



Polio Oz News

September 2023 – Spring Edition

Exercise Or Cognitive Behavioural Therapy For People With PPS?

By Michael Jackson

Polio Australia Clinical Educator

Perspectives on People with PPS Utilising Exercise or Cognitive Behavioural Therapy (CBT)

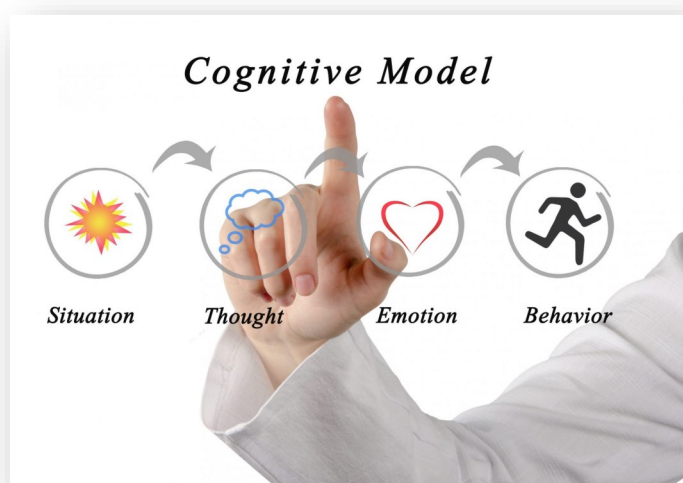
An exploratory Dutch study titled *Experiences and perspectives of patients with post-polio syndrome and therapists with exercise and cognitive behavioural therapy* was published in BMC Neurology in mid-2023. ([Source](#); open access) It looked at the perspectives of those with PPS and their clinicians, on exercise and [CBT interventions](#).

An earlier randomised controlled trial (by some of the same authors) had found no significant decreases in levels of fatigue or in aspects of quality of life with exercise of CBT interventions. The current study ran parallel to the earlier one, as a complementary study on the topic, drawing on a portion of the same participants.

Patients in this study reported not experiencing a decrease in fatigue with CBT, but it was perceived as valuable and long-lasting. They got more than they expected from it and there were empowering aspects noticed.

CBT therapists were moderately positive about the outcomes, noticing improvements in some patients, however the protocol used presented challenges. Due to limited distress (about their fatigue) being present in the patient group, the key element of motivation may have been too low.

Physical improvements were noted in some patients in the exercise group, but were mostly perceived as short-term, fading after the study's completion. Fatigue did not decrease in their experience in the study, but some patients did become more aware of their limitations which helped them manage energy use. The physical effort of exercise was seen as hard by all patients, and time investment in the exercise was a challenge. Self-esteem and acceptance improvements were experienced by some – emerging from exercising or the group interactions. The value of group training with peer engagement could not be overlooked.



Therapists expected endurance to improve but were unsure how fatigue might change in the patients. Physical and educational gains were evident related to the exercise performed, but this varied across the patients. The risk of patient 'over-achievement' was noted by the therapists, and they recognised the need for experience in delivering the exercise protocol.

Overall, CBT had no negative consequences while the exercise was perceived to be demanding and time consuming. There appeared to be low intrinsic motivation in the patients. The improvements noted in self-esteem and acceptance should not be overshadowed by the findings of no clear changes in fatigue. This was different to the earlier study, and the authors note that it may be due to this study's design which captured more nuances of the interventions and condition-specific aspects. However, there was notable discussion about influencing factors (and biases) related to interviewing, population characteristics and motivation.

A useful section was included to advise clinicians, including the following:

CBT

- Patient selection for CBT should consider distress level and need for support
- Motivation is an essential factor to align needs with interventions

Cont'd P4

Polio Australia

Representing polio survivors

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Inside this issue:

- [Exercise Or CBT For PPS?](#) 1
- [President's Report](#) 3
- [From The Editor](#) 3
- [Program Updates](#) 4
- [Posture And Seating Resource](#) 5
- [Polio Awareness Month](#) 6
- [LEoP And Continuing PD](#) 7
- [Polio NZ Signs Off](#) 8
- [Lives Well Lived Short Film](#) 9
- [The Autumn Ghost](#) 9
- [Foods For Snooze](#) 10
- [Accessible Travel Options](#) 11
- [Country Women With Disability Share Their Stories](#) 12
- [NDIS Review](#) 12
- [Inside Iron Lung For More Than 70 years](#) 13
- [What Is An Iron Lung?](#) 14
- [Building A new Vaccine Arsenal](#) 16
- [Can The World Really Stop WPV?](#) 17
- [Polio Around The World](#) 19
- [Polio This Week](#) 22

“An optimist is the human personification of Spring
~ Susan J Bissonette ~”

Polio Australia's Websites


MEDICAL ALERT
My medical history includes polio. I now experience symptoms of Late Effects of Polio. I may require additional assistance or specialised treatment to reduce my risks. Please discuss treatments with me, my family or carer, and my GP. Please also inform other staff of my condition. For more information on my surgical risks & planning for hospitalisations.

Late Effects of Polio
MEDICAL ALERT CARD
Download



Late Effects of Polio: Introduction to Clinical Practice
SECOND EDITION
NEWLY RELEASED
Download

Polio Australia
Representing polio survivors throughout Australia

Welcome to the Polio Australia website. Polio Australia is a not-for-profit organisation supporting polio survivors living in Australia. This website contains information about polio, the Late Effects of Polio, the work of Polio Australia and much more.

www.polioaustralia.org.au

Polio Australia
Improving health outcomes for Australia's polio survivors

The Polio Health website is a comprehensive resource for both health professionals and polio survivors. It contains clinically researched information on the Late Effects of Polio; the Health Professional Register; and where Polio Australia's Clinical Practice Workshops for Health Professionals are being held.

www.poliohealth.org.au

Australian Polio Register
Have you added your polio details?

The Australian Polio Register was established by Polio Australia in October 2010 to gather information on the numbers of polio survivors living in Australia today, whether or not they contracted polio in this country. To make the Australian Polio Register truly reflective of the unmet need for polio services throughout Australia, we urge every Australian polio survivor to join the Polio Register. Our strength lies in our numbers—please help us to get you the services you need by adding your polio details to the Register. You can register online or by downloading and completing a [paper copy](#).

www.australianpolioregister.org.au

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President's Report



By Gillian Thomas OAM
President

It's hard to believe that we are already 3/4 of the way through another year. And Polio Australia is "Still Here!", after nearly 15 years. We became an incorporated organisation in 2008, opening an office in January 2010. Since then, it

has been an ongoing challenge to fund the services we provide.

Michael Jackson joined us as Clinical Educator in 2019, and has proven to be a vital member of our small Team. His regular articles and program updates in *Polio Oz News* are testament to both his passion and efficacy in educating our treating health professionals. Polio Australia was fortunate to have received federal Dept of Health funding for the Clinical Practice Workshop program until June last year. However, this has not been renewed, and we have been unable to secure any other funding for the program since.

After much discussion, Polio Australia's Board resolved to continuing financing this key program for as long as possible. Longer term, we remain dependent upon at finding a new funding source,

but are pleased to be able to maintain the program for 2023 at least. As such, we are extremely indebted to everyone who donated during the EOFY campaign (P7) and will continue to gratefully accept any financial support — no matter the amount!

I was saddened to see that Polio NZ ceased to operate earlier this year, after 33 years (P8). But whilst our Kiwi cousins no longer have dedicated peer support, they are fortunate to have aligned themselves with [The Duncan Foundation](#), "a national support service for people living with neurological conditions, and the health professionals who treat and support them." I am sure that we all wish them well.

Polio Australia has been closely following the much needed and anticipated NDIS Review (P12). We fervently hope any changes will include removing the discriminatory age cap of 65 years old.

Most of us have a story inside us, just waiting to be told. So why not share it for Polio Awareness Month at office@polioaustralia.org.au. It would be really good to see a few new stories. This is the way we can keep our message alive — that "We're Still Here!" and need our treating health professionals to see that the Late Effects of Polio are more than just 'normal ageing'. ● *Gillian*

From The Editor



By Maryann Liethof
Editor

Although there are decidedly more Spring blossoms around, Melbourne is yet to come out of hibernation just yet, it would seem. However, with all the environmental changes happening around the world, I

am mindful that cooler weather may be a blessing in some areas. At least I'm not delivering vaccines like the incredible women in India, Pakistan and Afghanistan (P17-21).

Although it could be argued that the results of the Dutch study exploring at Exercise and Cognitive Behavioural Therapy (P1) were not exactly definitive, it is really good to see that research in the area of post-polio syndrome is still being done. This was also reflected in the LEOp and Continuing Professional Development paper which recently appeared in the Australian Journal of General Practice (P7). It is vital that our health professionals continue to be made aware of the issues faced by polio survivors.

And so we approach our annual Polio Awareness Month in October, with Rotary International's World Polio Day on the 24th of October. Polio Australia's hard working Administration Officer,



Paulette, has outlined a number of activities people can get involved with (P6), from simply wearing orange to contacting your local council to request they illuminate buildings and/or landmarks in orange for a week in October.

Three Victorian polio survivors have also been spreading the word about the challenges they face in a short film titled "Lives Well Lived" (P9). Shirley Glance OAM, Dr Peter Freckleton, and Robyn Abrahams feature in this five minute documentary, sharing their stories and life journeys.

Nutritionist, Melinda Overall, has once again contributed an excellent reminder of the important part food plays in all our lives (P10). I admit to having a few problems sleeping through the night sometimes (who doesn't?). As I had kiwi fruit in a bowl, I thought I'd try Melinda's suggestion of eating it as dessert after the evening meal. I can honestly say that it seemed to work. It could have just been that particular night—I can't be sure—but worth a try!

Writing for *Freedom2Live*, Kymberly Martin has highlighted a couple of interesting podcasts (P11-12). And everything you ever wanted to know about Iron Lungs appears across two articles (P13-15). What a fascinating invention!

So, happy reading, and I hope to see some orange photos in the next edition! ● *Maryann*

Clinical Practice Workshops Update



By Michael Jackson

Polio Australia Clinical Educator

We Visited Tasmania!

Although we had reached Tasmanian clinicians via our monthly Zoom sessions and had educated a private hospital staff group via Zoom in recent years, the last time we actually were on location in Tasmania was before the pandemic started. In 2018 and 2019, Paul (my predecessor) had delivered eight workshops, primarily in Hobart and Launceston, with one visit to Burnie. So a visit was long overdue.

From August 21st to 25th we delivered five workshops in five days, which made for a busy trip and a tired voice by the end. These included two hospitals in Hobart – Hobart Private and Royal Hobart; and in Launceston – a private physio clinic with numerous offices joining remotely, Launceston General Hospital, and the In-Balance private physio clinic. A total of 45 clinicians attended, which matched the average attendees at sessions elsewhere this year, with the majority being physiotherapists.

Many thanks to the five local polio survivors who shared their polio experiences through the Lived Expert role at the Launceston workshops. It is great to meet you, to hear your stories and insights, and for the clinicians to listen to you to better understand the clinical information shared with them.

Our next trip is to Melbourne at the end of September, where we have four workshops in four days and a public speaking opportunity at a Probus Club. 🌟

Exercise Or CBT For People With PPS? *(Cont'd from P1)*

Exercise

- Fitting therapy into a daily routine will likely enable participation
- Exercise intensity is person-specific and should align with physical capacity
- Ensure an aspect of enjoyment or peer interaction is present with exercise
- Online training sessions may better fit individual routines, and enable well-informed supervision and peer contact

Our perspective on this study

This study highlights aspects of motivation and participation which can confound results when looking at the group level. It must be kept in mind that individuals affected by polio are extremely variable in their presentation and their approach to their polio experience.

Fatigue is complex and difficult to manage for many Australians affected by polio. We know that fatigue management is exactly that: a

symptom that needs to be understood, attended to and managed carefully by the individual. Single interventions are unlikely to 'solve' fatigue – they should be seen as tools to inform and guide those with fatigue.

Regarding exercise, we know that there are mental and physical health benefits from participating in it for those affected by polio. To be successful with exercise requires 'getting it right' and 'finding a sweet spot that doesn't worsen symptoms', using advice and monitoring from a LEOp-informed exercise clinician. Polio Australia should explore how an online exercise class might have uptake amongst our polio survivors.

Source: Bakker, M., Schipper, K., Koopman, F.S. *et al.* Experiences and perspectives of patients with post-polio syndrome and therapists with exercise and cognitive behavioural therapy. *BMC Neurol* 16, 23 (2016). 🌟

CANBERRA 8-9 NOV 2023
Exhibition Park (Epic)

ADELAIDE 6-7 MARCH 2024
Adelaide Showground

SYDNEY 22-23 MAY 2024
Sydney Showground



atsa
independent living
expo

Community Programs Update



By Devalina Battacharjee
Community Development Worker

Community Information Sessions

- 5 sessions have been presented in Sydney in the suburbs of Randwick, Hornsby, Parramatta, Glenhaven and Hurstville, from the 19th till the 23rd of June, respectively. The sessions have been well attended and received.
- Sessions are currently being planned in Bendigo and Noble Park in Victoria.
- 5 sessions to be presented in Western Australia from the 23rd of October.
- 5 sessions to be presented in South Australia starting from the 13th of November.

Monthly Zoom Sessions

- We continue to meet monthly on Zoom, with very good attendance (averaging 50).
- Guest speakers have included Prof Mike Kossove and Dr Seema Padenceri. More guest speakers are in the process of being confirmed.

NDIS and My Aged Care Chats

- NDIS and My Aged Care chats took place on the 11th and 18th of July 2023.
- The next round of NDIS and My Aged Care chats are set to take place on the 10th and 17th of October, respectively.
- Please register below if you would like to attend one of these sessions:

www.polioaustralia.org.au/community-information-sessions

Advocacy

- Joined MS Australia's "[A better NDIS](#)" campaign.
- Attended Neurological Alliance Australia's update meeting on the 1st of August.
- Considering attending the [Older Women's Network National Conference](#) in Sydney on 28th September, budget considerations permitting. 🌟

New Resource

Posture and Seating



- Posture is important at all times, but especially when holding a posture for a long time
- Seated posture relates to the use of chairs, couches, vehicles, wheelchairs, scooters, power chairs.
- Seating is a source of poor health outcomes - long periods of sitting very still affects your health.

Polio Awareness Month



By Paulette Jackson
Administration Officer

October is quickly approaching and before you know it, we will be celebrating Polio Awareness Month 2023. Our theme, "We're Still Here", continues to bring awareness to the tens of thousands of polio survivors living here in Australia.

One of the ways Polio Australia raises awareness is by illuminating the country orange during the second week in October. As of 29-August, we have confirmed 57 landmarks across Australia illuminating **ORANGE** in support of Polio Awareness Month! It is nice to see participation in each state and territory. We continue to update this list as further confirmations are received. To find out which landmarks will be illuminated in your area, check out our list [HERE](#). If you would like to raise awareness and see landmarks lit up orange in your area, ask your local council to illuminate landmarks during **8th-14th October**. A sample template can be found [HERE](#). Let us know if you are successful so we can update our list!

In addition to illuminating landmarks, we will be encouraging people to **wear orange** on **2nd October** during our monthly **Zoom chat for polio survivors** as well as on **24th October** for **World Polio Day**. Snap a photo of yourself with friends and family wearing orange and post it to our social media sites. We would love to see everyone wearing orange!

Any polio survivors wishing to share their story (either by writing about it or being interviewed by media) can email us at office@polioaustralia.org.au.

For more information on Polio Awareness Month and associated events ([including a puzzle competition where you could win prizes from Bunnings](#)), check out our website at: www.polioaustralia.org.au/polio-awareness-month-2023/. 🌟

POLIO AWARENESS MONTH 2023

We're Still Here

More information 

LIGHTING UP AUSTRALIA **ORANGE** FOR POLIO AWARENESS MONTH



EOFY Thank You!



Following on from our request in the Winter Edition of *Polio Oz News* for End-Of-Financial-Year donations, Polio Australia is delighted to announce that we received just over \$18,000.

Polio Australia relies on donations and bequests to help ensure that all polio survivors in Australia have access to appropriate health care and the support required to maintain independence and make informed life choices.

Polio Australia is endorsed by the Australian Taxation Office as a Health Promotion Charity and a Deductible Gift Recipient making all Australian donations over \$2 tax deductible. Polio Australia will issue an official receipt for all donations received.

Find out more here:

www.polioaustralia.org.au/donations-bequests

LEoP And Continuing Professional Development

Authors: *Petra Quinlan-Turner, Phyllis Lau, Keith R McVilly*

Source: www1.racgp.org.au—5 May 2023

Late effects of polio: Interviewing general practitioners and health professionals about the need for and the means of promoting continuing professional development

Background and objectives

Polio Australia estimates tens of thousands of polio survivors are experiencing late effects of polio (LEoP), including increased cases among young women of childbearing age in some migrant communities. Because polio has been declared eradicated in Australia, the provision and uptake of education by general practitioners (GPs) and healthcare professionals (HCPs) is minimal. We explored the awareness of LEoP among HCPs and ways to enhance knowledge dissemination to improve clinical practice.

Results

HCPs expressed the importance of learning about LEoP and how this may help build supportive patient-practitioner relationships and contribute to patient outcomes. Factors influencing the uptake of professional development included motivation, possibly stemming from a lack of awareness of LEoP, together with the time and logistical limitations of practice generally.

Conclusions

Thousands of Australian and New Zealand polio survivors are experiencing sequelae from past polio infections, many in migrant communities

and including women of childbearing age. HCPs need to be aware of LEoP and PPS and incorporate this knowledge into their assessment and management of patients. A lack of awareness of LEoP and PPS, combined with time constraints for CPD, serves to perpetuate a serious gap in clinical knowledge, with potential adverse consequences for patients at risk of not being diagnosed or poorly managed.

Professional organisations could combine to develop multidisciplinary peer learning modules on LEoP. Existing online resources, such as the LEoP module on HealthPathways, could be more widely promoted. Organising dedicated symposia, such as that co-hosted by the University of Otago and Polio New Zealand, could also help with the dissemination of knowledge. Importantly, exploring the views of polio survivors and involving them in the co-development and delivery of educational materials could improve the relevance to all stakeholders involved.

Read full article [here](#).



Polio NZ Signs Off

Presidents Report May 2023

Fellow Members of Polio NZ Inc, It is with sadness mingled with regret that I write this final President's Report for Polio NZ Inc. I never thought that I would be the person doing this. Polio NZ and formerly Post Polio Support Society was formed to help and offer assistance to the people of New Zealand who are suffering from the Late Effects of Polio.

I believe that we have achieved probably 90% of the objectives set out in the beginning. Regretfully, some things haven't been achieved, for a number of reasons. I think one of the main ones is that some of the medical profession and governments don't want to recognise us as people needing recognition for what we have suffered and suffering from now. Go away, polio doesn't exist anymore so there is nothing wrong with you except you're getting old.

The past boards have done their darndest to make various departments and institutions understand our needs and expectations. Some have listened and taken our issues on board and then came changes to top people and we start all over again, (e.g. Governments, Government Departments, DHB's, etc.)

However, we have had some very successful Retreats and Conferences over the years and there has been great camaraderie, sharing of stories and experiences and a lot of useful information from great speakers. These will be missed, but the costs and ability to get to suitable venues around the country, and our mobility issues, has made it a lot more awkward to run them successfully.

The morning and afternoon teas with Marlayna will continue Mondays via Zoom for friendship, discussions and sharing of information. If you would like to join in go to polio.org.nz website and click on the link.

The upcoming changes in the Incorporated Societies Act (2026) will make it a lot more difficult to run a successful voluntary administration board. An aging population and having the people who are prepared to be on a Board to manage rule changes are the main reasons for the decision to wind up Polio NZ Inc and hand over the assets to the Duncan Foundation who will continue to do good for us.

We are grateful that we have a good working relationship with the Duncan Foundation, so give them your support and donate to them anything you may have given to Polio NZ Inc. Thank you, Leticia and The Duncan Foundation.

Unfortunately, our group is not alone in having to rethink our future. Many other clubs and groups have suffered the same fate, and we won't be the last.

I wish to thank past Board members for their work over the past 33 years or so.

There are also many individuals (too many to write down in case I miss someone's name, but you know who you are) who have dedicated their time to get information, help, knowledge and support out to the members, and making the population aware of what Polio is and what we as survivors have been and are going



through even now. Thank you all,

Thank you, Jeannette, for your support in keeping the organisation information up to date with the various authorities, for monitoring the 0800 number pretty much 24/7, organising the transfer of assets to The Duncan Foundation and all the other admin stuff that you have done over the years.

I will be keeping the Obituary Book open so if you hear or know of a member who has passed away, please, let me know so that I can record them. Name, address, date. Send to brian@polio.org.nz or dalandbrian@outlook.com or post to 10 Totara Street, Tapawera 7096 or you can phone me 021 138 2845.

In signing off, I would like to wish each and everyone of you best wishes, good health (as can be expected), take care and look after yourselves. I can still be contacted via email or phone and will be happy to hear from you.

Kind regards

Brian Robinson
Outgoing President, Polio NZ

Lives Well Lived Short Film

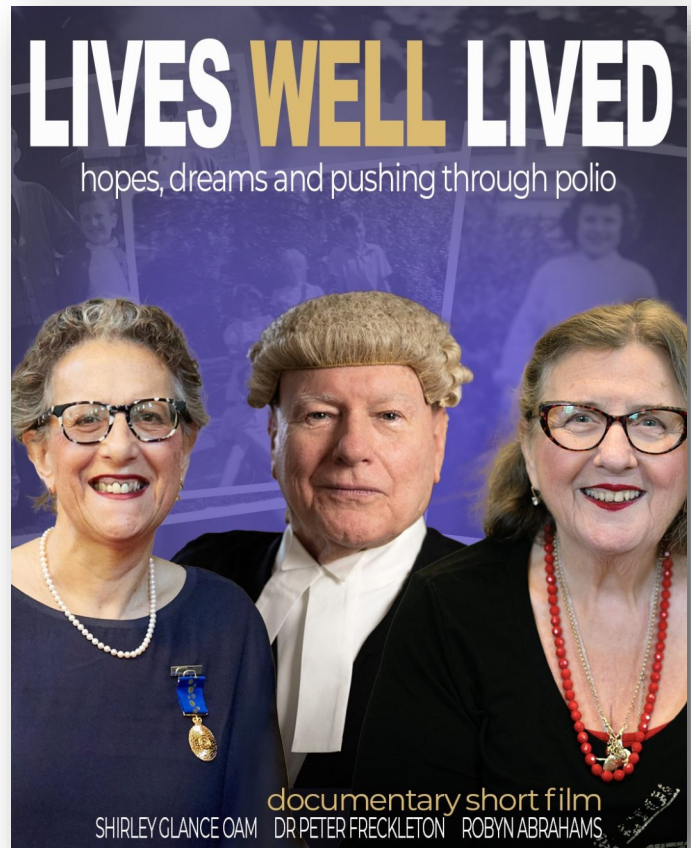
'LIVES WELL LIVED – hopes, dreams and surviving polio' is a finalist in the 2023 Focus On Ability Short Film Awards.

About our film 'LIVES WELL LIVED – hopes, dreams and surviving Polio

This is the story of three disabled adults born in Melbourne, Australia in the 1950s. They have a range of personal, social and cultural backgrounds. They contracted poliomyelitis also known as infantile paralysis, a neuromuscular disorder caused by a virus in the epidemics of the 1950s. Many died, fortunately they did not!

Together with their parents, family and friends they did begin a lifetime of disability and its inherent struggles, challenges and difficulties; pain and lack of mobility. "This occurred in a world with limited access to all services, where bullying was the norm and fairness was not considered".

Decades later they meet, having had a lifetime of struggle and joy and together now form part of the Post Polio Victoria Board. Together they now spend much of their lives advocating for Polio survivors and all other disabled people to achieve fairness and equity for all. This is their story of strength, courage and a recipe for energy to continue on at all costs Peter is now 76, Robyn 73 and Shirley 70 and this is their story. 🌟



Watch film here:

www.focusonability.com.au/FOA/

The Autumn Ghost—New Book

Dr. Hannah Wunsch, is the author of the recently published book, "[The Autumn Ghost: How the Battle Against a Polio Epidemic Revolutionized Modern Medical Care](#)".

In addition to being a summer resident of Woods Hole, Dr. Wunsch is a critical-care physician and researcher at Sunnybrook Health Sciences Centre. She is a professor of anaesthesiology and critical-care medicine at the University of Toronto, as well as a Canada Research Chair.

"The Autumn Ghost" is a suspenseful, authoritative account of how the battle against a mid-century polio epidemic sparked a revolution in medical care. Americans knew polio as the "summer plague". In countries farther north, however, the virus arrived later in the year, slipping into the homes of healthy children as the summer waned and the equinox approached. It was described by one writer as "the autumn ghost".

Intensive care units and mechanical ventilation are the crucial foundation of modern medical care; without them, the death toll of the COVID-19 pandemic would be even higher. In "The Autumn Ghost", Dr. Wunsch traces the origins of these two innovations back to a polio epidemic in the autumn of 1952. Drawing together compelling testimony from doctors, nurses, medical students and patients, she relates a gripping tale of an epidemic that changed the world. 🌟

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Foods For Snooze

By Melinda Overall JP

Nutritionist / Counsellor

www.overallnutrition.com.au

Having trouble getting some shut-eye? It might be the foods you're choosing or avoiding before bed.



There's a whole host of reasons people can get too little sleep which can lead to fatigue, disruptions to mood, changes in memory, poor concentration and increased risk of dementia. On average an adult aged between 25 and 64 years is recommended to get between 7-9 nine hours sleep each night. Adults aged 65 and over are recommended to get between 7-8 hours sleep each night [1].

To help improve sleep onset and maintenance health professionals often talk about *sleep hygiene*, which relates to the good habits people can adopt to support sleep. Sleep hygiene includes things like [2]:

- Not consuming caffeine soon before bed
- Going bed at the same time each day to establish routine
- Avoiding computers, televisions and other screen time soon before bed
- Avoiding being hungry or too full at bed time
- Having a bedroom that's not too hot and not too cold
- Keeping pets out of the bedroom
- Popping to the loo before bed to avoid getting up in the night
- Updating bedding: mattresses and pillows [2]

But did you know that what you eat matters?

Caffeine – It's a great idea to avoid any caffeine-containing stimulants like tea, coffee and even hot chocolate in the evening. Caffeine can inhibit the neurotransmitters that promote sleepiness [3].

Alcohol – Alcohol can also inhibit the neurotransmitters that promote sleepiness, despite making you feel drowsy soon after drinking. It can also lead to dehydration which can further disrupt your sleep [4].

Kiwi fruit – A small randomised controlled trial found that eating two kiwi fruits an hour before bed supports sleep onset, possibly because they contain melatonin, our primary sleep chemical [5].

Tart Cherries and Tart Cherry Juice – Tart cherries have been shown to have beneficial effects on sleep onset and maintenance, again possibly due to their melatonin content [6].

Night-time Milk including Malted Milk – Milk contains GABA (a calming neurotransmitter), tryptophan (the precursor to the mood-stabilising serotonin, which is the precursor to melatonin) and these may all play role in sleep maintenance [7].

Fatty Fish – Fatty fish may be helpful in improving overall sleep quality. It is thought that this is related to the vitamin D found in oily fish such as salmon, mackerel, trout, sardines and anchovies. Vitamin D helps to modulate the activity of serotonin and melatonin [7].

Fast Food – A fast food diet, or one with high levels of ultra-processed foods, appears to be correlated with poor sleep quality and maintenance, and longer sleep latency [8]. So whilst they might taste delicious, it might be a good idea to limit these foods if sleep has been an issue.

Mediterranean Diet – In so many studies, on all sorts of health issues, the Mediterranean diet proves itself time and time to be the superior of all diets. The Mediterranean diet is very low in processed foods, low in consumption of meat, alcohol and sweets but includes higher consumption of fruits, vegetables, cereals, legumes and fish. This diet profile has been shown to improve overall sleep quality [9].

So, if sleep has been a problem of late, perhaps you could take some time to review your diet and see if you can tweak some changes, and get some more zzzzzzzzzzzzzzzzzzzzzz

Eat well, sleep well.

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Accessible Travel Options—Podcast

By Kymberly Martin

Source: www.freedom2live.com.au
– 30 August 2023

Queensland has unveiled an accessible tourism podcast, designed to educate the tourism industry about the specific needs of people living with disability.

Called *Accessed That*, the podcast explores what it's like to travel with a disability and spans 11 episodes that encourages travellers with a range of disabilities to share their own insights of 'having been there, accessed that'.

Helping to drive the conversation each week is comedian Oliver Hunter, who has cerebral palsy and Paralympic swimmer and TV presenter Karni Liddell. The duo deliver informal chats with guests, drilling down into the challenges as well as the uplifting moments that come with travelling with disability.

Speaking about the podcast Hunter said he wants to spread the word about accessible tourism and share stories of those who travel with disability. Hunter who uses a wheelchair said the main barrier he faces is the limited information available about accessible accommodation and activities. *"For people with a disability, the best resource to prepare for anything, especially travel, is to hear directly from others with lived experiences and firsthand reviews are what Accessed That offers."*

Steph Agnew who is blind, is one of the guests appearing on *Accessed That*, who recently took a trip to North Queensland.

"I would recommend Kuranda Scenic Railway to travellers who may be blind or have low vision," she said. "Even though I couldn't see the vistas, I was able to tap into my other senses, like smell and hearing, to experience the rainforest. I could feel the cool air on my skin as we ascended the mountain, while the audio aids onboard helped me understand the scenery we were passing and the history of the railway."

Other examples of accessible experiences include the Brisbane Powerhouse which schedules regular Auslan performances for visitors who are deaf or hard of hearing. The venue also offers reserved wheelchair seating space in front of the stage for select standing flat floor shows.

Sea World at the Gold Coast provides wheelchair friendly access to many of the park's shows and exhibits as well as a pool hoist for people with mobility restrictions to access the dolphin pool and get close to other friendly creatures. The *All Abilities Events*, are custom designed for people with physical and cognitive challenges, creating a social and supportive environment to experience the joy of floating weightless in the air.

The *Accessed That* podcast is streamed via Apple Podcasts, Spotify and Google Podcasts with new episodes released weekly or go to: queensland.com/accessedthatpodcast.

For more information on accessible holidays visit: queensland.com/foreveryone.



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Country Women With Disability Share Their Stories

By Kymberly Martin

Source: www.freedom2live.com.au

– 30 August 2023

Take a trip away regional homes, workplaces, concert halls, sporting clubs and local pubs in rural communities and discover some unique stories in a new podcast.

From the Outskirts as its title suggests presents stories from 12 women from rural and regional Victoria whose individual voices of strength and individuality will be amplified across the world.

Local radio, interviewer Liz Wright was visited the homes of the women across the state.

Series one of the podcast, created by Women with Disabilities Victoria (WDV), introduces listeners to musicians, mothers, partners, artists and changemakers. All so different, yet united by their experiences of the world around them.

"Women with Disabilities Victoria is an organisation dedicated to empowering women with disabilities and sharing the stories. We know some women who live and work across regional and rural Victoria often face additional barriers," WDV CEO Nadia Mattiazzo



said. *"The podcast series has created an opportunity for regional and rural women with disabilities to be seen and heard."*

"Listening to the podcasts or reading the transcripts and learning the stories of these 12 unique voices, with their diverse interests, lifestyles, and backgrounds has been a privilege," she said.

There will be an event in Bendigo on Saturday September 9 to celebrate the launch.

From the Outskirts will be launched across podcast platforms from September 9 and also includes a commemorative magazine with various accessible versions available from www.wdv.org.au

NDIS Review To Suggest Major Structural Reforms



By Sara Gingold and Jessica Quilty

Source: teamdsc.com.au – 22 August 2023

Today, the NDIS Review Panel gave us a highly anticipated glimpse into how it hopes to reform the NDIS. The town hall and provider webinars were symbolically held in Newcastle, the location where then Prime Minister Kevin Rudd officially launched the NDIS in 2013. Now, Newcastle may well go down in history for a second time. Because the changes proposed by the Review Panel today are not tinkering around the edges, they are major structural reforms to Australia's entire disability landscape.

The Panel has previously summarised the key challenges facing the Scheme in their [Interim Report](#) (you can read our analysis [here](#)). But today's talk was the first indication we've had about what solutions they might recommend.

Panel co-chair Professor Bruce Bonyhady told the

community that rising costs are very serious and real, and called for significant change. He argued that governments, service providers, participants and family members all need to stop treating the NDIS as though it is a limitless 'magic pudding'. Because unlike the magic pudding, the NDIS is finite, and is in danger of overshooting its target of an 8% expenditure growth limit.

This is all quite serious, but I can't help seriously craving pudding right now. It doesn't have to be magic, chocolate is also fine.

Bonyhady said the NDIS is a policy miracle. It was a policy idea that got off the ground against all odds. But we now have to protect that miracle, and that happens by making some real changes.

Read full article [here](#).

Note: DSC is Australia's leading training, conference and consulting group specialising in the NDIS. 🌟

Inside Iron Lung For More Than 70 Years

By Jessica Hamilton

Source: www.dailymail.co.uk — 1 August 2023

Man who's lived inside iron lung for more than 70 years after being struck down by polio developed new way of breathing

- Paul Alexander, 77, of Dallas, Texas still relies on an iron lung to help him breathe
- After contracting polio in 1952, he was paralysed and left reliant on the machine
- Paul developed a new way of breathing to make the most out of his life

Paul Alexander was just six years old when he was struck down by polio, which left him paralysed from the neck down.

Unable to breathe by himself, Paul was placed inside an iron lung, which he has relied on since 1952.

Paul has spent a lifetime in and out of the iron lung, and developed his own way for breathing that he calls 'frog breathing', which allowed him to spend some of his life outside of the metal contraption.

The ventilator, which resembles a terrifying metal coffin, requires patients to lie down inside, with the device fastened tightly around their neck.

It works by creating a vacuum to mechanically draw in oxygen to the lungs for patients whose central nervous system and respiratory function were ravaged by polio.

While in hospital, doctors tried to get Paul to breathe on his own, turning off the machine and forcing him out, but it wouldn't take long for him to turn blue and pass out.

However, the Guardian reported, Paul managed to force some air into his lungs using an 'exhausting' technique that he described as 'frog breathing'.

A Short History Of The Iron Lung

An iron lung is a non-invasive negative-pressure ventilator, used to artificially maintain respiration during an acute polio infection.

They were first used in the 1920s and work by producing pressure on the lungs that causes them to expand and contract so that patients can breathe.

In most cases it would only be used for one or two weeks, until the patient could breathe independently, but some polio survivors with permanent respiratory paralysis rely on them daily.

They are now all but obsolete, replaced by

positive-pressure ventilators such as modern day respirators.

The technical name for 'frog breathing' is 'glossopharyngeal breathing' and involves gulping air and swallowing it down.

Paul's physical therapist, Mrs Sullivan, helped him to develop the breathing technique.

Encouraging him along, she offered him a puppy if he could breathe without the ventilator for three minutes.

It took Paul a year to do it but he got his puppy and called her Ginger. Once he could breathe unassisted for a long period of time, he could step outside the iron lung, venturing first to the porch and then the yard.

And, although he still needed to sleep in the iron lung, Paul ventured beyond the yard. At 21, he became the first person to graduate from a high school in Dallas without ever attending class in person.

He was accepted into Southern Methodist University in Dallas, after much difficulty with university administration and then got into law school at the University of Texas, Austin.

Paul moved into a dorm, hiring a caretaker to help him with physical tasks and hygiene.

'When I transferred to University of Texas, they were horrified to think that I was going to bring my iron lung down, but I did, and I put it in the dorm, and I lived in the dorm with my iron lung,' Paul recalled.

He pursued his dreams of becoming a trial lawyer, and represented clients in court in a three-piece suit and a modified wheelchair that held his paralysed body upright.

Over his lifetime, he has been on planes, lived alone, fallen in love, prayed in church, visited the ocean and has even found himself in a strip club.



Photo: Paul Alexander, 77, of Dallas is one of just a handful of people around the world who still relies on an iron lung to help him breathe

Inside Iron Lung For More Than 70 Years *(Cont'd from P13)*

He also staged a sit-in for disability rights and published his own memoir, titled 'Three Minutes for a Dog: My Life in an Iron Lung'.

The 155-page memoir was carefully crafted and took five years to complete; Paul wrote each word with a pen attached to a stick in his mouth.

Paul faced a crisis in 2015, when his iron lung began to malfunction and there were little parts and manufacturers available — but luckily, with the help of a YouTube video, the ventilator was fixed

Now, at 77 years old, he is one of the last people in the world to still use an iron lung, and he relies on it almost-exclusively to breathe.

Paul has outlived both of his parents, his brother and even his original iron lung, which began leaking air in 2015, but was luckily repaired after by a mechanic Brady Richards, which was prompted by a YouTube video of Paul pleading for help.

Paul has also survived a new deadly outbreak, living through the Covid-19 pandemic, despite being classed as highly vulnerable to the virus.

Read full article here:

www.dailymail.co.uk/news/article-12357005/Man-whos-lived-inside-iron-lung-70-years-struck-polio-developed-new-way-breathing.html 🌐

What Is An Iron Lung?

By Stephen C. George

Source: www.discovermagazine.com
— 11 August 2023

In the 1920s, the development of this technology saved the lives of thousands. But what was the iron lung for, and does anyone still use it?

In medical and engineering circles, it's known by a few different names: cabinet respirator, tank respirator, negative pressure ventilator and others.

But since its creation almost a century ago, this lifesaving device has been known almost universally by another name: the **iron lung**.

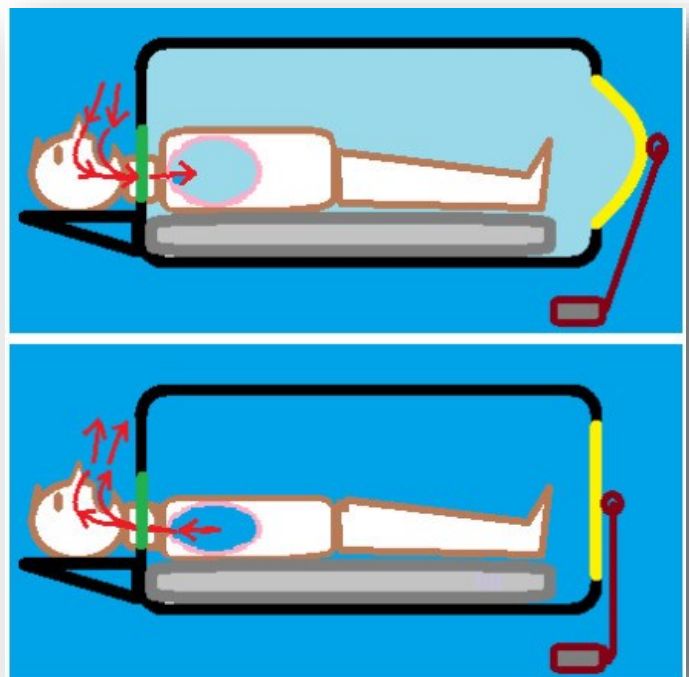
What Is an Iron Lung?

As intimidating as the name sounds — and as scary as the coffin-like device looked — the iron lung was a medical miracle for people suffering from something even scarier: **poliomyelitis**. Before the polio vaccine was invented in 1955, the virus could be a death sentence, and periodic epidemics filled people around the world with a dread that's hard to imagine today, even in a post-COVID world.

In addition to flulike symptoms, polio was known to cause muscle stiffness and paralysis. If the virus paralyzed muscles in the chest, polio sufferers — most of whom were children — couldn't breathe. Most patients would recover all or most of their muscle strength if they could just survive this critical phase. The challenge was to figure out a way to keep them breathing

for the one to two weeks that they typically needed to recover muscle function.

How Does an Iron Lung Work?



(Credit: Penlite CC-SA 4.0 Wikimedia Commons)

Thus, the iron lung was developed in 1927 and first used in a clinical setting in 1928, saving the life of a stricken little girl — and what would soon be many thousands of others. It was invented at the Harvard School of Public Health by Philip Drinker with Louis Agassiz Shaw.

What Is An Iron Lung? *(Cont'd from P14)*

Drinker in particular had been studying therapies for [coal-gas poisoning](#) but realized the form of artificial respiration that culminated in the iron lung could help polio victims as well.

Drinker envisioned an airtight chamber (typically made of steel, not iron, by the way) into which a patient could be placed. Their head remained outside the chamber while a rubber collar kept the enclosure sealed. The first iron lung was basically powered by an electric motor and the air pumps from a couple of vacuum cleaners.

The respiration chamber functioned via external [negative pressure ventilation](#) (ENPV). Air would be sucked out of the chamber, which would cause a patient's chest to expand, filling the lungs with precious oxygen, even when the patient's muscles were incapable of doing so. Then, air would be let back into the chamber, causing the lungs to deflate and allowing the patient to exhale. The motor kept the pumps operating, and more importantly, kept the patient alive. The process by which the iron lung functioned was simple and effective.

The Evolution of the Iron Lung

But the devices themselves posed some challenges. Getting patients into and out of early iron lungs was cumbersome. And the chambers were expensive, costing between \$1,500 and \$2,000, or about the same price as the average suburban home back then. They could also weigh as much as 500 pounds apiece and were a logistical nightmare to transport even within the U.S., let alone around the world.

Various design changes were implemented over the years to make patient access easier and also to make the construction and deployment of iron lungs faster and cheaper. During a polio outbreak in Australia, which literally couldn't get standard iron lungs shipped fast enough, an engineer named [Edward Both](#) built a prototype "iron" lung using plywood, one that could be constructed and ready for use in a day.

Mass distribution of iron lungs began in the late 1930s. By the late 1950s as many as 1,200 people in the U.S. alone were using iron lungs. Not every polio sufferer was lucky enough to regain breathing function in a couple of weeks. Some patients — about 1 in 200 — suffered permanent muscle and lung damage and would

have to use iron lungs on a more or less permanent basis. However, with the advent of the polio vaccine, and the invention of newer forms of mechanical ventilation, the iron lung gradually became obsolete. At least for a while.

Are Iron Lungs Still Used?

Some few polio [survivors](#) still use old-school iron lungs. According to [Guinness World Records](#), for example, [Paul Alexander](#) is a polio survivor who has used an iron lung since 1952, when he was stricken by polio at the age of 6 in Dallas, Texas. Although he learned breathing techniques to help reduce his reliance in the chamber, he still spends a significant part of his day in the iron lung.

It's a challenge for the scant few iron lung users remaining to maintain their constant use of the once cutting-edge respirators. Replacement parts are hard to come by, as is finding anyone still versed in their maintenance and repair. Yet they continue to try to find ways to keep their chambers operating, believing that the old-fashioned iron lungs still provide better therapy and comfort than modern ventilators.

What Replaced the Iron Lung?

During the COVID pandemic, various doctors and engineers did "[reinvent](#)" the technology, [developing](#) new pressure ventilators that could save patients without requiring them to be intubated on ventilators that were much more likely to cause permanent respiratory damage. This development may aid future patients in need of respiratory help from new and emerging diseases.

But hopefully it won't be needed for future polio victims. The World Health Organization remains committed to [eradicating](#) the virus. Today, polio cases worldwide have fallen from around 350,000 cases in the 1980s to just six reported cases in 2021. As polio dwindles, perhaps we can breathe a sigh of relief that the need for the iron lung will also diminish at last.

Read More: [The Deadly Polio Epidemic and Why It Matters](#)

Read More: [The History of the Polio Vaccine](#)

Read More: [What Would Happen If We Didn't Have Vaccines?](#)



Australian Polio Register

Have you added your polio details?

Every polio survivor living in Australia (regardless of the country where they contracted polio) should add their details to the Australian Polio Register.

CLICK TO ADD YOUR NAME TODAY



Building A New Vaccine Arsenal To Eradicate Polio

Source: [University of California](#) — San Francisco
— 14 June 2023

Summary

Despite some of the most successful international vaccination campaigns in history, the poliovirus continues to circulate around the world, posing a threat of neurological damage and even paralysis to anyone who is not vaccinated.

Full Story

Despite some of the most successful international vaccination campaigns in history, the poliovirus continues to circulate around the world, posing a threat of neurological damage and even paralysis to anyone who is not vaccinated.

While the original polio strains, called wildtype, have largely been eliminated, new strains can develop from the oral polio vaccine (OPV), which is the one most used in the developing world. Oral vaccines use live, weakened virus that occasionally mutates to an active form, leading to outbreaks even in countries believed to have eliminated polio.

Scientists at UCSF and the UK's National Institute of Biological Standards and Control (NIBSC) have developed two novel oral polio vaccines (nOPVs) to bolster the World Health Organization's most recent push to finally eradicate polio, which began two years ago using the first nOPV developed by the same team. These are the first new polio vaccines in 50 years.

Like the first nOPV, the two newest nOPVs, which were described in *Nature* on June 14, are made from weakened poliovirus that has been genetically engineered to reduce reversion to dangerous forms of the virus. The development of these new vaccines was led jointly by Raul Andino, PhD, UCSF professor of microbiology and immunology, and Andrew Macadam, PhD, a virologist at NIBSC.

"With such variation in vaccination within and between countries, poliovirus has persisted into the 21st century, with sometimes tragic consequences," said Andino, co-senior author of the paper along with Macadam. *"We've designed these new vaccines using lessons learned from many years of fighting polio and believe they will help eliminate the disease once and for all."*

The evolving battle against polio

Polio is insidious: it is usually asymptomatic, but can cause severe disability, paralysis or death in about one in every hundred children. It spreads via fecal or oral particles, so it is particularly problematic in regions with poor sanitation. In the first half of the 20th century, polio outbreaks

routinely rolled through the US, leading to a race to develop vaccines.

The first effective polio vaccines emerged in the 1950s, kicking off massive campaigns to immunize every person, with an emphasis on children. The inactivated polio vaccine (IPV), made of dead poliovirus, was given via injection, while the oral polio vaccine (OPV), made of weakened poliovirus, was given on a sugar cube or in a candy. Today, IPV is the vaccine of choice in countries with robust healthcare, and OPV — the cheaper, easier-to-administer option — is used otherwise.

In populations where everyone is immunized early in life, it doesn't matter whether they receive IPV or OPV, although these vaccines act in different ways in the environment. People vaccinated with IPV can still get infected with any polio that happens to be circulating. They will not get sick, but they can silently transmit the virus to the unvaccinated. People vaccinated with OPV can't silently transmit circulating polio in this way, but they can shed the weakened virus they were inoculated with and spread it to the unvaccinated. If the weakened virus mutates, it can become pathogenic polio once more.

In populations with unvaccinated children — whether due to refusal to vaccinate, natural disaster, or war — such vaccine-derived polio can spread widely, causing severe disease in the unlucky few.

While the original, or "wildtype", poliovirus has only been recently detected in Afghanistan and Pakistan, vaccine-derived polio has been detected in countries as far flung as Syria, the Democratic Republic of Congo, and the U.S. In fact, there have been more cases of vaccine-derived polio than wildtype in recent years, creating an urgency to counter this new source of polio.

In 2017, Andino and his colleagues discovered how OPV reverts to its harmful form: a single mutation restores the virus's capacity to migrate from the human gut and into the nervous system. Within a few years, the group had devised a trio of mutations that make such genetic reversion much less likely and packaged it into a new vaccine.

That vaccine, nOPV2, earned the WHO's first-ever emergency use listing for a vaccine in 2020 and was quickly manufactured and distributed.

"Over 600 million doses were delivered to more than 28 countries, and in ten instances it stopped ongoing outbreaks of vaccine-derived polio," said Andino. *"It gave us a lot more confidence that this actually was working as anticipated."*

Building A New Vaccine Arsenal *(Cont'd from P16)*

Covering all the bases with polio eradication

Despite its effectiveness, nOPV2 only protects against one of three strains of polio, and cases of polio have recently emerged in Israel, which is heavily vaccinated, as well as in pockets of the US where people refuse to vaccinate their kids.

Even where there are no polio cases in hospitals, polio continues to be detected in wastewater in major cities. There may be 99% fewer polio cases today than there were 30 years ago, but the last 1% has proven hard to snuff out.

"If there's polio anywhere, it will come back where there are gaps in vaccination," Andino said.

The latest work from Andino's group takes the solution they crafted for nOPV2 — the three mutations that usually prevent the vaccine from becoming dangerous over time — and engineers it into the other two types of OPV. The resulting vaccines, nOPV1 and nOPV3, effectively prevented polio in animal models. All three are much safer than the original OPVs, which can occasionally cause paralysis in those who get the vaccine, although this is rare (on the order of one case per two million children vaccinated).

The two new vaccines are currently being tested in clinical trials to ensure that they are both effective and do not revert to dangerous forms in humans. Andino is hopeful they will be incorporated into bivalent or trivalent combinations with nOPV2. Children of the future will be equally protected from polio for life, and perhaps the world will someday experience decades in which zero polio is detected.

"The perception that polio is gone is a dangerous one," said Andino. "For instance, just in India, 500,000 children are born each week, an enormous number of susceptible people. We now have what we need to protect them."

Story Source:

Materials provided by **University of California — an Francisco**. Original written by Levi Gadye.

Journal Reference:

1. Ming Te Yeh, Matthew Smith, Sarah Carlyle, Jennifer L. Konopka-Anstadt, Cara C. Burns, John Konz, Raul Andino, Andrew Macadam. **Genetic stabilization of attenuated oral vaccines against poliovirus types 1 and 3.** *Nature*, 2023; DOI: [10.1038/s41586-023-06212-3](https://doi.org/10.1038/s41586-023-06212-3)

Can The World Really Stop Wild Polio Virus In 2023?

By Clare Watson

Source: www.nature.com — 15 August 2023

Given that global efforts to eradicate the poliovirus were recently described as unsuccessful, how are Afghanistan and Pakistan now on the verge of eliminating it?



Photo: The polio eradication efforts in Pakistan and Afghanistan are made more difficult by mountainous terrain. Credit: Amirudin Mughal/EPA-EFE/Shutterstock

Afghanistan and Pakistan — the two countries in which polio is still endemic — are closer than they have ever been to eradicating wild poliovirus, the World Health Organization (WHO) said [last month](#). It's a surprising turn given that the eradication effort had been criticized as floundering as recently as [last year](#). With a small number of cases and limited geographical spread of the virus, scientists agree that the two nations stand a real chance of stopping transmission of wild poliovirus this year, but only if the eradication programmes in these countries can overcome persistent social and political challenges.

"This is the best epidemiological opportunity these two countries have had concurrently," to stop wild poliovirus from circulating, says Hamid Jafari, director of polio eradication at the WHO. With sustained, targeted and coordinated vaccination efforts, "there's now a shared opportunity" for them both to succeed, he adds.

Wiping out wild poliovirus, of which there are three strains, termed serotypes 1, 2 and 3, has been the goal of global eradication efforts since they began in 1988. Types 2 and 3 were successfully eradicated in 2015 and 2019, respectively, but type 1 continues to circulate in Afghanistan and Pakistan 12 years after India

Can The World Stop Wild Polio Virus? (Cont'd from P17)

quashed all forms of the wild virus, and 7 years after Africa did the same.

An analysis of polio transmission dynamics¹, published in 2020, found that global polio eradication efforts were “not on track to succeed” in their goal of eliminating wild poliovirus type 1 by 2023. Fears that eradication was falling out of reach increased again in 2021, when wild poliovirus broke containment lines and emerged in eastern Africa. One case in Malawi in 2021 and eight cases in Mozambique in 2022 were found to be genetically linked with a 2019 Pakistan strain, which had been circulating undetected in Africa for two years. As recently as February 2023, an article in the *New England Journal of Medicine* suggested eradication of the virus had been “unsuccessful”.

However, case numbers are down in 2023: Pakistan has reported just two wild polio cases so far this year; Afghanistan, five. In 2022, they recorded 22 cases combined. Poliovirus also seems to be cornered: transmission is now restricted to seven districts in Pakistan’s Khyber Pakhtunkhwa province, and two provinces across the border in eastern Afghanistan — Nangarhar and Kunar.

The reduction is thanks to how the countries have rebounded from the disruption of the COVID-19 pandemic, political upheaval in Afghanistan in 2021 and widespread flooding in Pakistan in 2022, with vaccination campaigns of renewed intensity and expanded environmental surveillance for signs of the virus.

In October 2022, the WHO’s Technical Advisory Group on polio eradication recommended changes to the campaign with the aim of concentrating resources in the highest-priority areas while allowing nationwide immunization to continue.

Jafari says that this major shift in vaccination strategy was a crucial move that helped Afghanistan and Pakistan to edge even closer to eradication, along with rapid responses to outbreaks.

The countries need to be free from wild poliovirus for a three-year period, during which no new cases are diagnosed and no poliovirus is detected in environmental samples, before the wild type 1 virus can be declared eradicated from the region — and the world.

“We’ve never seen what we’re seeing now,” says Natalia Molodecky, an independent epidemiologist and modeller, who has worked closely with the WHO and with Pakistan’s polio programme. *“The fact that we’re in this situation in August, the high-transmission season, is promising.”*

Not only are the recent cases of polio in

Afghanistan and Pakistan contained geographically, but the genetic diversity of the virus is at an all-time low. Mutations accumulate when a virus circulates freely, and new strains diverge. But only one genetic cluster of wild poliovirus type 1 is currently present in each country — down from 11 in Pakistan and 8 in Afghanistan in 2020. This suggests the virus isn’t circulating much.

‘All in’

Both Pakistan and Afghanistan are on high alert for traces of silent polio infections. Molodecky says for every child paralysed with wild poliovirus type 1, there are about 200 asymptomatic infections. *“So, when you see a case, it’s only the tip of the iceberg,”* she says. Infected people who have not been vaccinated can spread the virus.

To increase surveillance, Pakistan has markedly increased its number of sewage testing sites in the past 18 months, and Afghanistan has expanded its network by one-third. *“So they’re looking harder and harder, and finding less and less of the virus,”* says Jafari.

Kimberley Thompson, director of Kid Risk, a non-profit organization based in Orlando, Florida, that models vaccine-preventable childhood diseases including polio, says that both countries need to stay on the front foot, and not dial back vaccination campaigns too soon. That has happened in the past, when health authorities were overly confident that they had stamped out polio. *“This is the time to go all in,”* Thompson says, on the basis of her team’s modelling of eradication efforts in Pakistan and Afghanistan.

Attaullah Ahmadi, a public-health researcher at Kabul University of Medical Sciences in Afghanistan, agrees that the epidemiological evidence suggests Afghanistan and Pakistan are *“on the brink of eradicating the wild poliovirus”*. However, both countries have been close before, and have fallen short, and Ahmadi says that many obstacles persist.

Deadly militant attacks still occur in both countries. Parental refusal and false beliefs regarding vaccines, fuelled by misinformation and poor health literacy, are also barriers to vaccination, Ahmadi says.

To improve vaccine acceptance, health officials must continue working with community leaders in tribal areas, he says. Female health workers are another crucial part of vaccination campaigns, Jafari notes, because they help to build a rapport with mothers and caregivers. *“Failing to sustain these efforts could lead to a resurgence in cases, jeopardizing the progress made so far,”* Ahmadi cautions.

Since August 2021, vaccinators in Afghanistan

Can The World Stop Wild Polio Virus? (Cont'd from P18)

have been able to reach up to 4.5 million children in previously inaccessible areas, with the backing of the Taliban. But political uncertainty looms in Pakistan: the parliament dissolved this month amid political and economic crises, with elections to be held later this year.

Vaccine-derived polio

Wild poliovirus finally seems to be cornered, but vaccine-derived polioviruses threaten to undermine global polio eradication efforts as a whole.

Oral poliovirus vaccines (OPVs) contain weakened polioviruses that can sometimes revert to virulent forms, spread among unimmunized individuals and cause paralysis. Since January 2020, vaccine-derived polioviruses have sprung up in more than 50 countries — including some that eradicated polio long ago.

Injectable, inactivated poliovirus vaccines are not known to cause or seed paralysis cases, but they do not contain polio outbreaks as effectively as OPVs. Vaccination programmes must use oral drops with careful planning to ensure that outbreaks are stopped without seeding more. High vaccination coverage is the best protection against vaccine-derived polioviruses.

Molodecky points to an outbreak in Afghanistan and Pakistan that began in July 2019 (and lasted until 2021) as an example of how vaccine-derived poliovirus can be controlled and eliminated with vaccination strategies, informed by modelling. *"It's definitely possible to do, even in complex environments,"* she says. No vaccine-derived polioviruses have been detected in either country since the outbreak was contained in 2021.

And that was before the availability of a novel OPV (nOPV), which Jafari says *"will set us on a path"* to eradicating vaccine-derived poliovirus, too. Nearly 700 million doses of nOPV2, which targets vaccine-derived poliovirus type 2, have been administered across 31 countries since March 2021, and similarly stable formulations are being developed for types 1 and 3.

Eradicating all polioviruses is certainly possible, says Thompson, although it will take a lot of effort. *"It requires resources, it requires commitment and it requires us to really work together to figure out how to finish this."*

doi: <https://doi.org/10.1038/d41586-023-02577-7>

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Drones Delivering Vaccines

By Josephine Chinele

Source: healthpolicy-watch.news – 19 July 2023

Facing New Polio Cases, Malawi Resorts to Drones to Deliver Vaccines

On a partly cloudy morning last week, staff and onlookers watched with excitement and curiosity as a drone carrying polio vaccine doses was launched from the Matawale Health Centre in Zomba in eastern Malawi.

The drone was being sent to Chisi Island, one of the hard-to-reach parts of this district that is often left out of health initiatives due to its difficult geographical terrain.

But after wild poliovirus was detected in a young girl in Malawi's capital, Lilongwe, in March 2022 and three further cases of vaccine-derived poliovirus were detected last year, the country started a supplementary campaign against polio.

Currently, 17 suspected cases of polio are awaiting diagnosis after specimens were sent to a laboratory in South Africa and health authorities are racing to vaccinate some 8.8



Photo: technician assists health workers with a drone at Matawale Health Centre in Zomba. Malawi has started using drones to distribute polio vaccines.

million children from birth to the age of 15 years with its immunisation drive.

The use of drones to deliver vaccines to Chisi Island and other hard-to-reach areas has seen an increase in immunisation coverage.

Cont'd P20

Drones Delivering Vaccines *(Cont'd from P19)*

It also offers hope to parts of the country where health infrastructure and roads have been damaged due to the recent Tropical Cyclone Freddy.

From bad roads and boats to mere minutes

Ordinarily, staff from the Zomba District Health Office (DHO) would drive 50 kilometres to Kachulu Beach with medical supplies including vaccines. At the beach, the supplies would be transported by a motor boat for 30 minutes before finally reaching the Island. Fuel for the boat alone costs K120,000 (about \$126) f.

"This was costly and time-consuming for our office. Transporting commodities has been a matter of a few minutes using the drone," says Zomba DHO spokesperson, Arnold Mndalira.

Before the fifth mass polio vaccination campaign, which ran from 12-15 July, the Zomba district office used a drone for the first time to transport COVID-19 vaccines, blood samples and specimen results, Mndalira explains.

"The drone has a 3.5kg carrying capacity. Plus the advantage with this is that it can go several times within a short time," Mndalira told *Health Policy Watch*.

The drones are supplied and managed by Swoop AERO, a global medical drone logistics networking company.

The Malawi government and UNICEF launched an air corridor to test the potential humanitarian use of drones (also known as unmanned aerial vehicles) in 2017.

This corridor is the first in Africa and one of the first globally with a focus on humanitarian and development use, according to UNICEF.

Swoop AERO now delivers essential medical commodities to 60 remote facilities across six districts in Malawi.

"It's so satisfying to deliver life-saving commodities such as vaccines using drones. It feels good to be part of making a difference in people's lives," says Anne Nderitu, Operations Manager for Swoop AERO.

Health facility workers have been trained to receive the drone for the mass polio vaccination campaign and other medical commodities. By 14 July – day three of the campaign – the drones had already delivered 8,500 polio vaccine doses to hard-to-reach areas in Zomba, Chikwawa and Mangochi districts. The drone can carry 2,000 doses in one trip.

"We are targeting to reach 24 districts with this technology in the coming months. It's imperative to extend these services to a wider Malawian

public health space," Nderitu says. However, she notes that unpredictable weather is one of the drawbacks in drone operations.

But Africa's poor transportation and logistics derail the distribution of medicines and vaccines, particularly medicines with short shelf lives.

"Drone technology is providing the logistical and delivery solutions that can potentially enable African countries to distribute essential supplies to disadvantaged communities, remove access restrictions and facilitate the quicker delivery of life saving medications and vaccines," according to the African Union Development Agency, NEPAD.

Tamanda Chikuni, a parent living near the Magomero Health Centre, praised the use of drones to deliver vaccines and medical supplies.

"My child has missed routine immunisations before due to vaccine stockouts at Magomero Health Centre. The facility could not immediately restock due to transportation challenges. The drone has simplified the process," said Chikuni.

Benson Wyson, a Health Surveillance Assistant at Magomero Health Centre, says the drone technology has simplified his job: *"Vaccines arrive on time. We no longer have to wait longer to restock. This has even made the mass polio vaccination more successful than the previous ones."*

Two days after the mass vaccination launch, the facility had already reached 7,000 of the 16,000 targeted children with the polio vaccines.

The facility is 34 km from Zomba District Health Office but it would take the whole day to receive vaccines and medical supplies due to logistical arrangements and transportation time with the drone, the process now takes 13 minutes.

Simon Kondowe, UNICEF Malawi's Polio Cold Chain and Vaccine Management Consultant, says drone-driven vaccine delivery has assisted in boosting immunisation coverage for the polio campaign.

"UNICEF is committed to ensuring that immunisations are up to standard using innovative systems like drone technology. Some facilities in the country have become inaccessible following Tropical Cyclone Freddy but we are reaching them with medical suppliers using the drone," he told *Health Policy Watch*.

Helping to achieve universal health coverage
In many remote, developing regions of the world, drones are one of the most effective solutions to achieving universal health coverage, where mobility is a key stumbling block to meeting healthcare targets.

Drones Delivering Vaccines *(Cont'd from P20)*

Professor Adamson Muula, head of Community and Environmental Health at Kamuzu University of Health Sciences (KuHes), says that Malawi and its development partners have taken a bold decision use drones.

"But while we can discuss the obvious benefits such technology has afforded it, we must also embrace rigorous assessment, especially by independent agencies and consultants as to the cost-effectiveness of such initiatives," cautioned Muula, noting that the price to buy and maintain drones needed to be considered.

"Since the drones were introduced because of gaps in health services delivery, have these gaps been completely addressed? Or has the situation been that some problems have been addressed and others have been left unattended?" he asked.

Muula also observed many of Malawi's usual health service delivery problems were addressed by technological innovations funded by development partners, which *"makes the health sector extremely fragile"*. 🌟

Women Walk With Polio Drops To Remote Areas

Source: [Times of India](#) – 28 June 2023

In desert drenched with rain, women walk with polio drops to remote areas

Jaisalmer: The tough geographical conditions in Jaisalmer and Barmer districts and the water logging created by rains from cyclone Biparjoy are obstacles that women health workers daily cross, for the past three days, so that little kids can be immunised against polio.

Asha (accredited social health activist) sahayoginis (workers on contract) and nursing staff of the health department are going door to door in remote areas to administer polio drops to children up to 5 years of age. Health department officials said these women have to walk about 15 km every day.

Barmer district coordinator for the polio vaccination, Rakesh Bhati, said that in a few villages there is still 1-2 feet of water in the fields, which the Asha workers have to cross to reach homes. An Asha worker, Meena, had to wade through water at Jaisindhar village carrying a box of polio vaccines to reach the homes of children. Another Asha worker, Fatima, was similarly facing a tough time in travelling through Navata Pataudi area.

Bhati said that many Asha sahayoginis also have to cross sand dunes on foot to reach houses. They also have to cross over fencing on all four sides of farmed fields to make their way.

District child health officer Mohinder Singh said that in border areas there was a danger of polio virus spreading from Pakistan, due to which this vaccination campaign was being carried out in 22 districts of Rajasthan. 🌟



Polio This Week

Global Circulating Vaccine-derived Poliovirus (cVDPV) as of 29th of August 2023

	Country	AFP cases (Paralysis onset between 2020-2023)					Other sources (Human) ² (Collection between 2020-2023)					Other sources (Environment) (Collection between 2020-2023)				
		2020	2021	2022	2023	Onset of most recent case	2020	2021	2022	2023	most recent collection date	2020	2021	2022	2023	most recent collection date
cVDPV1	DR Congo			146 ³	54 ⁴	17-May-23			5		9-Oct-22					
	Madagascar	2	13	16	13	3-May-23		25	11	5	28-Apr-23		31	123	73	8-May-23
	Mozambique	1		22	3	27-Feb-23			1		25-Oct-22					
	Malawi			4		1-Dec-22			1		19-Sep-22					
	Congo			1		15-Oct-22										
	Yemen	31	3			27-Mar-21					7-Jul-19					
	Malaysia	1				14-Jan-20						9				13-Mar-20
Total type 1		35	16	189	70		0	25	18	5		9	31	123	73	
cVDPV2 ¹	Guinea	44	6		1	19-Jun-23	1			3	17-Jul-23	1	2			11-Aug-21
	Botswana													5	4	11-Jul-23
	Nigeria	8	418	48	19	13-Jun-23	8	204	28	9	17-May-23	5	303	82	24	11-Jul-23
	Algeria			3		13-Dec-22			2	3	5-Jan-23			18	18	10-Jul-23
	Tanzania				1	26-May-23				2	6-Jul-23					
	Kenya				3	22-Jun-23	1	2		3	1-Jul-23	1	1			13-Jan-21
	Côte d'Ivoire	64			2	5-May-23	25			10	21-Jun-23	95		3	2	26-May-23
	Chad	101		44	29	20-Jun-23	17		4	6	21-Jun-23	3	1	7		1-Dec-22
	Burundi			1	1	15-Jun-23				2	27-Jan-23			7	13	13-Jun-23
	Central African Republic	4		6	10	9-Jun-23	1			15	14-Jun-23	2	1	8	1	19-May-23
	Cameroon	7	3	3		22-Dec-22	4	3			29-Oct-21	9	1		5	8-Jun-23
	Zambia				1	3-Apr-23				4	25-May-23			3	2	6-Jun-23
	Burkina Faso	68	2		2	4-Jun-23	12				19-Sep-20		1			28-Dec-21
	Yemen		66	162	1	18-Apr-23		17	33		9-Dec-22		13	27	3	29-May-23
	Somalia	14	1	5	2	2-Mar-23	13		4		31-Aug-22	26	1	4	3	25-May-23
	DR Congo	81	28	368 ³	81 ⁴	24-May-23	95	6	30	2	23-May-23	1	3	10	4	24-May-23
	Mali	52		2	3	28-Apr-23	3				15-Aug-20	4				29-Aug-20
	Congo	2	2			10-Feb-21	2				12-Oct-20	1	3		1	11-Apr-23
	Benin	3	3	13	3	15-Mar-23		2	1		1-Jun-22	5	1	9	3	21-Feb-23
	Indonesia			1	3	20-Feb-23			3	7	1-Jan-23					
	Israel				1	13-Feb-23								55		24-Oct-22
	Niger	10	18	16		25-Dec-22	2	1	3		19-May-22	9		14	1	12-Jan-23
	Malawi														1	2-Jan-23
	Sudan	58		1		31-Oct-22	11				1-Oct-20	14		1		28-Nov-22
	United Kingdom													6		8-Nov-22
	United States of America			1		20-Jun-22								30		20-Oct-22
	Ghana	12		3		14-Sep-22	10		4		1-Jun-22	20		19		4-Oct-22
	Togo	9		2		30-Sep-22	9				9-Jul-20			2		6-Sep-22
	Canada													2		8-Sep-22
	Egypt											1	12	6		29-Aug-22
	Djibouti												7	11		22-May-22
	Ethiopia	37	10	1		1-Apr-22	7				13-Oct-20	4				28-Dec-20
	Mozambique		2	4		26-Mar-22					17-Dec-18					
	Eritrea		1	1		2-Mar-22										
	Senegal		17			27-Oct-21		34			17-Nov-21	1	14	1		17-Jan-22
	Ukraine		2			24-Dec-21		18			9-Oct-21					
	Mauretania							4			19-Jul-21		7			15-Dec-21
	Uganda												2			2-Nov-21
	Gambia												9			9-Sep-21
	Pakistan	135	8			23-Apr-21	2				11-Nov-20	135	35			13-Aug-21
	Guinea-Bissau		3			15-Jul-21		1			26-Jul-21					
	Tajikistan	1	35			25-Jul-21		22			24-May-21		17			22-Mar-21
	Afghanistan	308	43			9-Jul-21	36	2			3-May-21	175	40			23-Jun-21
	Sierra Leone	10	5			28-Feb-21	6	8			19-Mar-21		9			1-Jun-21
	Liberia		3			28-May-21	2	5			21-Jan-21	7	14			20-Apr-21
	South Sudan	50	9			10-Apr-21	19	5			25-Feb-21	6				1-Dec-20
	Iran											3	1			20-Feb-21
	Angola	3				9-Feb-20					31-Oct-19					
	Malaysia											5				4-Feb-20
	Philippines	1				15-Jan-20					23-Nov-19	4				16-Jan-20
Total type 2		1082	685	685	163		286	334	112	66		537	498	330	85	
cVDPV3	Israel			1		12-Feb-22			3		24-Mar-22	1	5	25		15-Mar-22
	Occupied Palestinian Terr.												7	9		12-Mar-22
	China						1				22-Jul-20		1			25-Jan-21
Total type 3		0	0	1	0		1	0	3	0		1	13	34	0	
Gender	Female (all sero type)	493	296	373	95											
	Male (all sero type)	610	400	493	133											
	Gender Unknown	10	3	5	4											

Environmental surveillance for poliovirus in selected sewage sites established and working

Changes from previous week