefit of exercise in individuals with Fontan circulation
- 56% of participants have increased their low-exertion activities but there has been no change in high-exertion activity over the last 5 years

#### CONCLUSIONS

- 1. Even with the known benefits of exercise, few individuals with Fontan circulation engage in routine exercise.
- 2. Almost half of cardiologists do not discuss the importance of physical activity in this single ventricle cohort