



Polio NZ Inc.

ANNUAL GENERAL MEETING 2021

SUNDAY OCTOBER 24 at 2PM

ZOOM Videoconference <https://us02web.zoom.us/j/6201574022>

Executive Nominations (voluntary)



PRESIDENT
Brian Robinson
Joined Board in 2015
Became President in 2018



TREASURER
Yi Liang Small
Joined Board in 2018
Became Treasurer in 2019



VICE PRESIDENT
Steve Griffiths
Joined Board in 2015
Became VP in 2018



SECRETARY
Jeannette Aldridge
Joined Board in 2012
Secretary for several years

Board Nominations (voluntary)



Brent von Sierakowski, JP
Joined Board in 2018
Actively fundraising for major projects.



Barry Holland, MNZM
Joined Board in 2012
President 2014- 2018
Life Member



Sue Griffin
Served Board for 6 years. 1 yr as VP. Responsible for major projects like retreats. Currently driving "light it Purple" campaign.



Marlayna Zucchiatti
Served Board for 3 years supporting membership services/retreats/clinics.

Off-Board Support



PATRON
Vicky M Duncan O.B.E. F Inst Directors
Life Member, Patron since 2018



BOOKKEEPER
Karen Davis
Common Cents Accounting Ltd
Monthly Contract



MINUTE SECRETARY
Carla Ceppi (not in photo)
Volunteer



STRATEGIC PLAN PROJECTS
Gordon Jackman
Monthly Contract



President's Report

Welcome to Polio NZ Inc's Annual General Meeting for 2021. It was to be the first time in Nelson, but today it has become the first time electronically, via ZOOM.

This past year has seen many difficulties and uncertainties with *COVID-19* and the *Delta Variant* even right up until now. At the beginning of October, I was confident that our weekend in Nelson was a goer. And then there was an outbreak in the Waikato. My enthusiasm dropped by half, but I still thought we could do it. However, ten days out and with the number of Covid cases on the rise again, the uncertainty of what could happen and in fairness to the accommodation and restaurant people, it was decided to defer the get together until a later time.

As Polio Survivors we must be ever vigilant with regards to our health and underlying issues with the Late Effects of Polio. We also know extremely well of the importance of vaccination.

The Board meets three times a year between AGMs via Zoom video-conferencing to discuss the issues that we face in getting better recognition from the Medical Profession, DHB's and Orthotics.

Through the efforts from Gordon Jackman and the Duncan Foundation, we have achieved a lot of what we had set out in the Strategic Plan some six or seven years ago. Thank you, Gordon, and the Duncan Foundation.

Gordon has since resigned as CEO of the Duncan Foundation but has been contracted by Polio NZ to continue with his work to better the outcomes for Polio Survivors.

The Board have recently signed a Memorandum of Understanding with the Duncan Foundation so that they and Polio NZ have a working relationship together.

On The Go Physio in Christchurch has set up a new clinic called "*Christchurch Polio NZ Hub*" complete with exercise equipment. The idea of the Hub is to support people to achieve their goals for better wellbeing in a way that suits them. Some of the services include occupational therapy home visits and support, peer support, dietician assessment and follow up, massage therapy, lymphedema management and follow up, and speech therapy. This will be great for the people of Canterbury.

After the last AGM, the Board co-opted Jeannette Aldridge back on as Secretary, and to keep track of our legal commitments. Jeannette continues to respond to members via FREEPHONE 0800 476 546.

Board member Brent Vonsierakowski secured funding from the *Freemasons Foundation* for the Mediboard displays of "*Are you a survivor of Polio*" pamphlet available in over 700 clinics around the country for a second year. I must point out that not all DHB areas have these displays.

Brent's daughter designed an ad to go into the *Physio Matters* magazine outlining our Late Effects of Polio problems to the physios around the country. Thank you, Brent, and Louise.

At this particular time on behalf of the Board and the members of Polio NZ Inc I wish to acknowledge and thank individuals, companies, sponsors, and donators to our organization, especially the *Sir Thomas and Lady Duncan Trust* and the *Freemasons Foundation*. A huge thank you.

I thank the Board members for their dedication and support special thanks to our Minute Secretary, Carla Ceppi, a volunteer who did not have polio. Thank you, Carla.

Two of our Board Members have decided not to seek re-election this year due to work and health commitments. Thank you Lonnard Watkins and Dorothea Pienaar for your support and time with the Board. We wish you both the best for the coming years.

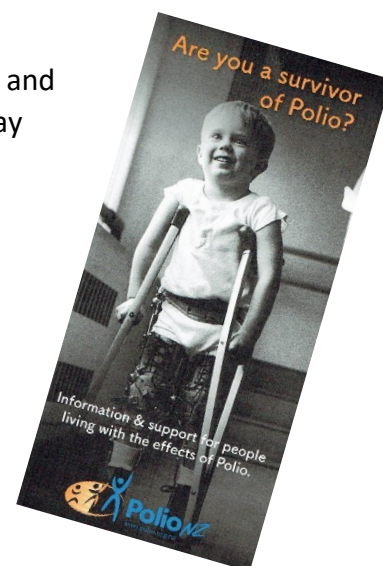
I also thank our Patron Vicky Duncan for her continued support. Vicky is our direct link with the long history that began in 1942 of the Duncan family's help for people affected by polio. If you haven't read the remarkable story in the book *Otiwhiti Station* by Random House, it is highly recommended reading.

Unfortunately, this cancelled weekend may be the last of these types of Retreat/Seminar/AGM's as we know them now. Face to face seminars and get togethers have been a wonderful way for members to catch up with each other and discover current learnings. We will still have an AGM, but in the future these may have to be conducted via Skype or ZOOM, or similar technology. This will be something the Board will have to look into.

As today (**October 24**) is **World Polio Day** and in recognition, various structures around the country will be lit up with **purple lights**. If you can, I urge you to go and look. We hope to get photos to go in the next Polio News.

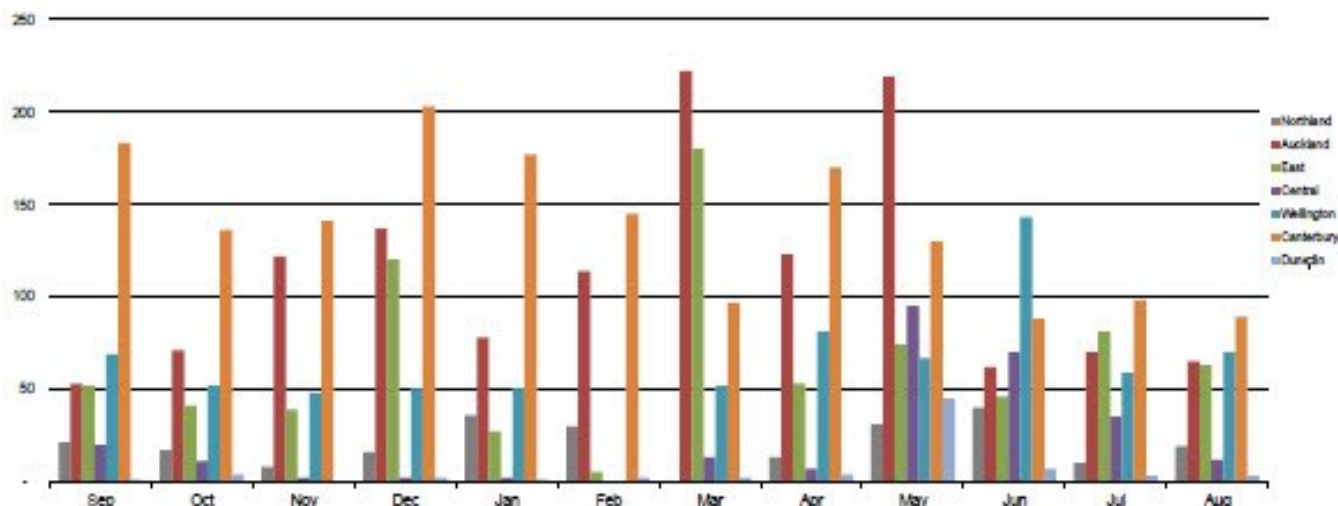
Finally, I wish all the members of Polio NZ Inc the absolute best for the coming years which may be quite different from what we know now.

Take care. Stay safe
Brian Robinson, President



MEDIBOARD PAMPHLET UPTAKE REPORT SEPT 2020 TO AUGUST 2021

Region	Sites	No of Brochures												Total MAT Brochures
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
Northland	28	21	17	8	16	36	30	-	13	31	40	10	19	241
Auckland	250	53	71	122	137	78	114	222	123	219	62	70	65	1,336
East	190	52	41	39	120	27	5	180	53	74	46	81	63	781
Central	82	20	11	2	2	2	-	13	7	95	70	35	12	269
Wellington	77	69	52	48	50	50	-	52	81	67	143	59	70	741
Canterbury	74	183	136	141	203	177	145	97	170	130	88	98	89	1,657
Dunedin	13	1	4	-	2	1	0	2	4	45	7	3	3	74
Total	714	399	332	360	530	371	296	566	451	661	456	356	321	5,099



Agenda

1. Welcome by Chair Brian Robinson
2. Apologies: *Received in advance* – Julia Squire, Ngaire Jury, Liz Falkner, Dorothea Pienaar, Shirley Anderson, Nancy and Graeme Blackstock, Marie Collins, Kevin and Maree Atkinson, Norm and Debbie Martin, Tetapua Gillies, Greg Cochrane, Diane Martin, Brian Snookes, Margaret Robins, Nyree Ambridge, Bernard O'Malley, Lonnard Watkins, Judi Barker, Terry Carr, Dr. YR Krishnaswamy, Bill Picken, Malcolm Nye, Johanna Korent.
3. In memory of departed members. We especially mourn the passing of our much-loved Board member Susan Kerr, who served our members in various capacities over many years.
4. Roll Call:
5. Proxies
6. President's Report
7. Minutes of previous AGM and Matters Arising from Minutes
8. Treasurer Report
9. Presentation of the Annual Financial Report
10. Election of Officers, Board Members.
11. Appointment of Reviewer: Navigator Accounting, Tauranga
12. Correspondence
13. Remits
14. Motions:
15. Any other business



Minutes of the Annual General Meeting 2020

SATURDAY OCTOBER 17, 2020, at 2PM Parksyde Community Centre 7-9 Tarewa Place, Rotorua

1. Welcome by Chair Brian Robinson

2. Apologies: Anne Fitzpatrick, Edith Rose, Mike Millington, Barbara Tapper, Rehle Craigie, Louise Gibson, Maurice Priestley, Julia Squire, Jenny Green, Dr YR Krishnaswamy, Susan Barber, Lindsay Coup, Kevin and Sue O'Neill, Nigel Sutton, Ngaire Jury, Judy Cameron, Lindsay Young, Rachel Burton, Bridget Musters, Mee Moi Edgar, Christine McPherson, Jane Chetwynd, Elizabeth Robb, Marianne McCoid, Ruth Inglis, Karen Peterson Butterworth, Alan Donaldson, May Ling White, Claudia Mushin, Sue and Graham Steer, Ivan Prattley, Lindsay and Dorothy Coop, Nancy Blackstock, Michael Hodgen, Anne Paulger, Penny Hunt, Hilary Bryden, Liz Falkner, Gabriela Mazouchova, Terry Carr, Pamela Cook, Judi Billens, George Harvey, Jenny Gay, Leonie Hopkins, Marie Collins, Kevin and Maree Atkinson, Diane Jackson, Raylee Murphy, Shirley Nieuwland, Susan Kerr, Malcolm and Janice Nye, Lorraine Jones, Raewyn Griffiths, Wayne Davies, Gisela Sonntag.

THAT the apologies be accepted: Moved Brian Robinson, Seconded Diane Mathews. Carried.

3. In Memory of departed members. A Minute's silence was held in memory of all departed members. We acknowledged the passing of our much loved and respected Patron David Duncan, and our dear friend Anne Mace who did much in service to Polio NZ members.

4. Roll Call: Gina Allan-Evans, Ngaire Ambridge, Frank and Anne Andrews, Jeannette Aldridge, Judi Barker, Sonia Blue, Carla Ceppi, Vicky Duncan, Wayne Davies Graham, Sue Griffin, Steve Griffiths, Kay Hayes, Barry Holland, Matthew Hood, Gordon Jackman, Gary Janmaat, Judi Kilduff, Johanna Korent, Cherie Latimer, Diane Mathews, Marianne McCoid, Joyce McCullough, Edith Morris, Shona Olsen, Dorothea Pienaar, Pam Ramage, Brian Robinson, Yi Small, Brent von Sierakowski, Margaret Wansborough, Max Warburton, Mary Ellen Warren, Lonnard Watkins, Jeffrey Yeo, Marlayna Zucchiatti.

5. Proxies – none.

6. President's Report. Brian read the President's report printed in the AGM documents.

THAT the President's Report be accepted: Moved: Brian Robinson, Seconded Sue Griffin. Carried.

7. Minutes of previous AGM and Matters Arising from Minutes.

THAT the Minutes of the AGM 2019 be accepted: Moved: Brent von Sierakowski, Seconded Marlayna Zucchiatti. Carried.

8. Secretary/Treasurer Report

THAT the Secretary/Treasurer Report presented in the AGM documents be accepted: Moved: Yi Liang Small, Seconded Steve Griffiths. Carried.

9. Presentation of the Annual Financial Report

THAT the Reviewed Statement of Performance and Annual Accounts for the year ended 30 June 2020 be adopted and submitted to Charities Services: Moved Yi Liang Small, Seconded Judi Barker. Carried.

10. Election of Officers, Board Members.

Jeannette Aldridge in her role as Returning Officer reported that nominations had been called for the Executive positions of the Society.

The following nominations have been received:

Brian Robinson, President; Stephen Griffiths, Vice President; Yi Liang Small, Treasurer. No nomination was received for Secretary. Carla Ceppi will continue as Minute-Secretary.

THAT Brian Robinson be confirmed as President, Steve Griffiths confirmed as Vice President, and Yi Liang Small confirmed as Treasurer: Moved Carla Ceppi, Seconded Jeannette Aldridge. Carried.

Election of Board of Management: Jeannette Aldridge in her role as Returning Officer reported that nominations had been called for the Board of Management positions of the Society. The Constitution allows for six positions in addition to the Executive Officers and 5 nominations were received. Brent von Sierakowski, Sue Griffin, Marlayna Zucchiatti, Lonnard Watkins, Dorothea Piennar.

Nominations were called from the floor: Barry Holland (Auckland) Moved: Brian Robinson, Seconded: Steve Griffiths, Carried.

As Returning Officer Jeannette Aldridge said "I seek confirmation that these six members, Brent von Sierakowski, Sue Griffin, Marlayna Zucchiatti, Lonnard Watkins, Dorothea Piennar and Barry Holland serve on the Board for the term 2020-2021.

Moved: Carla Ceppi, Seconded Jeannette Aldridge. Carried.

Motion: **THAT** Life Membership be Awarded to our Patron Vicky Duncan. Moved: Barry Holland, Seconded Brian Robinson. Carried. Vicky had brought with her intending to return the Life Membership Pin that had been presented to David in 2013. Instead, Brian pinned it on Vicky to much applause and gratitude for Vicky's continued support of our work.

11. Appointment of Reviewer: **THAT** Navigator Accounting of Tauranga be appointed as the Reviewer for this financial year.

12. Correspondence – none.

13. Remits: Change Clause 2.22 *The Board shall meet at least five (5) times during the period of between Annual General Meetings.*

Motions: **MOVE** that Clause 2.22 be altered in the following manner: *The Board shall meet at least three (3) times during the period between Annual General Meetings.* Moved: Joyce McCullough, Seconded Barry Holland. Carried.

14. Any other business

There being no further business the meeting closed at 3:55pm.



Presentation by Andrew Veale, Sleep Specialist, prior to the AGM 2020. Photo thanks to Noel Morris.



Treasurer's Report

It has been another productive year since the last AGM. That is all reflected in the Financial Statements which were formally Reviewed and Approved by Navigator Accounting in Tauranga.

Total Operating Receipts is \$59,456 and Total Operating Payments is \$63,990 for the year end of 30th June 2021. Our activities are reflected that our expenses are \$63,990 under \$125,000 a year for a Charities Services Tier 4 organisation that Polio NZ Incorporated is for the level of accounting reporting required to Charities Services.

A big success for this year's accounting is that we completed our second full financial year using the XERO online accounting system. This gives certainty to our compliance obligations and is a huge help for the end of year accounts review for a Charities Services Tier 4 organisation. This has significantly allowed the Treasurer to focus on governance and overview rather than day to day bookkeeping. This also ensures stability for the organisation.

The Board contracted Gordon Jackman to set up a comprehensive membership database using a platform called VEGA. It is about being able to capture all the information that members give us about their experience polio which can then be used to provide equipment and services. It will also improve our ability to communicate with our members and to link the database with the website and our accounting system.

The database was funded by a gift from the *Freemason's Foundation* in memory of Anne Mace.

It is encouraging to know that our members and friends are thinking of this organisation when making their Wills. Such gifts give certainty to the Board in planning its work for the future without being vulnerable to the uncertainty of the availability of grant funding.

We received another generous donation from Freemasons Foundation to display the *Are you a survivor of Polio* pamphlet in medical centres throughout the country for a second year.

To ease problems of accessibility for the Board's Officers and due to legislation changes, the Board has changed Polio NZ Inc. bankers from SBS to Kiwibank.

All members were notified through Polio NZ News to pay their member subscription through Kiwibank and almost everyone did! Thank you so much for your attention to this. We still have a couple of Term Investments with SBS that will mature in November 2021, and we will move completely to Kiwibank in December.

It is an honour to be the Treasurer of Polio NZ Inc. and to work with a Board of dedicated volunteers who all have families, employment, and other obligations on their time, but who continue to serve the Purposes for which this organisation was founded for the sake of all those who are living with the effects of Polio in New Zealand. My best wishes to all members, and I thank you for your continued support.

A special thank you to those who have given a donation with their subscription. It is your gesture of appreciation and support that gives heart and encouragement to those serving on the Board. We receive hundreds of donations with the subs, too many to list but equally appreciated. This list is of donations received \$300 or more from 1st July 2020 to 30th June 2021:

Waikato Branch Fundraising: \$3,000; Catherine Dobbie for the late John Lewis Dobbie: \$300; Onehunga Maungawhau Lodge- Freemasons: \$500; The late Nan Taylor- last settlement: \$2,260; Freemasons Foundation:

\$28,642; Freemasons Foundation In Memory of Ann Mace: \$8,325; Brian & Dallas Robinson- Quiz Night: \$613; SBS Bank Donation- Starwinner: \$1,000; Western Bay Support Group: \$531

I move that the following Reviewed Financial Statements be accepted and filed with Charities Services for the year ending 30 June 2021. The full Performance Report will be publicly available from November 1 at <https://www.charities.govt.nz/> Search for CC 25022

Yi Liang Small
Treasurer for 2020/2021

REVIEW REPORT

To the readers of the Financial Statements of the Polio New Zealand Inc.

Report on the Financial Statements

I have reviewed the accompanying Financial Statements of the Polio New Zealand Inc which comprises the Statement of Financial Position as at 30 June 2021 and the Statements of Financial Performance and associated Notes to the Accounts.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these Financial Statements in accordance with the International Financial Reporting Standard for Small and Medium Sized Entities and for such internal control as management determines is necessary to enable the preparation of Financial Statements that are free from material misstatement whether due to fraud or error.

Practitioner's Responsibilities

Our responsibility is to express a conclusion on the accompanying Financial Statements. We conducted the review in accordance with International Standards which require us to conclude whether anything has come to our attention that causes us to believe that the Financial Statements taken as a whole are not prepared, in material respects, in accordance with the applicable financial reporting framework. The Standards require us to comply with relevant ethical requirements.

A review of the Financial Statements in accordance with the International Standards is a limited assurance engagement. We perform procedures primarily consisting of making inquiries of management and others within the entity as appropriate and applying analytical procedures and evaluations of the evidence obtained.

The procedures performed in a review are substantially less than those performed in an audit conducted in accordance with the International Standards on Auditing. Accordingly, we do not express an audit opinion on these Financial Statements.

Conclusion

Based on our review, nothing has come to our attention that causes us to believe that these Financial Statements do not fairly present, in all material respects, the Financial Position of the Polio New Zealand Inc as at 30 June 2020 and its financial performance and cash flows for the year ended, in accordance with the International Financial Reporting Standard for Small and Medium Sized Entities.

Our review was completed on 26 July 2021 and our unqualified opinion is expressed as at that date.

Basis of Preparation

Polio NZ Incorporated is permitted by law to apply PBE SFR-C (NFP) Public Benefit Entity Simple Format Reporting - Cash (Not for Profit) and has elected to do so. All transactions are reported in the Statement of Receipts and Payments and related Notes to the Performance Report on a cash basis.

Goods and Services Tax (GST)

The entity is registered for GST. All amounts are stated exclusive of goods and services tax (GST) except for accounts payable and accounts receivable which are stated inclusive of GST.

Income Tax

POLIO NZ INCORPORATED is wholly exempt from New Zealand income tax having fully complied with all statutory conditions for these exemptions.

Bank Accounts and Cash

Bank accounts and cash in the Statement of Receipts and Payments comprise cash balances and bank balances (including short term deposits) with original maturities of 90 days or less.

Statement of Receipts and Payments

POLIO NZ INCORPORATED

For the year ended 30 June 2021

'How was it funded?' and 'What did it cost?'

	NOTES	2021	2020
Operating Receipts			
General Fundraising Events		-	767
Grants & Donations	1	46,693	160,361
Fees, subscriptions and other receipts from members	1	4,334	10,733
Receipts from providing goods or services	1	5,191	6,369
Interest, dividends and other investment receipts	1	3,239	3,653
Other operating receipts	1	-	23
Total Operating Receipts		59,456	181,907
Operating Payments			
Payments relating to public fundraising	2	2,125	600
Volunteer and employee related payments	2	3,468	8,901
Payments relating to providing goods or services	2	55,175	61,030
Grants and donations paid	2	-	400
Other operating payments	2	3,223	1,185
Total Operating Payments		63,990	72,116
Operating Surplus or (Deficit)		(4,534)	109,790
Capital Receipts			
Receipts from borrowings	3	(1,415)	1,439
Total Capital Receipts		(1,415)	1,439
Capital Payments			
Purchase of resources	3	-	912
Repayment of borrowings	3	-	-
Total Capital Payments		-	912
Increase/(Decrease) in Bank Accounts and Cash		(5,950)	110,317
Cash Balances			
Cash and cash equivalents at beginning of period		267,621	157,304
Cash and cash equivalents at end of period		261,672	267,621
Net change in cash for period		(5,950)	110,317

Statement of Resources and Commitments

POLIO NZ INCORPORATED

For the year ended 30 June 2021

Cash Basis

'What the entity owns?' and 'What the entity owes?'

	2021	2020
Bank Accounts and Cash		
Bank and cash/(bank overdraft)	261,672	267,621
Total Bank Accounts and Cash	261,672	267,621
	2021	2020
Money Owed to the Entity		
GST	1,545	129
Total Money Owed to the Entity	1,545	129
	2021	2020
Other Resources		
Non Current		
Property, Plant and Equipment		
Furniture and fittings owned	912	912
Total Property, Plant and Equipment	912	912
Total Non Current	912	912
Total Other Resources	912	912
	2021	2020
Commitments		
	2021	2020
Equity		
Current year earnings	(4,534)	109,790
Equity/Members funds	149,534	149,534
Retained earnings/Accumulated funds	119,129	9,339
Total Equity	264,129	268,663
	2021	2020
Other Information		
Grants or Donations with Conditions Attached (where conditions not fully met a balance date)		
NZ Lotteries Grant	-	6,698

1. Analysis of Receipts

Fundraising receipts

General Fundraising events	-	513
World Polio Day Income	-	255
Total Fundraising receipts	-	767

Grants and donations

Bequests	-	100,000
Donations from Members	6,613	9,122
Donations from non-members	736	1,249
Donation from Freemasons	36,967	30,687
Duncan Fund Income	822	3,743
Lotteries Grant	-	15,000
Orthotics Fund	555	559
SBS Bank Starwinner donation	1,000	-
Total Grants and donations	46,693	160,361

Fees, subscriptions and other receipts from members

Member Subscriptions	4,334	10,733
Total Fees, subscriptions and other receipts from members	4,334	10,733

Receipts from providing goods or services

AGM Income	3,353	-
Retreat Income	1,378	1,570
Symposium Income	-	3,674
Sales	-	22
Waikato Branch Income	459	1,104
Total Receipts from providing goods or services	5,191	6,369

Interest, dividends and other investment receipts

Interest Income	3,239	3,653
Total Interest, dividends and other investment receipts	3,239	3,653

Other receipts

Fee Rebate	-	23
Total Other receipts	-	23

Ways to donate to PolioNZ Inc.

By credit card on our website www.polio.org.nz

Deposit direct to Kiwibank Account 38-9022-0468027-01

2. Analysis of Payments

Payments related to public fundraising

Fundraising Costs	2,052	162
World Polio Day Expenses	73	439
Total Payments related to public fundraising	2,125	600

Volunteer and employee related payments

Administration	51	5,000
Board Expenses incl. Travel & Accommodation	3,079	3,140
Gifts for Bereavement and Gratitude	338	410
Board members Training	-	235
Volunteer Expenses	-	117
Total Volunteer and employee related payments	3,468	8,901

Payments relating to providing goods or services

AGM and other meetings	4,826	704
Canterbury Exercise Class	2,488	3,179
Communications (phone, internet, post)	2,322	4,460
Database development	750	-
Elderly Member Assistance	6,284	-
Freemasons expenses	28,642	30,687
Insurance	450	425
Licenses and registrations	-	96
Membership Costs	218	45
Office expenses, Printing & Stationery	586	1,055
Orthotics Provision	-	42
Polio News Production	2,559	2,759
Polio Survivor Education and Research	-	1,791
Publicity	462	1,020
Repairs and Maintenance	-	83
Retreat Expenses	3,744	2,502
Symposium Expenses	-	3,825
Waikato Branch Meetings	500	666
Waikato Rent and Hire	30	361
Website	1,313	750
Website and Documentary	-	6,582
Total Payments relating to providing goods or services	55,175	61,030

Grants and donations paid

Duncan Fund Distributions	-	400
Total Grants and donations paid	-	400

Other operating payments

Bank Fees	208	174
Consulting & Accounting	3,015	1,011
Total Other operating payments	3,223	1,185

3. Capital Receipts & Payments

Property, Plant and Equipment

Opening Balance	912	-
Computer Equipment	-	912
Total Property, Plant and Equipment	912	912

Other Assets

Opening Balance	129	1,568
GST	1,415	(1,439)
Total Other Assets	1,545	129

Equity

Opening Balance	268,663	158,872
Current year earnings	(4,534)	109,790
Total Equity	264,129	268,663

Changes in Accounting Policies

There have been no changes in accounting policies. Policies have been applied on a consistent basis with those of the previous reporting period.

Related Party Transactions

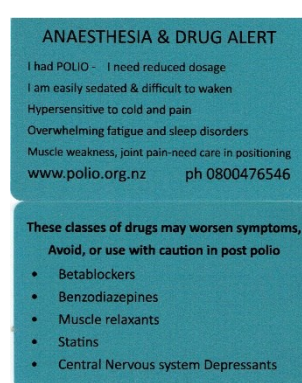
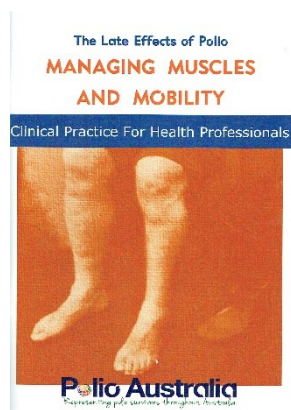
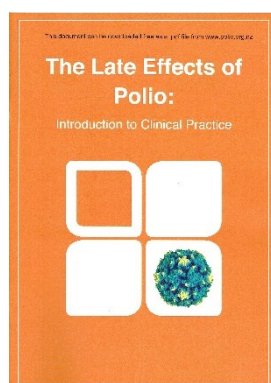
There were no transactions involving related parties during the financial year. (Last Year - Nil)

Events After the Balance Date

There were no events that have occurred after the balance date that would have a significant impact on the Performance Report. (Last Year - Nil)

New Members:

We have welcomed 20 new members to Polio NZ Inc. since the last AGM. Each new member receives a copy of the 16-page book *A Clinical Introduction to the Late Effects of Polio*, and if relevant to them, a copy of Polio Australia's publication *Managing Muscles and Mobility: The Late Effects of Polio*. They receive back issues of the Polio News, a copy of the Constitution, and two Drug Alert Cards for their wallets. They are encouraged to register for an assessment with *The Duncan Foundation*, and to meet with other members via the weekly Zoom sessions and exercise classes. Canterbury members will now also be introduced to *The Polio Hub* at *On The Go Physio*, made possible by the generous bequest of the late Almer Slack.



This full-page ad will appear in six bi-monthly issues of the *Physio Matters* magazine that is distributed to over 5000 physios throughout the country.



Photo: Maitland — © Robert 2021

Supporting your clients with Post-Polio Syndrome

While Polio has long been eradicated in New Zealand many survivors of Polio are now experiencing the Late Effects of Polio or Post-Polio Syndrome.

Physiotherapy can be very beneficial in managing the symptoms, which commonly include fatigue, pain and new muscle weakness +/- atrophy.

That said, exercise needs to be carefully prescribed to prevent worsening of these symptoms.

Patients with Post-Polio Syndrome are at risk of overexertion from daily activities and exercise, due to a higher level of relative effort required as the result of loss of innervated muscle fibres. In addition, the muscles affected by Polio require 2-3 times as long to recover from exhausting effort.

People with Post-Polio Syndrome can exercise safely but it is important to pace themselves. Exercise programmes should start gradually with close monitoring for signs of fatigue, muscle pain or joint pain. Research recommends gentle to moderate exercise with frequent intervals of rest to prevent overuse fatigue.

Ullian Drummond (NZPPS POLIO CLINICAL TEAM LEADER, DUNCAN FOUNDATION)

We're here to help.

Polio NZ provides information and peer support to assist polio survivors live life with independence and to the full.



SCAN THE POLIO NZ QR CODE

The Duncan Foundation has a national network of neurological physiotherapists experienced in the management of Post-Polio Syndrome. For support for you and/or your clients contact Ellen@openneurorehab.co.nz

Post-polio and anaesthesia considerations

Polio New Zealand is working to raise awareness of how anaesthesia impacts post-polio patients to enhance the quality and safety of patient care in these patients.

Polio results in widespread neural changes, not just destruction of the spinal cord anterior horn (motor nerve) cells, and these changes get worse as patients age. These anatomic changes affect many aspects of anaesthesia care.

1. Post-polio patients (PPS) are nearly always very sensitive to sedative meds, and emergence can be prolonged. This is probably due to central neuronal changes, especially in the Reticular Activating System, from the original disease.
2. Non-depolarizing muscle relaxants cause a greater degree of block for a longer time in post-polio patients. The current recommendation is to start with half the usual dose of whatever you're using, adding more as needed. This is because the poliovirus lived at the neuromuscular junctions during the original disease, and there are extensive anatomic changes there, even in seemingly normal muscles, which make for greater sensitivity to relaxants. Also, many patients have a significant decrease in total muscle mass. Neuromuscular monitoring intra-op helps prevent overdose of muscle relaxants. Overdose has been a frequent problem.
3. Succinylcholine often causes severe, generalised muscle pain postop. It's useful if this can be avoided.
4. Postop pain is often a significant issue. The anatomic changes from the original disease can affect pain pathways due to "spill-over" of the inflammatory response. Spinal cord "wind-up" of pain signals seems to occur. Proactive, multi-modal post-op pain control (local anaesthesia at the incision plus PCA, etc.) helps.
5. The autonomic nervous system is often dysfunctional, again due to anatomic changes from the original disease (the inflammation and scarring in the anterior horn "spills over" into the intermediolateral column, where sympathetic nerves travel). This can cause gastro-esophageal reflux, tachyarrhythmias and, sometimes, difficulty maintaining BP when anaesthetics are given.
6. Patients who use ventilators often have worsening of ventilatory function postop, and some patients who did not need ventilation have had to go onto a ventilator (including long-term use) postop. It's useful to get at least a VC preop, and full pulmonary function studies may be helpful. One group that should all have preop PFTs is those who were in iron lungs. The marker for real difficulty is thought to be a VC <1.0 liter. Such a patient needs good pulmonary preparation preop and a plan for postop ventilatory support. Another ventilation risk is obstructive sleep apnea in the postop period. Many post-polios are turning out to have significant sleep apnea due to new weakness in their upper airway muscles as they age.

COMMENT: Postop respiratory failure in these patients can be difficult to manage. The patient's pulmonary physician could help by doing a preop evaluation and being involved

in postop ventilator management. This situation might call for the resources of an ICU in a major medical center.

7. Laryngeal and swallowing problems due to muscle weakness are being recognized more often. Many patients have at least one paralyzed cord, and several cases of bilateral cord paralysis have occurred postop, after intubation or upper extremity blocks. ENT evaluation of the upper airway in suspicious patients would be useful.
8. Positioning can be difficult due to body asymmetry. Affected limbs are osteopenic and can be easily fractured during positioning for surgery. There seems to be greater risk for peripheral nerve damage (includes brachial plexus) during long cases, probably because nerves are not normal and also because peripheral nerves may be unprotected by the usual muscle mass or tendons.
9. New ideas/thoughts: Spinals: Recent studies demonstrating the presence of cytokines in the CNS of PPS patients lead me to be less enthusiastic about using spinal/epidural anaesthesia. There is no data on this situation, and there are so many benefits to this regional anaesthesia, and it might be suitable in some situations.

Lidocaine would not be a suitable drug choice for PPS patients. It has been shown to cause nerve damage when used for a spinal. Regional anaesthesia: Should the peripheral nerves of PPS patients be exposed to local anesthetics, especially for long periods postop? There is no data, but many PPS patients have atrophied peripheral nerves. Perhaps smaller doses of local anesthetics and avoiding continuous postop infusions would be safer. Above-the-clavicle blocks (supraclavicular and interscalene approaches): These have a high risk for diaphragmatic paralysis and should probably not be used in PPS patients, unless the patient can tolerate a 30% decrease in pulmonary function.

PPS patients can have anaesthesia and surgery safely, with careful preparation. These recommendations are based on extensive review of current literature and clinical experience with these patients. They may need to be adjusted for a particular patient.

Reference

Summary of Anaesthesia Issues for the Post-Polio Patient (abbreviated). Selma H. Calmes, MD, Chairman and Professor, (retired) Department of Anesthesiology, Olive View-UCLA Medical Center, Sylmar, California (Rev. 2014). Presented on 20 September 20, 2014, at the conference "We're Still Here!" Living with the Late Effects of Polio," presented by the California North Coast Post-Polio Group.

Further reading

<https://pubs.asahq.org/anesthesiology/article/103/3/638/8686/Postpolio-Syndrome-and-Anesthesia>
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3696261/>
https://www.aana.com/docs/default-source/aana-journal-web-documents-1/anestheticconsider_1011_p408-410.pdf?sfvrsn=2f8a5ab1_6

GRATEFUL ACKNOWLEDGEMENTS

The Society expresses our deepest gratitude to the organisations and individuals who have supported us over the last year, including Primo of Taranaki who provide free internet to our Secretary. Our sincere thanks go to the hundreds of people who sent in donations - too numerous to list.



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