



The development of the Legal Assistance Service Data Digest and Data Digest Online

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The Law and Justice Foundation of New South Wales is an independent, not-for-profit organisation that seeks to advance the fairness and equity of the justice system, and to improve access to justice, especially for socially and economically disadvantaged people.

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Shortened forms

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
DDO	Data Digest Online
CLC	Community legal centre
GIS	Geographical Information System
LASDD	Legal Assistance Service Data Digest
LGA	Local Government Area
NSW	New South Wales
SA4	Statistical Level Area 4

Executive Summary

This paper reports on a project by the Law and Justice Foundation of New South Wales to develop a database and associated online application to facilitate access to data on the use of publically funded legal assistance services in New South Wales (NSW).

In 2014, the Foundation released the Data Digest Online application (DDO) to participating legal assistance service providers. This allows legal assistance service providers and their funders to directly access collated data from the participating legal assistance services in NSW. By bringing together comparable service data from a range of agencies with socio-demographic data, it is possible to provide a more complete picture of who is accessing legal assistance services and the types of legal matters they seek help for, and how this has varied over time. This information can be used to assist in the planning and provision of legal assistance services.

Data presented in the DDO can be manipulated interactively and can be represented in various formats such as tables, charts or maps. Findings are available on the types of legal matters for which enquiries are made, the demographic characteristics of those who seek assistance, and where clients are referred from and to. The DDO also incorporates socio-demographic and geo-spatial data, allowing users to examine the relationship between legal matters and population characteristics.

Background

This project was instigated at a time when there was very little information available on the extent of legal need within Australia. The Law and Justice Foundation of NSW has been proactive in addressing this evidence gap through its research programs that assess the extent of met and unmet legal need. Surveys of residents are the only way to directly measure this, and a number of these have been conducted by the Foundation.

Most recently, the Foundation published the findings of its Legal Australia-Wide Survey (LAW Survey) in a series of reports covering each Australian state including NSW. The LAW Survey involved 20,716 interviews of residents across Australia and found that legal problems are widespread, with 50 per cent or more of respondents experiencing one or more legal problems in the 12 months prior to interview (Coumarelos et al. 2012). However, even large-scale general population surveys such as the LAW Survey only capture a small number of people who have had recent contact with legal assistance services and they therefore cannot be relied upon as a source of information on service users. This is especially the case for geographic areas smaller than state level.

In 2004, the Foundation sought to address this gap by publishing the Data Digest Compendium which used 1999–2002 service usage data to describe the legal needs expressed to legal services provided for disadvantaged people living in NSW (Scott et al. 2004). This report did not attempt to combine data from different agencies though some data harmonisation was undertaken to aid comparison between services.

Although the Data Digest Compendium was well received, it could only provide a partial analysis of data and inevitably, with its focus on 1999–2002 data, it had a limited shelf life. Consequently, the Data Digest Online (DDO) was conceived as a tool for use by public legal service agencies and other key sector stakeholders to access more current data of the type reported in Scott et al. (2004). It was also envisaged that the DDO would provide access to additional information by giving users the functionality to select, for example, specific regions of NSW, types of legal matters or client groups. Therefore, in developing the DDO functionality, the Foundation was keen to harness Geographical Information System (GIS) mapping technology to provide access to interactive maps of service use and population data.¹

Underpinning the DDO application is the Legal Assistance Services Data Digest (LASDD) – a database combining data on client enquiries from three NSW legal assistance services. In practice, the LASDD contains more data than is included in the DDO, as there is limited flexibility within the DDO application for selecting whether to include or exclude certain data records. Also, for technical reasons, new information or variables can more easily be added to the LASDD than incorporated into the DDO.

Although the DDO is the primary product of this project, much of the learning relates to the collection of the administrative data for the LASDD database. There is growing interest in the use of administrative data to inform the strategic development of legal assistance services and monitor the

¹ The Foundation has used mapping in other research reports to map the location of legal service provision and how the recruitment and retention of lawyers varies by area characteristics (Forell, Cain & Gray 2010). Other jurisdictions have also used mapping to identify likely locations for the provision of services and existing provision (see for instance, Baxter and Yoon 2010, Meeker, 2005) and service use (see Kurland 2004).

extent to which increasingly limited resources are targeted on those parts of the community at greatest need. The *Strategic Framework for Access to Justice* published by the Australian Commonwealth Attorney General's Department in 2009 identified a lack of robust data to make decisions about the delivery of policies to support access to justice. A follow up report on developing an evidence base for the federal civil justice system (*Managing Justice*, 2011) noted that although administrative records were essential to developing this evidence base, the challenges of achieving this included consistency of terminology and of data collection practices. It was also recognised that there were issues of privacy and confidentiality, and the potential for additional administrative burdens and costs. In spite of the challenges, administrative data is being increasingly used for purposes beyond the internal management information ones for which it was originally intended. For instance, the *Review of the Australian National Partnership Agreement on Legal Assistance Services* (Allen Consulting Group 2012) aimed to assess the quality, efficiency and cost-effectiveness of legal assistance services, drawing primarily on the administrative data collected and held by the Commonwealth-funded legal assistance services.

This paper first describes the development and content of the LASDD, and then provides details of the associated DDO application.

Agencies in NSW providing public legal assistance services

There are a range of sources of legal assistance available to the public in NSW. Most local libraries, for example, prominently display Legal Information Access Centre (LIAC) publications and have staff trained in providing access to 'self-help' legal information sources. There are also, of course, private solicitors catering for the full range of legal problems. But for those people who cannot afford, or do not have access to, or do not wish to see a private solicitor, there may be the option of using publically funded, not for profit legal assistance services.

Of the publically funded legal assistance services in NSW, LawAccess NSW, Legal Aid NSW and most NSW community legal centres currently provide data for the LASDD. Together, these providers cover the bulk of services available for the non-Indigenous NSW population. The other main provider of legal assistance services is the Aboriginal Legal Service NSW/ACT, who (at this stage) do not participate in LASDD. While each agency provides free legal assistance on a broad range of legal issues, they differ in terms of their mode of service delivery, areas of law practised, target client groups, service locations and geographical coverage.

LawAccess NSW

LawAccess is a free NSW government service that provides a single point of contact for accessing legal information, advice and referrals for people who have a legal problem in NSW. It was set up to assist people who have difficulty in accessing other public legal services. In particular, it services people:

- living in regional, rural and remote NSW,
- who identify as Aboriginal or Torres Strait Islander,
- who have a disability
- from a culturally and linguistically diverse background;
- who are at risk of harm.

LawAccess also provides services to inmates detained in NSW correctional centres.

LawAccess provides its services via telephone and the internet. The latter includes LawAccess Online, a website offering access to plain language and in-language legal fact sheets, and LawAssist, an online information service intended to help people who have a legal problem in NSW who are representing themselves at court. LawAccess does not provide face-to face or general counter legal assistance.

LawAccess NSW is a part of the Department of the Attorney General and Justice NSW. Its customer service officers and lawyers are co-located in a call centre/office in metropolitan Sydney.

Legal Aid NSW

Legal Aid NSW is a publically funded legal service that was established to assist socially and economically disadvantaged people in understanding and protecting their rights. It improves access to justice by providing a range of legal services to disadvantaged people, with special emphasis on financially disadvantaged people, disabled people, people from non-English speaking backgrounds, women, Aboriginal and Torres Strait Islander peoples, and those who are institutionalised.

Legal Aid NSW provides free legal advice, information and minor assistance in all broad areas of law. Other services include: representation at court, grants of legal aid, a duty solicitor service at local

courts, alternative dispute resolution and community legal education programs. Individual casework focuses mainly on criminal law matters and family law issues.

There are currently 20 Legal Aid offices across NSW, split equally between the greater Sydney metropolitan area and other major regional centres such as Wollongong and Newcastle. In areas of country NSW without an office, Legal Aid assigns case and duty work to private solicitors in the form of legal aid grants. It also provides outreach services to assist in effectively reaching particular disadvantaged groups and people living in the more remote areas of NSW.

Community legal centres in NSW

Community legal centres (CLCs) are independent community organisations, funded from a number of sources, providing free legal advice and information to individuals and communities across NSW, as well as legal education, law reform and some advocacy. CLC services are available to people needing legal information or assistance that cannot afford the services of a private solicitor. There is a network of generalist and specialist centres in NSW.

There are currently 21 generalist CLCs in NSW – 10 in metropolitan Sydney and 11 in regional NSW – offering a broad range of legal assistance and information to their local community.

All but two of the current 18 specialist CLCs in NSW are located in the greater Sydney metropolitan area. Specialist CLCs provide state-wide coverage and have expertise in either a particular area of law, such as consumer credit, welfare rights or immigration, or they specifically target a demographic group, such as women, people with an Indigenous background and people with a disability.

Data included in the Legal Assistance Service Data Digest

The Foundation's Data Digest Compendium (Scott at al. 2004) highlighted the potential value of developing common data collection protocols to the legal assistance agencies involved. Further work was required, however, to agree on the processes for the regular provision of data, including the most suitable format that would allow data from different services to be combined into one database (the Legal Assistance Service Data Digest (LASDD)). In working with the agencies to agree on the data to be included in the LASDD, consideration was given to the

- nature of the work they each perform
- quality of the data collected on different aspects of that work
- ease of extracting the relevant information from each agency's administrative database(s)
- types of questions that analysis of the LASDD could most usefully inform.

As the data provided for the LASDD is drawn from administrative information systems, it is subject to the usual limitations of this type of data such as miscoding and inputting errors. Also, the recording of information within a legal service is not necessarily mandatory, so some variables such as the age of a client and their Indigenous status are not always collected. However, the extent to which this is an issue has reduced over time.²

All the participating agencies provide at least annual extracts from their administrative information systems of a small number of core variables. These include the legal matter enquired about, where the client had been referred from and where they were referred to and the available demographic data for the client,³ though not any information that could identify the individual. The agencies differ, though, in the types of assistance service they can readily provide data about. This and other considerations in specifying the appropriate data to include in the LASDD are discussed below.

Type of legal assistance provided

The legal assistance service agencies provide a range of responses to the enquiries they receive. These are generally categorised as (in increasing level of intensity of service), providing: information, advice, minor assistance or casework.

- **Information** – clients are provided with generic information that relates to their legal issue but is not tailored to their specific circumstances. It can include providing written or verbal information and/or referral to other providers of legal or other relevant services.
- **Advice** – involves responding to the specific legal problem of the client by outlining their legal options in their particular circumstances and advising on the likely outcomes of these. It generally would not involve performing any further activity on the client's behalf.

² The proportion of legal matters recorded by the participating agencies for which age is not available fell from 8.8% in 2004 to 4.9% in 2011. LawAccess only started to collect Indigenous status in 2010, which is the primary reason why the proportion of legal matters missing this data fell from 57.1% to 1.9% between 2004 and 2011.

³ Particularly where legal assistance is provided over the phone, it may not always be possible to tell whether the person who made the enquiry is the person experiencing the issue or whether they made the enquiry on behalf of someone else, such as a partner, family member or friend. The demographic information attached to a legal matter may not, therefore, always reflect the characteristics of the person experiencing the problem.

- **Minor assistance** – clients are provided with assistance in addition to legal advice to help them resolve their legal problem. This might include helping the client draft a letter or complete a court form. It does not involve any representation.
- **Casework** – for Legal Aid NSW, casework matters are those for which legal representation is provided through a grant of legal aid. For CLCs, casework involves ongoing assistance on behalf of a client. LawAccess does not provide a casework service.

In determining the type of service data to be provided for the LASDD, consideration was taken of the quality of information collected at the point of enquiry, the ease of extracting and providing the data in a useable format, and the nature of the questions that analysis of LASDD was intended to address.

The agencies differ in the extent to which they collect data for each of the services they provide, reflecting their own administrative information requirements. LawAccess, for instance, collects the same information about all the calls it receives, whatever the outcome of the call. CLCs and Legal Aid NSW, on the other hand, only routinely collect data for those enquiries for which information about the individual is required in order for advice or assistance to be provided. For this reason, data on information services is only collected from LawAccess. Table 1 summarises the type of services that data is provided for, by agency.

Table 1: Service data included in the LASDD by agency

	<i>Information</i>	<i>Advice</i>	<i>Minor Assistance</i>	<i>Casework</i>
LawAccess ^a	✓	✓	– ^a	–
CLCs ^b	–	✓	✓	✓
Legal Aid ^c	–	✓	–	–

Notes:

- The LawAccess NSW data included in LASDD covers the information and advice services LawAccess provides over the telephone. Included within 'advice' are a small number of cases for which minor assistance was provided. Internet services are not included.
- The CLCs data included in the LASDD covers all the services provided by CLC other than information services. Advice, minor assistance and casework services are all included. It includes both generalist and specialist centres. Data is only available for those CLCs providing returns to the Community Legal Service Information System (CLSIS).
- Legal Aid NSW data included in LASDD only partially covers the range of services provided, as only advice service data is currently included. The LASDD does not contain records for matters dealt with through Legal Aid's information, minor assistance or casework services. It also does not include matters dealt with by its duty solicitors.

Client enquiries and legal matters

Regardless of the type of service provided, the legal assistance agencies start a new database record with each new enquiry they receive, although internally they may have some way of linking the record to a previous enquiry by the same individual. During the course of the enquiry, more than one legal matter might be mentioned and more than one action may be taken by the service provider. The agencies themselves tend to report on the *number* of enquiries they receive as opposed to the number of matters raised. The agencies allocate a *type* of legal matter to an enquiry by specifying just one of the matters raised as the *primary matter*. However, the 'primary' matter may not represent the matter for which the client was motivated to seek help for or the client's prioritisation of matters; and, over time, the status of 'primary' and 'secondary' matters may change.

As the purpose of the LASDD is to provide information on the nature of legal problems for which legal assistance is sought, the decision was made to define each legal matter as a separate record and to attach the demographic details of the client and referral information to each of these records. Consequently, in the LASDD, each legal problem enquired about is counted as a distinct legal matter, regardless of whether the source agency recorded the enquiry as the 'primary' or 'secondary' matter. This means that if a person contacts a legal assistance service with an enquiry involving a number of

legal problems —, for example, divorce, a parenting arrangement dispute and a tenancy issue — each of these is counted separately in the LASDD as a different legal matter.

The data provided for the LASDD is *de-identified* so that it does not contain personal information that could be used to ascertain the identity of the person who made the enquiry. This means it is not possible to quantify the extent to which service users are repeat users of that or another service. With no way to track individual enquiries, the same legal matter could be counted more than once within the LASDD, either (a) by the same service, if separate enquiries are made on the same matter, or (b) by different services where people are referred between services or seek help on the same matter from more than one service. The LASDD therefore presents a picture of the *volume of legal matters* for which assistance was sought, counting a person each time they seek assistance from an agency (or from different agencies) in relation to a legal matter.

The geographical location of enquiries

The participating agencies providing data for the LASDD are all based in NSW, but in practice they also provide services to people living out of state, in particular Victoria, Queensland and the Australian Capital Territory (ACT), which geographically sits within New South Wales. Conversely, people living near a border may use the legal services of another state or territory, in preference to a NSW service, because the interstate service is closer and more accessible or because of the nature of the legal matter. This may affect the number of legal matters for areas of NSW bordering on the ACT, Queensland, Victoria and South Australia.

As the purpose of the LASDD is primarily to provide information on the legal needs of communities in New South Wales, a decision was made to exclude non-residents from most analysis. This does, however, mean that the work load of the agencies is not fully represented.

Ideally, enquiries from NSW residents to agencies based outside of NSW would be included in the LASDD. In practice, identifying all these was too big a task, although the LASDD does include legal enquiries made to the Hume Riverina Community Legal Centre, which is just over the New South Wales border in Victoria, when the client is a resident of NSW.

The smallest unit of geographical information available from the agencies is the postcode provided by the client. In Australia, postcodes cover relatively large areas though not necessarily large populations — for example, the whole of Sydney's Central Business District (CBD) has the postcode 2000. It is therefore likely that some socio-economic variation exists within postcode areas. Nevertheless, postcodes are too small a geographic grouping for some types of analysis.

Aggregating Australian postcodes to higher levels of geography is not, however, straightforward. This is because postcodes are not an official geographic boundary — they do not align with any other official geographic area including census areas (for demographic population statistics) or state boundaries. The Australian Bureau of Statistics (ABS) however provides data by Postal Area, which is a good approximation to Australia Post postcodes. Correspondence files are available from the ABS to facilitate converting data from Postal Area to a higher level of geography, by providing the relative population proportions. For instance, the postcode 2618 sits within both NSW and the ACT, with 75.9 per cent of the population residing in the LGA of Yass Valley in NSW and the remaining 24.1 per cent of the population residing in the ACT.

For the purposes of the LASDD, the ABS correspondence files have been used to allocate matters from postcodes to two larger geographic areas. In NSW, there are 154 Local Government Areas (LGAs) and

this is a meaningful administrative classification for users of the LASDD analysis. Matters have also been allocated from postcode to the ABS defined boundaries of the 28 NSW 'Regions', officially called 'Statistical Level Area 4' (SA4), which is the largest available grouping below state level.⁴

To allocate legal matters to different geographic areas, the assumption is made that the distribution of legal matters reflects the population distribution. For a postcode whose boundaries fall completely within one geographic area, legal matters are assigned 100 per cent to that area.⁵ For postcodes that overlap one or more geographic areas, legal matters are randomly allocated between areas according to the distribution provided in the ABS correspondence table.⁶ This means that there is some degree of error associated with the allocation of matters to LGAs and Regions.⁷

The set of rules for excluding matters from certain postcodes is shown in Table 2.

Table 2: Exclusion of cases on a geographic basis

<i>Issue</i>	<i>Action</i>
Postcode missing	Matters are excluded
Postcode falls entirely outside State boundary	Matters are excluded
Postcode straddles state boundaries	Proportion of those matters expected to fall outside NSW, on the basis of population size, are excluded
Postcode is a NSW post office box	Matters are included for non-regional analysis but excluded from regional or any other geographical analysis
Matters that are randomly assigned through the correspondence process to an LGA or Region (SA4) falling outside NSW	Matters are excluded

The type of legal matter enquired about

A group of enquiries excluded from most analysis are those originating from NSW Correctional Centres, many of which will be from prisoners.⁸ The provision of legal assistance to prisoners has increased rapidly over the last few years at least partly in response to a Foundation report on the legal needs of prisoners (Grunseit et al. 2008).

Legal Aid NSW now provides a family law and civil law outreach service to prisoners through the Prisoners' Legal Service. In addition, prisoners can contact Legal Aid NSW and LawAccess NSW on the Common Auto Dial List (CADL) as a free call. The use of some of these services is thought to result in repeat calls about the same matter due to limits on the length of phone calls.

These changes to provision are reflected in the data provided for LASDD, with an increasingly large proportion of matters now originating from a correctional centre (see Table 3). Retaining data from prisoners increases the number of legal matters originating from locations that include a correctional centre. As the focus of the LASDD is the community-based use of legal assistance services, legal

⁴ The quality of the correspondence from postcode to both these geographic areas is classified by the ABS as 'good', meaning 'the ABS expects that the correspondence will convert data overall to a high degree of accuracy and users can expect the converted data will reflect the actual characteristics of the geographic regions involved'.

⁵ For example, the postcode 2327 is located 100 per cent in the LGA of Cessnock and therefore all legal enquiries from this postcode are assigned to Cessnock LGA.

⁶ For example, the legal enquiries from the postcode 2178 are randomly assigned 15 per cent to the LGA of Fairfield, 50 per cent to the LGA of Liverpool and 35 per cent to the LGA of Penrith.

⁷ At the Region (SA4) level, approximately two-thirds of matters in 2011 originated from postcodes that fall completely within one region. However, this was only the case for a third of matters when allocating to LGAs.

⁸ Although the prisoner data has been retained for analysis in LASDD, it is no longer included in the DDO application.

matters that originate from correctional centres, or relate to a prisoner legal matter such as parole, are excluded from most analysis.

Table 3: Number of legal matters originating from NSW correctional centres: 2004–2011

Year	Legal Aid NSW		LawAccess	
	Number rounded to '00s	Percentage of all matters	Number rounded to '00s	Percentage of all matters
2004			<100	0.0
2005			<100	0.0
2006			900	0.7
2007			6,100	4.0
2008			9,400	4.9
2009	2,700	3.7	13,000	6.5
2010	3,400	4.5	26,400	12.9
2011	2,400	3.3	34,300	16.6

When the enquiry was made

The LASDD holds the exact date a legal enquiry was made but much of the analysis is on the basis of calendar or financial year. Most of the enquiries held in the LASDD took place on a single date, which represents either when the phone call was made or the face-to-face meeting with a legal advisor took place. Some, however, involve a longer period of involvement by the casework service and are not necessarily completed within a calendar year. As the LASDD data is drawn from live administrative systems, each extract may differ from previous ones. Within the LASDD, matters are allocated to the year in which they were opened, this means that for the agencies whose data includes open cases, these cases are updated and overwritten in the following year's data extract with this additional information.

Data harmonisation

Combining data from different providers is rarely straightforward. Without a great deal of prior coordination, it can be expected that data collection arrangements will have developed in accordance with individual agencies' business needs. Extracting data in a format that is consistent with data analysis can therefore be problematic as each agency differs to some extent in the type and detail of information it collects. The Foundation worked closely with the participating agencies involved to create a combined dataset with common categories. For instance, initially the agencies did not collect or record legal enquiries information in the same way, even to the extent that the legal matter categories differed between agencies.

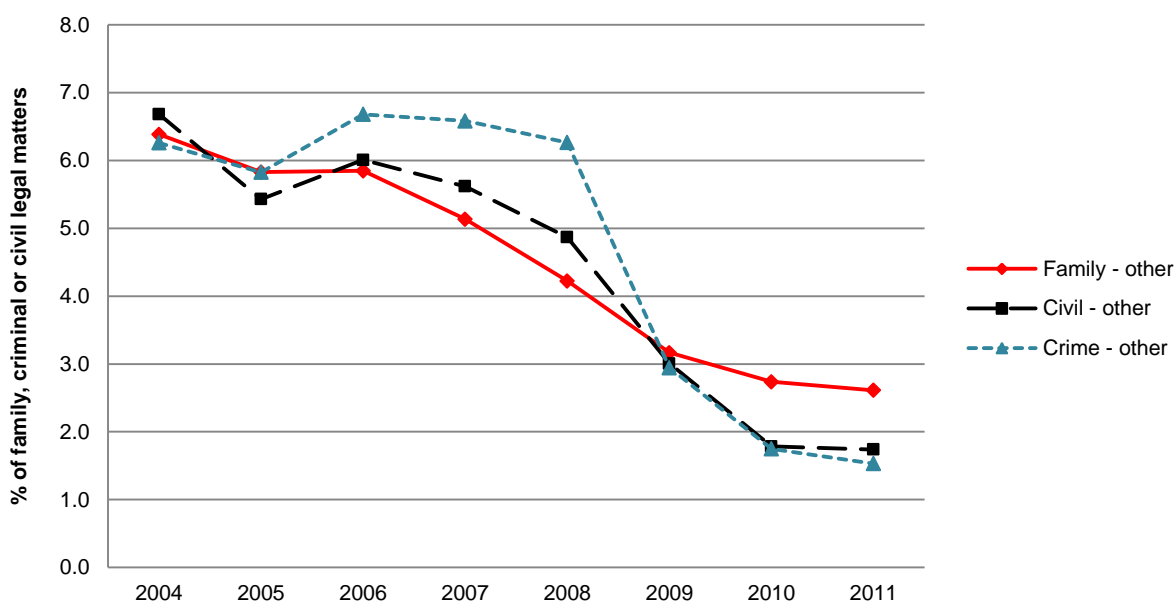
To allow data from the participating agencies to be combined and to facilitate comparison across a range of key indicators, data provided by the agencies is mapped to common sets of categories developed by the Foundation. Each agency's data are standardised using a number of taxonomies that are applied to: the raw values for legal matters; service delivery variables such as source of referral and referral destination (that is, where clients were 'referred from' and 'referred to'); and demographic characteristics such as gender, age, and Indigenous status.

The legal matter taxonomy involves recoding the original matter to three hierarchical levels of area of law: 'Broad' area of law, 'Specific' area of law and 'Matter group'. There are three broad areas of law: Family law, Criminal law and Civil law. Under Civil law, for example, there are 13 specific areas of law,

one of which is ‘Debt & Credit’. Under ‘Debt & credit’, there are a number of matter groups which include, for example, bankruptcy, consumer credit, and mortgage/repossession.

Where a legal matter cannot be allocated to one of these detailed matter groups, it is coded as ‘civil—other’, ‘crime—other’ and ‘family—other’. The use of these categories has fallen markedly over the years as the legal assistance agencies have addressed deficiencies in the recording and categorisation of the legal matters they deal with (see Figure 1).

Figure 1: Percentage of matters categorised as 'Other' within the three broad legal categories 2004–2011



Data processing

To minimise the burden on data providers, the annual data request from the Foundation specifies the fields, columns or variables and the time period for which this data is required. The data providers are not required to do any processing of the data themselves, although they may well have done so as part of their own processing procedures. Ideally, data comes with data dictionaries that link to how the data was originally collected, what different codes mean and how the data can be used. Where this is not available, it has been important to work closely with those familiar with the data to ensure it is correctly interpreted.

To facilitate efficient data processing a bespoke data processing ‘wizard’ was built. This currently runs on a Microsoft Access graphical user interface and links to a database in Microsoft SQL Server. The data transformation occurs in three stages:

- **Stage 1 – Data Import:** The first stage involves importing the raw agency data, in the format provided by the agencies, into the wizard. The data import stage also checks that all required variables are included in the raw data file.

- **Stage 2 — Data Mapping:** The second stage involves mapping the raw agency data to categories and taxonomies developed by the Foundation (such as the legal matters described above). The aim of this process is to ensure that the data provided by the different agencies are standardised to a common set of categories.
- **Stage 3 — Final Conversion:** The final stage involves calculating additional variables based on data provided by the agencies. For example, age is calculated using the interview date minus the date of birth provided by the client. At this stage, legal matters are assigned to geographical locations, based on the client's postcode, following the concordance process described above.

The advantage of the data processing wizard is the ease and speed at which the raw agency data is converted into standardised common categories. The wizard is also quick to identify any new data inclusions, such as the addition of a new legal matter category or referral destination added by a legal assistance agency. A downside is that any substantial variations in the raw agency data, such as the addition of a new variable or an existing variable in a different format, are challenging and time consuming to incorporate as modifications are required at each of the three data transformation stages. As coding decisions are hardwired into the wizard, changing those decisions (such as whether a postcode is now 'valid') is not necessarily straightforward.

Interpreting the data

The LASDD has been described as providing an indication of ‘expressed’ legal need, that is, legal need for which legal assistance is sought. Evidence from surveys of legal need shows that legal assistance is not sought for all problems and that some types of people are more likely to seek legal advice for some types of problems than others (e.g. Coumarelos et al. 2012).

Even when advice is sought, legal assistance might not be accessible or available, particularly where service capacity is not able to meet demand, and the LASDD service use data will, of course, reflect this. Also, not everyone has equal access to legal services due to their individual circumstances or their location. Factors that affect service availability include:

- the social and demographic characteristics of potential clients
- the geographic location of services and their accessibility to clients
- the type of legal matter for which assistance is sought
- the financial status of potential clients.

The impact of these on the LASDD profile of legal matters is considered below.

Social and demographic criteria

All of the legal assistance agencies either prioritise assistance to specified demographic groups or provide services targeted at a specific group. For different agencies, this may include some or all of the following groups: women, Aboriginal and Torres Strait Islander peoples; people from non-English speaking backgrounds; people who are institutionalised; people living in regional, rural and remote areas of NSW; and people with a disability or chronic illness. Some of these groups will be targeted by specialist services, such as the Women’s Legal Services NSW. Potential clients who do not fall into one of these groups may therefore find it harder to find assistance. To some extent, therefore, the LASDD’s profile of the demographic characteristics clients will reflect this inequality of service provision.

Location of agencies

Legal needs research has identified that one of the main barriers to seeking assistance for legal problems is ease of access to legal services (Coumarelos et al. 2006; Coumarelos et al. 2012). Geographically, some residents are much better serviced than others. In some parts of NSW, access to anything other than the telephone service provided by LawAccess and the specialist CLCs, can be extremely limited (see Forell, Cain & Gray 2010).

While Legal Aid NSW and CLCs are considered state-wide services, they do operate from discrete locations in NSW. There are many factors — ideological, historical, political, economic and socio-demographic — that have determined where Legal Aid NSW offices and CLCs are located in NSW. Ostensibly, the offices of legal services are located where there are lots of people and thus, where the number of people with a legal need and requiring legal services are likely to be high. It is, therefore, not surprising to find that the majority of Legal Aid NSW offices and generalist CLCs in NSW are located in the heavily populated metropolitan areas of Sydney, Newcastle and Wollongong, as well as in the larger regional centres such as Dubbo, Tamworth and Coffs Harbour.

As discussed above, a further issue to consider is that residents living near a border may choose to use another state or territory legal service (rather than one in NSW). This may happen because the interstate service is closer and more accessible, and the nature of the client's legal matter (for example, a family law enquiry) means that they can seek help from a solicitor in any Australian jurisdiction, not necessarily one practising in NSW. This can affect the number and rate of legal matters for areas of NSW bordering on the ACT, Queensland and Victoria.

It is to be expected that the number of legal matters generally will be higher in or around areas where a legal service office is physically located, and this will be reflected in the LASDD. As evidence of this, Table 4 shows the number of matters originating from CLCs in an LGA where a new CLC was set up on the Mid-North Coast in Port Macquarie in early 2011. Although a new service may take business away from other services, it can also increase the number of matters dealt with, either by referring to other parts of its own service or referring the matter to another agency.

Table 4: The impact on the number of CLC matters of introducing a new mid-north coast CLC — number of matters rounded to the nearest ten

	2009	2010	2011
Number of CLC matters in the LGA in which the Mid-North Coast CLC is located (Port Macquarie)	260	240	730
Number of CLC matters in LGAs immediately surrounding Port Macquarie (including Kempsey and Greater Taree)	650	650	1,470
Number of CLC matters across the state	80,650	85,670	83,440

Type of legal matter

Even where there is some type of service provision, it may be restricted in the extent to which it covers all criminal, civil and family problems. Each of the agencies included in the LASDD has a different remit reflecting their individual service delivery models. Legal Aid NSW, for instance, tends to focus on criminal and family matters, particularly when providing minor assistance and casework (though these types of service are not included in LASDD). CLCs that are generalist will provide initial advice for any type of legal matter, but in practice, there is a greater focus on civil matters. In part this reflects the existence of specialist CLCs that target, for instance, consumer credit, tenancy and immigration related legal problems. Specialist centres tend to be geographically located in the more

urban parts of the state, though they may provide a state-wide service via the telephone. The different geographic coverage of the services, as well as the different clients targeted, are particularly important to consider when numbers of legal matters are being compared across different parts of the state.

Financial disadvantage

Public legal assistance services are aimed at people who are disadvantaged in some way and generally, they are not intended for people who can afford to access private advice. Agencies advertise their services as being primarily available to the socially and economically disadvantaged, and some may apply formal or informal means testing. This means that the LASDD will under-represent the 'expressed' legal needs of the more financially advantaged members of the community.

Development of the Data Digest Online application

The Foundation provides an information service to the LASDD data providers and selected stakeholders such as the funding organisations. In recognition that these organisations wanted a facility to directly interrogate the data, the Foundation developed the Data Digest Online (DDO) application to provide them with direct access to the data.

Creating an online application enables users to create their own bespoke analysis on demand, using the most up to date data available, but this has to be balanced against the time involved in learning (and remembering, for infrequent users) how to use the application. In practice, users will have different preferences for the ways in which they want to interact with the data. Some will require ready access to written reports that provide a documented interpretation of the data while others would prefer words, tables or charts. An online application can be designed to meet each of these preferences; however, this is not without its technical challenges.

To test the viability of the concept, a DDO prototype was developed and tested during 2006. Users were surveyed and agencies and key stakeholders consulted. Legal service agencies expressed interest in such an application as a way of better identifying legal need, revealing gaps in services, improving the quality of collected information, and aiding in the modelling, planning and delivery of legal assistance services in NSW.

Due to the sector's enthusiasm for the prototype, the Foundation successfully applied to the NSW Public Purpose Fund (PPF) to develop a fully functional online version of the LASDD. While it was modelled on the principles and functionalities of its predecessor, the new DDO application improved on the interactive and display capabilities of the prototype in using a more versatile integrated database and spatial mapping solution. The stated aims of the DDO were to:

- provide users with a single, convenient point of access to the different legal enquiries datasets to build a more complete picture of legal need in NSW
- provide the capacity to quickly generate legal enquiries data in a variety of forms, including tables, charts and maps, using intuitive and easily navigable medium
- allow users to generate maps to examine the relationship between legal enquiries and population characteristics, such as socio-economic disadvantage
- assist public legal assistance agencies to use evidence based planning to improve services to disadvantaged people in NSW.

The final version of the DDO was built in collaboration by e.Bi Pty Ltd and Integeo Pty Ltd, two companies with relevant and complementary expertise. It uses a Microsoft SQL Server as the relational database management system, Business Objects from SAP as the Business Intelligence tool, and Map Intelligence from Integeo as the integrated Geographic Information System (GIS).

The application is currently hosted on the Foundation's internal servers but offsite hosting is an option for the future. Technical considerations in the build of the application included:

- there should be no requirement for users to have any specialist software or associated licences
- the application would work with range of internet browsers and versions (such as Internet Explorer, Chrome, Safari, Firefox)
- the software would continue to be supported
- future developments of the software were likely to keep abreast of the latest technologies

- the efficiency of data processing, including synchronising between data reports and (GIS) maps, so that users would have a fast and seamless experience
- the ease with which the output (together with any associated titles and notes) could be exported to other medium, such as Excel for further analysis or Power Point for use in presentations
- the impact of server efficiency on the number of concurrent users, and ways to manage this.

Consideration was also given to the look and feel of the proposed systems from the user perspective. In particular the:

- familiarity and user friendliness of the interface, particularly for occasional users
- ease of system administration (setting up individual user access and rights et cetera)
- styling of the visual interface (reflecting the Foundation's corporate style throughout the application)
- presentation of multiple pages of data (ensuring that it was obvious when there are additional pages of reports and that they are easy to access)
- interactive features (dictating what can be selected in charts and what can be sorted and/or calculated in tables)
- flexibility to customise and later amend or update the way that data is presented.

With regards to the mapping functionality, of particular concern was the number of layers and how they would be displayed; the ability of users to change the degree of zoom; the transparency of geographical features; the presentation of labels; and the display of the legend describing the content of the map.

From an administrator perspective, the application had to allow easy loading of new datasets; it needed to manage hierarchical data (for instance, where there is more than one outcome for one enquiry), and allow calculation of new fields such as rates by incorporating population data. System security had to be sufficiently flexible to allow for users with different access rights, thus allowing users-only access to data from their own agency or combined data (see below).

The presentation of data in the DDO

The data is held in the DDO in four separate underlying datasets: one for each of the participating agencies and an 'all agency' dataset. Access to each of the datasets can be restricted so that, for instance, users can only access data from their own agency together with the combined 'all agency' dataset.

The DDO application displays data from the underlying dataset primarily via Web Intelligence Reports, Xcelsius Dashboards and maps. The maps are accessed via the relevant reports. Users with administrator access can build their own reports and maps.

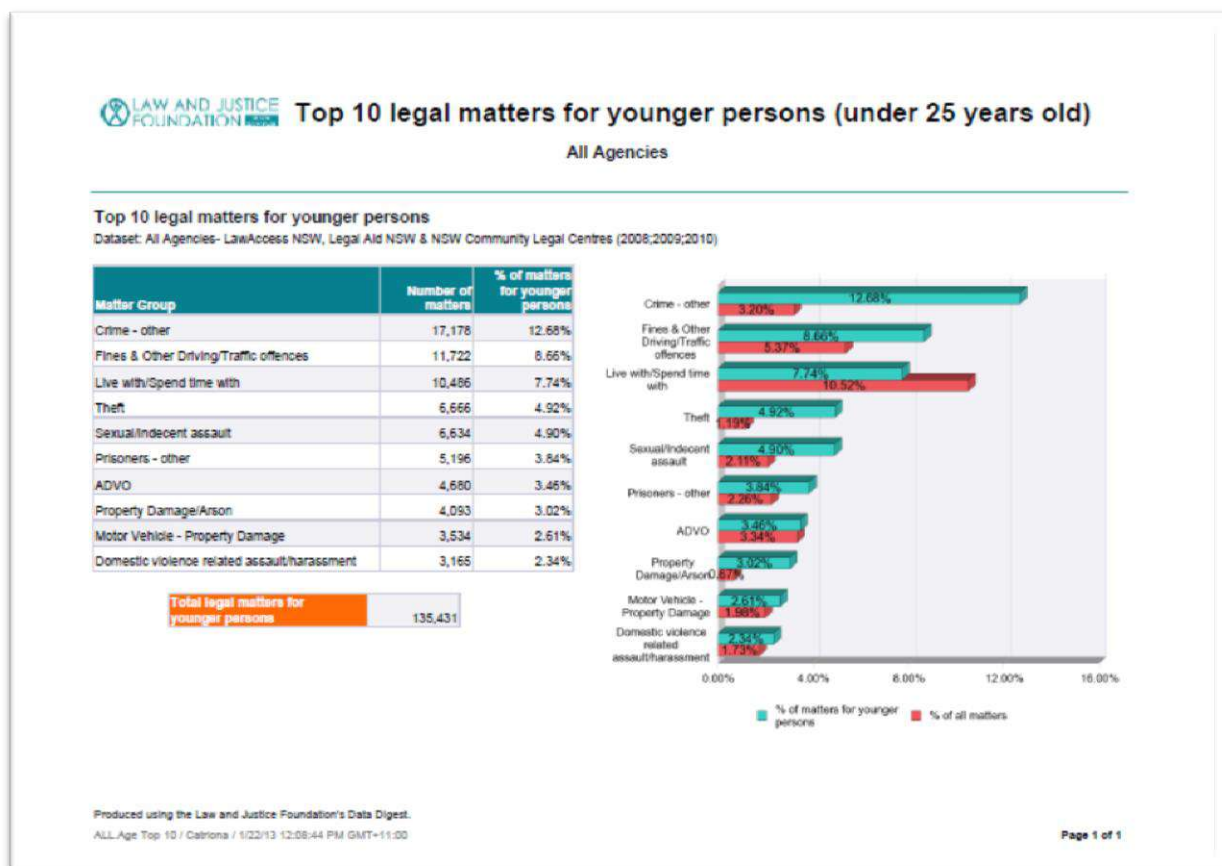
The ABS is the main source of population-based data, drawn predominantly from the Australian Census, which is conducted every five years. Planning for legal assistance service provision draws on socio-demographic data that indicates which areas are likely to experience greater levels of legal need. The DDO provides ready access to this data in the same Report and map format familiar to users. It can also be used to calculate per capita rates, facilitating comparison of the use of services across different demographic groups and geographic areas.

Reports

The reports contain selected data from the underlying dataset in the format of a table and/or a chart. An example is shown at Figure 2. These tables and charts can provide summed totals and, where appropriate, calculations of new variables such as rates (the number of legal matters per person in the population in a particular geographic area or demographic group). Report columns can be sorted; for instance, LGAs can be sorted in increasing or descending order according to the number of legal matters originating from residents of those areas.

Reports of data included in the DDO are restricted and access is limited to small numbers of legal matters, small demographic groups or in small geographic areas. This is to ensure that confidentiality and privacy provisions are maintained, and that the risk of identifying a particular individual from data available through the DDO is negligible.

Figure 2: Example of a DDO report

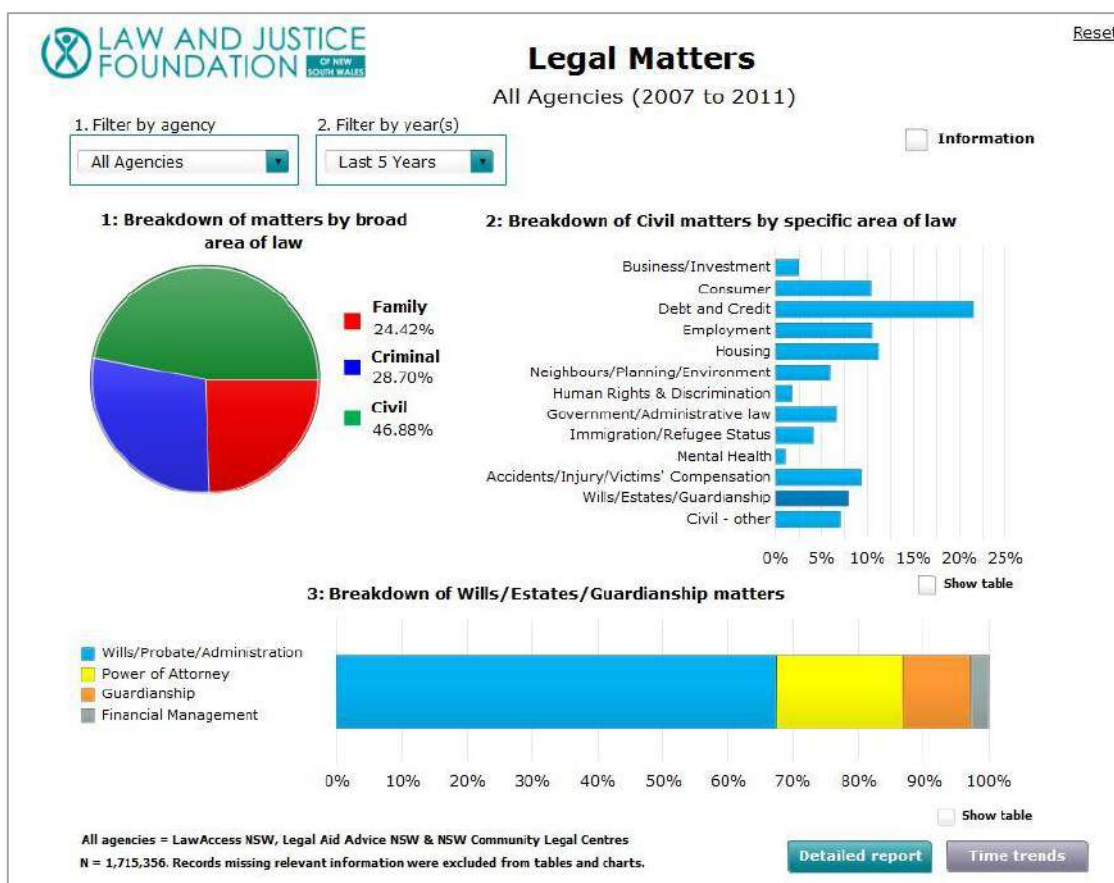


Dashboards

The current version of the DDO also contains a number of specially designed dashboards. A *dashboard* is a visual interface that provides an interactive view into key measures. They present the most commonly interrogated data in an easy to access format.

The DDO dashboards mainly use charts to present data. Dashboards can be interrogated to access alternative data, such as switching between civil and family law matters, or drilling down within a broad legal matter category to the constituent specific matters. Dashboards are visually appealing, but they are inherently less flexible. Changes to the content of the underlying dataset can only be reflected in a dashboard by specialist programming.

Figure 3: Example of a DDO dashboard

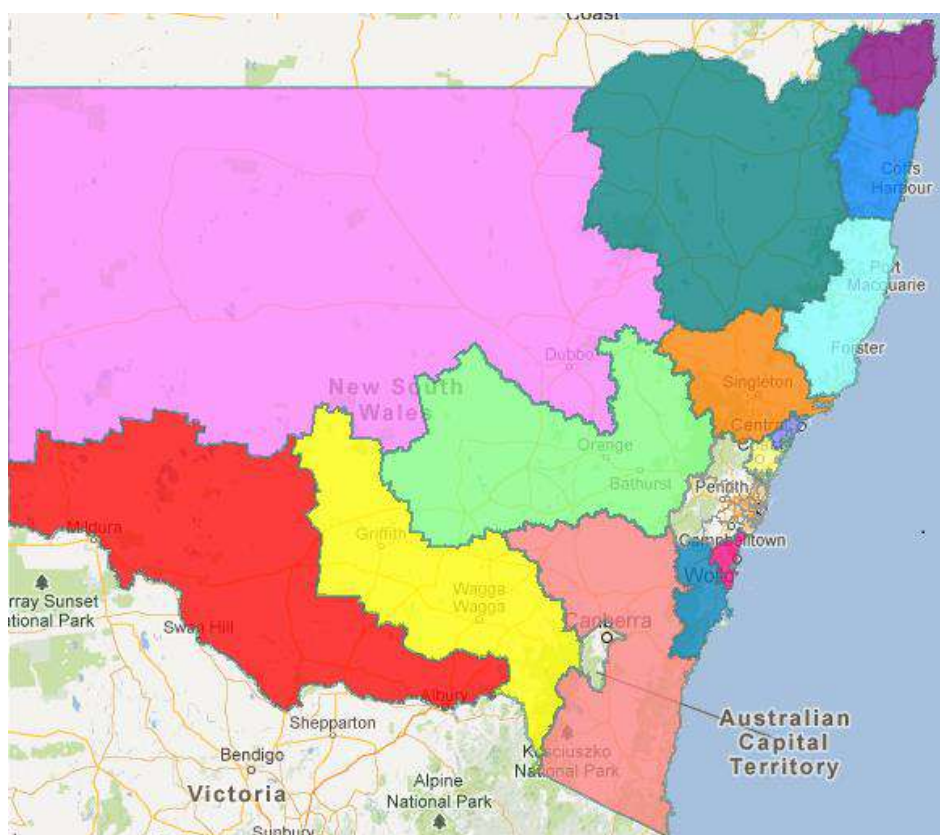


Maps

The DDO incorporates a GIS that provides the capability for the analysis and display of spatially distributed data. In the case of the DDO, this includes the geographic location from which legal enquiries originate, the socio-demographic profile of different areas, and the location of service providers and associated organisations.

Maps of NSW with the relevant geographic layers (including postcode, LGA, Region (SA4)) are available in the application. The GIS maps link to and display geographically based report data. The data can be displayed on the maps with areas colour coded according to the number or rate of, for instance, legal matters of a particular type. Socio-demographic information about an area can be displayed on top of this using line patterns such as hatchings. There is the capability to zoom in and out, which is particularly valuable when moving from sparsely populated regional areas to the more densely populated areas such as Sydney.

Figure 4: Example of a DDO map



Managing the DDO application

Maintaining and supporting an online application such as the DDO is a continuous process. Hardware and software issues arise on a regular basis. Data, from both legal assistance agencies and socio-demographic data, have to be frequently updated or amended to be relevant for users. Reports have to be modified or new reports built to reflect evolving user requirements. Advice has to be provided on how to access particular analysis, or ad hoc analysis conducted where existing reports are unsuitable.

A Memorandum of Understanding (MoU) between the Foundation, the data providers and the funding bodies, is in place to facilitate the provision of data from the legal assistance agencies and access to this data via the DDO. The purpose of the MoU is to support the use of the data for appropriate purposes while protecting the integrity of the DDO, the privacy of the individuals seeking advice, and the administrative data provided by the agencies.

The agreement describes the respective roles and responsibilities of the data providers, the data analysts and the data users. The requirement for data providers includes providing regular data updates and informing the Foundation of substantive changes to collection and processing that could have an impact on the interpretation of the data.

To assist users, the application includes a User Guide which incorporates DDO screenshots. Assistance with using the application and interpreting findings is available via a dedicated email address that is prominently displayed throughout the DDO. This address is also used by the Foundation to keep users in touch with planned system outages, addition of new material and other updates. Active engagement with users is no doubt essential to continued use of the DDO.

Conclusion

The development of the LASDD has demonstrated the feasibility of bringing together data from agencies that are providing distinct services, each in different organisational contexts. In combination, this data provides a more complete picture of the NSW not-for-profit legal assistance provision than would otherwise be available. This complements the growing evidence base on the extent of legal need in the NSW community and the barriers to seeking assistance for legal problems (Coumarelos et al. 2012).

Using data to better understand who is using services and for what purpose, is essential to support evidence based planning of service provision. However, it is important to keep abreast of the way administrative data of this type is being used for other purposes, such as performance assessment or funding decisions, as this may have an impact on the quality and consistency of the data collected over time.

Providing users with ready access to routinely updated data by way of an application such as the DDO should facilitate the use of data for strategic purposes. However, the development of the DDO has taken many years and considerable Foundation resources to come to fruition. Resources will continue to be necessary to maintain it, as data requires regular updating, hardware needs to be replaced and software upgraded – not only to keep it functioning but to keep pace with the expectations of users in a fast moving technological work environment. This level of future investment by the Foundation can only be justified if the DDO is actively used by data providers and the funding agencies.

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