# L Medical treatment injury under the NIIS

This appendix expands on the discussion and recommendation in chapter 18 about options to fund medical treatment injury under the National Injury Insurance Scheme (NIIS). Closely related to funding is the question of what medical accidents should be eligible under the NIIS. Decisions about cover of medical treatment injury are not as straightforward as for other sources of injury, since it is difficult to disentangle causality from a range of other factors giving rise to disability. Complexities relate to the inherent riskiness of medical treatment, the natural progression of an underlying illness or disease, or the process of ageing.

The questions of who would be eligible for medical treatment injury and how these injuries should be funded under an NIIS are the focus of the first two sections of this appendix.

The remainder of the appendix specifically addresses arrangements for cerebral palsy. It informs recommendation 18.5 in chapter 18 that the NDIS should fund this source of disability. It also discusses the care and support needs of people with cerebral palsy and the important role of early interventions. This informs the argument in chapter 18 that the National Disability Insurance Agency (NDIA) should ensure that health departments appropriately provide cost-effective early interventions to reduce long-term disability and costs.

## L.1 What 'medical treatment injuries' should be covered by the NIIS?

There are a number of factors relevant to deciding whether the needs of a person suffering a catastrophic medical treatment outcome should be addressed under the NIIS or under the National Disability Insurance Scheme (NDIS).

As discussed in chapter 18, the Commission has recommended that a key consideration in constructing the NIIS for catastrophic medical accidents is to build on existing incentives to minimise risk by:

- motivating the systematic collection and analysis of data that may be used to decrease risks
- varying premiums depending on whether the health sector and practitioners follow best practice protocols and have appropriate training and credentials.

For this reason, the Commission recommended that the NIIS should fund the care and support needs of people who suffer catastrophic injuries in circumstances where changes to the behaviour of medical practitioners, systems and/or protocols could lead to reductions in the number of catastrophic injuries over time. This would go beyond issues of negligence by individual practitioners or hospitals.

In the case of catastrophic injuries arising from accidents that fundamentally represent random events — 'acts of God' — the Commission has recommended that care and support needs would be provided under the NDIS.

In the draft report, the Commission raised the question of whether there should be any consideration of fault in determining cover under the NIIS. The discussion drew heavily on the New Zealand experience, which prior to 2005 took account of a health practitioner's adherence to a standard of care in deciding cover under their universal no-fault injury scheme.[1] Since 2005, the criteria for 'treatment injury' in New Zealand does not include investigation of a health practitioner's clinical practice other than to evaluate whether there is a physical injury and whether that arose out of treatment (box L.1). A central motivation for this was to foster a culture of safety, including early, open disclosure of patient injury. As stated by the Malcolm Report in relation to reform of medical misadventure in New Zealand, there is a need to:

> … move from 'medical error' to a culture of safety rather than blame in what is an otherwise no-fault insurance system. (Malcolm and Barnett 2004, p. 10)

In a similar vein, a move away from the punitive system of finding medical error towards a true no-fault system for treatment injury sought to shift the focus towards the need to create safe, supportive systems of care and clinical learning at the organisational level, rather than focusing on an individual practitioner's failure.[2] This is widely called 'clinical governance'.

A common response from participants to the draft report was that the NIIS should provide truly no-fault cover of treatment injuries, which should not investigate a

1 In 2005, the criteria changed following an interagency review that found the medical misadventure criteria incorporating an assessment of medical error were arbitrary and slow and did not align with the Woodhouse principles. The incorporation of fault, and levelling blame on the health practitioner, was considered to be out of kilter with the ethos of a no-fault scheme (Malcolm and Barnett 2004).

2 This aligns with evidence that a significant proportion of claims against public hospitals in New Zealand were organisational in character (Malcolm and Barnett 2004, p. 16).

practitioner's or hospital's fault. This recognises that some adverse outcomes from medical treatment will occur even when the clinical care was appropriate, given the confines of medical knowledge at the time of giving treatment, and the state of treatment protocols and technologies. These are 'no-fault' injuries that would currently be ineligible for compensation through medical litigation.

The Commission supports this view and its alignment with the no-fault principle of the NIIS (although a system of 'notification' would be appropriate to reinforce the value of public safety, as occurs in New Zealand (box L.1), and proposed in chapter 18).

Nevertheless, while this means both at-fault and no-fault cases of medical treatment injury would be covered under the NIIS, there would still be a need to distinguish an *injury* that arises from a medical treatment accident from a *disability* arising more generally. In practice, this is the interface between the NIIS and the NDIS, and is discussed below.

## Identifying a 'treatment injury'

As mentioned above, determining causality can be complex. In view of the inherent risks to the patient in undergoing medical procedures, it can be expected that some adverse outcomes will eventuate even with ideal clinical care. This could reflect, for example, the characteristics of the person undergoing treatment, including:

- the existence of an underlying co-morbidity — health condition, disease, or ageing
- refusal to undergo, or unreasonably delaying, a treatment intervention.

To the extent that these factors either *wholly or substantially* cause a significant adverse outcome associated with the medical treatment, that would not be classed as a 'treatment injury' for the purposes of the NIIS, and instead, the resulting disability would be covered under the NDIS. This reflects that the medical treatment did not substantially cause the outcome and, hence, the outcome could not have been prevented, other than by perhaps refusing treatment (which would be unlikely to be desirable in most circumstances).

For example, in the event of an adverse outcome from a heart transplant where the care was appropriate and used the most up-to-date protocol, the preventability of an adverse outcome is relatively low, since the underlying health status of the patient and the inherent risks of the procedure were likely to have caused (or, at least, contributed substantially) to the outcome of the 'life-saving surgery'.

## Box L.1 **Treatment injury in New Zealand**

Under New Zealand's Accident Compensation Corporation Scheme (ACC), a treatment injury is any injury resulting from treatment by a registered health professional, including from disease prevention, delays or failure to diagnose, a delay to follow-up or refer, or the failure of equipment used in treatment.

The treatment has to give rise to a physical injury, and the person is not covered if the injury either wholly or substantially relates to an underlying health condition or other genetic factor. In addition, the fact that the treatment did not achieve the desired result does not itself constitute a treatment injury.

In-house clinical advisors (registered health professionals with clinical experience) make decisions about coverage. Generally, claims involving allegations of delay or failure to treat or diagnose will require external advice.

The ACC (as the statutory insurer in New Zealand) is required to notify the Director–General of Health of a risk of harm to the public, based on claims information, with a capacity for urgent notifications to be made within 72 hours.

- Prior to 2005, when the requirement for cover was still based on a practitioner's fault (medical misadventure), there were on average 12 notifications per month.
- In 2010, there were 24 adverse event notifications per month. (These do not constitute an allegation of error or blame and are usually about systems or patterns of events at the organisational level.)

The ACC also publishes professionally-reviewed case studies to educate practitioners on the risks of various treatment injuries and help prevent avoidable incidents.

While it is not possible to definitively attribute all of the increase in claim numbers to the introduction of the new criteria in 2005, it is reasonable to conclude that coverage substantially increased under the new legislation.

- From 1992 to 2005, an average of 3000 claims were received by the ACC each year, with around 40 per cent accepted (around 1200 claims); although from 2001 to 2004, the rate of acceptance was lower than this. Around 15 per cent of claims accepted were because of medical error and 85 per cent were for medical mishap.[3]
- Following the new legislation in 2005, the average number of claims increased three-fold to around 9000 per year, and the acceptance rate was around 65 per cent (around 5850 claims per year or in the order of four to five times as many claims as pre-2005).
- Most of the growth in claims appeared to be for non-catastrophic injury, with catastrophic treatment injuries apparently not markedly changed and remaining stable.

*Source*: www.acc.co.nz; personal communication with ACC.

[3] Medical error is when the practitioner failed to provide a standard of care reasonably expected under the circumstances. Medical mishap is when, as a result of appropriate and timely medical treatment, a severe and rare injury is sustained. These terms were defined in section 5 of the NZ *Accident Rehabilitation and Compensation Insurance Act 1992*, but are no longer current.

At the boundary, however, the extent that such underlying factors or the medical treatment itself caused the adverse outcome may not always be clear. Above *some threshold* level of statistical risk, a clinical risk will become sufficiently material to be regarded as an 'expected' or necessary outcome of the treatment.

An important function of the NIIS would be to make decisions about the appropriate threshold or materiality of known risks across different treatments and patients. Moreover, decisions about coverage would have to be sufficiently robust and timely. While, as discussed in chapter 18, the NIIS would rely upon an administrative expert panel for this purpose, and contract external experts where necessary, there is some uncertainty about the capacity of an administrative panel to do this.

It is particularly problematic to objectively determine whether or not an 'accident' occurred in cases relating to birth, antenatal or neonatal care, with significant potential for classification errors. As such, the issue of cover and funding of cerebral palsy is discussed separately (section L.3). For other treatment injuries, such as cases of delayed diagnosis or misdiagnosis, determining causality can also be difficult given uncertainty about the natural progression of an illness or disease, but the likelihood of classification error is generally much lower.

The Commission expects that classification issues in making decisions about NIIS coverage could largely be overcome through access to comprehensive data and sufficient clinical knowledge residing within the expert panel. This is consistent with an insurance approach to assessing statistical probabilities (including the analysis of underwriting and actuarial risks), but would also draw on expert knowledge about the expected risks associated with various clinical treatment protocols. The complementary task of data analysis would, however, require access to a comprehensive information database. At present, such information is largely held by hospitals and insurers.

- To varying degrees, hospitals and health service providers already report incidents and adverse outcomes, and analyse contributory or preventative factors as part of their normal clinical risk management procedures.
- Medical indemnity insurers, including public hospitals under state-based insurance arrangements, also collect and disseminate information among health service providers and organisations about ways to report, monitor and reduce the risk of adverse treatment outcomes. For example, the Victorian Managed Insurance Agency recently undertook a data analysis project of high cost claims to identify predictive factors of adverse outcomes in order to better target training and the allocation of resources (VMIA 2010).
- Relationships with overseas hospitals and insurers could provide useful information. This was the experiences of Invivo, a relatively new entrant to the

medical indemnity insurance market, who undertakes extensive risk management to individually risk-rate the entire premium of each of their member practitioners.4

There is a strong argument to establish a single comprehensive information database that relevant organisations, including the NIIS, medical boards and existing bodies responsible for safety and quality frameworks, insurers, clinical colleges and researchers could access. Importantly, this would offer benefits far broader than informing decisions about NIIS coverage. Access to an information database and analysis of risks is crucial to guide continued improvements in risk management, reducing the consequences and likelihood of adverse events.

Cooperation and coordination with existing bodies responsible for patient safety and quality frameworks would assist in the establishment and management of the database. The database would enable the identification of trends based on claim information, event notifications and information on predictors of adverse events, preventable complications and the impact of co-morbidities (for example, to analyse clinical risks by treatment type and the impact of location, practitioner, hospital, training, experience level, patient characteristics). Any unjustified variation in standards of care across organisational units and particular practitioners could similarly be identified through analysis and could help to inform funding models that recognise and reward safety.

The NIIS could help to advance the proposal for an information database and coordinate national consistency in data collection and reporting frequency.

## The timeliness of assessing eligibility for the NIIS

Avoiding delays in decisions about cover under the NIIS is important to ensure early interventions and appropriate rehabilitation, as well as to support early planning of lifetime care needs and future levels of participation. Regardless of any potential for delay in individual cases, access to treatments and rehabilitation should be the same between the NIIS and NDIS in the early period following injury.

4 Invivo looks at a broad range of risk factors when determining the premium of each of its members. This differs from the traditional approach of medical indemnity insurers who apply a loading to a base premium to capture *some* of the actuarial variations in risk. Apart from claims experience, individual risk factors could include, for example: the level of experience of a practitioner, including how long they have been practicing in their field; the degree of specialisation and areas of sub-specialty and the extent to which they only practice in that sub-specialty; claims experience; the number of hospitals they practise across — fewer hospitals represents a better risk; where the practitioner received their training; and participation in industry bodies.

The advice the Commission has received from New Zealand's Accident Compensation Corporation (ACC) Treatment Injury Centre suggests that, although some cases are more complex than others, it is usually possible to identify whether or not a treatment injury has occurred with adequate certainty and timeliness.

The ACC has a legislated timeframe to make decisions about cover for treatment injury of no longer than nine months, though the median time to make decisions is 37 days. Key performance indicators (KPIs) depend on the assessed complexity of the claim. Complex claims account for around 15 per cent of overall claims and have a KPI of 147 calendar days, though the median timeframe is 110 days from the initial lodging of a claim (or around three months from the date medical records are received) (ACC 2010e). Client contact is considered important at the early stage to set expectations about the timeframe for decisions and processes involved. It also assists with obtaining the injured person's consent for the release of all relevant information and avoiding any unnecessary delays in accessing medical records.

A challenge for the ACC is ensuring treating physicians provide the information required of them in a timely fashion. The experience has been that this is less likely in complex cases where the impact of treatment is unclear. To inform and referee decisions in complex cases, the ACC employs specialist clinical advisors or seeks advice from external experts in specific specialty areas. While the Commission understands that there can be shortages of such expertise in New Zealand, this would be a lesser issue in Australia.

Drawing on New Zealand's experience, there would be value in legislating a maximum decision timeframe, supported by key performance indicators. Any potential for errors and delays in the decision-making process should be monitored and reviewed over time. As proposed in chapter 18, this could occur as part of the 2020 review. However, unlike the situation in New Zealand, the concurrent introduction of the NDIS would ease pressure about decisions of coverage, and largely eliminate any material consequences for participants.

## Should there be exclusions from coverage?

Other than exclusions from coverage based on the disability being a necessary part of the medical treatment (which would instead be covered under the NDIS), there may be a basis to apply additional exclusions, including:

- for health services consumed abroad or not covered by the pharmaceutical benefits scheme or medical benefits scheme. This reflects the important role of regulating the health service and ensuring patient safety is supported by clinical risk management procedures

- if the injury was the result of a person unreasonably withholding or delaying consent to undergo treatment
- based on whether the injury is the result of a resource allocation decision. For example, the New Zealand legislation specifically does not cover an injury that is solely the result of a resource allocation decision (*Accident Compensation Act 2001* no 49, s.32.2(b)).

In practice, exclusion of injuries resulting solely from a resource allocation decision appears to be applied only in exceptional circumstances in New Zealand — the Commission understands the resourcing condition has been applied on six occasions out of nearly 42 000 treatment injury claims. This approach to how the legislation is applied in New Zealand, therefore, appears consistent with:

- the concept of a no-fault scheme
- providing incentives for cost-effective reductions in catastrophic treatment injury, given the close nexus between resourcing decisions and clinical risk management. But, recognises that, at the margins, some costs could be unreasonably (and inefficiently) high if there was no consideration of various practical imperatives associated with resourcing of health services.

The NIIS would similarly have a role in setting expectations on what appropriate risk management would entail in practice, which would take account of the cost-effectiveness of changes in clinical practices and protocols. The importance of clinical risk management is discussed below.

## Clinical risk management

In an otherwise healthy patient, the inherent riskiness of medical treatment heavily influences the probability of a treatment injury. This reflects the limits of current medical knowledge, treatment protocols and technologies. To this end, the rationale for funding (and providing cover) through the NIIS will closely relate to clinical risk management (box L.2), including:

- resource allocation decisions that affect patient safety. As noted above, cost considerations are a prominent feature of risk management decisions and will heavily influence what constitutes adequate5 controls among various alternatives to mitigate clinical risks

5 For example, the clinical risk management guidelines for the WA Health system assesses an adequate standard of controls as having: sufficient effective controls substantially in place for specific circumstances, which are communicated and complied with, and periodic reviews conducted (Department of Health (Western Australia), no date).

- the state of clinical knowledge and accepted clinical practice at the time of seeking or receiving medical treatment
- incentives for improvements in patient safety.

To reduce catastrophic treatment injuries, the NIIS should seek to lever cost-effective improvements in each of the above areas. This includes:

- driving innovation in clinical training and protocols
- ensuring that the ongoing and high cost of long term-care for catastrophic treatment injuries is incorporated in cost-management decisions and the determination of an 'appropriate' standard of care to patients.

Identifying areas for improvement would be informed by data analysis and in collaboration with medical boards, relevant colleges and existing bodies charged with patient safety and quality frameworks. Providing incentives for cost-effective reduction in clinical risks is the basis of decisions about funding treatment injury under the NIIS, which is discussed in the next section.

### Box L.2 **Clinical risk management**

Risks are inherent in the delivery of health services to the community. The level of clinical risk involved in performing various treatments and procedures reflects the consequence(s) of the risk and the likelihood of that risk materialising. Within a clinical risk management model, risks are evaluated for a specific program or area of service using a risk assessment matrix to evaluate the overall risk, which is a composite of consequences, ranging from insignificant to catastrophic, and likelihoods, ranging from rare to almost certain.

Once the level of clinical risk is determined, a decision will be made to accept or not accept the level of risk and look at ways to reduce or eliminate the level of risk — especially if the risk is identified as either high or extreme. Alternative treatment options may be available to prevent, detect and monitor or lower the consequences of the risk. The acceptability of a risk will reflect a mix of clinical, operational, technical and financial factors, as well as legal and other ethical ramifications. In particular, assessing the feasibility of options to reduce the risk requires cost benefit analysis. Such resourcing issues are sometimes beyond the locus of an individual practitioner's direct control, but are generally within that of an organisation's broader clinical governance structure (which both responds to and pursues improvements in clinical standards over time).

A key objective of clinical risk management is to support a proactive approach and a safety culture. This involves encouraging staff and practitioners to identify and report clinical risks, particularly systemic problems, and to the extent possible achieve organisational learning to reduce the likelihood of a risk occurring and its consequences.

## In summary

As concluded in chapter 18, questions of eligibility for people catastrophically injured following medical treatment should be decided by an expert panel within the NIIS.

- An evidence base would inform decisions of the expert panel, and the panel may choose to use external experts.
- A person would generally be eligible if their injury is catastrophic and not a necessary outcome from medical treatment, advice or diagnosis (with some possible exclusions relating to, for example, consumption of health services abroad). That would require evidence that:
  - better clinical care or a different protocol could have reduced the likelihood and/or severity of the adverse outcome
  - the disability was not substantially or wholly the result of the natural expected and inevitable progression of an underlying illness or disease.
- Any persons found not to be eligible under the NIIS would be covered under the NDIS. This includes cerebral palsy, for which a special set of arrangements are proposed (chapter 18 and section L.3), reflecting that:
  - in most cases of cerebral palsy, clinical practices could not avoid the disability, which is more akin to other birth defects covered by the NDIS
  - it is particularly hard to reliably determine medical treatment or care by the physician as the cause in any individual case. As such, individually risk-rated insurance is not an efficient way of moderating risks and there does not currently appear to be many systemic changes to practice that would avert risk.

Chapter 18 also proposed that the NIIS would not make any determination of a practitioner's fault, but that there should notification to an appropriate disciplinary and/or investigative body for further investigation if there is a risk to public safety.[6] All common law rights to sue for medical and long-term care and support costs associated with medical negligence would be extinguished for NIIS participants, but not for other heads of damage (economic losses and general damages).

6 Notification would be based on the possibility of a practitioner's negligence and the risk of harm to the public. (See, for example, the New Zealand system of adverse event notification (box L.1)). Collaboration between the NIIS, the Australian medical indemnity industry, medical boards and clinical organisations could assist with early detection of organisational and practitioner errors.

## L.2 Funding of treatment injury

Most participants supported the principle of no-fault provision of lifetime care for people injured through medical accidents. For example, the Medical Indemnity Protection Society criticised the current common law negligence 'trigger' for access to care and support funding of medical treatment incidents, stating that it:

> … generally requires an arguably inefficient and time consuming process that dissipates resources which in our view could be better applied to outcomes rather than process. … MIPS' view is that a clearer and more cost and time efficient trigger than 'negligence' is needed to determine access to obtaining benefits under any disability long-term care and support scheme. …
>
> … there is considerable scope within existing funding for appropriate long-term care costs of patients who become significantly disabled if more efficient processes for determining access to resources and funding of those resources are implemented. (sub. 282, pp. 3, 5)

Despite their in-principle support for no-fault cover of medical treatment injury, insurers were generally cautious about how claims would be funded under an NIIS. Such guarded support is understandable given the pervasive changes an NIIS will engender for medical indemnity insurance, and the substantial weight placed on ensuring the stability of physicians' premiums. Moreover, the number and cost of no-fault claims that the NIIS would cover is uncertain, as is the impact of funding care and support for cerebral palsy through the NDIS (with the timing of such savings depending on the commencement date of the NDIS).

As proposed in chapter 18, medical treatment accidents covered under the NIIS could be financed from a mix of:

- savings on current medical litigation costs and other offsets associated with the introduction of the NIIS
- any automatic program savings associated with reduced reliance on Australian Government subsidy schemes (box 18.4) as a result of reforms, or from the eventual redesign of these programs following a review
- reduced medical negligence insurance costs from the NDIS funding all cerebral palsy (and removing access to the common law to sue for long term care and related heads of damage)
- contributions from the insurance (including self-insurance) arrangements of hospitals and the medical indemnity premiums of physicians for medical treatment accidents.

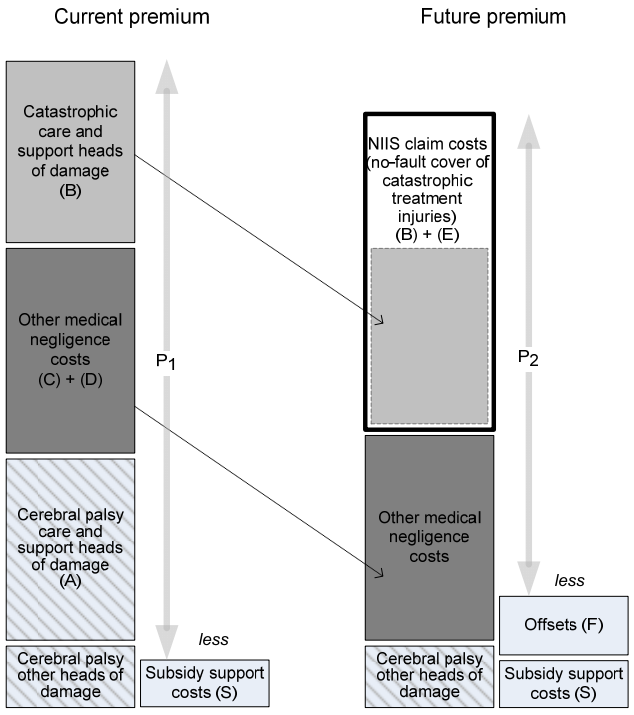
While savings in medical negligence costs and offsets associated with the introduction of an NIIS could provide a significant source of funding for medical treatment injuries, it is unlikely that they alone would be sufficient to cover the increase in coverage for 'no-fault' injuries.

The removal of the insurance costs associated with the lifetime care and support of cerebral palsy cases would put significant downward pressure on premiums. But, whether the removal of these insurance costs would be sufficient to outweigh the additional costs associated with the inclusion of no-fault catastrophic injuries is uncertain. If they were not sufficient, then it would be necessary to gradually phase in premium increases. A phased approach would ensure premiums do not threaten existing practice. Moreover, as proposed in chapter 18:

- state and territory governments should fund any gap between premium income and catastrophic medical injury claims
- regardless, Australian Government subsidy schemes should continue to safeguard the affordability of medical indemnity cover.

The Commission considers that the savings from the introduction of the NIIS, plus the reduced call on medical indemnity premiums from the NDIS funding cerebral palsy, will probably be sufficient to outweigh the cost of 'no-fault' claims (that is, the additional cost of extending cover to catastrophic injury claims where no 'at-fault' party can be identified). However, this is a complex matter and the net impact is subject to uncertainty (figure L.1; box L.3).

## Figure L.1 **Future medical indemnity premiums**[a]




[a] This illustration does not include the portion of the total premium pool required for underwriting, general expenses and the net surplus. See box L.3 for definitions of (A) through to (F).

## Box L.3 **The impact of the NIIS (and the NDIS) on the premium pool**

The current annual costs ($T_1$) associated with meeting 'at-fault' claims for medical 'accidents' involving individual physicians and public and private hospitals comprise:

- future care and support costs for cerebral palsy (A), other catastrophic injury (B) and non-catastrophic injury (C)
- pain and suffering and income losses for all severities of accidents (D).

That is: $T_1$ = A+B+C+D. The actual costs borne through premiums by doctors and hospitals ($P_1$) are less than $T_1$ because the Australian Government provides subsidies (S) to private practitioners (but not to hospitals). Accordingly, $P_1$= $T_1$-S. Currently $P_1$ is directed solely at parties making claims through litigation.

With the introduction of an NIIS, the costs to be met by the combined NIIS and through the tort system for medical 'accidents' would include a new obligation to meet the long-term care and support costs for catastrophic injury claims where no at-fault party could be identified (E).[7] However, there would be some revenue savings because long-term care and support costs for cerebral palsy (A) would now be covered by the NDIS and there would also be some offsets (F). These offsets would include reduced reinsurance costs, reduced frictional litigation costs, savings associated with medical claims that do not proceed to litigation because of the determinations of the expert panel (discussed above) and reduced claims under the other heads of damage given the availability of the NIIS and NDIS.

Under the assumption that S is preserved at its current value, the total premium costs to be met by doctors and hospitals ($P_2$) after the creation of the NIIS would be:

$P_2$= B+C+D+E-F-S

These premiums would be streamed to two different funding pools. The value of B+E (the costs of providing comprehensive cover of catastrophic accidents regardless of fault, based on the claim values as assessed by the NIIS in this area) would go to the NIIS. The remainder would go to the torts system.

There are essentially two possible scenarios with the introduction of an NIIS. The current premium pool either exceeds or falls short of the premium pool required with the introduction of an NIIS. The difference between the current premium pool and the one under the NIIS is P1-P2 = A-(E-F). That would be positive if the cerebral palsy savings (A) are greater than the cost of covering catastrophic injury claims under the NIIS where no at-fault party can be identified (E), less any offsets (F). Under that scenario, no additional contributions from hospitals and practitioners would be needed to fund NIIS claims. However, under a second scenario P1-P2<0, some additional funds would be required.

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7 And would also include the gap between the full costs of providing long-term care and support in *at-fault* cases and what the litigation system actually delivers in these cases. As discussed elsewhere the litigation system does not usually fully-fund those needs, as settlements are discounted for any uncertainty over liability.

As outlined in box L.3, if the current premium pool exceeds the premium pool required with the introduction of an NIIS, there would be no need for *additional* contributions from hospitals and practitioners. This implies that cerebral palsy savings and other offsets are more than sufficient to cover the extension in coverage to 'no-fault' claims. On the other hand, if the current premium pool was not sufficient, additional funds would be required to fund NIIS claims.

Each of the sources of funds that could contribute to the cost of NIIS claims is discussed below.

### *Savings in legal process costs*

The coverage of catastrophic medical accidents under the NIIS (and the associated removal of the head of damage for medical, care and support costs), would remove a proportion of the frictional costs associated with determining the quantum of damages.

The extent of such savings is not certain (box L.4), but it is reasonable to assume that the litigation process should be more straightforward, requiring less reliance on predicting life expectancy[8] and a person's ongoing health status and care requirements. While recognising the potential for some savings, some participants have questioned the extent that legal process costs would represent an appreciable contribution towards the funding of NIIS claims. As suggested by the Australian Medical Association, the retention of common law rights to sue for pain and suffering and economic (income) losses will:

> … require medical practitioners to retain a high level of cover. Medical indemnity insurers will still incur high administrative and legal costs to defend negligence claims. (sub. DR875, p. 4)

### *Weaker incentives to pursue litigation under the remaining heads of damage*

It is likely that more significant savings could accrue from a reduction in the number of medical negligence torts. In particular, with the removal of the head of damage to sue for all medical and lifetime care and support costs, and instead providing care and support through the NIIS (or the NDIS to the extent that cerebral palsy cases would be funded through the larger scheme (see later)), there would be less of an incentive to pursue a claim under the remaining heads of damage. In addition, even for medical accidents occurring before the introduction of the NDIS and NIIS, it is likely that

[8] Damages for loss of earning capacity are calculated over a person's projected 'working life'. Hence, unlike care costs, estimates of life expectancy are generally less crucial for this head of damage.

some of these 'long tail' claims would not proceed to litigation, as care and support costs could instead be met through the NDIS.[9]

### Box L.4 Some 'back of the envelope' estimates of legal savings

- MDA National suggests that a defendant insurer's legal costs for settlements on catastrophic claims are 7 per cent of the total settlement amount. Other information available to the Commission on medical negligence claims suggests that the plaintiff's party-party legal costs are also around 7 per cent and solicitor-client costs (paid from the settlement) are about 80 per cent of party-party costs. In total, this means an amount equivalent to around 20 per cent of the settlement amount is absorbed in legal expenses.
- If assuming a 30 per cent reduction in legal costs from removing the head of damage for medical and future care costs, an amount equivalent to about 6 per cent of the settlement may be saved. Walsh et al. (2005) based their estimates on a more ambitious 50 per cent reduction in legal costs. However, this was applied to an estimated 9 per cent of the total claim cost, implying a 4.5 per cent overall saving.
- These estimates do not include legal resources absorbed in cases where the patient is not successful, or settles for a small 'economic settlement' to reflect a low likelihood of liability being found if the case proceeded to court.

While these estimates are subject to uncertainty, they suggest that the potential for savings will be relatively modest.

*Sources*: Senior Master's Office estimates; MDA National (sub. DR937); Walsh et al. (2005).

More so than would be expected for motor vehicle or workplace accidents,[10] this would come about because of the significant contention that typically surrounds liability in medical negligence claims.

- It is estimated that in the order of 60 to 80 per cent of current medical negligence damages for catastrophic injury are comprised of medical, rehabilitation and future care and support costs. Removing these damages from the total amount claimable through a tort considerably reduces the stakes of pursuing a legal claim. Among a range of reasons why individuals bring medical malpractice

9 Medical indemnity insurers would already have put funds aside to cover the expected future cost of these claims. This means insurers and their members could expect to receive some savings associated with the retrospective cover provided by the NDIS.

10 For example, in the NSW Lifetime Care and Support Scheme, the fault of the first or third party is reasonably certain for about 90 per cent of cases, with about 45 per cent injured by the fault of another person and the other 45 per cent causing their own injury and not pursuing a common law claims. For the 10 per cent of uncertain claims, a common law claim may or may not be pursued depending upon the level of contributory negligence.

claims, securing funds for future medical and care costs is consistently found to be a major motivation (Rothstein 2010).

- Medical negligence claims have a generally very different litigation profile to other personal injury claims. There is a much greater need to establish matters of fact and other circumstances around the case, such as whether the standard of care was adequate under the circumstances. Causation is also complicated by a range of other factors that might have similarly contributed to the adverse treatment outcome, such as an underlying illness or health condition.
- In the context of uncertain liability, this affects the risk-reward tradeoff that determines both a patient's willingness to pursue a negligence tort and a plaintiff lawyer's willingness to accept a case on a no-win, no-fee basis. To the extent that the 2001-2003 tort reforms raised the liability hurdle, there was a noticeable reduction in the number of claims successfully navigated through the new requirements and, in turn, the number of claims brought forward. As the burden of proof rests with the patient, they are likely to incur significant legal costs to marshal evidence and expert opinion.

Given the generally high liability risk, and the lesser reward with an NIIS, it follows that fewer medical negligence notifications would proceed into claims. Of course, for some cases, establishing negligence and liability will be more straightforward, but overall, these would be relatively few.

### *Reinsurance savings*

An additional source of savings would be a reduction in reinsurance and capital costs. Once a steady state is achieved, it is suggested that savings could be in the order of one-third of current expenditure, though there is significant uncertainty around these estimates, and particularly how they would accrue in the shorter term. In particular, medical indemnity insurers are cautious about how the reinsurance market would respond to the impact of the NIIS and anticipate that savings would take some time to flow through, given the long tail of medical negligence claims. To this end, cover under the NIIS on the basis of when an accident occurs differs to the 'claims made' cover provided under current medical indemnity insurance and reinsurance arrangements. MDA National suggested this will limit the potential for immediate savings in reinsurance costs (sub. DR937 p. 3).

While medical indemnity insurers spend around $40 million annually on reinsurance (ACCC 2009b), the approach varies significantly across insurers, with varying attachment points and amounts of cover purchased. To the extent that some insurers have a high attachment point already, there would be less savings. The

reinsurance arrangements of public hospital state insurers also differ widely, with scope for savings being uncertain.

## Savings in cerebral palsy litigation costs

Cerebral palsy litigation is generally the most protracted and highest cost of medical negligence claims. There is typically significant deliberation over liability, and the long term care needs and life expectancy of a claimant are often not apparent until many years after birth. Of the total number of children born with cerebral palsy each year in Australia, only a small number pursue and are successful in gaining compensation. That said, given the high cost of lifetime care, they represent a significant share of claim costs for insurers. Cerebral palsy litigation is discussed in section L.3. For the purposes here, it is sufficient to observe some back-of-the-envelope savings that could become available to offset NIIS coverage of 'no-fault' claims.

- Each year around 5 to 8 per cent of cerebral palsy births could relate to a practitioner's or hospital's negligence. This implies a potential 35 to 55 cases out of the approximate 700 births each year.
- The insurance cover of both private practitioners and public hospitals, provides compensation to in the order of 30 to 40 cases each year. Given these will mostly be settlements which are reduced for uncertainty over liability, the value of the claim would often be less than the full cost of care and support and other damages. Even so, assuming that the average successful claim settles for around $3 million, and that 60 to 80 per cent of the claim will be for long term care and related heads of damage, around $60 to $100 million in claim and litigation costs would be avoided each year.

These are costs that the current premium pool would no longer have to meet, and could instead be used to offset the cost of 'no-fault' cover of treatment injury under the NIIS (although the High Cost Claims Scheme already covers a portion of these costs, covering half the cost of claims against private practitioners exceeding $300 000).

## The future of taxpayer funded subsidy schemes?

A range of Australian Government-funded programs operate to assist with the cost of medical indemnity insurance for private medical practitioners. The four medical indemnity schemes are outlined in chapter 18 (box 18.4), and were developed in 2002 as a 'rescue package' to support physicians and the stability of medical indemnity insurance arrangements. This was at a time when the costs of premiums were at

'crisis' point for many practice groups, and concurrent to the introduction of a range of tort law reforms in each state and territory.

Medical indemnity premiums have since stabilised, and the real price of premiums has declined on average over successive years. In addition to the specific taxpayer funded support programs, the tort reforms of 2002-2003 assisted with this outcome, with now significantly fewer claims and reduced claim costs (ACCC 2009b). The uncertain impact of the parallel tort law reforms meant that the role and ongoing level of assistance to be provided by the various support programs was initially speculative.

For example, the expected costs of the Premium Support Scheme were estimated as just under $50 million for each of the six years following the scheme's inception in 2002, but actual costs were less than half of this each year on average. In the most recent year of the scheme's operation, the actual costs of the scheme have for the first time exceeded the estimated costs, though the Australian Government guarantees cover of all claims subject to the legislated parameters of the scheme.

The number of high cost medical negligence claims would significantly reduce with the introduction of an NIIS. For example, the use of the High Cost Claims Scheme would be expected to fall dramatically over time, since the majority of settlement costs for catastrophic claims would no longer be covered through medical litigation (care costs and associated damages, which represent up to around 80 per cent of a total settlement for catastrophic claims, would instead be met through the NIIS). Moreover, to the extent that the remaining heads of damage for income losses and pain and suffering total more than the current $300 000 threshold, the amount contributed by the Commonwealth would substantially reduce.

As outlined in chapter 18, it was assumed that the Australian Government would maintain its existing level of financial commitment (around $40 million in payments in 2009-10) with the introduction of an NIIS. However, after the NIIS is fully established and following a review, it may be appropriate to:

- modify aspects of how existing taxpayer-funded support schemes operate
- redirect a proportion of the estimated ongoing program funds committed by the Australian Government towards the NIIS (or to the NDIS, in the event that premiums fall and in lieu of NDIS cover of all cerebral palsy care and support costs).

While participants acknowledged that some changes to the operation of these taxpayer-funded schemes may be appropriate, most cautioned against their complete removal. As stated by the AMA:

> … insurance support arrangements should be maintained, particularly if the right to pursue legal compensation is preserved. It is possible to argue for a redirection of Commonwealth and State monies which currently are dissipated via the transactional

> costs of current compensation systems toward supporting the cost of a no fault National Disability Scheme, especially if there is an overall reduction in costs for Medical Indemnity Insurance. However, the extent to which a new no fault scheme will impact on indemnity insurance premiums for classes of medical professionals is unpredictable, and it will be necessary to ensure that the affordability of medical indemnity insurance is maintained. At the very least, the Premium Support Scheme should be kept in place to ensure affordability of indemnity insurance for all doctors. (sub. 568, p.12)

The Commission appreciates such concerns about premium affordability, and notes that any changes to existing Australian Government subsidy schemes could be phased-in after the NIIS is fully established and when the impact on medical indemnity premiums becomes more certain. The reliance on various support schemes across individual practitioners should be carefully evaluated, not just to maintain premium affordability, but also to limit the potential for cross-subsidisation where this would be counter to risk management objectives.

As a practical matter, 'savings' accruing to the Australian Government from the introduction of the NIIS and redesign of the existing support schemes would have to be transferred to the NIIS. For this to occur, such savings would have to be regularly estimated by the Australian Government Actuary and an agreement established between governments that avoided cost-shifting.

## Funding from medical indemnity premiums

As outlined in chapter 18, if the current premium pool falls short of that required with the introduction of an NIIS, it would be necessary to pursue *additional* contributions from medical practitioners and hospitals. The future premium pool with the introduction of an NIIS would be required to fund (figure L.1):

- the cost of catastrophic treatment injuries covered under the NIIS. This includes:
  - the cost of 'at fault' claims for future care and support costs. These are currently met through medical litigation and, hence, already reflected in premiums
  - the cost of extending cover for lifetime care and support to 'no-fault' injuries, plus any gap between the cost of fault-based compensation and NIIS lifetime care and support (given settlements are generally reduced to reflect issues over liability). These costs are currently not reflected in premiums
- damages for income losses and pain and suffering for catastrophic injuries and the fault-based medical negligence costs for all non-catastrophic injuries. These costs are already reflected in premiums.

Premiums would, however, be reduced by:

- the various offsets associated with the introduction of the NIIS, including reinsurance savings, fewer claims under the remaining heads of damage and savings in legal process costs
- the cost of cerebral palsy litigation for future care and related heads of damage, which would instead be met through the NDIS. These costs are currently included in premiums and we estimate could account for around $60-100 million
- spending on subsidy programs.

Chapter 18 also explained reasons why funding NIIS claims through contributions from practitioners and hospitals would be appropriate to encourage clinical risk management activity (beyond that facilitated through premiums for legal negligence). To the extent that funds for NIIS claims would be derived from insurance premiums, chapter 18 indicated the desirability of linking individual physicians' and hospitals' contributions to improvements in risk reduction and patient safety.

## Funding by taxpayers

Links to patient safety and the ability to risk-rate premiums does not necessarily mean *all* costs should be borne by health practitioners and hospitals — reflecting the broader benefits to the public from an NIIS, including the anticipated increase in coverage and reduced reliance on social welfare services and the NDIS. In addition, governments already assume many key responsibilities in this space. This means there may be grounds for some funds, including establishment costs, to be contributed by governments. Although the extent of any taxpayer funds contributed by governments should reflect that:

- significant taxpayer revenues are already used by the Australian Government to subsidise medical indemnity premiums and the cost of medical negligence claims
- the Australian Government would be responsible for funding cerebral palsy through the NDIS, hence removing a proportion of medical negligence costs
- state and territory governments implicitly contribute taxpayer money through self-insurance arrangements for public hospitals
- taxpayers would solely bear the costs of the NDIS. To the extent that more targeted sources of funding are available and appropriate to fund NIIS claims, these should be used to reduce any additional direct burden on taxpayers.

## In summary

It is an empirical question whether the premium pool required with the introduction of an NIIS would be any greater than the current premium pool (figure L.1). The Commission has estimated that the premium pool with an NIIS (and the substantial removal of cerebral palsy litigation costs) could result in a $40 million *reduction* in the insurance costs of doctors and hospitals. Nevertheless, to the extent that uncertainty in this estimate could mean that current premium revenues fall short, chapter 18 proposes the phasing in of modest additional contributions from the insurance premiums of medical practitioners and hospitals. The states and territories should fund any gap in claim costs.

### Box L.5 Medical indemnity premiums

For claims notified in 2007-08, the ultimate claims cost was over $200 million[11], averaging $81 690 per claim and with just over 3 per cent of claims exceeding $500 000. Total premium revenue in the 2007-08 underwriting year was around $306 million, or on average $5392 per premium, which has gradually declined since it peaked at $7500 per premium in 2002-03 (especially if adjusting for real prices).

There is significant variation in the average cost of premiums across specialty groups however, in 2008-09 ranging from $2667 for a non-procedural general practitioner to $48 910 for an obstetrician. Similarly, there is significant variation in the average written premium across jurisdictions — highest in NSW at 24 per cent higher than the national average, but less in the Northern Territory, South Australia and Tasmania. Differences among jurisdictions mainly reflect the different common law regimes operating within each state and territory.

Reflecting the complete removal of common law rights to sue for personal injury in New Zealand, the cost of medical protection insurance is far less than in Australia — selling for around $A1270 for general practitioners or $A270 for nurses in 2010.

In Australia, claim costs represent only around 45 per cent of the total premium pool, or less than 60 per cent of the pool if reinsurance costs are included; the remaining premium income is spent on underwriting and general expenses (around 25 per cent) and the expected surplus (16 per cent), which is typically raised for the purposes of capital accumulation. Even with a proportion of claim expenses removed, it would appear that a sizable portion of premium income will continue to be absorbed for a range of auxiliary purposes.

*Sources*: ACCC (2009b); Medical Protection Society Limited (2010), New Zealand Subscription rates.

11 This is the gross cost, which is offset by recoveries from the Australian Government under the High Costs Claims Scheme, the Run Off Cover Scheme and the UMP support scheme.

## L.3 Arrangements for severe cerebral palsy

Cerebral palsy is a condition that, to varying degrees, affects over 30 000 Australians (Field et al. 2010). Each year, around 150 children born with the condition will have intensive care and support needs, broadly equivalent to that of catastrophic injury. The lifetime care costs can be substantial and are sometimes met through medical litigation. However, due to the difficulty in determining the cause of cerebral palsy, these cases are often drawn out and expensive to litigate.

The current medical litigation context for obtaining compensation invites the question of what role the NIIS should play in covering cases of cerebral palsy — should it have responsibility for funding certain cases of cerebral palsy? In particular, cerebral palsy is relevant to the design of the NIIS because in some cases it is the result of an accident, while in others it is the result of some underlying condition or unknown cause. While emerging scientific research and clinical studies continue to shift medical opinion about the origins of cerebral palsy, it is particularly difficult to determine the cause of cerebral palsy in individual cases. Cerebral palsy originating from factors occurring around the time of birth is believed to account for only around 5 to 8 per cent of cases (Access Economics 2008b).

It is clear that lifetime care needs of people with cerebral palsy should be covered by either the NDIS or the NIIS, but how this care should be funded raises some important questions. These include:

- Can cerebral palsy be prevented through safer clinical practices?
- Does risk-rated insurance give physicians the incentives to lower risk? Would other mechanisms such as research into causal pathways and better training programs achieve this outcome in a more effective and cheaper way?
- What is the most efficient way to fund this support?

In chapter 18, the Commission concluded that the lifetime care and support costs of cerebral palsy would be most appropriately funded within the NDIS. This section presents the rationale for this recommendation. It also discusses the clinical care and support needs of cerebral palsy cases and, in turn, reasons why early interventions would need to be appropriately provided through the health system to reduce lifelong functional disability and care costs.

The focus is on cerebral palsy cases with lifetime care and support needs. Though there would be a broader group of individuals with cerebral palsy, with lower levels of need, who may also be assisted by the NDIS (depending on the extent of their care needs and opportunities for cost-effective early interventions; see chapters 3 and 13).

## The treatment, care and support needs of severe cerebral palsy

Cerebral palsy is an umbrella term used to describe a group of disorders affecting movement and/or posture and motor function. It is a lifelong physical disability resulting from an interference, lesion or abnormality in the immature brain and affects approximately 2 to 2.5 in every 1000 children born each year. While the condition is permanent, it is not unchanging, and function can significantly improve from early interventions. Modern treatment options in early childhood can now delay or even prevent the progression of physical impairment.

The Gross Motor Function Classification System (GMFCS) is used to classify the level of physical disability from cerebral palsy based on the person's ability to self-initiate movement, with a focus on sitting, transferring and mobilising (Palisano et al. 1997). There is often an associated speech, intellectual, vision or hearing impairment or epilepsy, with the rate of these associated impairments generally increasing as the level of motor impairment increases. The GMFCS has five levels describing the extent of motor function restriction of children at the age of five years.

- Levels IV and V would generally be consistent with intensive and lifelong care and support needs. The significant probability of an accompanying impairment will tend to increase the level of care and support need for some children within these categories, as well as for children assessed with lower levels of motor function impairment on the GMFCS.
- Roughly 20 to 30 per cent of cerebral palsy cases will be level IV or above. Given there are around 600 to 700 new cases of cerebral palsy each year, this equates to around 150 cases each year. More profound severity is generally observed for spastic quadriplegia and mixed subtypes:
  - level IV cases are classified as having an ability to walk for short distances on a walker or rely on wheeled mobility.
  - level V describes cases where the physical impairment restricts voluntary control of movement and the ability to hold the head and trunk posture under gravity. Children have no independent means of mobility and are transported.
- The Commission has been advised that it is generally possible to identify the GMFCS level of physical impairment within a year following birth for levels IV and V cases, but for a lower level of impairment, it may take up to five years to accurately gauge the level of ongoing motor function restriction on the GMFCS.

The service and support needs of people with severe cerebral palsy are complex and require multidisciplinary input and coordination (especially in the early years). There are intensive clinical service needs and requirements for post-treatment

therapies (box L.6). These early interventions are important aspects of cerebral palsy management, mainly to minimise the long-term functional disability (and lifelong care and support needs) associated with the condition.

### Box L.6 What are the clinical treatment and post-treatment therapy needs of severe cerebral palsy

Medical and surgical treatments for spastic quadriplegia cerebral palsy (typically associated with very severe functional limitations) that seek to improve physical function include:

- upper and lower limb botulinum toxin (Botox) injections — provided to approximately 60 per cent of children, irrespective of severity.
- orthopaedic surgery — provided to approximately 90 per cent of children with quadriplegia cerebral palsy but to a lower proportion of children with less extensive gross motor function restriction.
- hip surgery — provided to approximately 80 to 90 per cent of children with quadriplegia cerebral palsy, and lower proportions of children with less severe functional limitations.
- Intracathecal Baclofen Pumps — provided mainly to people with quadriplegia cerebral palsy, with around 40 percent of these children provided with a pump, which if successful, is a lifelong treatment program.

Post treatment therapies are critical to the effectiveness of clinical (and particularly surgical) treatments. They include physiotherapy (stretching, physical exercises and other activities to develop muscle strength, flexibility and control), occupational therapy (focusing on developing specific skills including holding the head up, sitting unsupported, or walking), psychology and other specific therapies. In the absence of these services being available, it is likely that clinical treatments will be refused.

Rehabilitation needs are usually overseen by a specialist in rehabilitation medicine (physiatrist), and may also include a neurologist to assist with selecting an appropriate regimen or other specialists as appropriate. A multidisciplinary clinic may sometimes oversee all aspects of the child's therapy and tertiary medical and surgical treatments, however, in some jurisdictions, funding of post-treatment therapies is separated and services not integrated with the tertiary treatment. This then means that substantial liaison effort may be required to ensure post treatment therapies are appropriately coordinated.

*Source*: The Children's Hospital at Westmead; The Sydney Children's Hospital, Randwick and John Hunter Children's Hospital 2009, Proposal *to NSW Health 2009, Enhanced therapy services for children with cerebral palsy following medical and surgical treatment.* Version 1.0.

Given the significant functional disability and high rates of co morbidities, the cost of clinical interventions, post treatment therapies and lifetime care of children with

levels IV and V cerebral palsy is high[12] (albeit that lifespan closely relates to the level of gross motor function and feeding capabilities).[13] In particular, there is:

- an emphasis on medical and surgical treatments
- a need for close interaction with the health system and rehabilitation programs
- a close nexus between successful early interventions and reduced long term functional disability and care requirements.

While early interventions and clinical treatment units for cerebral palsy are in various stages of development in each state and territory, the Commission understands that resourcing of post-treatment therapies may be rationed and poorly coordinated in some jurisdictions. This can result in delays in assessments and refusal to provide clinical treatments (in the absence of an adequate post-treatment program in place).

## Is cerebral palsy preventable?

It is very difficult, and some would say impossible, to accurately establish that medical care *caused* cerebral palsy on a case-by-case basis. Evidence on statistical prevalence indicates that the causal pathway will mostly be unknown:

- When cerebral palsy occurs during pregnancy (during the prenatal period), there is usually no way of knowing whether a specific event or factor caused it. It is currently in the domain of science-based clinical and multi-disciplinary research to find ways to identify individual cases of cerebral palsy arising during fetal development and, in turn, understand possible causal factors. Though generally unknown, factors originating during pregnancy are believed to be the cause of around 75 to 90 per cent of cerebral palsy cases.
- The onset of cerebral palsy can also occur around the time of birth (during the perinatal period), which may suggest that there was some limited opportunity for medical intervention to prevent the condition, including through various defensive

[12] Under current civil liability arrangements to recover compensation, damages for cerebral palsy cases are generally in the order of $3 to $9 million, with up to in excess of 80 per cent of these damages intended to cover the future care and medical costs of the disability. More severe cases would generally have care and support costs at the higher end of this range (though this would depend on life expectancy) and sometimes in excess of $9 million. Under New Zealand's no-fault scheme, lifetime liabilities for cerebral palsy participants can total NZD$20 million.

[13] For example, a teenager with cerebral palsy and a level of gross motor function making them unable to lift their head and requiring to be tube fed or fed by others may only live to around 30 years (Strauss and Shavelle 1998; Strauss et al. 2008). Other factors generally affecting life expectancy include fine motor function, cognitive function and epilepsy.

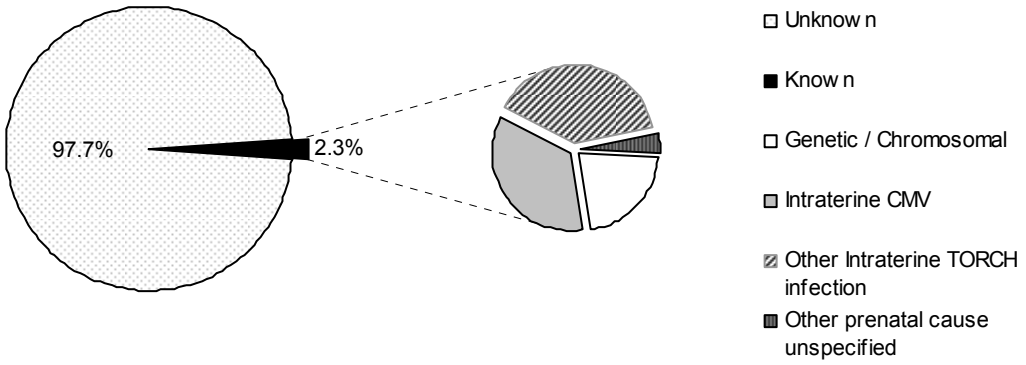
medical practices to lower risks. Cerebral palsy originating from factors occurring around the time of birth is believed to account for around 5 to 8 per cent of cases. Some of these factors may be within a medical practitioner's control.

- Postnatal causes of cerebral palsy (occurring after 28 days of life) are believed to account for between 5 and 18 per cent of cases. In these cases, the cause of cerebral palsy is generally well-specified and usually not related to medical treatment. Cases most commonly arise from a stroke, occurring either spontaneously or as a result of surgery or a heart condition. Other causes may include infections such as meningitis, or a trauma to the developing brain causing brain damage, including from a fall, assault or near drowning.[14] (ACPR Group 2009; Blair and Watson 2006; Stanley et al. 2000; Access Economics 2008b)[15]

On balance, the clear majority of cerebral palsy cases are non-preventable, having mostly congenital or antenatal pathological origins, of which the specific cause is unknown (figure L.2). Given current clinical knowledge and medical technologies, opportunities to prevent cerebral palsy through clinical practices and interventions appear, at best, to be limited to the perinatal (birth) period.

Figure L.2 **The cause of cerebral palsy during pregnancy and birth is mostly unknown**

Per cent of cases




*Data source*: ACPR Group 2009, p. 30

14 To the extent these early childhood causes of 'catastrophic' cerebral palsy are preventable (through various risk management activities and broader public safety programs, such as to reduce near drowning and physical abuse), they would be covered under the NIIS, but included in the 'general injury' category.

15 Percent ranges are shown, reflecting variation in the estimated statistical prevalence across different studies (and different sample sizes and populations). Studies also note that factors may act synergistically across the different developmental periods.

That leaves contention about the current preventability of cerebral palsy in only around 5-8 percent of cases. In practice, prevention has proved difficult, even with sophisticated defensive clinical practices and technologies, given that for cases of cerebral palsy originating around birth there is:

- no good evidence that electronic fetal monitoring (and appropriate responses to its results) reduces cerebral palsy rates
- no good evidence that the process leading to the neuropathology of cerebral palsy has not already become established or can be reversed by the time there are non-reassuring fetal heart rate patterns
- a high rate of error associated with monitoring for non-reassuring fetal heart rate patterns, which should be accounted for when making decisions to intervene, given the maternal risks of emergency caesarean section. In addition, there are varying facilities to perform urgent caesarean sections across hospitals
- no evidence that quicker delivery of a baby with neonatal complications (by up to an hour, as is suggested by some plaintiff experts) reduces cerebral palsy risk, with some evidence to the contrary. (MacLennan et al. 2006; Phelan et al. 1999; Thomas et al. 2004)

### *Future prevention?*

Like most areas of medicine, it is likely that medical technology and scientific knowledge will improve over time. For example, it may be that new medical technologies can assist to evaluate the condition of the fetus in utero. Notwithstanding that a medical 'breakthrough' could be on the horizon, at present, there does not appear to be substantial room for further prevention during birth through improved clinical practices. More broadly, there does not appear to be good evidence to guide the science based-determination of preventative clinical interventions and practices during pregnancy and birth.

That said, there are sound reasons for the investigation of risks to continue at the clinical-organisational level, including through data analysis to identify predictors of adverse events. In particular, various proven training programs and other clinical protocols aimed at the relevant group of physicians should continue. For example, the Victorian Managed Insurance Agency, which manages the medical indemnity exposures of public hospitals, conducts mandatory annual PROMPT training to all midwifery staff of individual hospitals (including managerial, community-based and part-time midwives, as well as obstetric and anaesthetic medical staff). This training has been associated with improved clinical outcomes and reduced costs. It is estimated that, following the introduction of PROMPT training:

- the incidence of hypoxic ischaemic encephalopathy (including some cases of cerebral palsy) decreased from 27.3 to 13.6 per 10 000 births (Draycott et al. 2006)
- potential costs of $12 to $20 million per 10 000 babies were avoided, given evidence that around 28 per cent of hypoxic ischaemic encephalopathy cases (or around four of the avoided cases) may have resulted in a significant handicap. (VMIA 2010, p. 22).

However, given the largely unpreventable nature of cerebral palsy, and the high cost of determining the specific cause in individual cases (see below), expanding opportunities for individually risk rating insurance premiums to reduce incidence is currently not feasible. It is likely that more general training measures, such as the PROMPT initiative above, would be more effective.

Continued funding of research should be a priority of public policy in this area, which could entail a further role for the NDIA to contribute to funding and coordinating the research agenda. This reflects:

- the high cost and lifelong disabling impacts of cerebral palsy
- that the cause is unknown for the greater proportion of cerebral palsy cases
- that any inroads into prevention will generally rely on scientific-identification of probabilistic causes rather than specifically altering clinical practices.

Certainly, it would not seem appropriate to rely solely on the incentives created by the tort and liability insurance systems to progress broader prevention strategies.

Specifically, the NDIA could help to fund and coordinate research into:

- early interventions that effectively improve quality of life
- identify causal pathways and possible strategies to enable future prevention, particularly factors during pregnancy which accounts for the majority of cases.

## Identifying causal factors in individual cases

### *Cerebral palsy occurring in early childhood (after 28 days of life)*

For the 10 to 20 percent of cases where the cerebral palsy occurs in early childhood (after one month of age), classifying whether or not the cerebral palsy was preventable is reasonably straightforward. Where there is evidence of causality, such as from a near drowning or physical assault, cases would be covered under the NIIS, but most would be classed as a general injury rather than a medical treatment

injury.[16] In cases where the cerebral palsy does not have an identifiable cause, such as from a spontaneous stroke, the case would automatically proceed to the NDIS.

### *Cerebral palsy occurring during pregnancy or around the time of birth*

Separating causal factors that occur during pregnancy from those occurring around the time of birth is fraught with difficulty. Further still, the Commission's evaluation of the literature indicates it is even more problematic to reliably identify the relatively few *individual cases* of cerebral palsy that were caused from inappropriate medical treatment. Based on the statistical prevalence identified in the empirical research,[17] it is thought that around 1 out of 10 cases is most likely to result from factors during birth and around 9 out of 10 cases from factors during pregnancy. However, it would appear to the Commission that distinguishing individual cases is complex, has a high potential for errors and is likely to involve a high cost.

One major problem is that it is not possible to definitively establish that a baby was healthy prior to any opportunity for medical intervention or the first signs of fetal non-reassurance or distress. Indeed, it is believed that many antenatal causative factors (that is, factors occurring during pregnancy) may often be silent during pregnancy and labour. To this end, even if there is evidence of acute intrapartum hypoxia (and later cerebral palsy), it is not possible to dismiss the likelihood of an antenatal pathological cause, or prove that an acute intrapartum hypoxia event during labour was *on its own* sufficient to cause the cerebral palsy. This reflects that:

- the value of neuro-imaging to retrospectively identify both the possible cause and timing of cerebral palsy is currently unproven. Though some neuroradiologists claim to predict whether the neuropathology leading to cerebral palsy occurred pre- or post partum hypoxia or from infection, this has not been validated.

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16 A proportion of cases may be preventable through clinical risk management (such as from diagnosis and treatment of childhood meningitis and improved clinical management of surgery risks), but the influence of an underlying health condition in causing the disability would be uncertain. As such, the Commission understands there would be extremely few, if any, cases of cerebral palsy occurring in nearly childhood that would fall into medical treatment class of injuries under the NIIS.

17 based on population samples of cases where there is sufficient information collected including, for example, about: antenatal risk factors; details of labour management; signs of, and reactions to, possible non-reassuring fetal status; details of arterial chord gases; placenta pathology; and contemporaneous clinical notes about all decisions made before and during labour and delivery.

- even if evidence is found of severe metabolic acidosis (the current gold standard to define acute intrapartum hypoxia), it is suggested to only rarely occur in a previously healthy baby.
  - It generally takes a severe event to occur in labour, such as a prolapsed cord, ruptured uterus, large antepartum haemorrhage, or amniotic fluid embolism, to render a prolonged insult severe enough to cause cerebral palsy in a previously healthy fetus.
  - International cerebral palsy consensus statements have settled on a criteria thought to identify the few babies who may have suffered an acute asphyxial event sufficient on its own to cause cerebral palsy in a previously healthy fetus. This includes: spastic quadriplegic or dyskinetic types of cerebral palsy; early onset of severe or moderate neonatal encephalopathy in a baby born at 34 weeks or later; and evidence of severe metabolic acidosis (Bakketeig 1999).[18] However, there remains significant uncertainty about the acuteness of hypoxia that will give rise to cerebral palsy in a previously healthy fetus. This reflects the special physiological mechanisms that protect a healthy fetus from acute hypoxia. In particular, such mechanisms allow a fetus to survive for a longer period than an adult with similar blood gas concentrations, but it is uncertain whether this ranges from minutes to perhaps hours. (MacLennan et al. 1999)

*Lessons from medical litigation*

In light of such complexity and uncertainty, it is also not surprising that medical litigation of cerebral palsy cases is highly disputed, protracted and, based on evidence available to the Commission, usually incurs very substantial legal costs.

As highlighted by MDA National, cerebral palsy is a vexed issue in medical negligence litigation, since it is frequently not possible to determine when the damage suffered by the child occurred and, hence, whether causation can be established on the balance of probabilities. (sub. DR937, p. 2). Moreover, although the need for compensation to meet care and support needs associated with cerebral palsy is universally undoubted, there appears to be a general view that the current medico-legal process results in an arbitrary group of people obtaining compensation. As stated by Johnson and Stanley:

> … tort law may not be an effective system for compensating injured patients since the court's decision is often dependent on legal strategy, the ability to find suitable expert

[18] There are alternative criteria to identify whether there was acute intrapartum hypoxic events that also have validity, but these generally rely on advanced medical technology, which is not available for the greater number of deliveries.

> witnesses and the physician's performance as a witness in court, resulting in a poor correlation between litigation success and negligence. (2011, p. 98)

In addition, a plaintiff's success also depends critically on the documentation of circumstances and other evidence for interpretation by expert opinion; whether costs are covered on a no-win, no-fee basis; or whether the claimant has their own access to capital to fund a legal action. Moreover, it is suggested that medico-legal expert witnesses will sometimes provide non-current and non-peer reviewed evidence to suggest that the cerebral palsy was preventable (MacLennan et al. 2006).

The contention appears to be not whether or not there were details of the management of the labour that may have been negligent, but rather, whether such details are used as evidence of the cause of cerebral palsy. In some cases, better clinical care may have prevented cerebral palsy, but in others, it would not be the decisive factor. But, as discussed above, evidence of a previously healthy fetus prior to any opportunity for medical intervention cannot be reliably determined, and this is the dilemma for insurers defending claims.

Plaintiff lawyers, on the other hand, argue that legal negligence provides effective deterrence and encourages higher levels of clinical care (Law Council of Australia, sub 375, p. 11). This may well be true, and is evidenced by the rise in defensive obstetric practices. However, while defensive medicine may be successful in avoiding potential negligence, it is not clear that this would necessarily change the outcome for many successful plaintiffs and, indeed, rates of cerebral palsy have not fallen even with advances in obstetric care and increased rates of caesarean section (Bakketeig 1999; Johnson and Stanley 2011; MacLennan 2002). (That said, increased survival rates of pre-term babies is an increasing source of cerebral palsy.)

Evidence of an acute intrapartum hypoxia event resulting in severe cerebral palsy would normally be notified to the relevant insurer (either the hospital or the medical indemnity insurer). Most of these cases will then lead to litigation. Of these, it is likely that around 30 to 40 cases per year will be successful in gaining compensation, including some cases where there was probably no negligence that *caused* the condition. (As already mentioned, there is no way of definitively establishing the exact cause on a case by case basis.) To this end, some estimates show that cerebral palsy cases account for around 60 per cent of all 'catastrophic' medical negligence claims (Cohen et al. 2011).

Even still, the 40 or so compensated cases represents only about 6 per cent of the approximate 700 new cases of cerebral palsy each year in Australia. This reflects that:

- some cases of cerebral palsy are not severe and would have minimal incentives to pursue litigation. Less severe cases (GMFCS level I and II) account for around 50 per cent of cases (Howard et al. 2005)
- around 75 to 90 per cent of cases are from unknown cause originating during pregnancy
- only around 5 to 8 per cent of cases are believed to originate from the birthing phase and possibly result from a practitioner's action, inaction or medical diagnosis
- 5 to 18 per cent of cases originate from events occurring after one month from birth, almost none are the direct result of medical treatment. The Commission is advised that virtually no cases of cerebral palsy originating from an injury during early childhood pursue a medical negligence claim. Moreover, to the extent an allegation of negligence is made post birth, this is usually in addition to other existing problems.

Those not pursuing or unable to access compensation are reliant on generally inadequate care and support provided informally and through publicly funded systems. This is experienced most acutely if early interventions and treatments are not available or delayed, or if there is an over-reliance on family provided care and uncertainty about the continuity of care and support. In 2007, the financial cost of informal care for people with cerebral palsy was estimated at $129 million, which is about triple the cost of direct health system expenditures for cerebral palsy (Access Economics 2008b).

*In summary*

It is doubtful that a criteria could be sufficiently robust and operable to determine whether a treatment injury caused cerebral palsy around the time of birth. It is also unlikely that any determination could occur in a timely and efficient manner. The experiences of insurers and plaintiff lawyers is that it usually takes significant time to investigate liability — to establish the facts of the case and, on the balance of probabilities, reach some level of agreement. While in many cases, liability is broadly determined after around two years, issues of contention continue to arise over the many subsequent years until the claim is finalised.

Similarly, the advice the Commission has received from the ACC is that cases of cerebral palsy are their most difficult to make reliable decisions about and are subject to significant uncertainty. To achieve some level of timeliness, it is possible to adopt 'stringent' rules, but this would retain the potential for error and the suggested arbitrariness of the current arrangements. In New Zealand, if paediatric advice does not identify an apparent cause, cover for treatment injury is denied, and the disability

is instead attributed to an underlying condition of the child or mother, or the birth process itself (such as underlying prematurity that could not have been avoided from any treatment intervention).[19]

The improved survival rate of premature babies is a rising source of cerebral palsy. Given the inadequate resourcing of current disability care and support arrangements for children with severe cerebral palsy, participants raised this as a concern:

> … if we have public policy which says we are going to use huge medical resources to save 22, 28-week babies, which is currently happening, … then at least what we should be doing is ensuring that we've got the services and the financial support to help them for the rest of their lives. (Barbara Robb and Lachlan, trans., pp. 112–113)

This statement captures the main concerns of people affected by cerebral palsy, physicians and the community more generally — that is, ensuring that treatment, care and support is appropriate and adequately funded. To this end, spending on diagnostic and other forensic measures to ascertain eligibility for one scheme or another (NIIS or NDIS) does not represent sensible use of resources, especially to the extent that it will not alter the outcome for the child with cerebral palsy or others in the future.

## Options to fund care and support of severe cerebral palsy

### *Who should fund — the NDIS or NIIS?*

The main options for funding the lifetime care and support costs of cerebral palsy cases are:

- through the NIIS (using medical indemnity premiums)
- through the NDIS using Commonwealth general revenue as the proposed source of financing.

As stated in chapter 18, reflecting the largely unknown causal factors associated with the clear majority of cerebral palsy cases and, in turn, the inability to prevent such cases, there is little to be gained by seeking contributions from practitioners' medical indemnity premiums and hospitals' insurance to fund care and support costs of cerebral palsy under the NIIS. There is a stronger basis for a community insurance approach, which is consistent with having the NDIS fund cerebral palsy cases associated with pregnancy or birth. This excludes the small number of cerebral palsy cases originating from factors occurring after one month of age. In

[19] In New Zealand, the birth process itself is not considered 'treatment'. The ACC does not accept cover for birth injury unless a treatment intervention or a delay in treatment caused the injury, and also subject to resourcing decisions not being the apparent cause (ACC 2010, p. 6).

these cases, the cause of injury can more reliably be determined and would generally fall within the 'general injury' category of NIIS claims. This would include, for example, cerebral palsy caused by physical abuse or a near drowning.

While it would still be possible to fund lifetime care for catastrophic cases of cerebral palsy from existing insurance premiums, this would raise premiums significantly and amount to an inefficient tax compared with the proposed funding arrangements for the NDIS. NDIS funding also aligns with the stated approach of moving over time towards more efficient revenue sources for non-injury causes of disability (chapter 14). In addition, as raised by the Tasmanian Motor Accidents Insurance Board, boundary issues between the NIIS and NDIS should be avoided — for example, if there are conflicting views about whether a disability arose from a congenital disorder or resulted from an accident or a negligent act (MAIB, sub. DR687). To the extent that this could create cost-shifting opportunities between the NIIS and NDIS, funding of all cerebral palsy by the NDIS would address one of the most likely areas of potential dispute.

As in other areas of catastrophic injury, common law rights to sue for care and support needs would be removed for all cases of cerebral palsy eligible under the NDIS, including under the early intervention category. This would overcome the particularly complex issues arising from determining cause (and fault) in this area, and the associated, often costly and protracted litigation processes. People could still sue for economic loss and pain and suffering, but the Commission has been told that some will not do so, given the difficulty in establishing fault and the fact that their most important need — adequate long-term care and support — would be met.

Reflecting the importance of various clinical treatments (box L.6) and appropriate post-treatment programs for cerebral palsy, the NDIS would have an interest in ensuring that cost effective early interventions are appropriately provided to participants. In particular, this would reduce the level of functional disability and lower lifetime care and support costs. As proposed in chapter 18, the NDIA should ensure agreements with health departments secure adequate provision of clinical health services, post-treatment therapies and rehabilitation programs. In particular, current bottlenecks in access to post-treatment therapies through the health system would need to be overcome.