

A novel classification system enabling inclusion of athletes with multiple different impairments in ice-skating sports

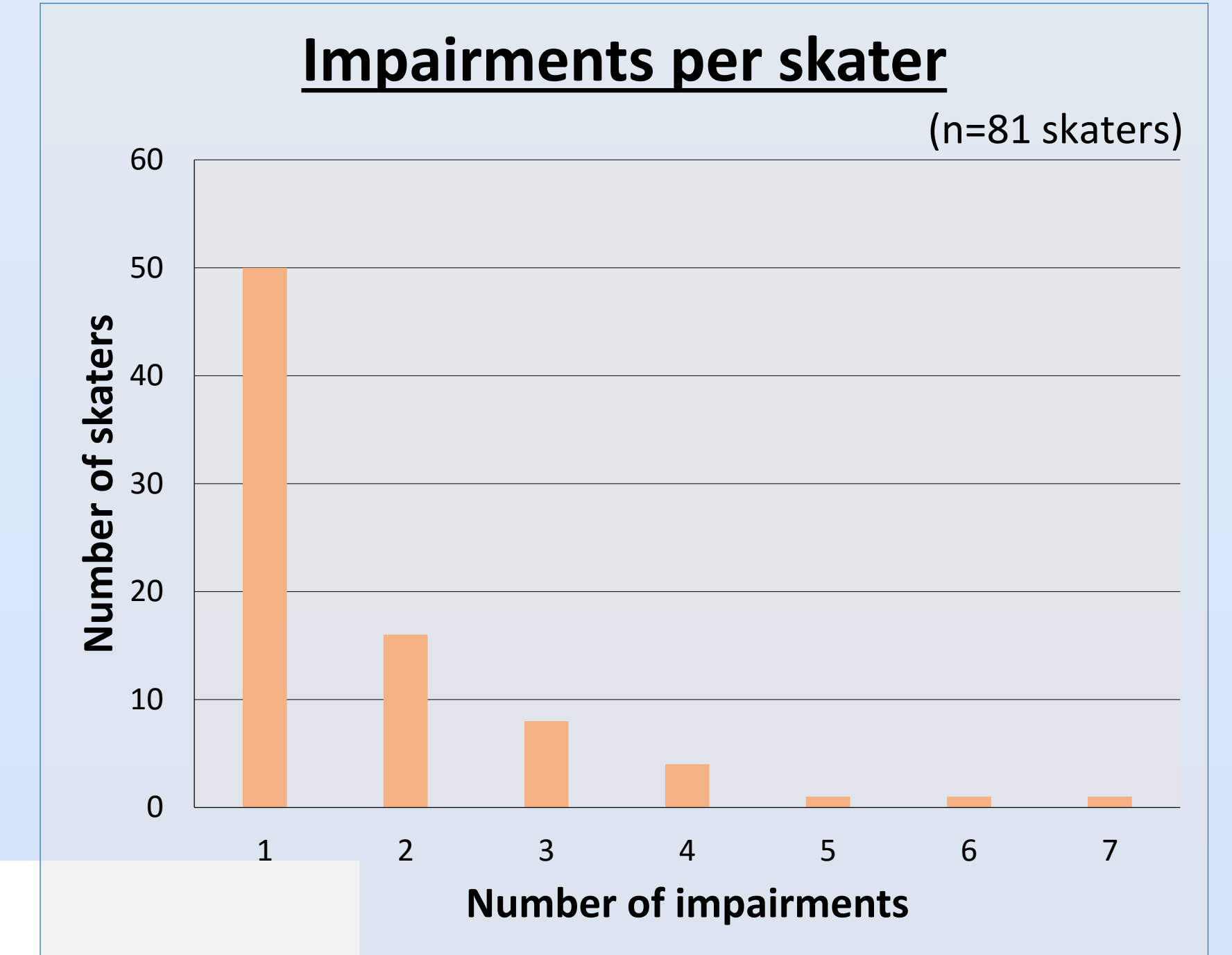
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Background

Classification is undertaken “to ensure that an Athlete’s impairment is relevant to sport performance, and to ensure that the Athlete competes equitably with other Athletes.” Paralympic classification requires that athletes’ impairments must belong to one of ten eligible impairment types. Current classifications do not easily account for athletes with multiple impairments.

Because classification is both sport-specific and impairment type-specific, there is limited scope for equitable competition between athletes with different types and or degrees of impairments. Children with genetic syndromes manifesting with multiple visual, intellectual and physical impairments may be particularly disadvantaged by current classification systems.

The Paralympic Movement does not currently include any ice-skating discipline.

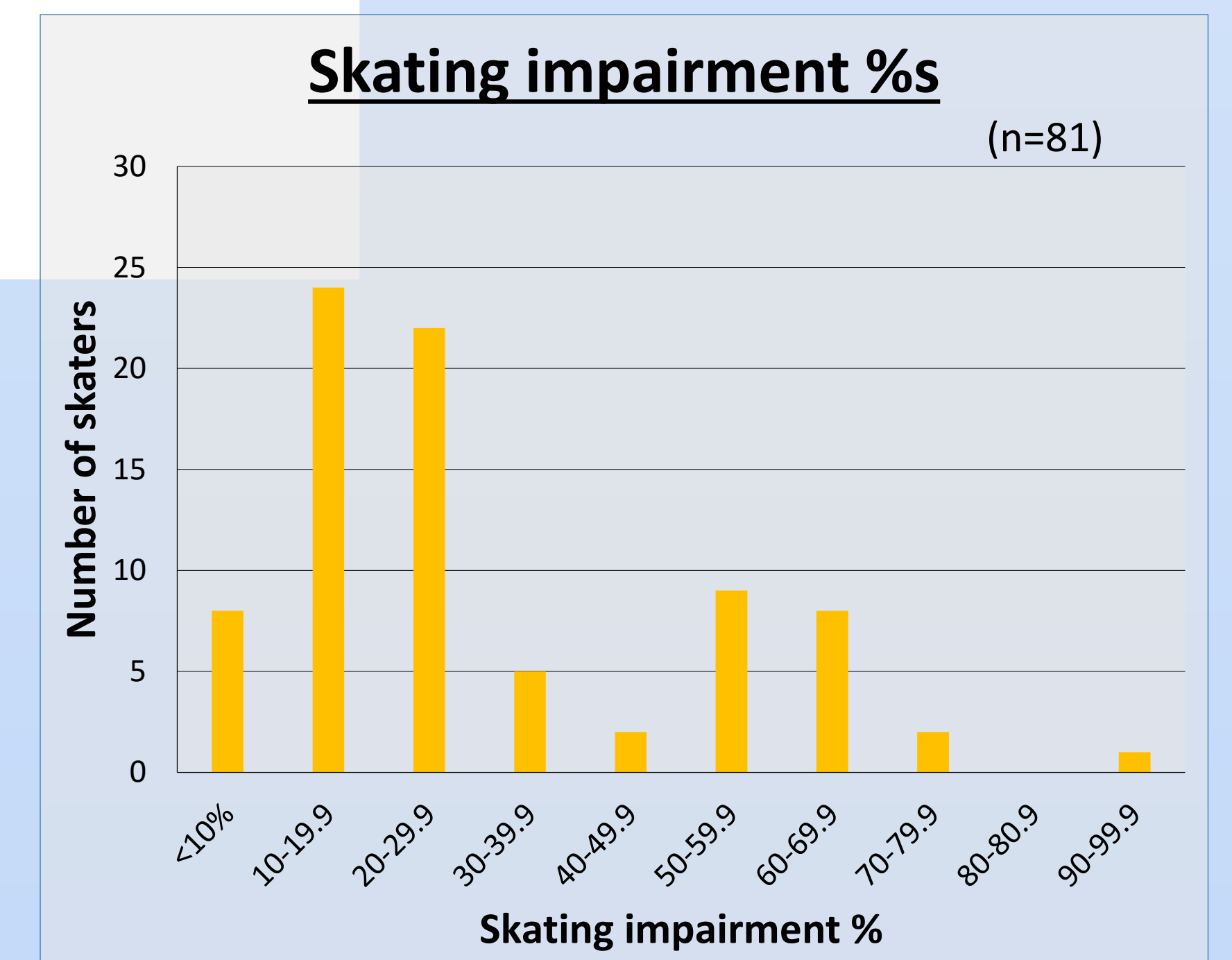


Ice Skating Classification

We developed a classification system for competitive figure skating and speed skating events. This is based on the well-established American Medical Association Guide to the Evaluation of Permanent Disablement (known as the Rondinelli Guides). Athletes’ impairment types are grouped into broad impairment groups which are: cardiovascular; pulmonary; digestive; urinary; skin; hematopoietic; endocrine; ear nose and throat; visual system; central and peripheral nervous system; intellectual; upper extremities; lower extremities; spine and pelvis.

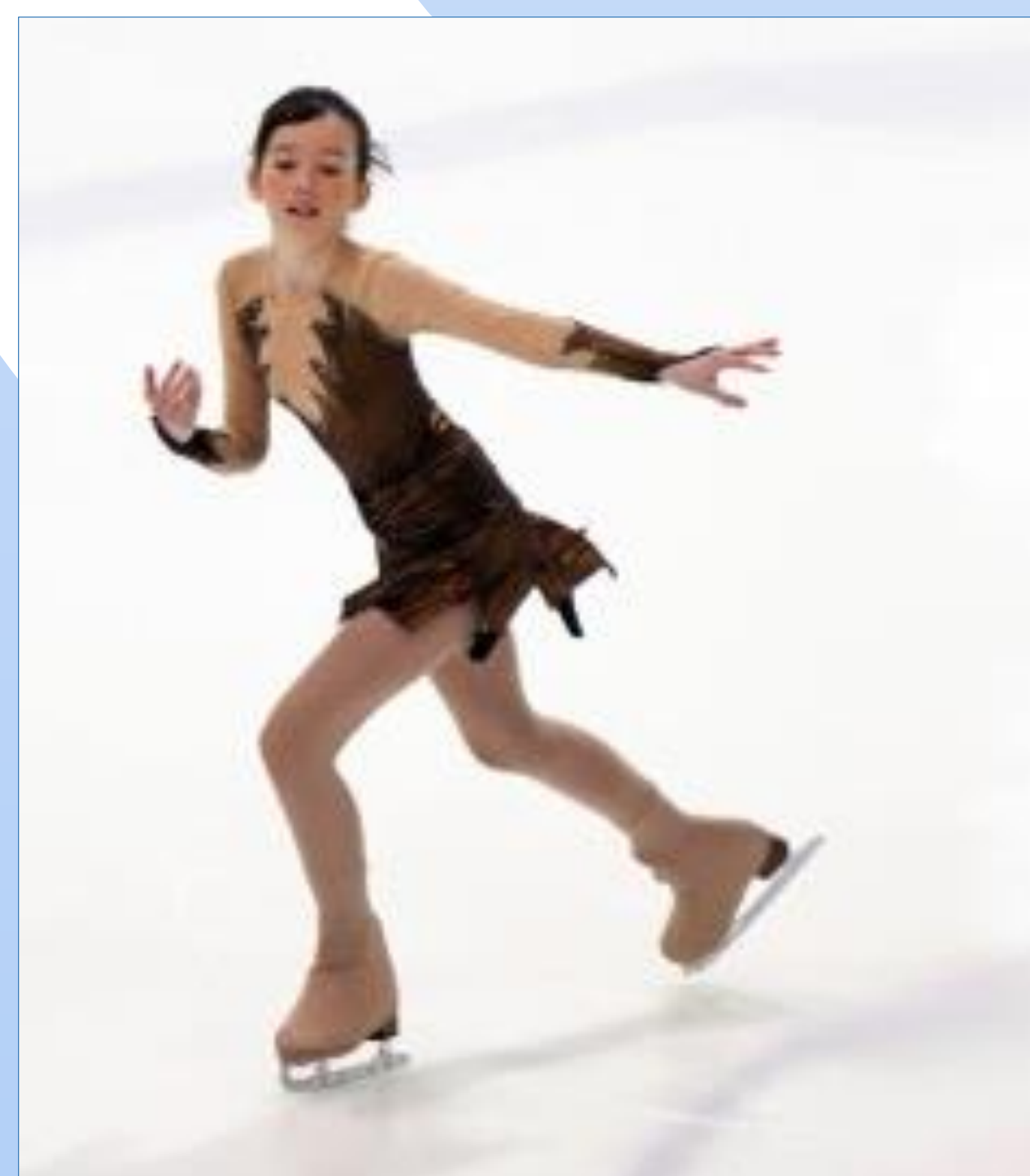
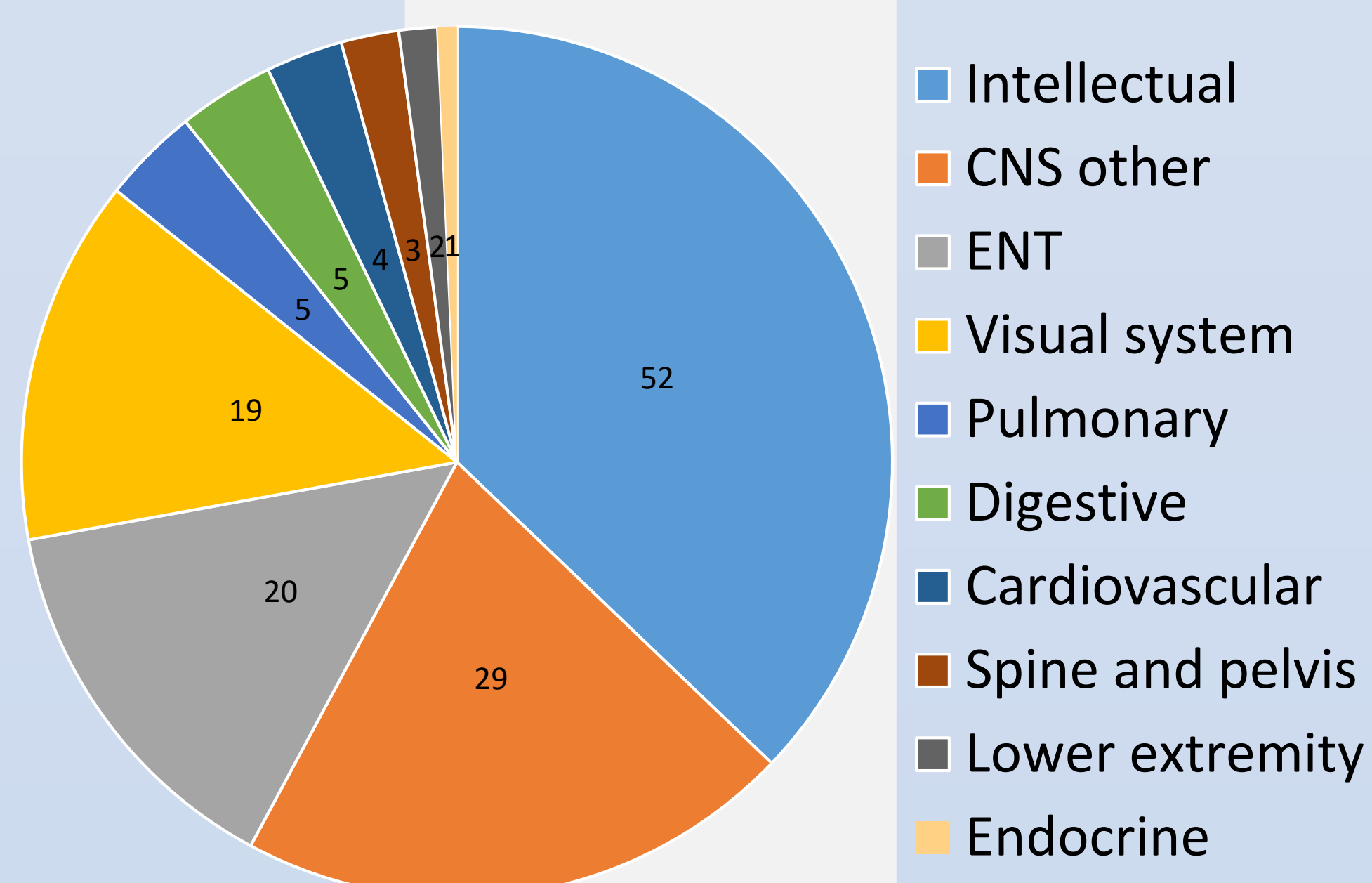
Skating impairment percentages are calculated for skaters’ individual impairments. These percentages are combined to provide an overall skating impairment percentage for each athlete. A skating impairment compensation is calculated for the athlete. This takes account of the skater’s impairments and the expected average score for skaters at that competitive level. The skater’s impairment compensation is calculated before the competition. It is added to the skater’s performance score, giving each individual skater’s final impairment compensated result.

This compensation adjusts for the impact of skaters’ combined disablements during competitions between athletes with varying and multiple impairments. This adjustment also enables these skaters to integrate with and compete against non-impaired skaters.



Skaters’ impairment types

(n=140)



Outcome

Our classification system has been successfully used in four international ice skating competitions over four years. We have awarded impairment compensation scores for 81 skaters. 38% of our skaters had more than one classified impairment type.

The classification system is readily adaptable to other sports to enable competition between athletes with different and multiple impairments. It will also be useful for other competitive sports which are based on individuals’ performance scores.

One skater’s story

This figure skater has a complex congenital syndrome.

The attending physician provided a classification report showing that the effects included a ventricular septal defect (VSD) microsomia, retrognathia, ear canal defects and cranio-cerebellar cord syndrome. The VSD has been repaired but the skater is short of breath on exertion (NYHA II). Intubation may be difficult due to air passage deformity. Muscle tone is increased in the right upper and left lower limbs, with reduced tone in opposite limbs. Balance is impaired due to muscle tone imbalance. Hearing is impaired. This disorder usually includes some intellectual impairment due to craniofacial deformity.

The skater’s clinical assessment included eight diagnoses (Cardiovascular, ENT hearing, ENT vestibular, ENT air passage, CNS right upper limb, CNS station and gait, CNS mental state and Cognitive and Highest Integrative Function (MSCHIF)).

The skater was awarded compensation for impairment of cardiovascular (17%), ENT hearing (6%), CNS upper limb right (5%) and CNS station and gait (10%), resulting in a 33% combined skating impairment compensation.

This skater competed in 2013 at level 2 when his impairment compensation adjusted score was 9.94. He skated again in 2014 when his compensated score was 10.98 and in 2015, scoring 11.47.

Skaters’ countries

(n=81)

