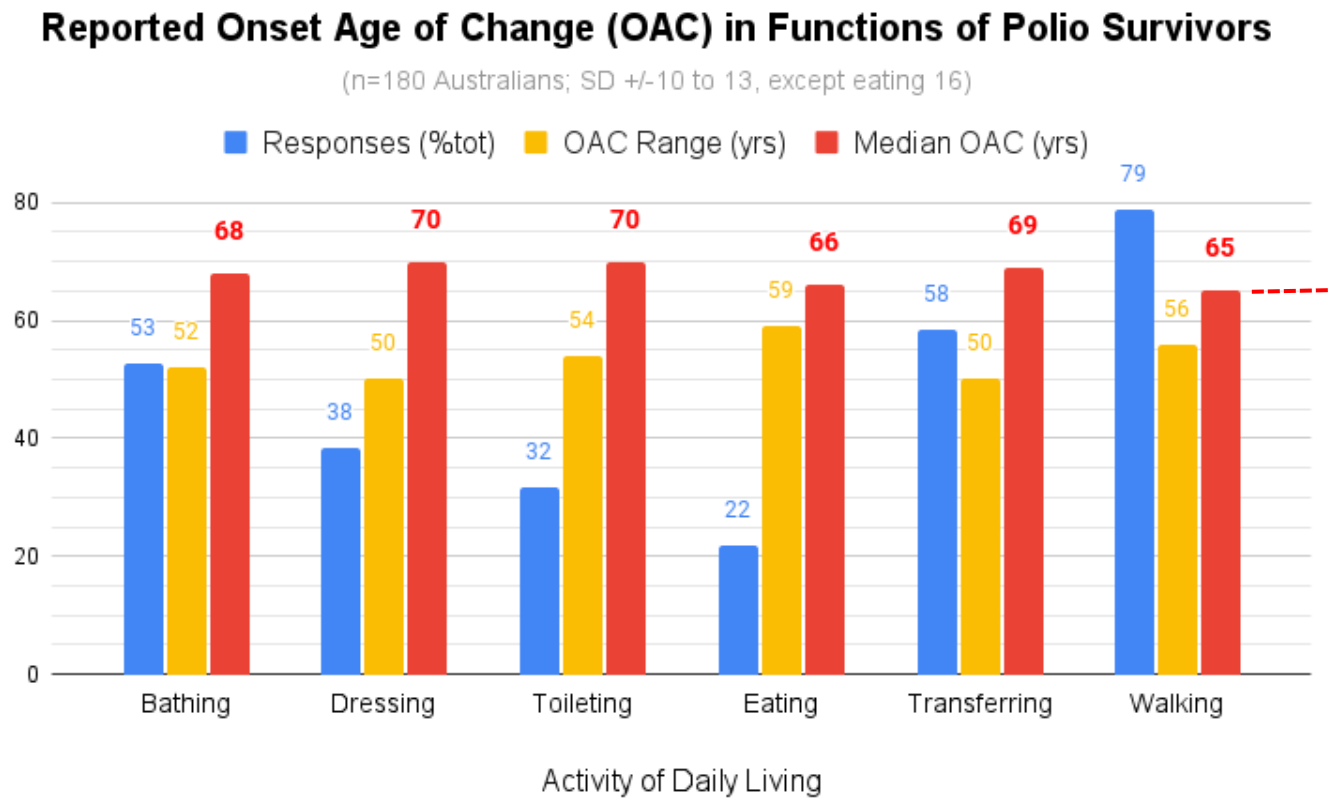

Australian polio survivors were surveyed in 2020 by Polio Australia. One survey, covering topics on *Health and Health Professional Use,* asked polio survivors to recall the age where they detected a change in their previous ability to perform activities of daily living (ADL).

The chart above shows the responses to the questions about ADL changes.

When working with polio survivors it is important to understand the following aspects related to ADL change:

a) The most common (79% of respondents, blue) ADL change experienced was a change in walking ability. This aligns with published post-polio research - walking ability change is an indicator of LEoP/PPS onset and is multifactorial.
b) While changes in toileting (32%) and eating (22%) are less common, they can indicate reducing capacities within bulbar and autonomic neural networks.
c) The OAC across ALDs ranged 50-59 years (orange), from survivors' early thirties to late eighties. Both young and elderly polio survivors report change in ADLs. Post-polio literature asserts that ageing is not the primary reason for functional changes in polio survivors – changing body system capacities is.
d) The median OAC reported was 65-70 years of age (red) - an age frustratingly close to but beyond NDIS eligibility (red dotted line). Clinical questioning of the polio survivor may reveal that ADL changes were noticed prior to age 65 but were dismissed or denied. Those <65 years old should obtain NDIS assistance.

Further functional context is important to obtain from each individual polio survivor.

It is prudent for each member of the multidisciplinary health team to understand the variability and extent of the ADL and function changes experienced by polio survivors.

Exercising Muscle Groups with Giant Motor Units in the Presence of Partial Paralysis

Specific guidelines for exercise in those with Late Effects of Polio:

- Polio survivors should be encouraged to exercise to benefit their health.
- Exercise in post-polio patients should be prescribed and monitored.
- The expertise and guidance of LEoP-informed therapists should be used.
- Avoid LEoP fatigue and pain rollercoasters by careful prescription.
- When initiating exercise programs think: low-strain, slow, conservative.
- Assess safety (fall, fracture, temperature) in each exercise mode choice.
- LEoP weakness can be stabilised or slowed, but never normalised.
- The goal to articulate, is to "stabilise function" NOT to "get stronger".
- Avoid unnecessary "extra" stress and strain on all muscle groups.
- Educate survivors on moderate consistent exercise and risks of disuse.

STRENGTHENING

- Any strength gains will emerge slowly; progress exercises gradually.
- Only exercise muscle groups that test as 3+ or greater out of 5.
- Fibre type, fibrosis, atrophy, and vasomotor tone affect muscle function.
- Low resistance (intensity), moderate repetitions, ensuring frequent rest.

CARDIOVASCULAR

- With whole body modes, exert only to the capacity of the weakest limb.
- Modes that support weaker limbs should be prioritised (e.g. aquatics).
- Shorter moderate bouts with rest (intervals) may be tolerated best.
- Environment and clothing planning help reduce heat loss after exercise.

JOINT RANGE AND MUSCLE LENGTH

- Stretching must appreciate surgical history and any limb bracing in use.
- Stretching can reduce pain, reduce asymmetry, and stabilise posture.
- Stretching intrinsically affects muscle control – this can present risks.

BALANCE AND CONTROL

- Skill and balance activities should adhere to the above constraints.
- Reducing fall risk using a multifaceted approach should be a priority.

Polio Australia

Improving health outcomes for Australia's polio survivors