

ONTARIO NEUROTRAUMA FOUNDATION 2014/2015 ANNUAL REPORT



Ontario Neurotrauma Foundation
Fondation ontarienne de neurotraumatologie

PRACTICAL, RESULTS-FOCUSED RESEARCH FOR REAL CHANGE

The Ontario Neurotrauma Foundation (ONF) funds practical, results-focused research in neurotrauma (acquired brain injury, spinal cord injury), and injury prevention. ONF's bold approach focuses on collaboration and implementation to bridge gaps between research and practice. The result – sustainable change for improved quality of life.

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MESSAGE FROM THE CHAIR AND CHIEF EXECUTIVE OFFICER

Neurotrauma: This is our time

Neurotrauma is a significant public health issue that contributes to our collective need to focus on brain health as an objective for Ontario, Canada and internationally.

ONF is a leader in advancing research to practice, and making the changes necessary to prevent these injuries and improve quality of life for people living with a spinal cord or acquired brain injury. Our work is embedded within a developing national and international conscience that understands the burden of these injuries, their interconnection with other neurological disorders, and the compelling need to work collaboratively towards solutions.

Our annual report highlights the importance of understanding the impact of neurotrauma in Ontario, and our research and implementation activities, which improve outcomes. This year, we simplified our presentation and highlighted a few areas in order to provide the essence of what we do rather than chronicle all of our investments, and identify all our stakeholders and collaborators.

We are indebted to a robust research community: engaged clinical, consumer and stakeholder participants, our partners and collaborators, our Board, our staff and our volunteers, all who work tirelessly to advance our agenda and make a difference for Ontarians. We thank them all.

Our stewardship of public money and our accountability for achieving results galvanizes us to work together, and leverage other investments to make the differences we all expect and need. We are proud of our new alliance with the Canadian Spinal Research Organization. Our ongoing work with the Rick Hansen Institute, REPAR in Quebec, the Seniors Health Knowledge Network, the Canadian Institutes of Health Research and our participation in the International Traumatic Brain Injury Research Initiative brings new research funding to Ontario.

None of this good work would be possible without investments made by the Ministry of Research and Innovation. We thank the Ministry and the Ontario government for their ongoing support.

This spring, the Ontario government launched the Ministry of Health's **Strategic Vision and Plan - Patients First**. The vision resonates with ONF, as our work has always been created by and with individuals living with the effects of neurotrauma—those we refer to as our consumers. We are proud of the development of the Ontario Spinal Cord Injury Alliance to improve lives and reduce burden. This network of individuals living with a spinal cord injury as well as researchers, clinicians, policy makers and system administrators is a prime example of how we can work together to create evidence informed, clinically relevant and consumer supported solutions. We know our work will contribute to the success of the Ministry's vision.

We encourage you to read our report and let the numbers speak for themselves. For more information, visit www.onf.org to find out about what we do and the difference we make. This is our time. Thank you for helping us and being part of our exciting journey.



BARRY MUNRO
Chair



KENT BASSETT-SPIERS
Chief Executive Officer

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Charitable registration number: 89638 4427 RR0001

Injury Prevention

Brain and spinal cord injuries have life-long severity and consequences. Classified as *neurotrauma*, these result in a tremendous burden to individuals, their families and the healthcare system. Preventing such injuries is paramount particularly since most injuries are predictable and preventable. ONF's current focus is the issue of falls across the lifespan, particularly in older adults—a priority based on the burden of injuries resulting from falls alone and the changing demographics in Ontario.

INJURIES DUE TO FALLS IN ONTARIO

30% OF VISITS TO ONTARIO EMERGENCY ROOMS FOR FALLS



57% OF ADMISSIONS TO ONTARIO HOSPITALS DUE TO FALLS



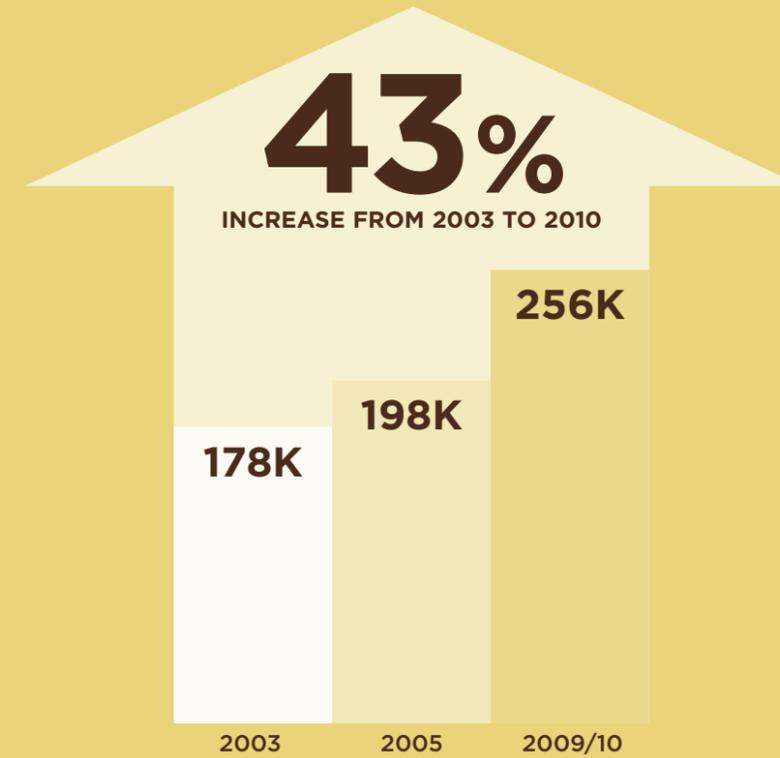
38% OF INJURY-RELATED DEATH IN ONTARIO DUE TO FALLS



COST TO ONTARIO FOR FALLS-RELATED INJURIES
\$2.8 BILLION

FALLS IN OLDER ADULTS

INCREASE IN THE NUMBER OF OLDER CANADIANS WHO REPORTED A FALL-RELATED INJURY (2003-2010)



MOST COMMON CAUSES OF FALLS

*According to number of individuals hospitalized due to a fall



FALLING ON SAME LEVEL e.g. tripping

32%



LADDERS/SCAFFOLDING

3%



FALLS ON STAIRS

10%



SKATES/SKIS/BOARDS/BLADES

2%



FROM FURNITURE

6%



PLAYGROUNDS

1%

OTHER NON-SPECIFIC FALLS EACH LESS THAN 1%

2014-15 HIGHLIGHTS

POWER OF POSITIVE LINKING— THE FALL PREVENTION COMMUNITY OF PRACTICE

There is no shortage of information about fall prevention in older adults. The challenge for health practitioners and decisions makers is making the best use of what is available, and then applying the most appropriate information, tools and implementation processes. The Fall Prevention Community of Practice, sponsored by ONF in partnership with the Seniors Health Knowledge Network (SHKN), connects over 1700 members who work in fall prevention. By sharing with each other the most effective tools, knowledge and implementation practices, new skills are developed and best practices put into use.

PUBLIC AWARENESS AS OLDER ADULT FALLS INCREASE

Based on the burden of injuries resulting from falls in older adults, 15 provincial and national organizations are working together to coordinate education and awareness raising efforts. A collective fall prevention campaign is planned for November 2015. As a catalyst, ONF is uniquely suited to coordinating the various perspectives and partners in order to present a consistent message about the incidence, impact and prevention. With research telling us that injuries in older adults have increased in Canada by 43%, this is a timely effort for raising the profile of healthy aging and fall prevention in older adults.

FALL PREVENTION PRACTICES IMPLEMENTED FOR SUCCESS

Evidence-informed (best) practices are key to knowing what works best in falls prevention. However, best practices work only when they are well implemented. In 2014, ONF continued to provide implementation science expertise and support to those working on the front lines of falls prevention and other injury prevention topics. These include regional partners such as the LHINS, and provincial networks such as the Injury Prevention Managers Alliance and regional network chairs.

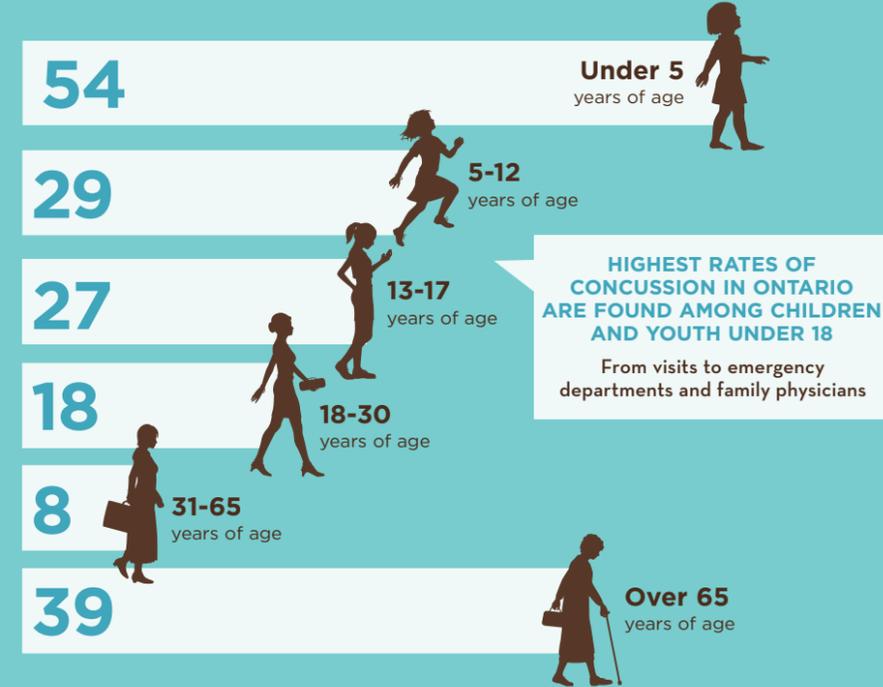
Source: Parachute. (2015). Cost of Injury in Canada. Parachute: Toronto, ON., PHAC Seniors' Falls in Canada Second Report (2014). Used with permission.

Acquired Brain Injury

Acquired Brain Injury (ABI) dramatically impacts people's lives. It can happen to anyone in an instant and although early rehabilitation improves chances of recovery of function, symptoms can be permanent. Individuals experience changes in how they think, feel and behave as well as how they move. Through research findings, individuals with ABI, their families and caregivers have hope that their loved ones can and will have an improved quality of life.

CONCUSSIONS BY AGE GROUP

PER 1000



ONTARIANS LIVING WITH A BRAIN INJURY

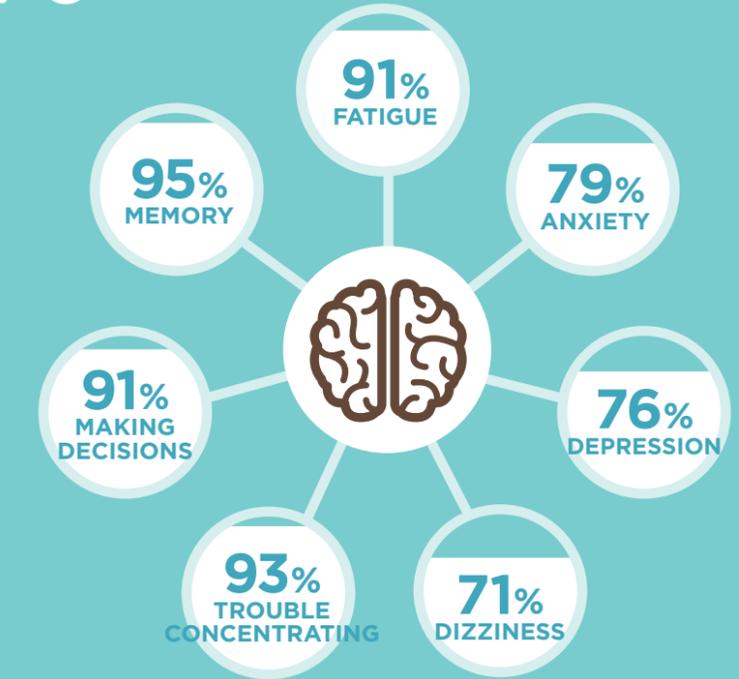


PERCENTAGE OF THOSE WITH BRAIN INJURY WHO RETURN TO WORK

Productivity losses from working-age disability and death are the highest for TBI than any other neurological condition, across all age groups.

IMPACT OF A BRAIN INJURY

% OF PEOPLE WHO SUFFER THESE SYMPTOMS FOLLOWING BRAIN INJURY



HALF A MILLION

PEOPLE IN ONTARIO LIVE WITH ACQUIRED BRAIN INJURY

If everyone with an ABI joined hands, the line would stretch from Toronto to Montreal.

2014-15 HIGHLIGHTS

DEMONSTRATING LINKS BETWEEN ACQUIRED BRAIN INJURY AND ADDICTION

ONF funded research showed that approximately 1/3 of those seeking care for addictions also reported a history of brain injury. Unfortunately, individuals with co-existing conditions do not always receive the specific treatment and support they require. Research is leading to better integration of healthcare services between service providers who work in either addictions or brain injury. Improved integration means co-existing conditions can be identified sooner and treatment models adapted to serve patients better.

IMPROVED TREATMENT FOR CONCUSSIONS IN CHILDREN

Concussions can have a more serious effect on a young, developing brain and need to be addressed correctly. In 2014, ONF released the world's first comprehensive pediatric guidelines, researched and compiled by 30 experts across North America. **The Guidelines for Diagnosing and Managing Pediatric Concussion** is described as "an indispensable resource for caregivers." The French version is being released this spring.

IMPROVED OUTCOMES IN BRAIN INJURY REHABILITATION

Brain injury rehabilitation should begin as early as possible as therapy at the hospital. An ONF-funded study looking at more intense therapies during inpatient rehabilitation found that length of stay and the overall number of hours of therapy had a significant impact on functional recovery. At a time when financial pressures mean shorter in-patient stays, these results underscore that longer and more therapeutically intensive in-patient stays result in better immediate and medium-term gains.

BETTER MEASUREMENT OF INJURY SEVERITY

Traumatic brain injuries vary in degree of cognitive, physical and psychosocial consequences. Several studies funded by ONF on older adults and children have provided important new information to help in understanding the course of recovery. Findings can serve to help inform clinical prediction. Healthcare professionals can determine when, what and how patients need to receive management for their TBI and which patients may be at higher or lower risk for good or poor prognosis.

Sources: OBIA Impact Report, 2012; National population health study of neurological conditions, 2011; Center for Disease Control; Colantonio et al, ABI Dataset Report, 2009; Levy, Bayley et al, Access to concussion care in Ontario, 2012.

Spinal Cord Injury

A Spinal Cord Injury (SCI) causes loss of motor and sensory function, and paralysis. The result is a sudden and drastic change in an individual's life. There are two types of paralysis, depending on the level of the injury: paraplegia where the individual has use of upper limbs but lacks the use of lower limbs; and tetraplegia or quadriplegia where the individual loses use of all four limbs. Common secondary conditions are pressure sores, pain, neurogenic bowel and bladder management—the recent focus of ONF supported research.

CAUSES OF SCI

MOTOR VEHICLE COLLISIONS



43%

most common for ages 30-40

FALLS



43%

most common for those 65 and over

OTHER



14%

sports, violence and others

ECONOMIC BURDEN OF SCI



33,140

ONTARIANS LIVE WITH SPINAL CORD INJURY

THERE ARE **600**

NEW SPINAL CORD INJURIES EVERY YEAR IN ONTARIO

EACH SCI COST

\$1.5 TO 3.0 MILLION

(depending on level and completeness of injury)

HOSPITALIZATION ALONE OF PEOPLE WITH SCI COSTS ONTARIO'S HEALTH CARE SYSTEM AN ESTIMATED

\$500,000,000

EACH YEAR

DIRECT COSTS INCLUDE HOSPITALIZATIONS, DOCTORS' VISITS, PERSONAL CARE ATTENDANTS, MEDICATIONS, ASSISTIVE DEVICES.

RATE OF EMPLOYMENT

TIME IT TAKES ON AVERAGE TO ATTAIN SUFFICIENT INDEPENDENCE FOLLOWING A SPINAL CORD INJURY



2-3
YEARS

EMPLOYMENT RATE FOLLOWING AN SCI

<30%



2014-15 HIGHLIGHTS

PROVIDING PRIMARY CARE

Timely access to primary care for an individual with SCI means better health, fewer visits to the emergency department and less frequent hospitalization. The Mobility Clinic in Kitchener Waterloo, supported by ONF since 2010, is a model for such primary care. In 2014, the clinic expanded services by:

- Partnering with the local Health Link, giving complex care patients access to the clinic.
- Adding an Ontario Telemedicine Network E-consultation service so family physicians can consult a physiatrist via the Internet.
- Setting up a SCI assessment protocol. Those at risk for mental health issues, i.e. depression or anxiety, now are screened at regular clinics.
- Developing self-management supports and resources.

REDUCING THE BURDEN AND COST OF SECONDARY HEALTH CONDITIONS

Neurogenic bowel dysfunction and management is a daily, challenging routine after SCI. ONF supported research shows this common secondary complication costs approximately \$8,000 annually (per individual) in resource utilization, including visits to healthcare professionals. The research has contributed to much needed knowledge for developing bowel management programs—knowledge that assists in proper healthcare resource utilization and improves quality of life.

CONSUMER ENGAGEMENT

By engaging consumers through the Ontario SCI Solutions Alliance, ONF ensures that those living with SCI have a voice in determining research priorities and the best possible health outcomes. The Alliance has over 100 members, including consumers, clinicians, researchers, administrators and policy makers. It identifies research gaps, funding priorities and channels for implementing new knowledge and best practices—critical elements for making long term, successful change.

GETTING COMPLEX RESEARCH INTO EVERYDAY PRACTICE

ONF continues to disseminate new knowledge in pragmatic ways so individuals with SCI and their caregivers can manage their own health better. The 2015 consumer guide, **Preventing and Treating Pressure Sores: A Guide for People with Spinal Cord Injuries** released in March is a plain language version of a more complex best practice document, with needed direction for managing this common secondary complication.

Sources: Kruger & Noonan, The economic burden of traumatic spinal cord injury in Canada, 2013; World Health Organization, Media Centre, 2013; Escorpizo R, Miller WC, Trenaman LM, Smith EM, Work and Employment Following Spinal Cord Injury, 2014; Urban Futures Institute Report, 2010

RESEARCH KNOWLEDGE PARTNERS

ONF's agenda is made possible through partnerships and collaborations developed and nurtured over sixteen years. Through combined research, knowledge, strengths and capacity, solutions are found that improve the quality of life for those living with a neurotrauma injury and address strategies necessary to prevent these injuries.

AO Spine North America	Neurological Health Charities Canada (NHCC)
Brain Canada	NeuroRecovery Network (NRN)
Brain Injury Canada	Ontario Brain Injury Association (OBIA)
Canadian Institutes of Health Research	Ontario Brain Institute (OBI)
• Institute of Human Development, Child and Youth Health	Ontario Injury Prevention Resource Centre (OIPRC)
• Institute of Neurosciences, Mental Health and Addiction	Ontario SCI Solutions Alliance
Canadian Spinal Research Organization (CSRO)	Parachute
Centre for Addiction and Mental Health (CAMH)	Public Health Agency of Canada
Provincial System Support Program	Public Health Ontario
Christopher and Dana Reeve Foundation	Réseau provincial de recherche en adaptation-réadaptation (REPAR-FRQS)
Institut national d'excellence en santé et en services sociaux	Rick Hansen Foundation
Institute for Safety, Compensation and Recovery Research (ISCRR) Australia	Rick Hansen Institute
International Collaboration on Repair Discoveries (ICORD)	Seniors Health Knowledge Network (SHKN)
Ministry of Health and Long-Term Care (MoHLT)	Spinal Cord Injury Ontario (SCI Ontario)
Ministry of Research and Innovation (MRI)	St. Michael's Hospital
	Toronto ABI Network

INDEPENDENT AUDITORS' REPORT

TO THE DIRECTORS OF ONTARIO NEUROTRAUMA FOUNDATION

We have audited the accompanying financial statements of Ontario Neurotrauma Foundation, which comprise the statement of financial position as at March 31, 2015 and the statements of revenue and expenses, changes in net assets and cash flow for the year then ended, and a summary of significant accounting policies and other explanatory information.

Board of Directors' Responsibility

The board of directors is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for not for profit organizations, 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.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained in our audit is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of Ontario Neurotrauma Foundation as at March 31, 2015 and the results of its operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not for profit organizations.

Stern Cohen LLP
Chartered Professional Accountants
Chartered Accountants
Licensed Public Accountants
Toronto, Canada
May 12, 2015

STATEMENT OF REVENUE AND EXPENSES

For the year ended March 31,

	2015	2014
	\$	\$
REVENUE		
Funding grants		
Ministry of Health	-	67,784
Ministry of Research and Innovation	2,100,489	864,000
Rick Hansen Foundation	2,523,034	425,000
Partnership and other	35,231	618,840
Investment income (loss)	38,578	(13,250)
	4,697,332	1,962,374
EXPENSES		
Research project funding	4,018,712	1,588,476
Administrative salaries and benefits	314,089	344,291
Professional fees	19,059	22,753
Occupancy costs	213,924	205,687
Board meetings and travel	5,962	13,913
Insurance	2,707	2,574
Office and general	70,900	51,490
Amortization	13,401	21,686
	4,658,754	2,250,870
Excess (deficiency) of revenue over expenses for the year	38,578	(288,496)

STATEMENT OF CHANGES IN NET ASSETS

For the year ended March 31,

	2015	2014		
	\$	\$		
Contingency Fund				
Unrestricted				
Total				
BEGINNING OF YEAR	673,540	(7,604)	665,936	954,432
Excess (deficiency) of revenue over expenses for the year	35,927	2,651	38,578	(288,496)
END OF YEAR	709,467	(4,953)	704,514	665,936

STATEMENT OF CASH FLOWS

For the year ended March 31,

	2015	2014
	\$	\$
OPERATING ACTIVITIES		
Excess (deficiency) of revenue over expenses for the year	38,578	(288,496)
Items not involving cash		
Amortization	13,401	21,686
Adjustment to fair value of investments	(36,492)	51,979
Working capital from (required by) operations	15,487	(214,831)
Change in noncash working capital balances related to operations		
Deferred grants	760,380	55,292
Deferred interest revenue	1,907	(2,104)
Funding receivable	(1,259,034)	(864,000)
Funding awards payable	545,077	(2,148,744)
Other	(146,626)	164,918
Cash required by operations	(82,809)	(3,009,469)
INVESTING ACTIVITIES		
Purchase of capital assets	(4,470)	(5,168)
Short term investments, net	137,366	2,963,376
	132,896	2,958,208
CHANGE IN CASH DURING THE YEAR	50,087	(51,261)
CASH		
Beginning of year	102,369	153,630
End of year	152,456	102,369

STATEMENT OF FINANCIAL POSITION

As at March 31,

	2015	2014
	\$	\$
ASSETS		
Current assets		
Cash	152,456	102,369
Short-term investments	956,709	1,057,583
Funding receivable	2,123,034	864,000
HST recoverable	66,258	76,884
Prepaid expenses	38,500	25,274
Accounts receivable	-	8,241
	3,336,957	2,134,351
Capital assets	10,682	19,613
	3,347,639	2,153,964
LIABILITIES		
Current liabilities		
Accounts payable	20,779	173,045
Deferred grants	1,377,303	616,923
Funding awards payable	902,151	357,074
Due to Ministry of Health	342,892	340,986
	2,643,125	1,488,028
NET ASSETS		
Contingency fund	709,467	673,540
Unrestricted deficit	(4,953)	(7,604)
	704,514	665,936
	3,347,639	2,153,964