Queensland Health

Notifiable Dust Lung Disease Register annual report

2022–2023

Queensland Government

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For more information contact

Notifiable Dust Lung Disease Register
Health Protection Branch
Department of Health
PO Box 2368, Fortitude Valley BC QLD 4006

Telephone: (07) 3328 9632
Fax: (07) 3328 9622
Email: ndldregister@health.qld.gov.au

Annual reports

The Notifiable Dust Lung Disease Register annual reports are available at:

https://www.health.qld.gov.au/public-health/industry-environment/dust-lung-disease-register/annual-report

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Acknowledgement of Country

The Department of Health acknowledges the traditional custodians of the lands, waters and seas across the State of Queensland, and pay our respects to the Elders past, present, and recognise the role of current and emerging leaders in shaping a better health system. We value the culture, traditions and contributions that the Aboriginal and Torres Strait Islander people have contributed to our communities, and recognise our collective responsibility as government, communities, and individuals to ensure equality, recognition and advancement of Aboriginal and Torres Strait Islander Queenslanders in every aspect of our society.

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At a glance

This report is the fourth annual report of the Queensland Health Notifiable Dust Lung Disease Register (NDLD Register), which commenced operations on 1 July 2019. The report is for the financial year 1 July 2022 to 30 June 2023 (2022–23) and has been prepared to meet requirements under section 279AJ of the *Public Health Act 2005*.

New confirmed cases of notifiable dust lung diseases recorded in the Register during 2022–23

Notifications/Reports

242 confirmed

During 2022–23, the NDLD Register recorded 242 confirmed notifications and reports of workers with new notifiable dust lung disease.

Two of these were a separate notification/report about a new notifiable dust lung disease for the same worker, totalling 241 workers recorded in the NDLD Register during 2022–23.

Workers

Below is a summary of workers with new notifiable dust lung diseases recorded in the NDLD Register during 2022–23.

241 workers with new notifiable dust lung disease were recorded in the NDLD Register during 2022–23.

233 (97%) were male

10 (4%) were deceased

at time of the notification or report.

8 (3%) were female

142 (59%) were aged 60–79 years

This is the most frequently reported age group of workers at time of diagnosis.

1 worker was a First Nations person

The First Nations status of the 241 workers was not well reported (not reported for 228 or 95% of workers).

Diseases

Of the 241 workers, 224 were diagnosed with one disease and 17 were diagnosed with two diseases, totalling 258 new confirmed notifiable dust lung diseases recorded in the NDLD Register during 2022–23. Mesothelioma (61, 24%), followed by chronic bronchitis/emphysema (50, 19%) were the most frequently reported types of new notifiable dust lung diseases recorded in the NDLD Register during 2022–23.

Type of notifiable dust lung disease	Number (%) of new confirmed notifiable dust lung diseases recorded in the NDLD Register during 2022–23[i]
Cancer—Mesothelioma	61 (24%)
Cancer—Other[ii]	15 (6%)
COPD—Chronic bronchitis/Emphysema	50 (19%)
COPD—Other[iii]	38 (15%)
Pneumoconiosis—Coal Workers'	15 (6%)
Pneumoconiosis—Mixed-dust	3 (1%)
Pneumoconiosis—Silicosis	30 (12%)
Pneumoconiosis—Asbestosis	37 (14%)
Pneumoconiosis—Other[iv]	9 (3%)
Total	**258 (100%)**

Primary occupational exposure history

Asbestos (100, 42%), followed by coal (61, 25%) and silica (32, 13%) were the **top three** reported type of occupational dust exposure for the 241 workers with new notifiable dust lung disease for 2022–23[v].

Dust	Asbestos	100 (42 %)
	Coal	61 (25%)
	Silica	32 (13%)

Mining, resources and quarrying (100, 42%), followed by construction (71, 29%) and manufacturing (30, 12%), were the **top three** reported occupational industry of exposure for the 241 workers with new notifiable dust lung disease for 2022–23[vi].

Industry	Mining, resources and quarrying	100 (42%)
	Construction	71 (29%)
	Manufacturing	30 (12%)

Place of exposure	Queensland	229 (95 %)
	Outside Queensland	12 (5%)

All 241 workers were occupationally exposed in Queensland, however for 12 (5%) workers, their primary place of occupational exposure occurred outside of Queensland.

i A worker may be diagnosed with more than one notifiable dust lung disease.

ii 'Cancer—Other' includes 'Malignant neoplasms and carcinomas of the respiratory system (other than mesothelioma)' (12 of 15), 'Non-small cell lung cancer' (1 of 15) and 'Large cell neuroendocrine' (1 of 15) and 'Cancer – Sub type not reported' (1 of 15).

iii 'COPD—Other' includes 'COPD— Subtype not reported' (38 of 38).

iv 'Pneumoconiosis—Other' includes 'Pulmonary fibrosis/Dust related diffuse fibrosis' (4 of 9), 'Pleural plaques' (2 of 9), 'Lymph node silicosis' (1 of 9), 'Interstitial lung disease' (1 of 9) and 'Simple pneumoconiosis' (1 of 9).

v The type of primary occupational dust was derived in 172 (71%) of the 241 reports.

vi The primary industry of occupational exposure was derived in 52 (22%) of the 241 reports.

1 About this report

This is the fourth annual report of the Queensland Health Notifiable Dust Lung Disease Register (NDLD Register). Previous NDLD Register annual reports are available at:

https://www.health.qld.gov.au/public-health/industry-environment/dust-lung-disease-register/annual-report

The NDLD Register annual reports have been prepared to meet the requirements of section 279AJ of the *Public Health Act 2005*.

This annual report is for the financial year 1 July 2022 to 30 June 2023 (2022–23) and includes:

- the number of notifications and reports given to the NDLD Register during 2022–23; and
- a description of the types of notifiable dust lung diseases recorded in the NDLD Register during 2022–23.

The report focuses on new confirmed cases of notifiable dust lung diseases received and recorded in the NDLD Register during 2022–23. It also provides a spotlight on silicosis, due to the recent re-emergence and national focus on this occupational dust lung disease.[1,2]

Cases diagnosed during the financial year but given to the NDLD Register after 30 June 2023 are not included. They will be included as an update in the next annual report.

To understand the total number and type of notifiable dust lung diseases in Queensland, information about confirmed cases of notifiable dust lung disease recorded in the NDLD Register to date, by date of diagnosis, has also been included in this report.

This incorporates all confirmed notifications and reports given to the NDLD Register from commencement of the Register on 1 July 2019 to 30 June 2023, including legacy cases (those diagnosed before the establishment of the NDLD Register). Some caution is required when interpreting this legacy information as these historical records may be incomplete.

For the first time, this annual report provides the number and nature of notifiable dust lung diseases recorded in the NDLD Register, for three years of complete data, by date of diagnosis. Specifically, complete annual data for the financial years 2019–20, 2020–21 and 2021–22, by date of diagnosis, are presented, enabling simple comparative statements to be made about the number and nature of these diseases over this period.

As the NDLD Register matures and each financial year of date of diagnosis data becomes complete, this further enables Queensland Health to monitor and analyse the incidence of notifiable dust lung diseases.

No personal information identifying workers has been included in this report.

The report concludes with information about other actions the department has taken to implement the purposes of the NDLD Register during 2022–23 and outlines plans for the Register during its fifth year of operations (2023–24).

Of particular note, the report outlines Queensland Health's ongoing support and preparations for the development and implementation of a National Occupational Respiratory Disease Registry (National Registry).

2 About the Notifiable Dust Lung Disease Register

The NDLD Register commenced on 1 July 2019 after amendments to the *Public Health Act 2005* and Public Health Regulation 2018 came into effect. These amendments were made in response to the re-identification and emergence of occupational dust lung diseases[3], including coal workers' pneumoconiosis and silicosis.

The main purposes of establishing and keeping the NDLD Register are to:

- monitor and analyse the incidence of notifiable dust lung disease, and
- enable information about notifiable dust lung diseases to be exchanged with an entity of the State or corresponding entity.

Entities of the State include Resources Safety and Health Queensland (RSHQ) and the Office of Industrial Relations (OIR).

The NDLD Register is managed by the Health Protection Branch, Queensland Public Health and Scientific Services (QPHaSS) Division, Department of Health, on behalf of the chief executive (Director-General, Queensland Health). An Advisory Panel consisting of a small group of respiratory medicine specialists from Queensland Hospital and Health Services, has been established to provide expert advice and guidance to the NDLD Register.

While the NDLD Register allows Queensland Health to monitor and analyse the incidence of notifiable dust lung diseases in Queensland, the NDLD Register does not provide clinical advice or practical support to people who have been diagnosed with an occupational dust lung disease, work in dusty environments or are concerned about their health.

As prevention and early screening programs can stop occupational dust lung disease from developing or progressing further, it is very important that these workers participate in industry respiratory surveillance programs where available, such as those in place for current and former Queensland mine and quarry workers[vii], or otherwise discuss health concerns with their General Practitioner. The surveillance program or General Practitioner can arrange for further testing and may also arrange referral to an occupational or respiratory specialist. If this specialist makes a diagnosis of a notifiable dust lung disease caused by occupational exposure to inorganic dust, they are required to make a notification to the NDLD Register.

In Queensland, RSHQ and OIR are responsible for the prevention, control and early detection of occupational dust lung diseases.

Of relevance to the NDLD Register, both RSHQ and OIR hold records of workers who have been diagnosed with a notifiable dust lung disease. RSHQ has health records of workers from coal mining industries who have undergone a health assessment and who have been diagnosed with a notifiable dust lung disease and OIR collects information on workers across all industries who have lodged a claim for workers' compensation for a work-related injury.

The NDLD Register periodically requests relevant information about cases of notifiable dust lung disease from both RSHQ and OIR. This information is in addition to notifications given to the NDLD Register by specialists and helps ensure the numbers and type of these diseases in the NDLD Register is complete. The confidentiality of this information is protected by legislation.

Further information about the legislative framework and reporting requirements for specialists and state entities, to the NDLD Register, is detailed in the next section of this report.

It is anticipated that in the near future, once the National Occupational Respiratory Disease Registry (National Registry) is established, the way the NDLD Register receives notifications and reports about notifiable dust lung diseases, from specialists and state entities, may change.

For further information about the NDLD Register, including notification requirements, and information about assistance and support services available to patients and/or workers concerned about occupational dust lung disease, visit the NDLD Register website.

vii See for example the former mine and quarry worker screening program How the retired and former worker assessment works | Business Queensland

3 Legislative framework and reporting requirements to the Register

In response to the re-identification and emergence of occupational dust lung diseases[3], including coal workers' pneumoconiosis and silicosis, changes to the *Public Health Act 2005* and the Public Health Regulation 2018 were passed by the Queensland Parliament and came into effect on 1 July 2019. The changes provide a legislative framework for the establishment and operations of the NDLD Register, including notification and reporting obligations for notifiable dust lung diseases in Queensland.

3.1 Obligations of prescribed medical practitioners to notify the Register

Under the *Public Health Act 2005*, prescribed medical practitioners are required to notify the chief executive of Queensland Health when a person is diagnosed with a notifiable dust lung disease. Making a notification to the NDLD Register satisfies this requirement.

As defined in the Public Health Regulation 2018, a prescribed medical practitioner is a medical practitioner from either of the following specialties:

- occupational and environmental medicine
- respiratory and sleep medicine.

To prevent dual notification requirements, if a prescribed medical practitioner has reported a notifiable dust lung disease to the department in which the *Coal Mining Safety and Health Act 1999* is administered (i.e. RSHQ), they do not need to notify the NDLD Register. No other exemptions currently apply. For example, if a prescribed medical practitioner has diagnosed a notifiable dust lung disease in relation to a claim for worker's compensation (i.e. to OIR), they must also notify the NDLD Register.

An obligation to notify or give information about a notifiable dust lung disease for a person includes an obligation to notify or give information for a deceased person.

Workers, their family members or their general practitioner are not required to notify the NDLD Register of a notifiable dust lung disease diagnosis.

3.2 Notifiable dust lung diseases

A diagnosis is made if, in the opinion of the prescribed medical practitioner, the person has a notifiable dust lung disease.

As defined in the Public Health Regulation 2018, a notifiable dust lung disease is any of the following respiratory diseases when caused by occupational exposure to inorganic dust:

- cancer (e.g. mesothelioma)
- chronic obstructive pulmonary disease, including chronic bronchitis and emphysema
- pneumoconiosis, including:
  - asbestosis
  - coal workers' pneumoconiosis
  - mixed-dust pneumoconiosis
  - silicosis.

Examples of inorganic dust include (but are not limited to) silica, coal, asbestos, natural stone, tungsten, cobalt, aluminium and beryllium.

3.3 Notification method

Notifications to the NDLD Register by a prescribed medical practitioner must be in the Approved Form and must be made within 30 days of diagnosis. Failure to submit a notification of a notifiable dust lung disease to the NDLD Register within 30 days of diagnosis without a reasonable excuse is an offence under the *Public Health Act 2005* and may incur a maximum penalty of 20 penalty units.

Notifications are securely submitted to the NDLD Register by secure file transfer email, a Queensland Health email, by secure fax or by registered post.

For further information on how to make a notification visit the NDLD Register website.

3.4 Requests for further information about a notification

To ensure the accuracy and completeness of information recorded in the NDLD Register, a notice requesting further information about a notification may be issued, under s279AG of the *Public Health Act 2005*, to the prescribed medical practitioner who gave the notification, or another health practitioner who has the information.

The notice will include a reasonable period within which the information is due. Failure to comply with the notice and provide the further information without a reasonable excuse is an offence under the *Public Health Act 2005* and may incur a maximum penalty of 20 penalty units.

3.5 Obligation of relevant chief executive to give information to the Register

Under section 279AH of the *Public Health Act 2005*, a relevant chief executive of the department in which the *Coal Mining Safety and Health Act 1999* is administered or the department in which the *Workers' Compensation and Rehabilitation Act 2003* is administered, namely the chief executive officer of RSHQ or the chief executive of OIR respectively, if requested, must give information which their organisation holds about a notifiable dust lung disease to the NDLD Register.

Reports of notifiable dust lung diseases are given to the NDLD Register by RSHQ or OIR via secure file transfer. These reports are in addition to notifications given to the NDLD Register by prescribed medical practitioners and assists to ensure the NDLD Register has a complete record of the number and type of notifiable dust lung diseases in Queensland. This will allow Queensland Health to monitor and analyse the incidence of notifiable dust lung diseases and enable the NDLD Register to achieve its purposes.

3.6 Confidentiality and disclosure of information

Under the *Public Health Act 2005*, strict confidentiality and disclosure of information obligations apply to the NDLD Register.

Only information consistent with the data fields in the Approved Form for notifications is recorded in the NDLD Register. Clinical reports, X-rays and CT scans as well as detailed exposure histories and names of workplaces where exposure may have taken place are not given to, or recorded in, the NDLD Register.

Personal information collected by the NDLD Register is handled in accordance with the *Information Privacy Act 2009* and the Department of Health Privacy Plan.[4]

All personal information is securely stored and only accessible by authorised Queensland Health staff. Personal information is not disclosed to any third parties without consent of the person to whom the information relates unless the disclosure is authorised or required by law.

4 Notifiable dust lung diseases recorded in the Register during 2022–23

4.1 Number of new notifications and reports given to the Register

As shown in Table 1, during 2022–23, the NDLD Register received a total of 370 notifications and reports of persons with notifiable dust lung disease, including 42 notifications from specialists, 87 reports from RSHQ and 241 reports from OIR. Of these, 242 (65%) were assessed as confirmed notifications and reports of workers with new notifiable dust lung disease. The remainder were assessed as duplicate reports (115, 31%) or out of scope (13, 4%).

Table 1. Number of new notifications and reports given to the Register during 2022–23, by information source and information type

Information source	Information type	Confirmed	Duplicate	Out of scope	Totals
Specialists	Notification	38	2	2[viii]	42 (11%)
RSHQ	Report	72	15	0	87 (24%)
OIR	Report	132	98	11[ix]	241 (65%)
Totals		**242 (65%)**	**115 (31%)**	**13 (4%)**	**370 (100%)**

4.2 Number of workers with new notifiable dust lung disease

Two of the 242 confirmed notifications/reports were a separate notification/report about a new notifiable dust lung disease for the same worker, totalling 241 workers with new confirmed notifiable dust lung disease recorded in the NDLD Register during 2022–23.

4.3 Number and type of new notifiable dust lung diseases

Of the 241 workers, 224 were diagnosed with one disease and 17 were diagnosed with two diseases, totalling 258 new confirmed notifiable dust lung diseases recorded in the NDLD Register during 2022–23 (Table 2).

As shown in Table 2, mesothelioma (61, 24%), followed by chronic bronchitis/emphysema (50, 19%) were the most frequently reported types of new notifiable dust lung diseases recorded in the NDLD Register during 2022–23.

Collectively, pneumoconiosis made up over a third (94 or 36%) of the 258 new cases of notifiable dust lung diseases given to the NDLD Register during 2022–23. Chronic obstructive pulmonary diseases (COPD) made up another third (88 or 34%) of new cases and the remainder (76 or 29%) of new cases were respiratory cancers (Table 2). Of the 94 workers with pneumoconiosis only 4 (4%) were reported to have progressive massive fibrosis (PMF) i.e. conglomerate areas of scar tissue in the lungs, also known as complicated pneumoconiosis. Caution is required when interpreting information about the proportion of workers with PMF as this figure may be underreported. While specialists and RSHQ notify about PMF, OIR are unable to provide this information.

viii Two notifications were assessed as out of scope as the notification was made by a general practitioner, not a prescribed medical practitioner (i.e. not from an occupational or respiratory specialist) and therefore not within the legislative framework for notification to the NDLD Register. These general practitioners were contacted and encouraged to discuss with the patients' medical specialist the requirement to notify the NDLD Register.

ix Eleven notifications from OIR were assessed as out of scope, primarily because the disease reported was not a notifiable dust lung disease prescribed in regulation (6 of 11), or OIR subsequently advised the NDLD Register that the case (the claim) had been reassigned as no longer in scope/had been withdrawn (5 of 11).

Table 2. New confirmed notifiable dust lung diseases recorded in the Register during 2022–23, by number and type of disease

Type of notifiable dust lung disease	Number (%) of new confirmed notifiable dust lung diseases recorded in the NDLD Register during 2022–23[x]
Cancer—Mesothelioma	61 (24%)
Cancer—Other[xi]	15 (6%)
COPD—Chronic bronchitis/Emphysema	50 (19%)
COPD—Other[xii]	38 (15%)
Pneumoconiosis—Coal Workers'	15 (6%)
Pneumoconiosis—Mixed-dust	3 (1%)
Pneumoconiosis—Silicosis	30 (12%)
Pneumoconiosis—Asbestosis	37 (14%)
Pneumoconiosis—Other[xiii]	9 (3%)
Total	**258 (100%)**

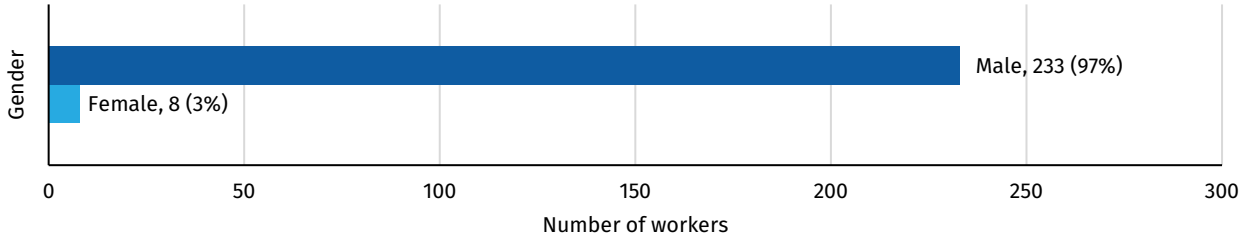
4.4 Demographics of workers with new notifiable dust lung disease

The following section provides demographic information about the 241 workers with new confirmed notifiable dust lung disease recorded in the NDLD Register during 2022–23.

Workers with new notifiable dust lung disease, by gender

Workers with new notifiable dust lung disease recorded in the NDLD Register during 2022–23 were predominantly male (233, 97%) (Graph 1). Male workers are more likely to be over-represented in dust generating industries such as construction, mining and manufacturing.

Graph 1: Workers with new notifiable dust lung disease recorded in the Register during 2022–23, by gender.



x A worker may be diagnosed with more than one notifiable dust lung disease.

xi 'Cancer—Other' includes 'Malignant neoplasms and carcinomas of the respiratory system (other than mesothelioma)' (12 of 15), 'Non-small cell lung cancer' (1 of 15), 'Large cell neuroendocrine' (1 of 15) and 'Cancer - Sub type not reported' (1 of 15).

xii 'COPD—Other' includes 'COPD—Subtype not reported' (38 of 38).

xiii 'Pneumoconiosis—Other' includes 'Pulmonary fibrosis/Dust related diffuse fibrosis' (4 of 9), 'Pleural plaques' (2 of 9), 'Lymph node silicosis' (1 of 9), Interstitial lung disease (1 of 9) and 'Simple pneumoconiosis' (1 of 9).

Workers with new notifiable dust lung disease, by age group

Age 60–79 years was the most frequently reported age group of workers at time of diagnosis, accounting for over half (142 or 59%) of the 241 workers with new notifiable dust lung disease (Table 3). The over-representation of older age groups may be explained by the latency of dust lung diseases (i.e. the time lag between occupational exposure to the inorganic dust and when the disease is diagnosed).

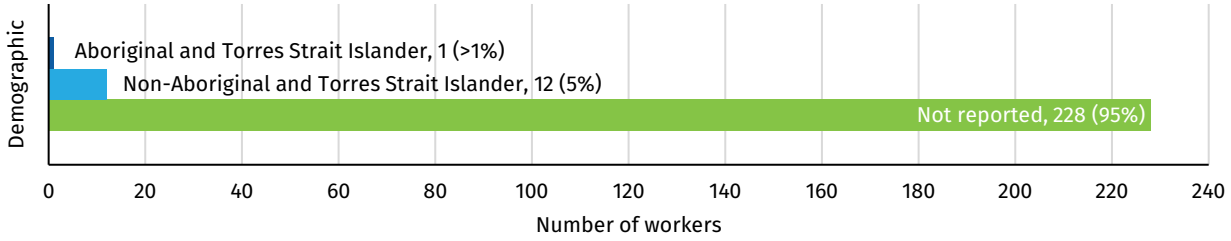
Table 3. Workers with new notifiable dust lung disease recorded in the Register during 2022–23, by age group

Age group	Number of workers	(%)
20–39	6	3%
40–59	37	15%
60–79	142	59%
80 and above	56	23%
Total	**241**	**(100%)**

Workers with new notifiable dust lung disease, by First Nations status

The First Nations status of the 241 workers with new notifiable dust lung disease was not well reported[xiv]. First Nations status was not reported for 95% (228) of workers. Where First Nations status was reported, one worker was reported as Aboriginal and Torres Strait Islander and 12 (5%) were reported as Non-Aboriginal and Torres Strait Islander (Graph 2).

Graph 2. Workers with new notifiable dust lung disease recorded in the Register during 2022–23, by First Nations status.



Workers with new notifiable dust lung disease reported as deceased

Ten (4%) of the 241 workers with new notifiable dust lung disease were reported as deceased at the time the notification/report was given to the NDLD Register during 2022–23. Caution is required when interpreting deceased status as this information was not reported for 69 (29%) of the 241 workers with new notifiable dust lung disease. Additionally, deceased status of a worker is reported to the NDLD Register once, at time of diagnosis/notification and may not include updated information about whether a worker has subsequently died.

4.5 Primary occupational exposure history of workers with new notifiable dust lung disease

The following information provides an overview of the primary occupational exposure history of the 241 workers with new notifiable dust lung disease recorded in the NDLD Register during 2022–23.

Primary occupational dust exposure for workers with new notifiable dust lung disease

As presented in Table 4, asbestos (100, 42%), followed by coal (61, 25%) and silica (32, 13%) were the most frequently reported type of primary occupational dust exposure for workers with new notifiable dust lung disease.

xiv While specialists report on the First Nations status of workers, reports given to the NDLD Register by RSHQ or OIR do not generally provide this information.

Table 4. Workers with new notifiable dust lung disease recorded in the Register during 2022–23, by type of primary occupational dust exposure

Type of inorganic dust[xv]	Number of workers	(%)
Asbestos	100	42%
Coal	61	25%
Silica	32	13%
Mixed	21	9%
Other[xvi]	27	11%
Total	**241**	**(100%)**

Primary industry of occupational exposure for workers with new notifiable dust lung disease

Mining, resources and quarrying (100, 42%), followed by construction (71, 29%), and manufacturing (30, 12%) were the most frequently reported primary industry of occupational exposure for workers with new notifiable dust lung disease (Table 5).

Table 5. Workers with new notifiable dust lung disease recorded in the Register during 2022–23, by primary industry of occupational exposure

Industry of exposure[xvii]	Number of workers	(%)
Mining, Resources and Quarrying	100	42%
Construction	71	29%
Manufacturing	30	12%
Transport	11	5%
Other[xviii]	29	12%
Total	**241**	**(100%)**

Primary place of occupational exposure for workers with new notifiable dust lung disease

All 241 workers with new notifiable dust lung disease were occupationally exposed in Queensland. However, for 12 (5%) of these workers, their primary place of occupational exposure reportedly occurred outside Queensland (Table 6).

Table 6. Workers with new notifiable dust lung disease recorded in the Register during 2022–23, by primary place of occupational exposure

Place of exposure	Number of workers	(%)
Queensland	229	95%
New South Wales	4	1.5%
Western Australia	2	1%
Other Australian State or Territory[xix]	4	1.5%
Other country[xx]	2	1%
Total	**241**	**(100%)**

xv The type of primary occupational dust exposure was derived in 172 (71%) of the 241 reports.

xvi 'Other' type of dust includes 'Opal' (1 of 27) and dust type 'Not reported' (26 of 27).

xvii The primary industry of occupational exposure was derived in 52 (22%) of the 241 reports.

xviii Industry 'Other' encompasses a wide range of industries, with the most frequent including, but not limited to 'Other services' (6 of 29), 'Public safety administration' (5 of 29), 'Professional, scientific and technical' (4 of 29), 'Power (electricity, gas), water and waste services' (4 of 29) and 'Industry type—not reported/unknown' (5 of 29).

xix Includes Northern Territory (1 of 4), Victoria (1 of 4), South Australia (1 of 4) and Tasmania (1 of 4).

xx Includes Germany (1 of 2) and Indonesia/Solomon Islands (1 of 2).

5 Notifiable dust lung diseases recorded in the Register to date, by year of diagnosis

This section includes information about the total number of workers and confirmed notifiable dust lung diseases recorded in the NDLD Register to date (i.e. based on confirmed notifications and reports given to the NDLD Register from commencement of the NDLD Register on 1 July 2019 to 30 June 2023, including legacy cases), by year of diagnosis.

Some caution is required when interpreting the data and information in the following tables (Tables 7 to 9). Where the 2019–20, 2020–21 and 2021–22 'Year of diagnosis' data columns are complete and comparable, the 'Legacy' column includes multiple years of data and the '2022–23' 'Year of diagnosis' column is not yet complete. As previously stated, not all cases of notifiable dust lung disease are given to the NDLD Register in the year that they are diagnosed, and the number of cases recorded for 2022–23 will likely be revised upwards in the next annual report. Additionally, the numbers presented in this report may differ slightly from those reported in previous annual reports, as new or updated information about cases of notifiable dust lung disease is received and recorded in the NDLD Register.

5.1 Total number of confirmed notifications and reports by information source

Table 7 shows the total number of confirmed notifications and reports of workers with notifiable dust lung diseases recorded in the NDLD Register to date, by information source and year of diagnosis. A total of 1377 confirmed notifications and reports have been recorded in the NDLD Register to date (Table 7). Notifications from occupational and respiratory specialists account for 17%, while reports from RSHQ (20%) and OIR (63%) account for the remaining information sources (Table 7).

☞ When comparing the three complete financial 'Year of diagnosis' data (2019–20, 2020–21 and 2021–22), the total number of notifications and reports recorded in the NDLD Register for the most recent year (2021–22), is slightly (10%) lower than the previous two years i.e. 260, 256 compared to 234 respectively (Table 7). This decrease in notifications could be due to multiple factors, including random variation and it is not possible to assess whether this represents a downward trend at this stage.

Table 7. Total confirmed notifications and reports recorded in the Register to date, by information source and year of diagnosis.

Information source (and type)	Year of diagnosis[xxi]					
	Legacy *(multiple years, prior 1 July 2019)*	2019–20	2020–21	2021–22	2022–23 *(Incomplete year)*[xxii]	Total (%)
Specialists (notifications)	61	53	49	34	35	232 (17%)
RSHQ (reports)	107	35	36	50	48	276 (20%)
OIR (reports)	320	172	171	150	56	869 (63%)
Total	**488**	**260**	**256**	**234**	**139**	**1377 (100%)**

xxi Date of diagnosis was derived in 970 (70%) of the 1377 reports. See the Glossary in Appendix 3, for further information on 'date of diagnosis' and how 'derived'.

xxii Not all cases of notifiable dust lung disease are given to the NDLD Register in the year that they are diagnosed, and the number of cases recorded for 2022–23 will likely be revised upwards in the next annual report e.g. cases diagnosed during the 2022–23 financial year but given to the NDLD Register after 30 June 2023 are not included.

5.2 Total number of workers recorded in the Register

Eight of the 1377 confirmed notifications/reports were a separate notification/report about a newly diagnosed notifiable dust lung disease for the same worker (for four workers), totalling 1373 workers recorded in the NDLD Register to date (Table 8). Of these, 1326 (97%) were male and 47 (3%) were female.

☞ When comparing the three complete financial 'Year of diagnosis' data (2019–20, 2020–21 and 2021–22), the total number of workers with confirmed notifiable dust lung disease recorded in the NDLD Register for the most recent year (2021–22), is slightly (10%) lower than the previous two years i.e. 259, 254 compared to 233 respectively (Table 8). This decrease in number of workers with confirmed disease could be due to multiple factors, including random variation and it is not possible to assess whether this represents a downward trend at this stage.

Table 8. Total number of workers with confirmed notifiable dust lung disease recorded in the Register to date, by year of diagnosis.

Number of workers	Year of diagnosis[xxiii]					
	Legacy *(multiple years, prior 1 July 2019)*	2019–20	2020–21	2021–22	2022–23 *(Incomplete year)*[xxiv]	Total
Total	**488**	**259**	**254**	**233**	**139**	**1373**

5.3 Total number and type of diseases recorded in the Register

Table 9 shows the total number and type of confirmed notifiable dust lung diseases recorded in the NDLD Register to date, by year of diagnosis.

Of the 1373 workers, 1295 were diagnosed with one disease, 76 were diagnosed with two diseases, and two were diagnosed with three diseases, totalling 1453 confirmed notifiable dust lung diseases recorded in the NDLD Register to date (Table 9).

Silicosis (380, 26%), closely followed by mesothelioma (364, 25%) and then Asbestosis (210, 15%) are the most frequently reported types of notifiable dust lung diseases, accounting for over two thirds (66%) of the 1453 confirmed notifiable dust lung diseases recorded in the NDLD Register to date (Table 9).

☞ When comparing the three complete financial 'Year of diagnosis' data (2019–20, 2020–21 and 2021–22), the total number of confirmed notifiable dust lung diseases recorded in the NDLD Register for the most recent year (2021–22), is slightly (10%) lower than the previous two years i.e. 273, 270 compared to 245 respectively (Table 9). This decrease in number of confirmed notifiable dust lung diseases could be due to multiple factors, including random variation and it is not possible to assess whether this represents a downward trend at this stage.

xxiii Date of diagnosis was derived in 970 (70%) of the 1377 reports. See the Glossary in Appendix 3, for further information on 'date of diagnosis' and how 'derived'.

xxiv Not all cases of notifiable dust lung disease are given to the NDLD Register in the year that they are diagnosed, and the number of cases recorded for 2022–23 will likely be revised upwards in the next annual report e.g. cases diagnosed during the 2022–23 financial year but given to the NDLD Register after 30 June 2023 are not included.

Table 9. Total confirmed notifiable dust lung diseases recorded in the Register to date, by year of diagnosis.

Type of notifiable dust lung disease	Year of diagnosis[xxv]					
	Legacy *(multiple years, prior 1 July 2019)*	2019–20	2020–21	2021–22	2022–23 *(Incomplete year)* [xxvi]	Total (%)
Cancer—Mesothelioma	116	71	69	75	33	364 (25%)
Cancer—Other[xxvii]	31	15	21	16	8	91 (6%)
COPD—Chronic bronchitis/Emphysema	21	28	25	40	33	147 (10%)
COPD—Other[xxviii]	43	17	5	21	27	113 (8%)
Pneumoconiosis—Coal Workers'	36	10	8	9	8	71 (5%)
Pneumoconiosis—Mixed-dust	17	8	11	5	3	44 (3%)
Pneumoconiosis—Silicosis	192	69	69	31	19	380 (26%)
Pneumoconiosis—Asbestosis	50	49	54	43	14	210 (15%)
Pneumoconiosis—Other[xxix]	6	6	8	5	8	33 (2%)
Totals	**512**	**273**	**270**	**245**	**153**	**1453 (100%)**

xxv Date of diagnosis was derived in 970 (70%) of the 1377 reports. See the Glossary in Appendix 3, for further information on 'date of diagnosis' and how 'derived'.

xxvi Not all cases of notifiable dust lung disease are given to the NDLD Register in the year that they are diagnosed, and the number of cases recorded for 2022–23 will likely be revised upwards in the next annual report e.g. cases diagnosed during the 2022–23 financial year but given to the NDLD Register after 30 June 2023 are not included.

xxvii 'Cancer – Other' includes 'Malignant neoplasms and carcinomas of the respiratory system (other than mesothelioma)' (77 of 91), 'Squamous cell carcinoma' (2 of 91), 'Non-small cell lung cancer' (2 of 91) 'Adenocarcinoma' (1 of 91), 'Large cell neuroendocrine' (1 of 91) and 'Cancer – Subtype not reported' (8 0f 91).

xxviii 'COPD – Other' includes 'COPD – Other' (5 of 113) and 'COPD – Subtype not reported' (108 of 113).

xxix 'Pneumoconiosis – Other' includes 'Pulmonary fibrosis/Dust related diffuse fibrosis' (18 of 33), 'Lymph node silicosis/early silicosis' (4 of 33), 'Interstitial lung disease' (3 of 33), 'Pleural Plaques' (2 of 33), 'Pneumoconiosis – Possible Berylliosis plus asbestos pleural plaques' (1 of 33), 'Anthracosis of lymph nodes' (1 of 33), 'Simple pneumoconiosis' (1 of 33), and 'Pneumoconiosis – Subtype not reported' (3 of 33).

6 Spotlight on silicosis information recorded in the Register

Silicosis is one of the diseases caused by inhalation of very fine silica dust (respirable crystalline silica). Exposure to silica dust is also linked to an increased risk for a number of other diseases such as lung cancer, kidney disease and some autoimmune diseases.[1,5]

There is no proven treatment for advanced lung silicosis other than a lung transplant. However, the majority of silicosis and silica related diseases are potentially preventable.[6]

Silicosis affects the lungs by damaging the lining of lung air sacs and small airways adjacent to, or supplying them. It is a form of fibrosis (scarring) of the lungs that may result in progressive loss of lung function. The lung tissue scarring stops oxygen being absorbed and can lead to respiratory failure, disability or death. In the early stages the person may not manifest symptoms.[5] It is possible to have silicosis and not realise. The first symptoms are often shortness of breath, a cough, occasional chest pain, loss of appetite and tiredness. As the disease progresses the shortness of breath gets worse and can become persistent and irreversible. In time the cough becomes more severe and frequent, the chest pain can worsen, weight loss can occur, and night sweats can be experienced. In severe cases, respiratory failure may cause or result in death.[5]

Simple silicosis involves formation of small spots of scar tissue (nodules). Complicated silicosis involves formation of conglomerate areas of scar tissue called progressive massive fibrosis (PMF). The three types of silicosis are:

- **Acute**—Acute silicosis is very rare and results from very large amounts of exposure to silica dust over a very short time (e.g. less than one year, may be weeks or months).
- **Accelerated**—Accelerated silicosis results from short term exposure to large amounts of silica dust (1 to 10 years of exposure).
- **Chronic**—Chronic silicosis results from long term exposure (10+ years) to low levels of silica dust.[5]

The recent, Australia-wide re-emergence of silicosis, a serious, irreversible occupational dust lung disease, has been well documented.[1]

The re-emergence of silicosis has mostly been driven by the introduction and surge in popularity of high silica content engineered stone material commonly used in kitchen, laundry and bathroom benchtops.[1] Engineered stone products can contain up to 97 per cent silica. The high amount of silica means that there is a very high risk of workers developing breathing problems and silicosis if they breathe in dust made from these products. The risk of exposure to hazardous levels of respirable crystalline silica dust is not only confined to the engineered stone industry (stonemasonry), but spans other industrial settings such as mining, sandblasting and construction.[1]

Workers who undertake activities involving uncontrolled cutting, polishing, grinding, sanding and trimming engineered stone and who work in dust generating industries are at the greatest risk of exposure to crystalline silica and developing silicosis.[1,5]

In Queensland, reforms are continuing to better protect workers from hazardous exposures and to reduce the burden of silicosis and other occupational dust lung diseases.[7,8,9] This includes workplace health and safety laws requiring these risks to be eliminated or minimised as much as possible and approved codes of practice on managing the risks of respirable crystalline silica in the stone benchtop industry (including engineered stone), construction work, manufacturing of building materials and coal-fired power stations.[7,8,9] Additionally, more than $3 million of research grants for occupational dust lung disease have also been allocated by the Queensland Government.

A nationally co-ordinated and collaborative approach to driving regulatory and non-regulatory changes also continues to be progressed to ensure workers and workplaces stay healthy, safe and protected from silicosis and other occupational dust lung diseases.[1,2] A significant program of work is planned and being implemented, demonstrating a commitment from all Australian state and territory governments to work together to better protect workers from silicosis and other dust diseases, as well as improve supports for affected workers and their families.[1,2]

6.1 Number of workers with new silicosis

During 2022–23, the NDLD Register recorded 30 workers with new confirmed silicosis.

6.2 Number and type of new silicosis

Table 10 shows the number and type of new confirmed cases of silicosis recorded in the NDLD Register during 2022–23.

Of the 30 new cases of silicosis recorded in the NDLD Register during 2022–23, one third (10, 33%) were reported as Chronic silicosis. Chronic silicosis results from long term exposure (10+ years) to low levels of silica dust and can affect upper lung areas, sometimes with extensive scarring.[5] Caution is required when interpreting this data as information about the type of silicosis was not reported to the NDLD Register in 20 (67%) of the 30 new cases of silicosis. While specialists notify about the type of silicosis, reports given to the NDLD Register by RSHQ or OIR do not generally provide this information.

Of the 30 workers with newly diagnosed silicosis during 2022–23, four were reported to have progressive massive fibrosis (PMF) i.e. conglomerate areas of scar tissue in the lungs, also known as complicated silicosis. Caution is required when interpreting this information, as this figure may be underreported. While specialists and RSHQ notify about PMF, OIR are unable to provide this information.

Table 10. Number and type of new silicosis recorded in the Register, 2022–23

Type of silicosis	Number of new confirmed silicosis recorded in the NDLD Register during 2022–23	(%)
Silicosis (Acute)	0	(0%)
Silicosis (Accelerated)	0	(0%)
Silicosis (Chronic)	10	(33%)
Silicosis (Type not reported)	20	(67%)
Totals	**30**	**(100%)**

6.3 Demographics of workers with new silicosis

The following section provides demographic information about the 30 workers with new silicosis recorded in the NDLD Register during 2022–23.

Workers with new silicosis, by gender

All except one (29 or 97%) of the 30 workers with new silicosis were male. Men are more likely to be over-represented in dust generating industries such as construction, manufacturing and mining.

Workers with new silicosis, by age group

The age group 60–79 years, closely followed by 40–59 years were the most frequently reported age group of workers at time of diagnosis, accounting for 13 (44%) and 12 (40%) of the 30 workers with new silicosis, respectively (Table 11). This is a slightly younger age group profile than for all workers with new notifiable dust lung diseases recorded in the NDLD Register during 2022–23 (Table 11 compared to Table 3).

Table 11. Workers with new silicosis recorded in the Register during 2022–23, by age group

Age group	Number of workers	(%)
20–39	4	(13%)
40–59	12	(40%)
60–79	13	(44%)
80 and above	1	(3%)
Total	**30**	**(100%)**

Workers with new silicosis, by First Nations status

The First Nations status of workers with new silicosis was not well reported[xxx]. First Nations status was not reported in 27 (90%) of the 30 notifications/reports of workers with new silicosis given to the NDLD Register during 2022–23. In the remaining three notifications/reports, where First Nations status was reported, these workers were reported as Non-Aboriginal and Torres Strait Islander.

Workers with new silicosis reported as deceased, at time notification/report received

No worker with new silicosis was reported as deceased at the time the notification/report was given to the NDLD Register. Caution is required when interpreting this number as deceased status was not reported in 13 (44%) of the 30 notifications/reports about new silicosis given to the NDLD Register during 2022–23. Additionally, deceased status of a worker is reported to the NDLD Register once, at time of diagnosis/notification and may not include updated information about whether a worker has subsequently died.

6.4 Primary occupational exposure history of workers with new silicosis

The following information provides an overview of the primary occupational exposure history of the 30 workers with new silicosis recorded in the NDLD Register during 2022–23.

Primary occupational dust exposure for workers with new silicosis

Silica (29, 97%) was the most frequently reported type of primary occupational dust exposure for workers with new silicosis (Table 12). This result is to be expected as silicosis is caused by exposure to very fine silica dust (respirable crystalline silica), which is most commonly found in engineered (artificial) stone, however is also found in lower proportions in things like concrete, bricks, mortar, pavers, tiles, cement sheeting and natural stone products.[5,8]

Table 12. Workers with new silicosis recorded in the Register during 2022–23, by type of primary occupational dust exposure

Type of inorganic dust[xxxi]	Number of workers	(%)
Silica	29	(97%)
Mixed	1	(3%)
Total	**30**	**(100%)**

xxx While specialists report on the First Nations status of workers, reports given to the NDLD Register by RSHQ or OIR do not generally provide this information.

xxxi The type of primary occupational dust was derived in 20 (67%) of the 30 reports.

Primary industry of occupation exposure for workers with new silicosis

As presented in Table 13, mining, resources and quarrying (17, 57%), followed by manufacturing (7, 23%) were the most frequently reported primary industry of occupational exposure during 2022–23 for workers with new silicosis. This result is changed from previous annual reports (2019-20 to 2021–22), which had reported manufacturing as the most frequent industry of exposure for workers with new silicosis. The findings remain consistent with research evidence that the risk to workers of developing dust disease is not confined to the engineered stone industry and manufacturing, but spans other industrial settings including mining, sandblasting and construction.[1]

Table 13. Workers with new silicosis recorded in the Register during 2022–23, by primary industry of occupational exposure

Industry of exposure[xxxii]	Number of workers	(%)
Mining, resources and quarrying	17	(57%)
Manufacturing	7	(23%)
Construction	3	(10%)
Transport	2	(7%)
Other[xxxiii]	1	(3%)
Total	**30**	**(100%)**

Primary place of occupational exposure for workers with new silicosis

All 30 workers with new silicosis were occupationally exposed in Queensland. However, for three (10%) of these workers, their place of primary occupational exposure reportedly occurred outside Queensland (Table 14).

Table 14. Workers with new silicosis recorded in the Register during 2022–23, by primary place of occupational exposure

Place of exposure	Number of workers	(%)
Queensland	27	(90%)
Western Australia	2	(7%)
Victoria	1	(3%)
Total	**30**	**(100%)**

6.5 Total number and type of silicosis recorded in the Register to date, by year of diagnosis

Table 15 shows the total number and type of silicosis recorded in the NDLD Register to date (i.e. based on confirmed notifications and reports given to the NDLD Register from commencement of the NDLD Register on 1 July 2019 to 30 June 2023, including legacy cases), by year of diagnosis.

Some caution is required when interpreting the data and information in Table 15. Where the 2019–20, 2020–21 and 2021–22 'Year of diagnosis' data columns are complete and comparable, the 'Legacy' column includes multiple years of data and the '2022–23' 'Year of diagnosis' column is not yet complete. As previously noted, not all cases of notifiable dust lung disease, including silicosis, are given to the NDLD Register in the year that they are diagnosed, and the number of cases recorded for 2022–23 will likely be revised upwards in the next annual report. Additionally, the numbers presented in this report may differ slightly from those reported in previous annual reports, as new or updated information is received and recorded in the NDLD Register.

As presented in Table 15, a total of 380 cases of silicosis have been recorded in the NDLD Register to date. The most frequently reported type of silicosis is Chronic silicosis (108, 28%). Chronic silicosis results from long term exposure (10+ years) to low levels of silica dust and can affect upper lung areas, sometimes with extensive scarring.[5] Caution is required when interpreting this data as information about the type of silicosis was not reported in 245 (65%) of the 380 cases of silicosis. The source of many of these cases where type of silicosis is not reported were from legacy cases (where historical records are incomplete) (135 of 380 or 36%) or from OIR reports which are based on workers' compensation claims data and do not provide information about the type of silicosis to the NDLD Register.

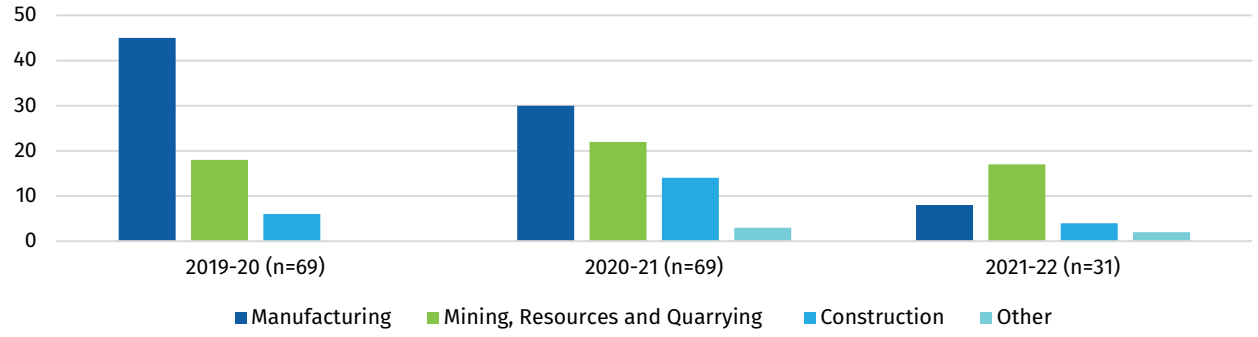
xxxii The primary industry of occupational exposure was derived in 6 (20%) of the 30 reports.
xxxiii Industry 'Other' includes 'Professional, scientific and technical' (1 of 1).

When comparing the three complete financial 'Year of diagnosis' data (2019–20, 2020–21 and 2021–22), the total number of confirmed silicosis recorded in the NDLD Register for the most recent year (2021-2022), is (45%) lower than the previous two years i.e. 69, 69 compared to 31 respectively (Table 15). This decrease in number of silicosis cases recorded in the NDLD Register could be due to multiple factors, including random variation and it is not possible to assess whether this represents a downward trend at this stage.

Table 15. Total number and type of confirmed silicosis recorded in the Register to date, by year of diagnosis

Type of silicosis	Year of diagnosis[xxxiv]					
	Legacy *(multiple years, prior 1 July 2019)*	2019–20	2020–21	2021–22	2022–23 *(Incomplete year)* [xxxv]	Total (%)
Silicosis (Acute)	2	0	1	0	0	3 (1%)
Silicosis (Accelerated)	15	7	1	1	0	24 (6%)
Silicosis (Chronic)	40	19	25	16	8	108 (28%)
Silicosis (Type not reported)	135	43	42	14	11	245 (65%)
Totals	**192**	**69**	**69**	**31**	**19**	**380 (100%)**

Graph 3: Confirmed silicosis recorded in the Register, by year of diagnosis 2019-20, 2020–21 and 2021–22 (n=169 cases), by primary industry of occupational exposure[xxxvi]



When examining the three years of comparable silicosis data, by year of diagnosis 2019–20, 2020–21 and 2021–22 (n = 169 cases), by most frequently reported primary industry of occupational exposure (Graph 3), it indicates the number of silicosis cases where manufacturing is the main industry of occupational exposure has decreased over the period, while the number of silicosis cases where mining, resources and quarrying is the main industry of occupational exposure has remained uniform over the period. These findings could be due to multiple factors, including random variation and it is not possible to assess whether this represents a trend at this stage.

xxxiv Date of diagnosis was derived in 220 (58%) of the 380 reports. See the Glossary in Appendix 3, for further information on 'date of diagnosis' and how 'derived'.

xxxv Not all cases of notifiable dust lung disease are given to the NDLD Register in the year that they are diagnosed, and the number of cases recorded for 2022–23 will likely be revised upwards in the next annual report e.g. cases diagnosed during the 2022–23 financial year but given to the NDLD Register after 30 June 2023 are not included.

xxxvi The primary industry of occupational exposure was derived in 38 (22%) of the 169 reports.

7 Requests for further information issued during 2022–23

During the 2022–23 financial year, there were no section 279AG notices (requiring further information about notification given to the NDLD Register) issued to occupational and respiratory specialists under the *Public Health Act 2005*.

However, six non statutory requests for further information were made seeking additional information/clarification about a notification or report given to the NDLD Register. These requests were usually made by telephone, followed by an email to the notifier.

Requests for further information are requested in writing to the NDLD Register. This further information helps to ensure the accuracy and completeness of information recorded in the NDLD Register.

8 Information disclosures made during 2022–23

During 2022–23, there were no disclosures of confidential information, including for authorised purposes relating to public health monitoring, or to another entity of the State, or for an investigation of the death of a person by police or the coroner under the *Coroners Act 2003.*

9 Other actions taken to implement the purposes of the Register during 2022–23

During the financial year 2022–23, the department completed a wide range of other activities to implement the purposes of the NDLD Register. These activities are summarised in the table below.

Key activity	Description
Support for development of a National Registry	During 2022–23, Queensland Health continued to work collaboratively with the Commonwealth Government and Queensland state agencies, primarily RSHQ and OIR, to provide advice and support for a nationally coordinated response to the implementation of the National Dust Disease Taskforce Final Report recommendations and the All of Governments' response implementation plan.[1,2] In particular, Queensland Health has assisted the Commonwealth Government with work to date on the design and development of a National Occupational Respiratory Disease Registry (National Registry), including the provision of feedback on draft Commonwealth legislation to establish the National Registry. With support from NDLD Register staff, the Executive Director, Health Protection Branch, has continued to be the Queensland representative on the National Registry Build Advisory Group. The Senior Medical Officer, has also provided assistance via the Physician Working Group, for example via user acceptance testing of data screens for the National Registry.
Progress amendments to the *Public Health Act 2005* and regulation	To facilitate a smooth transition to a National Registry, amendments will be required to the *Public Health Act 2005* (Qld) and regulation, so that Queensland occupational and respiratory specialists are not required to notify occupational caused respiratory diseases twice, once to the National Registry and again to the NDLD Register, During 2022–23, NDLD Register staff provided further policy advice and continued to work with the department's legislative policy unit to inform these legislative amendments to the *Public Health Act 2005* (Qld).
Communication with occupational and respiratory specialists	Targeted education and communication with occupational and respiratory specialists was conducted during the 2022–23 year via e-newsletters of their professional associations, namely the Australasian Faculty of Occupational and Environmental Medicine (AFOEM) and the Queensland Branch of the Thoracic Society of Australia and New Zealand (TSANZ). Targeted communications with individual general practitioners were also conducted during the 2022–23 year, where a general practitioner had submitted a notification(s) to the NDLD Register. Educational advice was provided, noting that under the *Public Health Act 2005* (Qld), only prescribed medical practitioners (occupational and respiratory specialists) are required to notify the NDLD Register within 30 days of diagnosing a person with a notifiable dust lung disease. General practitioners are encouraged to discuss these patients with the patient's medical specialist to ensure the medical specialist has appropriately notified the NDLD Register.
Implement Disclosure Agreement with RSHQ	During the 2022–23 financial year, NDLD Register staff implemented the requirements under a Disclosure Agreement between Queensland Health and RSHQ under section 279AO(1)(b) of the *Public Health Act 2005*. Of note, during the financial year, the NDLD Register provided a one-off legacy report, followed by monthly reports to RSHQ, of notifiable dust lung diseases recorded in the NDLD Register relevant to RSHQ functions. The Disclosure agreement was prescribed in regulation on the 24 June 2022.[10] The Disclosure agreement enables Queensland Health to disclose confidential information regarding notifiable dust lung diseases recorded in the NDLD Register that are relevant to RSHQ functions. The agreement outlines the obligations on RSHQ relating to the disclosure and use of confidential information. It provides that confidential information must be used for the purpose of facilitating RSHQ's statutory functions and prohibits the disclosure of confidential information by RSHQ unless expressly allowed by the Agreement, authorised in writing by the chief executive of Queensland Health, or where required or permitted under an Act or other law.

Key activity	Description
Meetings with RSHQ and OIR	Throughout the 2022–23 year, the NDLD Register continued to hold regular meetings with RSHQ and OIR either jointly or separately to discuss a range of matters associated with achieving the purposes of the NDLD Register. This included meetings to discuss ways to continue to improve the quality of data given to the NDLD Register. Further meetings and discussions were held during the financial year between Queensland Health, OIR and RSHQ to provide feedback on development of a National Registry, including responding to draft Commonwealth exposure legislation to establish a National Registry.[1,2]
Consultation with Advisory Panel	During the 2022–23 year the NDLD Register continued to seek and engage the expert assistance and advice of the NDLD Register Advisory Panel (a small group of respiratory medical specialists from Queensland Hospital and Health Services), where this was required. The Advisory Panel are usually consulted on a range of matters supporting the operations and purposes of the NDLD Register. These include review of complex notifications and reports and clinical advice on disease classification. The panel were also consulted in relation to preparing this annual report.
Updates to website and Approved Form	During the 2022–23 year, the NDLD Register website and Approved Form (latest version effective 1 July 2022) continued to be updated and maintained as required. The NDLD Register website was also updated to include the NDLD Register third annual report, and to provide a direct link to the National Registry website.

10 Future directions for the Register in 2023–24

Looking forward to 2023–24, the NDLD Register will commence its fifth year of operations. A summary of key activities planned for the NDLD Register during 2023–24 is provided in the table below.

Key activity	Description
Continue support for the National Registry	During 2023–24 Queensland Health will continue to work collaboratively with the Commonwealth and relevant stakeholders, to support the implementation of a National Registry.[1,2] A particular focus will be keeping notifiers (Queensland occupational and respiratory specialists, RSHQ and OIR) informed of key milestones in the development and implementation of the National Registry and any associated impacts for reporting obligations and notifications to the NDLD Register. The Executive Director, Health Protection Branch, will continue to be the Queensland representative on the National Registry Build Advisory Group, as required. NDLD Register staff will also continue to assist and provide advice where appropriate, including participation on associated working groups, as required to support the final development and implementation of a National Registry.
Finalise/implement amendments to the *Public Health Act 2005* and regulation	The National Registry is expected to be operational end 2023/mid 2024, subject to Commonwealth legislation being in place. In response, NDLD Register staff will continue to provide advice and support to government to finalise/implement relevant legislative amendments to the *Public Health Act 2005* and regulation. This is with the aim of facilitating a smooth transition and to ensure Queensland occupational and respiratory specialists are not required to notify occupational respiratory diseases twice, once to the National Registry and again to the NDLD Register.
Further communications with occupational and respiratory specialists	Further communications with occupational and respiratory specialists, through messaging on the NDLD website, by direct mail (email) or through e-newsletters of their professional associations (including AFOEM and TSANZ) are also planned. This is expected to be particularly important during the 2023–24 financial year, as specialists reporting obligations to the NDLD Register and notification methods may change once the National Registry becomes operational and corresponding amendments are made to the *Public Health Act 2005.*
Continue to meet with RSHQ and OIR	During 2023–24, NDLD Register staff will continue to meet with RSHQ and OIR to progress the purposes of the NDLD Register, promote continuous data quality improvement, and to progress joint actions toward the prevention, early identification, control and management of occupational dust lung diseases in Queensland and nationally. This will include the NDLD Register staff working closely and collaboratively with RSHQ and OIR, to support implementation of a National Registry and agree information sharing arrangments.[2]
Continue to implement Disclosure Agreement with RSHQ	NDLD Register staff will continue to implement the new Disclosure Agreement between Queensland Health and RSHQ, as appropriate.[10] This information sharing is one of the purposes of the NDLD Register, and will assist RSHQ in performing its statutory functions, including protecting the safety and health of workers in the resources industry.
Maintenance of website and Approved Form	The NDLD Register website will continue to be maintained to ensure all stakeholders are kept informed of the operations of the NDLD Register. Updates to the website are expected to include information on the National Registry, and any subsequent changes to notifiable dust lung diseases notification requirements for Queensland medical specialists.

11 Appendices

Appendix 1. Acknowledgements

Expert advice to inform strategic review and ongoing development of the NDLD Register, and to inform this annual report, has been provided by executive and senior staff of the Health Protection Branch.

The valuable assistance of members of the Advisory Panel, who provided expert advice and guidance on complex notifications given to the NDLD Register and on drafting this report, is also gratefully acknowledged.

The contributions of management and staff from the Public Health Regulatory Systems Unit, Public Health Licensing Team and Administrative Services, Health Protection Branch, in operating the NDLD Register, providing data analytics, and report development, is also acknowledged.

Recognition is extended to RSHQ and OIR, and to Queensland Health staff from other areas of the department, including from the First Nations Health Office and from the Corporate Services Division, Strategic Communications Branch, who have also contributed their advice and expertise in preparing this report.

Appendix 2. Acronyms

AFOEM	Australasian Faculty of Occupational and Environmental Medicine (a Faculty of the Royal Australasian College of Physicians (RACP))
CWP	Coal workers' pneumoconiosis
COPD	Chronic obstructive pulmonary disease
PMF	Progressive massive fibrosis
NDLD	Notifiable dust lung disease
NDLD Register (the Register)	Notifiable Dust Lung Disease Register
OIR	Office of Industrial Relations
QPHaSS	Queensland Public Health and Scientific Services Division
RSHQ	Resources Safety and Health Queensland
TSANZ	Thoracic Society of Australia and New Zealand (Queensland Branch)
NORDR (National Registry)	National Occupational and Respiratory Disease Registry

Appendix 3. Glossary

Term	Definition
Asbestosis	A preventable, dust lung disease (a pneumoconiosis) involving scarring of lung tissue caused by inhaling large amounts of asbestos fibres or asbestos dust over a long period.[11] Asbestosis is a notifiable dust lung disease.
Chronic obstructive pulmonary disease (COPD)	A progressive, inflammatory lung disease which causes damage to the small airways in the lungs, resulting in limited airflow.[12] COPD is an umbrella term for a group of disorders (including chronic bronchitis and emphysema) with a range of causes, of which exposure to inorganic dust may be a contributor. COPD, when caused wholly or in part by occupational exposure to inorganic dust, is a notifiable dust lung disease.
Coal workers' pneumoconiosis (CWP)	A preventable, irreversible, and progressive dust lung disease (a pneumoconiosis) arising from the inhalation of coal dust over a period of years. Also known as black lung disease.[3,13] Coal workers' pneumoconiosis is a notifiable dust lung disease.
Confirmed case	A notification or report about a notifiable dust lung disease given to the NDLD Register, which meets the case definition, including the following information/core data fields: • patient's family and first name, date of birth and gender • date of diagnosis • the type of notifiable dust lung disease, as prescribed by regulation • occupational exposure to inorganic dust in Queensland. and is given to the NDLD Register by: • an authorised notifier i.e. a prescribed medical practitioner, RSHQ or OIR. Excludes a notification or report of respiratory lung disease recorded in the NDLD Register as either a 'duplicate', 'out of scope', 'unconfirmed' or 'other' notification or report.
Date of diagnosis	For notifications from prescribed medical practitioners—refers to the date the specialist diagnosed the worker as having a notifiable dust lung disease, as recorded on the notification given to the NDLD Register. For reports from RSHQ—refers to the date of diagnosis as reported by RSHQ. Where a date of diagnosis is not provided to RSHQ, the date on which RSHQ received the report of a disease is reported, and is recorded in the NDLD Register as the (derived) date of diagnosis. For reports from OIR— refers to the 'latest intimation date' as reported by OIR (i.e. the date the disease claim is entered into the insurers' system), and is recorded in the NDLD Register as the ('derived') date of diagnosis.
Derived	A proxy value deduced from contextual information. May be used where a core data field is missing, and a proxy value can be deduced from contextual information given in the report. For example, if the report states a person is diagnosed with silicosis and the type of dust the worker has been exposed to is not reported, silica can be 'derived' as the dust value, as exposure to respirable crystalline silica dust causes silicosis. Another example is the ('derived') date of diagnosis which is explained under the definition above for 'date of diagnosis'.
Duplicate (notification/report)	A notification or report about a worker with respiratory lung disease that has previously been given to the NDLD Register and does not represent new or different information about the worker or disease.
(The) Financial year	1 July 2022 to 30 June 2023 (2022–23)
Incidence	The number of new cases (of disease) occurring during a given period.
Inorganic dust	Small solid particles consisting of inorganic matter. Inorganic dust is the type of dust prescribed by regulation. It includes (but is not limited to) silica, coal, asbestos, natural stone, tungsten, cobalt, aluminium and beryllium.

Term	Definition
Legacy case	A notification or report about a notifiable dust lung disease diagnosed prior to 1 July 2019 (i.e. date of diagnosis occurred prior to commencement of the NDLD Register), given to the NDLD Register. For reports given to the NDLD Register by RSHQ—legacy cases include all cases of notifiable dust lung disease that were reported to RSHQ prior to the commencement of the NDLD Register, with date of diagnosis dating back to 1992. For reports given to the NDLD Register by OIR—legacy cases include all cases of notifiable dust lung disease that were reported to OIR prior to the commencement of the NDLD Register, with a latest intimation date (derived date of diagnosis) dating back to 1 July 2017. The NDLD Register may not have been given information about all cases of notifiable dust lung diseases diagnosed prior to 1 July 2019 due to dispersed or incomplete historical records.
Mesothelioma	A preventable, dust lung disease (a cancer), typically related to exposure to asbestos that affects the mesothelium, a thin tissue membrane that covers internal organs of the body including the thoracic cavity (pleura), the heart sac (pericardium) and the abdominal cavity (peritoneum). Caused primarily by the inhalation of asbestos fibres into the lungs.[14] Mesothelioma is a notifiable dust lung disease.
Mixed-dust pneumoconiosis	A preventable, dust lung disease (a pneumoconiosis) resulting from chronic exposure to more than one type of mineral dust, such as coal and silica dust.[15] Mixed-dust pneumoconiosis is a notifiable dust lung disease.
New case	A confirmed notification or report about a notifiable dust lung disease given to the NDLD Register during the 2022–23 financial year. Includes cases diagnosed in the previous financial year (2021–22) given to the NDLD Register during the 2022–23 financial year. Does not include cases diagnosed during 2022–23 given to the NDLD Register after 30 June 2023. For reports given to the NDLD Register by RSHQ—this includes confirmed reports of notifiable dust lung diseases given to the NDLD Register during 2022–23 (i.e. reports for a 12 month period dated 1 June 2022 to 31 May 2023, received during the 2022–23 financial year). For reports given to the NDLD Register by OIR—this includes confirmed reports of notifiable dust lung diseases given to the NDLD Register during 2022–23 (i.e. reports for a 12 month period dated 1 April 2022 to 31 March 2023, received during the 2022–23 financial year).
Notifiable dust lung disease	In relation to a person, any of the following respiratory diseases, when wholly or partly caused by occupational or work-related exposure to inorganic dust, as prescribed by regulation: 1. Cancer 2. Chronic obstructive pulmonary disease, including chronic bronchitis and emphysema 3. Pneumoconiosis, including asbestosis, coal workers' pneumoconiosis, mixed-dust pneumoconiosis and silicosis.
Notification	Information about a person with a diagnosis of a notifiable dust lung disease given to the NDLD Register in the approved form by a prescribed medical practitioner, pursuant to s279AF of the *Public Health Act 2005*. A notification may include a person diagnosed with more than one notifiable dust lung disease.
Occupational exposure	Exposure of a person to a disease-causing agent (i.e. inorganic dust) occurring, wholly or partly, in the course of a person's work.

Term	Definition
Out of scope (notification/report)	A notification or report about a person with respiratory lung disease given to the NDLD Register that falls outside the legislative framework for notifying or reporting to the NDLD Register (i.e. falls outside of Chapter 6, Part 3A, sections 279AA – 279AP of the *Public Health Act 2005* and outside of Part 8, Division 5, sections 49A – 49C of the Public Health Regulation 2018). For example: • A respiratory lung disease that is notified to the NDLD Register by a specialist not practising in Queensland (i.e. the specialist is not bound by obligations to notify and is not covered by confidentiality provisions under the *Public Health Act 2005*) • A report about a person with a respiratory lung disease that contains insufficient information to categorise as a notifiable dust lung disease • A notification or report about a person with a respiratory lung disease that is not caused by occupational exposure to inorganic dust e.g. asbestosis caused by exposure to asbestos dust during home renovations.
Other (notification/report)	A notification or report about a person with respiratory lung disease given to the NDLD Register that is not a notifiable dust lung disease as prescribed in regulation. However, it is recorded in the NDLD Register (classified as 'other') to enable future monitoring of the disease.
Prescribed medical practitioner	A medical practitioner registered under the Health Practitioner Regulation National Law (Queensland) as a specialist health practitioner in either of the following specialties or specialty fields as prescribed by regulation: • occupational and environmental medicine • respiratory and sleep medicine. Also referred to as a specialist, or occupational and respiratory specialists.
Progressive massive fibrosis (PMF)	A more severe form of pneumoconiosis where small lung nodules coalesce, creating conglomerate areas of scar tissue in the lungs. Denotes progression from simple pneumoconiosis to more severe pneumoconiosis (also known as complicated pneumoconiosis).[3,13]
Report	Information about a person with a notifiable dust lung disease, given to the NDLD Register by either RSHQ or OIR, as requested pursuant to s279AH of the *Public Health Act 2005*. A report may include a person diagnosed with more than one notifiable dust lung disease.
Silicosis	A preventable, progressive and incurable dust lung disease (a pneumoconiosis) caused by inhalation of very fine silica dust (respirable crystalline silica). Silicosis affects the lungs by damaging the lining of lung air sacs and the small airways supplying or adjacent to them. It is a form of fibrosis (scarring) of the lungs that may result in progressive loss of lung function. The lung tissue scarring stops oxygen being absorbed and can lead to disability or death.[1,5] Silicosis is a notifiable dust lung disease.
Silicosis – Acute	Acute silicosis can develop after short-term and very high levels of exposure to silica dust (e.g. less than one year, may be after a few weeks or months).[5]
Silicosis – Accelerated	Accelerated silicosis results from short term exposure to large amounts of silica dust (1 to 10 years of exposure).[5]
Silicosis – Chronic	Chronic silicosis results from long term exposure (over 10 years) to low levels of silica dust.[5]
Specialist	A medical practitioner registered under the Health Practitioner Regulation National Law (Queensland) as a specialist health practitioner in either of the following specialties or specialty fields as prescribed by regulation: • occupational and environmental medicine • respiratory and sleep medicine. Also referred to as a prescribed medical practitioner, or occupational and respiratory specialist.

Appendix 4. Register data considerations and data quality assurance activities

The number and type of notifiable dust lung diseases recorded in the NDLD Register and reported in this annual report were received from three information sources as follows:

1. Notifications—information about notifiable dust lung diseases given to the NDLD Register by occupational and respiratory specialists, pursuant to s279AF of the *Public Health Act 2005*.
2. Reports—information about notifiable dust lung diseases given to the NDLD Register by RSHQ, pursuant to s279AH of the *Public Health Act 2005*.
3. Reports—information about notifiable dust lung diseases given to the NDLD Register by OIR, pursuant to s279AH of the *Public Health Act 2005*.

The data reported in this annual report focuses on new confirmed cases of notifiable dust lung diseases recorded in the NDLD Register during 2022–23. It is important to note that due to a time delay between when a person is diagnosed and when the NDLD Register is given the notification or report, some new cases of notifiable dust lung disease captured in this report were diagnosed in the previous financial year (2021–22). In addition, some cases diagnosed during 2022–23 will not have been given to the NDLD Register by 30 June 2023 and therefore will not be captured in this report. Total numbers diagnosed for 2022–23 are likely to be revised upwards in the next annual report.

This annual report also includes information about all confirmed cases of notifiable dust lung disease recorded in the NDLD Register to date (i.e. based on confirmed notifications and reports given to the NDLD Register from commencement of the NDLD Register on 1 July 2019 to 30 June 2023, including legacy cases), by year of diagnosis.

This includes updated information given to the NDLD Register for cases diagnosed during the previous (2021–22) financial year and updated information given to the NDLD Register about legacy cases.

Notifications of notifiable dust lung disease given to the NDLD Register by occupational and respiratory specialists in the Approved Form provides fit for purpose data, including all core data fields. This is designed to enable the monitoring and analysis of the incidence of notifiable dust lung diseases and meet other purposes of the NDLD Register.

In contrast, reports of notifiable dust lung disease given to the NDLD Register by RSHQ and OIR contain information which has been gathered by these organisations for other purposes, including monitoring coal miners' health or managing workers' compensation claims, respectively. Therefore, not all information held by RSHQ or OIR about notifiable dust lung diseases match the core data fields in the Approved Form for making notifications of notifiable dust lung disease to the NDLD Register.

Gaps in information given to the NDLD Register by RSHQ and OIR include exposure history (e.g. years of exposure), disease severity (e.g. PMF) and First Nations status of workers, for example.

For any incomplete notifications, the NDLD Register can issue a notice under s279AG of the *Public Health Act 2005*, requesting or requiring further information from the specialist who gave the notification to the Register. There are no provisions under the *Public Health Act 2005*, similar to s279AG, that would enable the NDLD Register to issue notices to RSHQ or OIR requiring or requesting them to provide further information about an incomplete report given to the Register.

Further differences include variations in the amount of reliable historical information provided by RSHQ and OIR to the NDLD Register. For example, RSHQ was able to provide the NDLD Register with information on legacy cases of notifiable dust lung disease with a date of diagnosis dating back to 1992, whereas OIR was able to provide information on legacy cases with a date of diagnosis dating back two years only (from 1 July 2017).

Another difference is RSHQ reports of notifiable dust lung disease are provided to the NDLD Register each month, whereas OIR reports are provided quarterly.

Consequently, the completeness and quality of the information about notifiable dust lung diseases given to the NDLD Register by the three sources varies. To minimise these differences, and to maximise the accuracy and completeness of the core data recorded in the NDLD Register, a range of data monitoring and quality assurance measures continue to be implemented. These include:

- Frequent meetings with RSHQ and OIR to promote consistency and completeness of information given to the NDLD Register, especially for core data fields
- Ongoing development and consolidation of data entry and data derivation rules and procedures to ensure to extent possible the consistency and completeness of information recorded in the NDLD Register
- Continuous implementation of a rigorous three-person data check for all notifications and reports received by the NDLD Register
- Production of regular data quality assurance reports to review and improve the completeness of records in the NDLD Register
- Referral of complex notifications and reports to the Interim Advisory Panel for specialist medical review and advice on case interpretation and classification.

As additional information is provided to the NDLD Register, some cases may be reclassified over time resulting in revisions to the number and type of dust lung diseases recorded in the NDLD Register. Updates to the number and type of notifiable dust lung diseases will continue to be provided each year in subsequent annual reports.

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