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**NZIER report:**

**Earlier intervention of Multiple Sclerosis will benefit people with MS and the New Zealand economy**

A recently released report by the New Zealand Institute of Economic Research (NZIER), commissioned by the Multiple Sclerosis Society of New Zealand (MSNZ) shows that earlier intervention of Multiple Sclerosis (MS) will not only save New Zealand’s health system millions of dollars per year, it will also contribute millions back into the economy through individual income related earnings.

In 2021 the total estimated employment related loss for individuals with Multiple Sclerosis (MS) was $82 million. Additionally, the total social cost associated with the prevalence of MS was estimated to be $266.3 million in the same period.

The report states - understanding the total costs and benefits of a health challenge is good health economics which matters for society because a person’s health has implications for families, society, and the economy**.**

Although the understanding of MS is evolving. The NZIER report provides evidence that earlier intervention and medicines funding access are key to positive outcomes for both people with MS and the New Zealand economy.

In 2021, around 4,130 people suffered with MS across New Zealand. Predominantly aged between 25 to 50 years old, these people tend to be in their peak earning years and making consequential financial decisions such as home loans and re-financing, household debt and consumption, children and retirement saving plans. The financial consequences of lost employment and lost potential to earn due to the onset of MS are likely to be significant. Individuals’ financial decisions are invariably informed by assumed continued employment and the financial pay-offs associated with career progression. MS can significantly disrupt these plans and oppose unanticipated costs on households and society.

The report describes how the progression of the disease to the severe disability level can be delayed by between 6 to 10 years with early intervention and the present value of such a delay could be between $500,000 and $1 million per case over the delay period.

Slowing the progression of the MS will generate private and social costs savings beyond avoided pain and suffering. Delaying the disease will support people to be more independent, lessen the need for informal care and improve the probability of staying at work.

The population of New Zealand is projected to increase and age in the future, which could contribute to an increase in the number of cases and a greater burden from MS. In the context of an ageing population and MS being a disease of people aged between 25 to 50, it may become more visible in health rankings in New Zealand over the next 30 years.

The prevalence of MS is disproportionately higher among females. Among the New Zealand population, 76% of people with MS were female (3,121), and the remainder were male (1,009). This pattern of higher prevalence among females is a global feature of MS (Wallin et al. 2019; Stenager 2019).

MS is more prevalent in the higher-skilled workforce. The educational achievement of people with MS is higher than the general population. The MS population had higher rates of post-secondary school qualification (54%) compared to the general population (42%) at the time of the NZMSPS (Pearson et al., 2017).

The report combines 2 accepted modelling tools to measure and express the research findings. The Expanded Disability Status Scale (EDSS) to quantify impairment in multiple sclerosis and monitoring changes in the level of impairment over time, and Quality-adjusted life years (QALYs) to measure the loss in health quality for individuals.

The estimated total cost of lost QALYs associated with the prevalence of MS in New Zealand was $26.3 million in 2021.

The health system cost for mild, moderate and severe cases of MS was estimated to be $14.9 million, $42.5 million and $73.1 million, respectively. In 2021, the total health system cost of MS was $130.5 million. This represents an average cost of $31,607per case of MS per year.

The report found that access to medicines in New Zealand is falling behind comparator OECD countries due to a combination of reasons, including:

* Medicines funding is not keeping pace with health spending
* Social costs and benefits being systematically under-counted in funding decisions
* The emergence of effective new medicines is not accommodated by current funding appraisal processes.
* The speed of access to new medicines can be slower in New Zealand than elsewhere.

For New Zealand to progress in the assessment of the social cost and benefits of health intervention relating to MS and other conditions, the report proposes the following changes need to be considered:

* Greater use of social-benefit analysis in pharmacoeconomic analyses would provide greater insight into the benefits of emerging treatments for MS.
* Adding cost-benefit analysis to the suite of tools would support more fulsome decisions about how to set budgets to deliver better health and wellbeing outcomes for New Zealanders.
* Commissioning research into the social benefits and costs would support greater transparency.

The analysis measures considered in the NZIER research include comparison of cost-effectiveness analysis (CEA) and cost benefit analysis (CBA).

Importantly, CEA is a widely used in health policy analysis. CEA investigates the merits of mutually exclusive alternatives based on the ratio of quantitative non-monetised measures of effectiveness, such as improvements in health outcomes, to the cost of the alternative inventions. Additionally, CBA allows for outcomes or benefits of the alternatives to be expressed in a monetised way and compared to the costs of the intervention. This allows analysis to show the value of the net benefits to society. Typically, PHARMAC uses cost-utility analysis, a form of cost-effectiveness analysis, to enable comparison between the cost-effectiveness of interventions treating different conditions taking into account benefits resulting from both decreases in mortality and decreases in morbidity (PHARMAC 2015). In comparison, the Treasury recommends cost-benefit analysis (CBA).

**Research objectives**

The report commissioned by MSNZ engaged NZIER to investigate the economic burden of multiple sclerosis (MS) in New Zealand. The research objectives were to:

**Assess** the economic burden of MS, including the impacts on health quality, productivity, and economic wellbeing.

**Compare** the approaches taken by PHARMAC, which uses cost-utility analysis and social cost-benefit analysis, recommended by Treasury.

**Recommend** an approach that focuses most on supporting improvement in everyday life and enhances the general wellbeing of people with MS.

**What is Multiple Sclerosis?**

MS is a disease of the central nervous system. MS involves the immune system attacking the protective layer of nerve fibres. This causes communication problems within the central nervous system, which can lead to problems in many systems, including:

* Movement:
  + Numbness or weakness in one or more limbs that typically occurs on one side of your body at a time, or your legs and trunk.
  + Electric-shock sensations that occur with certain neck movements, especially bending the neck forward (Lhermitte sign)
  + Tremor, lack of coordination or unsteady gait.
* Vision:
  + Partial or complete loss of vision, usually in one eye at a time, often with pain during eye movement
  + Prolonged double vision
  + Blurry vision.
* Other MS symptoms may include:
  + Slurred speech
  + Fatigue Dizziness
  + Tingling or pain in parts of your body

The [Multiple Sclerosis Society of New Zealand (MSNZ)](https://www.msnz.org.nz/) is a non-profit organisation formed to work with member organisations to meet the needs of people with Multiple Sclerosis, their families, and carers, through national leadership, advocacy, communication, and national and international collaboration.

MSNZ was established in 1967 and provides support, information, educational resources and training to 18 independent [Regional Societies](https://www.msnz.org.nz/contact-your-regional-society/) supporting people living with MS in their communities.

A copy of the report can be obtained by contacting the MSNZ office.

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