

Queensland Health

**Notifiable Dust Lung  
Disease Register  
annual report  
2020-2021**



Queensland  
Government

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## Notifiable Dust Lung Disease Register annual report 2020-2021

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### 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 second annual report of the Queensland Health Notifiable Dust Lung Disease Register (NDLD Register), which commenced operations on 1 July 2019. The report has been prepared to meet requirements under the *Public Health Act 2005*.

## New confirmed cases of notifiable dust lung diseases recorded in the Register during 2020-21

### Workers

Below is a summary of workers with new confirmed notifiable dust lung diseases recorded in the NDLD Register during the financial year 1 July 2020 to 30 June 2021 (2020-21).

#### 238 workers

238 workers with new notifiable dust lung disease were recorded in the NDLD Register during 2020-21.



#### 227 (95%) Males

227 workers with new notifiable dust lung disease were male.



#### 11 (5%) Females

11 workers with new notifiable dust lung disease were female.



#### 10 (4%) Deceased

Ten workers were reported as deceased at time the notification or report was given to the NDLD Register.



#### 135 (57%) Aged 60-79 years

Age 60-79 years was the most frequently reported age group of workers at time of diagnosis, accounting for 135 (57%) of the 238 workers with new notifiable dust lung disease.



#### 1 (<1%) Aboriginal and Torres Strait Islander

The Indigenous status of the 238 workers was not well reported (not reported 85% of the 238 notifications/reports). Less than 1% of workers were reported as Aboriginal and Torres Strait Islander and 34 (14%) were reported as Non-Aboriginal and Torres Strait Islander.



## New confirmed disease 2020-21

Of the 238 workers, 230 were diagnosed with one disease and eight were diagnosed with two diseases, totalling 246 new confirmed notifiable dust lung diseases recorded in the NDLD Register during 2020-21.

Type of notifiable dust lung disease	Number (%) of new confirmed notifiable dust lung diseases recorded in the NDLD Register during 2020-21 <sup>i</sup>
Cancer – Mesothelioma	68 (28%)
Cancer – Other <sup>ii</sup>	16 (7%)
COPD – Chronic bronchitis/Emphysema	17 (7%)
COPD – Other <sup>iii</sup>	10 (4%)
Pneumoconiosis – Coal Workers'	8 (3%)
Pneumoconiosis – Mixed-dust	11 (4%)
Pneumoconiosis – Silicosis	59 (24%)
Pneumoconiosis – Asbestosis	47 (19%)
Pneumoconiosis – Other <sup>iv</sup>	10 (4%)
<b>Total</b>	<b>246 (100%)</b>

## Primary occupational exposure history of workers 2020-21

<b>Dust</b>	Asbestos	113 (47%)	Most frequently reported type of primary occupational dust exposure. <sup>v</sup>
	Silica	59 (25%)	
	Coal	27 (11%)	
<b>Industry</b>	Construction	79 (33%)	Most frequently reported industry of primary occupational exposure. <sup>vi</sup>
	Mining, Resources & Quarrying	65 (27%)	
	Manufacturing	35 (15%)	

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)' (14 of 16), 'Cancer – Adenocarcinoma' (1 of 16) and 'Cancer – subtype not reported' (1 of 16).

iii 'COPD – Other' includes 'COPD – subtype not reported' (10 of 10).

iv 'Pneumoconiosis – Other' includes 'Pneumoconiosis – Pulmonary fibrosis' (9 of 10) and 'Pneumoconiosis – possible Berylliosis plus asbestos pleural plaques' (1 of 10).

v The type of inorganic dust was derived in 161 (68%) and not reported in 25 (11%) of the 238 reports.

vi The industry of primary occupational exposure was derived in 42 (18%) of the 238 reports.

# Acronyms

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
RSHQ	Resources Safety and Health Queensland

# 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. <sup>1</sup> 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. <sup>2</sup> 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. <sup>3,4</sup> 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: <ul style="list-style-type: none"> <li>patient's family and first name, date of birth and gender</li> <li>date of diagnosis</li> <li>the type of notifiable dust lung disease, as prescribed by regulation</li> <li>occupational exposure to inorganic dust in Queensland.</li> </ul> and is given to the NDLD Register by: <ul style="list-style-type: none"> <li>an authorised notifier i.e. a prescribed medical practitioner, RSHQ or OIR.</li> </ul> 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 by RSHQ, the date on which RSHQ received the report from a specialist/medical advisor is the date recorded in the NDLD Register as the (derived) date of diagnosis. For reports from OIR – the 'latest intimation date' as reported by OIR (i.e. the date the disease claim is entered into the insurers' system) is the date recorded in the NDLD Register as the ('derived') date of diagnosis.
Derived	A proxy value. 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 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.
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	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
Mesothelioma	<p>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.<sup>5</sup> Mesothelioma is a notifiable dust lung disease.</p>
Mixed-dust pneumoconiosis	<p>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.<sup>6</sup> Mixed-dust pneumoconiosis is a notifiable dust lung disease.</p>
New case	<p>A confirmed notification or report about a notifiable dust lung disease given to the NDLD Register during 2020-21.</p> <p>Includes cases diagnosed in the previous financial year (2019-20) given to the NDLD Register during 2020-21.</p> <p>Does not include cases diagnosed during 2020-21 given to the NDLD Register after 30 June 2021.</p> <p>For reports given to the NDLD Register by RSHQ – this includes confirmed reports of notifiable dust lung diseases given to the NDLD Register during 2020-21 (i.e. from 1 June 2020 to 31 May 2021).</p> <p>For reports given to the NDLD Register by OIR – this includes confirmed reports of notifiable dust lung diseases given to the NDLD Register during 2020-21 (i.e. from 1 April 2020 to 31 March 2021).</p>
Notifiable dust lung disease	<p>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:</p> <ol style="list-style-type: none"> <li>1. Cancer</li> <li>2. Chronic obstructive pulmonary disease, including chronic bronchitis and emphysema</li> <li>3. Pneumoconiosis, including asbestosis, coal workers' pneumoconiosis, mixed-dust pneumoconiosis and silicosis.</li> </ol>
Notification	<p>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 <i>Public Health Act 2005</i>. A notification may include a person diagnosed with more than one notifiable dust lung disease.</p>
Occupational exposure	<p>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.</p>

Term	Definition
Out of scope (notification/report)	<p>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 <i>Public Health Act 2005</i> and outside of Part 8, Division 5, sections 49A – 49C of the <i>Public Health Regulation 2018</i>). For example:</p> <ul style="list-style-type: none"> <li>• 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 <i>Public Health Act 2005</i>)</li> <li>• A report about a person with a respiratory lung disease that contains insufficient information to categorise as a notifiable dust lung disease</li> <li>• 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.</li> </ul>
Other (notification/report)	<p>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.</p>
Prescribed medical practitioner	<p>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:</p> <ul style="list-style-type: none"> <li>• occupational and environmental medicine</li> <li>• respiratory and sleep medicine.</li> </ul> <p>Also referred to as a specialist, or occupational and respiratory specialists.</p>
Progressive massive fibrosis (PMF)	<p>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).<sup>3,4</sup></p>
Report	<p>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 <i>Public Health Act 2005</i>. A report may include a person diagnosed with more than one notifiable dust lung disease.</p>
Reporting period	1 July 2020 to 30 June 2021
Silicosis	<p>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.<sup>7,8</sup> Silicosis is a notifiable dust lung disease.</p>
Silicosis – Acute	<p>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).<sup>7</sup></p>
Silicosis – Accelerated	<p>Accelerated silicosis results from short term exposure to large amounts of silica dust (1 to 10 years of exposure).<sup>7</sup></p>
Silicosis – Chronic	<p>Chronic silicosis results from long term exposure (10+ years) to low levels of silica dust.<sup>7</sup></p>
Specialist	<p>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:</p> <ul style="list-style-type: none"> <li>• occupational and environmental medicine</li> <li>• respiratory and sleep medicine.</li> </ul> <p>Also referred to as a prescribed medical practitioner, or occupational and respiratory specialist.</p>
The financial year	1 July 2020 to 30 June 2021 (2020-21).

# 1 About this report

This report has been prepared to meet the requirements of the *Public Health Act 2005* and is the second annual report of the Queensland Health Notifiable Dust Lung Disease Register (NDLD Register).

The report is for the financial year 1 July 2020 to 30 June 2021 (2020-21) and includes:

- the number of notifications and reports given to the NDLD Register during 2020-21; and
- a description of the types of notifiable dust lung diseases recorded in the NDLD Register during 2020-21.

The report focuses on new confirmed cases of notifiable dust lung diseases received and recorded in the NDLD Register during 2020-21. It also provides a spotlight on silicosis, due to the recent re-emergence and national focus on this occupational dust lung disease.<sup>8</sup> Cases diagnosed during the financial year but received after 30 June 2021 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 NDLD Register on 1 July 2019 to 30 June 2021, 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.

In addition, the data to date, by date of diagnosis, presented in this report is not yet comparable across financial years. As the NDLD Register matures, each financial year of data will become complete and therefore comparable for monitoring and analysing the incidence of notifiable dust lung diseases. While not possible for this annual report, in our next annual report (2021-22), the NDLD Register will have two complete financial years of data, by date of diagnosis, and will therefore be able to commence making comparative statements about these diseases.

The report concludes with other information about actions the department has taken to implement the purposes of the NDLD Register during 2020-21 and outlines plans for the NDLD Register during its third year of operations (2021-22).

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

## 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, 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, Prevention 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 discuss health concerns with their GP. The GP 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 helps ensure the numbers and type of these diseases in the NDLD Register is complete. The confidentiality of this information is protected by legislation.

For further information about the NDLD Register, including information about assistance and support services available to patients and/or workers concerned about occupational dust lung disease, visit the [NDLD Register website](#).

### 3 Background to re-identification and emergence of occupational dust lung diseases

In May 2015, the first case of coal workers' pneumoconiosis (also known as black lung disease) in 30 years was confirmed in Queensland, after this disease was thought to be eradicated. Soon after this, other cases in Queensland coal miners were reported. In response, the Queensland Government initiated several independent reviews and implemented a range of recommendations to address structural failings in the design and operation of the respiratory component of the Coal Mine Workers Health Scheme.<sup>3,9</sup> This included the establishment of a Parliamentary Committee, the Coal Workers' Pneumoconiosis Select Committee (the Select Committee) to conduct an inquiry and report on this disease.

In May 2017, the Select Committee tabled its final report which made 68 recommendations to address system failures that had allowed preventable diseases such as coal workers' pneumoconiosis to re-emerge.<sup>3,9</sup> All recommendations of the Select Committee report were supported in-principle by the Queensland Government, with recommendations 59 and 60 applicable to Queensland Health. Broadly, recommendation 59 stated that coal mine dust lung diseases (including coal workers' pneumoconiosis) should be notifiable conditions, reported to the Chief Health Officer, Queensland Health; and recommendation 60 stated that Queensland Health should report annually on its activities in relation to coal mine dust lung diseases.<sup>3,10</sup>

In light of the Select Committee findings, OIR undertook an industry-wide audit of stone benchtop fabrication businesses, which led to a sudden increase in the number of confirmed cases of silicosis in the engineered stone industry. In mid-September 2018, a safety alert was issued to highlight the significant health risks for stone benchtop workers exposed to silica dust.<sup>11</sup> The re-emergence of silicosis also demonstrated failings, at that time, in the system that was meant to protect workers.

In response to the Select Committee recommendations 59 and 60, and in view of the re-identification of silicosis, the initial focus of proposed amendments to the *Public Health Act 2005* was expanded. The scope of amendments were expanded from the notification of coal workers' pneumoconiosis and coal mine dust lung diseases to also include a reporting requirement for all dust lung diseases (including silicosis and asbestosis) in Queensland when caused by occupational exposure to inorganic dust across all industries.

In addition to amendments to the *Public Health Act 2005* and regulation, to establish the NDLD Register, other significant reforms have been progressed by the Queensland government to better protect workers' health from occupational dust lung diseases. For example, OIR has since introduced the *Managing respirable crystalline silica dust exposure in the stone bench top industry Code of Practice 2019* (the Code) in an effort to eradicate silicosis in Queensland. In 2020-2021, OIR undertook a subsequent audit of all stone benchtop fabrication businesses. These subsequent audits demonstrated industry is proactively responding to the Code by implementing recommended controls. (See Appendix 1 for further details of government actions taken to address the risk of occupational dust lung diseases in Queensland).

## 4 Legislative framework and requirements

In response to the re-identification and emergence of occupational dust lung diseases, 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.

### 4.1 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 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 diagnosis of a notifiable dust lung disease.

### 4.2 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.

### 4.3 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 and may incur a maximum penalty of 20 penalty units.

Notifications are securely submitted to the NDLD Register by secure file transfer (SFT) 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](#).

### 4.4 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 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 reasonable excuse is an offence and may incur a maximum penalty of 20 penalty units.

#### 4.5 Obligation of relevant chief executive to give information to the Register

Under 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 given to the NDLD Register by RSHQ or OIR, in addition to notifications given to the NDLD Register by prescribed medical practitioners, 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.

The provisions under the *Public Health Act 2005* do not enable the NDLD Register to issue notices requiring or requesting further information about an incomplete report given to the NDLD Register by RSHQ or OIR. (See Section 5 of this report for further information about the NDLD Register's data considerations and data quality assurance activities).

#### 4.6 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.<sup>12</sup>

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.

## 5 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 2020-21. 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 (2019-20). In addition, some cases diagnosed during 2020-21 will not have been given to the NDLD Register by 30 June 2021 and therefore will not be captured in this report. Total numbers diagnosed for 2020-21 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 2021, including legacy cases), by year of diagnosis.

This includes updated information given to the NDLD Register for cases diagnosed during the previous (2019-20) 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 data fields in the [Approved Form](#) for making notifications of notifiable dust lung disease to the NDLD Register.

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 similar provisions to s279AG, that would enable the NDLD Register to issue notices requiring or requesting further information about an incomplete report given to it by RSHQ or OIR.

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.

As a consequence, 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 of information given to the NDLD Register, especially for core data fields
- Implementation of rules for deriving core data values (such as dust type and date of diagnosis) from the information reported by RSHQ and OIR to support data completeness
- Ongoing development and consolidation of data entry procedures to ensure consistency 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 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.

## 6 Notifiable dust lung diseases recorded in the Register during 2020-21

### 6.1 Number of notifications and reports given to the Register

During 2020-21, the NDLD Register received a total of 465 notifications and reports of persons with notifiable dust lung disease, including 59 notifications from specialists, 67 reports from RSHQ and 339 reports from OIR. Of these, 238 (51%) were assessed as confirmed notifications and reports of workers with new notifiable dust lung disease (Table 1).

Table 1. Number of notifications and reports given to the Register during 2020-21, by information source and information type

Information source	Information type	Confirmed	Duplicate	Out of scope	Other	Totals
Specialists	Notification	52 (88%)	7	0	0	59
RSHQ	Report	41 (61%)	26	0	0	67
OIR	Report	145 (43%)	159	35	0	339
<b>Totals</b>		<b>238 (51%)</b>	<b>192</b>	<b>35</b>	<b>0</b>	<b>465</b>

### 6.2 Number of workers with new notifiable dust lung disease

There were 238 workers with new confirmed notifiable dust lung disease recorded in the NDLD Register during 2020-21.

### 6.3 Number and type of new notifiable dust lung diseases

Of the 238 workers, 230 were diagnosed with one disease and eight were diagnosed with two diseases, totalling 246 new confirmed notifiable dust lung diseases recorded in the NDLD Register during 2020-21.

Table 2 presents the number and type of new notifiable dust lung diseases recorded in the NDLD Register during 2020-21. As shown in the table, mesothelioma (68, 28%), followed by silicosis (59, 24%) and asbestosis (47, 19%) were the most frequently reported types of new notifiable dust lung diseases recorded in the NDLD Register during 2020-21.

Collectively, pneumoconiosis made up 135 (55%) of the 246 new cases of notifiable dust lung diseases given to the NDLD Register during 2020-21. Of the 135 workers with pneumoconiosis 6 (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 is likely to be underreported. While specialists notify about PMF, reports given to the NDLD Register by RSHQ or OIR may not provide this information.

Table 2. New confirmed cases of notifiable dust lung disease recorded in the Register during 2020-21, 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 2020-21 <sup>vii</sup>
Cancer – Mesothelioma	68 (28%)
Cancer – Other <sup>viii</sup>	16 (7%)
COPD – Chronic bronchitis/Emphysema	17 (7%)
COPD – Other <sup>ix</sup>	10 (4%)
Pneumoconiosis – Coal Workers'	8 (3%)
Pneumoconiosis – Mixed-dust	11 (4%)
Pneumoconiosis – Silicosis	59 (24%)
Pneumoconiosis – Asbestosis	47 (19%)
Pneumoconiosis – Other <sup>x</sup>	10 (4%)
<b>Total</b>	<b>246 (100%)</b>

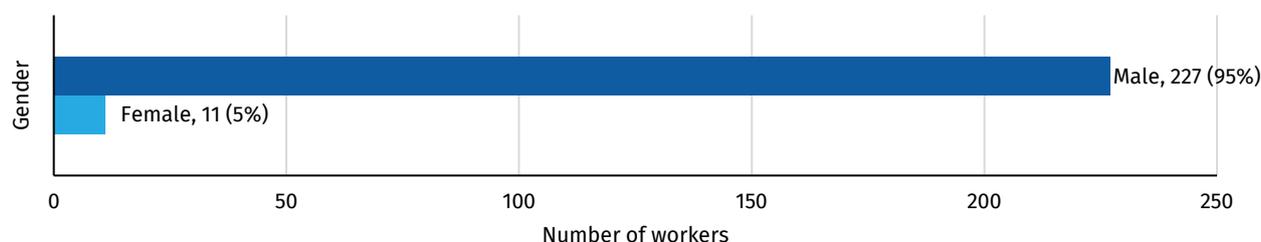
## 6.4 Demographics of workers with new notifiable dust lung disease

The following section provides demographic information about the 238 workers with new confirmed notifiable dust lung disease recorded in the NDLD Register during 2020-21.

### Workers with new notifiable dust lung disease, by gender

Workers with new notifiable dust lung disease recorded in the NDLD Register during 2020-21 were predominantly male (95%) (Graph 1). Men are more likely to be overrepresented in dust generating industries such as construction, mining and manufacturing.

Graph 1: Workers with new notifiable dust lung disease recorded in the Register during 2020-21, by gender



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

viii 'Cancer – Other' includes 'Malignant neoplasms and carcinomas of the respiratory system (other than mesothelioma)' (14 of 16), 'Cancer – Adenocarcinoma' (1 of 16) and 'Cancer - subtype not reported' (1 of 16).

ix 'COPD – Other' includes 'COPD – subtype not reported' (10 of 10).

x 'Pneumoconiosis – Other' includes 'Pneumoconiosis – Pulmonary fibrosis' (9 of 10) and 'Pneumoconiosis – possible Berylliosis plus asbestos pleural plaques' (1 of 10).

### 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 135 (57%) of the 238 workers with new notifiable dust lung disease (Table 3).

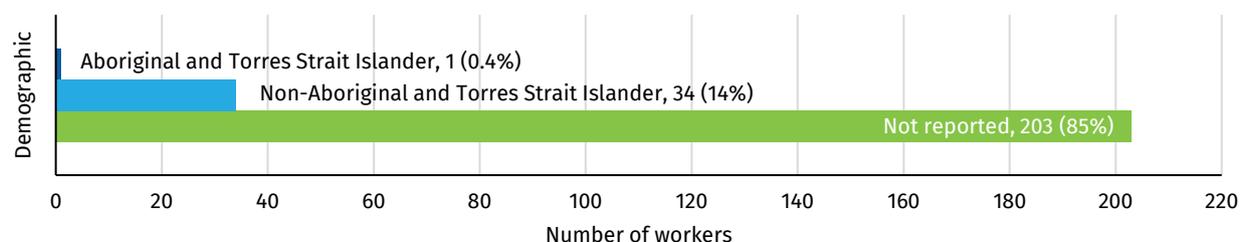
Table 3. Workers with new notifiable dust lung disease recorded in the Register during 2020-21, by age group

Age group	Number of workers	(%)
20-39	18	(8%)
40-59	50	(21%)
60-79	135	(57%)
80 and above	35	(15%)
<b>Total</b>	<b>238</b>	<b>(100%)</b>

### Workers with new notifiable dust lung disease, by indigenous status

The Indigenous status of the 238 workers with new notifiable dust lung disease was not well reported (Graph 2). Indigenous status was not reported in 203 (85%) of the 238 notifications/reports. Less than 1% of workers were reported as Aboriginal and Torres Strait Islander and 34 (14%) were reported as Non-Aboriginal and Torres Strait Islander.

Graph 2. Workers with new notifiable dust lung disease recorded in the Register during 2020-21, by indigenous status.



### Workers with new notifiable dust lung disease reported as deceased

Ten (4%) of the 238 workers with new notifiable dust lung disease were 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 40 (17%) of the 238 notifications/reports of workers with new notifiable dust lung disease given to the NDLD Register during 2020-21. 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.

## 6.5 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 238 workers with new confirmed notifiable dust lung disease recorded in the NDLD Register during 2020-21.

### Type of occupational dust exposure for workers with new notifiable dust lung disease

As presented in Table 4, Asbestos (113, 47%), followed by Silica (59, 25%) and Coal (27, 11%) were the most frequently reported type of primary occupational dust exposure for workers with new notifiable dust lung disease.

Table 4. Workers with new notifiable dust lung disease recorded in the Register during 2020-21, by type of primary occupational dust exposure

Type of inorganic dust <sup>xi</sup>	Number of workers	(%)
Silica	59	(25%)
Asbestos	113	(47%)
Coal	27	(11%)
Mixed dust	12	(5%)
Natural stone	1	(<1%)
Other <sup>xii</sup>	26	(11%)
<b>Total</b>	<b>238</b>	<b>(100%)</b>

### Industry of occupational exposure for workers with new notifiable dust lung disease

Construction (79, 33%), Mining, Resources and Quarrying (65, 27%), followed by Manufacturing (35, 15%) were the most frequently reported industry of primary 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 2020-21, by industry of primary occupational exposure

Industry of exposure <sup>xiii</sup>	Number of workers	(%)
Mining, Resources and Quarrying	65	(27%)
Manufacturing	35	(15%)
Construction	79	(33%)
Other <sup>xiv</sup>	59	(25%)
<b>Total</b>	<b>238</b>	<b>(100%)</b>

### Place of occupational exposure for workers with new notifiable dust lung disease

All 238 workers with new notifiable dust lung disease were occupationally exposed in Queensland. However, for 7 (4%) of these workers, their place of primary occupational exposure reportedly occurred outside Queensland (Table 6).

Table 6. Workers with new notifiable dust lung disease recorded in the Register during 2020-21, by place of primary occupational exposure

Place of exposure	Number of workers	(%)
Queensland	224	(94%)
Western Australia	3	(1%)
New South Wales	2	(1%)
Victoria	1	(<1%)
United Kingdom	1	(<1%)
Other (not reported)	7	(3%)
<b>Total</b>	<b>238</b>	<b>(100%)</b>

xi The type of inorganic dust was derived in 161 (68%) of the 238 reports.

xii 'Other' includes Inorganic dust type 'not reported' (25 of 26) and 'Beryllium' (1 of 26).

xiii The industry of primary occupational exposure was derived in 42 (18%) of the 238 reports.

xiv Industry 'Other' includes a range of industries such 'Transport, postal and warehousing' (6 of 59), 'Administrative and support services' (8 of 59), 'Other services' (14 of 59), and industry type 'not reported' (31 of 59).

## 7 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 2021, 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) as the data in each column are not yet comparable (i.e. not all columns represent a single or complete financial year of data, and legacy records may be incomplete).

As previously noted, 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 2020-21 will likely be revised upwards in the next annual report. Additionally, as updated data is given to the NDLD Register, case numbers for a previous financial year may be revised in subsequent annual reports.

As the NDLD Register matures, each financial year of data will become complete and therefore comparable for monitoring and analysing the incidence of notifiable dust lung diseases. While not possible for this annual report to compare disease information across financial years, in our next annual report (2021-22), the NDLD Register will have two complete financial years of data, by date of diagnosis, and will therefore be able to commence making comparative statements about these diseases.

### 7.1 Total number of confirmed notifications and reports by information source

Table 7 shows the total number of confirmed notifications and reports of persons with notifiable dust lung diseases recorded in the NDLD Register to date, by information source and year of diagnosis. A total of 883 confirmed notifications and reports have been recorded in the NDLD Register to date. Notifications from occupational and respiratory specialists accounted for 18% of these, while reports from RSHQ (19%) and OIR (63%) accounted for the remaining information sources (Table 7).

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 <sup>xv</sup>			Total (%)
	Legacy	2019-20	2020-21 (Incomplete year)	
Specialists (notifications)	60	52	46	158 (18%)
RSHQ (reports)	108	34	30	172 (19%)
OIR (reports)	312	167	74	553 (63%)
<b>Total</b>	<b>480</b>	<b>253</b>	<b>150</b>	<b>883 (100%)</b>

### 7.2 Total number of workers recorded in the Register

Table 8 presents the total number of workers with confirmed notifiable dust lung disease recorded in the NDLD Register to date, by year of diagnosis. To date, a total of 883 workers are recorded in the NDLD Register as having a notifiable dust lung disease. Of these, 857 (97%) were men and 26 (3%) were women.

xv Date of diagnosis was derived in 607 (69%) of the 883 reports.

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 <sup>xvi</sup>			Total
	Legacy	2019-20	2020-21 (Incomplete year)	
<b>Total</b>	480	253	150	<b>883</b>

### 7.3 Total number and type of diseases recorded in the Register

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

Of the 883 workers, 841 were diagnosed with one disease and 42 were diagnosed with two diseases, totalling 925 confirmed cases of notifiable dust lung disease recorded in the NDLD Register to date (Table 9).

Silicosis (308, 33%), followed by mesothelioma (229, 25%), are the most frequently reported types of notifiable dust lung disease recorded in the NDLD Register to date (Table 9).

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

Type of notifiable dust lung disease	Year of diagnosis <sup>xvii</sup>			Total (%)
	Legacy	2019-20	2020-21 (Incomplete year)	
Cancer – Mesothelioma	116	71	42	229 (25%)
Cancer – Other <sup>xviii</sup>	30	15	8	53 (6%)
COPD – Chronic bronchitis/Emphysema	17	23	12	52 (6%)
COPD - Other <sup>xix</sup>	45	18	7	70 (8%)
Pneumoconiosis – Coal Workers'	36	8	7	51 (6%)
Pneumoconiosis – Mixed-dust	18	7	10	35 (4%)
Pneumoconiosis – Silicosis	191	68	49	308 (33%)
Pneumoconiosis – Asbestosis	45	47	17	109 (12%)
Pneumoconiosis – Other <sup>xx</sup>	5	7	6	18 (2%)
<b>Totals</b>	<b>503</b>	<b>264</b>	<b>158</b>	<b>925 (100%)</b>

xvi Date of diagnosis was derived in 607 (69%) of 883 reports.

xvii Date of diagnosis was derived in 607 (69%) of 883 reports.

xviii 'Cancer – Other' includes 'Malignant neoplasms and carcinomas of the respiratory system (other than mesothelioma)' (50 of 53), 'Cancer - Adenocarcinoma' (1 of 53) and 'Cancer - subtype not reported' (2 of 53)

xix 'COPD – Other' includes 'COPD – subtype not reported' (70 of 70).

xx 'Pneumoconiosis – Other' includes 'Pneumoconiosis – Pulmonary fibrosis' (12 of 18), 'Pneumoconiosis – Mediastinal lymph node silicosis' (1 of 18), 'Pneumoconiosis – Anthracosis of lymph nodes' (1 of 18), 'Pneumoconiosis – possible Berylliosis plus asbestos pleural plaques' (1 of 18) and 'Pneumoconiosis – subtype not reported' (3 of 18).

## 8 Spotlight on silicosis information recorded in the Register

Across Australia over the past decade has seen the re-emergence of silicosis, a preventable, irreversible and progressive occupational respiratory dust lung disease.<sup>8</sup> 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.<sup>7,8</sup>

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.<sup>7</sup> 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.<sup>7</sup>

Simple silicosis involves formation of small spots of scar tissue (nodules), usually without symptoms. 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.<sup>7</sup>

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.<sup>8</sup> 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. 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.<sup>8</sup>

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.<sup>7,8</sup>

In Queensland, reforms are underway to better protect workers from hazardous exposures and to reduce the burden of silicosis and other occupational dust lung diseases.<sup>10,11</sup> This includes workplace health and safety laws requiring these risks to be eliminated or minimised as much as possible and model codes of practice on managing the risks of respirable crystalline silica when working with engineered stone. (See Appendix 1 for further details of government actions taken to address the risk of occupational dust lung diseases in Queensland).

A nationally co-ordinated and collaborative approach to driving regulatory and non-regulatory changes is also being progressed to ensure workers and workplaces stay healthy, safe and protected from silicosis and other occupational dust lung diseases.<sup>8</sup>

## 8.1 Number of workers with new silicosis

During 2020-21, the NDLD Register recorded 59 workers with new confirmed silicosis (Table 10).

Table 10. Number of workers with new silicosis recorded in the Register, 2020-21

Number of workers	2020-21
Total	59

## 8.2 Number and type of new silicosis

Table 11 shows the number and type of new confirmed cases of silicosis recorded in the NDLD Register during 2020-21.

Of the 59 new cases of silicosis recorded in the NDLD Register during 2020-21, almost half (28, 47%) 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.<sup>7</sup> Caution is required when interpreting this data as information about the type of silicosis was not reported to the NDLD Register in 29 (49%) of the 59 new cases of silicosis. While specialists notify about the type of silicosis, reports given to the NDLD Register by RSHQ or OIR may not provide this information.

Six of the 59 workers newly diagnosed with silicosis during 2020-21, 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 is likely to be underreported. While specialists notify about PMF, reports given to the NDLD Register by RSHQ or OIR may not provide this information.

Table 11. Number and type of new cases of silicosis recorded in the Register, 2020-21

Type of silicosis	Number of new confirmed silicosis recorded in the NDLD Register during 2020-21	(%)
Silicosis (Acute)	1	(2%)
Silicosis (Accelerated)	1	(2%)
Silicosis (Chronic)	28	(47%)
Silicosis (Type not reported)	29	(49%)
<b>Totals</b>	<b>59</b>	<b>(100%)</b>

## 8.3 Demographics of workers with new silicosis

The following section provides demographic information about the 59 workers with new silicosis recorded in the NDLD Register during 2020-21.

### Workers with new silicosis, by gender

All except one of the 59 (98%) workers with new silicosis were male. Men are more likely to be overrepresented in dust generating industries such as construction, mining and manufacturing.

### Workers with new silicosis, by age group

Age 40-59 years was the most frequently reported age group of workers at time of diagnosis, accounting for 28 (48%) of the 59 workers with new silicosis. This is a slightly younger age group than for all workers with new notifiable dust lung diseases recorded in the NDLD Register during 2020-21 (Table 12).

Table 12. Workers with newly diagnosed silicosis recorded in the Register during 2020-21, by age group

Age group	Number of workers	(%)
20-39	17	(29%)
40-59	28	(48%)
60-79	12	(20%)
80 and above	2	(3%)
<b>Total</b>	<b>59</b>	<b>(100%)</b>

#### Workers with new silicosis, by indigenous status

The indigenous status of workers with new silicosis was not well reported. Indigenous status was not reported in 43 (73%) of the 59 notifications/reports of workers with new silicosis given to the NDLD Register during 2020-21. All workers with new silicosis were reported as Non-Aboriginal and Torres Strait Islander.

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

No workers with new silicosis were 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 11 (19%) of the 59 notifications/reports about new silicosis given to the NDLD Register during 2020-21. 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.

## 8.4 Primary occupational exposure history of workers with new silicosis

The following information provides an overview of the primary occupational exposure history of the 59 workers with new silicosis recorded in the NDLD Register during 2020-21.

#### Type of occupational dust exposure for workers with new silicosis

Silica (57, 96%) was the most frequently reported type of primary occupational dust exposure (Table 13). This is to be expected as silicosis is caused by exposure to very fine silica dust (respirable crystalline silica). Mixed dust (1, 2%) and natural stone (1, 2%) were reported as the primary occupational dust exposure in the remaining cases (Table 13).

Table 13. Workers with new silicosis recorded in the Register during 2020-21, by type of primary occupational dust exposure

Type of inorganic dust <sup>xxi</sup>	Number of workers	(%)
Silica	57	(96%)
Mixed dust	1	(2%)
Natural stone	1	(2%)
<b>Total</b>	<b>59</b>	<b>(100%)</b>

xxi The type of inorganic dust was derived in 29 (51%) of the 59 reports.

### Industry of occupation exposure for workers with new silicosis

As presented in Table 14, Manufacturing (24, 41%) was the most frequently reported industry of primary occupational exposure for workers with new silicosis, followed by Mining, Resources and Quarrying (20, 34%) and Construction (20%).

Table 14. Workers with new silicosis recorded in the Register during 2020-21, by industry of primary occupational exposure

Industry of exposure <sup>xxii</sup>	Number of workers	(%)
Mining, Resources and Quarrying	20	(34%)
Manufacturing	24	(41%)
Construction	12	(20%)
Other <sup>xxiii</sup>	3	(5%)
<b>Total</b>	<b>59</b>	<b>(100%)</b>

### Place of occupational exposure for workers with new silicosis

All 59 workers with new silicosis were occupationally exposed in Queensland. However, for four (7%) of these workers, their place of primary occupational exposure reportedly occurred outside Queensland (Table 15).

Table 15. Workers with new silicosis recorded in the Register during 2020-21, by place of primary occupational exposure

Place of exposure	Number of workers	(%)
Queensland	55	(93%)
Western Australia	1	(2%)
New South Wales	3	(5%)
<b>Total</b>	<b>59</b>	<b>(100%)</b>

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

Table 16 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 2021, including legacy cases), by year of diagnosis.

Some caution is required when interpreting the data and information in Table 16 as the data in each column are not yet comparable (i.e. not all columns represent a single or complete financial year of data, and legacy records may be incomplete).

As the NDLD Register matures, each financial year of data will become complete and therefore comparable for monitoring and analysing the incidence of notifiable dust lung diseases. While not possible for this annual report to compare disease information across financial years, in our next annual report (2021-22), the NDLD Register will have two complete financial years of data, by date of diagnosis, and will therefore be able to commence making comparative statements about these diseases.

As presented in Table 16, a total of 308 cases of silicosis have been recorded in the NDLD Register to date. The most frequently reported type of silicosis is Chronic silicosis (82, 27%). 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.<sup>7</sup> Caution is required when interpreting this data as information about the type of silicosis was not reported in 200 (65%) of the 308 cases of silicosis. The source of many of these (135 of 200) were from legacy cases (where historical records are incomplete) or from OIR reports which do not provide information about the type of silicosis to the NDLD Register.

xxii The Industry of primary occupational exposure was derived in 10 (17%) of the 59 reports.

xxiii Industry 'Other' includes 'Administrative and support services' (1 of 3) and 'Other services' (1 of 3), plus industry type 'not reported' (1 of 3).

Table 16. Total number and type of confirmed cases of silicosis recorded in the Register to date, by year of diagnosis

Type of silicosis	Year of diagnosis <sup>xxiv</sup>			
	Legacy	2019-20	2020-21 (Incomplete year)	Total (%)
Silicosis (Acute)	2	0	1	3 (1%)
Silicosis (Accelerated)	15	7	1	23 (7%)
Silicosis (Chronic)	39	19	24	82 (27%)
Silicosis (Type not reported)	135	42	23	200 (65%)
<b>Totals</b>	<b>191</b>	<b>68</b>	<b>49</b>	<b>308 (100%)</b>

xxiv Date of diagnosis was derived in 178 (58%) of the 308 reports.

## 9 Requests for further information issued during 2020-21

During 2020-21, four notices requesting further information about notifications given to the NDLD Register were issued to occupational and respiratory specialists under s279AG of the *Public Health Act 2005*.

In addition, 35 general requests for further information were made by telephone, followed by email to the notifying occupational and respiratory specialist.

In all instances, the further information requested was provided in writing to the NDLD Register. This further information helps to ensure the accuracy and completeness of notification information recorded in the NDLD Register.

## 10 Information disclosures made during 2020-21

During 2020-21, there was one authorised disclosure of confidential information held in the NDLD Register. The confidential information was disclosed to Workplace Health and Safety Queensland under s179AM (c) of the *Public Health Act 2005*. The disclosure was in response to a Workplace Health and Safety notice (requirement to produce document(s)) issued under s171(1)b of the *Workplace Health and Safety Act 2011* to the Director-General, Queensland Health. The NDLD Register engaged with the department's legal services branch to ensure authorised and appropriate disclosure.

There were no other 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*.

# 11 Other actions taken to implement the purposes of the Register during 2020-21

During the financial year 2020-21, 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
Compliance audit	<p>As planned, NDLD Register staff completed a compliance audit to establish if there were any gaps in notifications given to the NDLD Register. Specifically, an audit of 98 OIR reports of confirmed notifiable dust lung diseases recorded in the NDLD Register during 2020-21 were examined to identify if a notification by an occupational or respiratory specialist for these cases had also been given to the NDLD Register.</p> <p>The audit found that a notification from a specialist had not been received by the NDLD Register for almost half (48 or 49%) of the 98 OIR reports. Of these, 26 reports were for workers with occupational cancer of the lungs (such as mesothelioma). Eleven were for silicosis and 10 were for asbestosis.</p> <p>As the reports given to the NDLD Register by OIR do not include names or details of the diagnosing medical specialist, it was not possible to make definitive conclusions from the audit. However, the audit results did suggest that there could be benefit in further, targeted communication with specialists, regarding the types of occupational dust lung diseases which are notifiable to the NDLD Register. Accordingly, reminders were sent to occupational and respiratory specialists.</p>
Communication with occupational and respiratory specialists	<p>Further education and communication with occupational and respiratory specialists was conducted throughout the year via direct email as well as through e-newsletters of their professional associations, namely the Royal Australasian College of Physicians (RACP) and the Queensland Branch of the Thoracic Society of Australia and New Zealand (TSANZ).</p> <p>For example, in response to the compliance audit, further communication was conducted during the last quarter of the 2020-21 financial year, reminding occupational and respiratory specialists of the types of occupational dust lung diseases which are notifiable to the NDLD Register (i.e. includes cancer of the lungs, such as mesothelioma, when caused by occupational exposure to inorganic dust).</p>
Meetings with RSHQ and OIR	<p>Throughout the year, NDLD Register staff held 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. These included strategies for continuously improving data quality, input into the design and development of a National Occupational Respiratory Disease Registry, and initial work to develop disclosure agreements between Queensland Health and these state agencies.</p>
Advisory Panel	<p>This year the NDLD Register continued to seek and engage the expert assistance and advice of our Advisory Panel (a small group of respiratory medical specialists from Queensland Hospital and Health Services).</p> <p>Specifically, the Advisory Panel was consulted on a range of matters supporting the operations and purposes of the NDLD Register. These included a review of complex cases, providing advice on clinical matters such as in-scope notifiable dust lung diseases and considering the results and outcomes of the compliance audit. The panel were also consulted in relation to preparing this annual report.</p>
Updates to website and Approved Form	<p>This year the NDLD Register website was updated to include a section for hosting the NDLD Register inaugural annual report (2019-20), and for publishing subsequent annual reports.</p> <p>The <a href="#">Approved Form</a> for making notifications was also updated to improve clarity and enhance data collection. For example, the option of selecting 'mixed dust' as a type of inorganic dust was added to the form (where previously this may have been reported on form as 'Inorganic dust - other').</p>

Key activity	Description
<p>Support for the National Dust Disease Taskforce – National registry</p>	<p>During the year, Queensland Health, including NDLD Register staff, continued to support the work of the National Dust Diseases Taskforce to facilitate a consistent, national approach to the management of occupational respiratory diseases in Australia.</p> <p>Commencing November 2020, NDLD Register staff (in collaboration with RSHQ and OIR) contributed significantly to national meetings and correspondence associated with the high-level design and development of a National registry. The establishment of a National registry was a key interim recommendation of the National Dust Disease Taskforce, to support the prevention, early identification, control and management of occupational dust lung diseases in Australia.</p> <p>In February 2021, the Taskforce expanded the scope of the interim recommendation regarding the development of a National registry. The scope of the National registry was expanded from diseases caused by exposure to dusts to also include respiratory diseases caused by exposure to gases, fumes, vapours, mists and fibres and will now be referred to as a National Occupational Respiratory Disease Registry.<sup>8</sup></p> <p>The Executive Director, Health Protection Branch (ED, HPB), supported by NDLD Register staff, and in collaboration with RSHQ and OIR represented Queensland on the National Registry Steering Committee and Jurisdictional working group.</p> <p>Further information about the Taskforce and the development of the National registry is available at: <a href="https://www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-nat-dust-disease-taskforce.htm">https://www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-nat-dust-disease-taskforce.htm</a></p>
<p>Assistance with administering \$5 million medical research grant to protect workers</p>	<p>This year, the department, through the Health Innovation, Investment and Research Office (HIIRO), provided assistance to OIR in administering the Queensland Government's \$5 million medical research grant to protect Queensland workers from, and improve treatment for, occupational dust lung diseases like coal workers' pneumoconiosis and silicosis.</p> <p>Specifically, the department is represented on the evaluation panel selecting the grant recipients, along with RSHQ, OIR and WorkCover Queensland. This research will support key areas including determining the efficacy and sensitivity of methods for early diagnosis, prevention and progression of occupational dust lung diseases and treatment options.</p>

## 12 Future directions for the Register in 2021-22

Looking forward to 2021-22, the NDLD Register will commence its third year of operations. A summary of key activities planned for the NDLD Register during 2021-22 is provided in the table below.

Key activity	Description
Continue to support the development of a National Occupational Respiratory Disease Registry	NDLD Register staff will continue to support the work of the National Dust Disease Taskforce and the Commonwealth Department of Health, to develop a National Occupational Respiratory Disease Registry. A particular focus will be keeping Queensland notifiers (occupational and respiratory specialists, RSHQ and OIR) informed of key milestones in the development of a National registry, and progressing any legislative amendments to the <i>Public Health Act 2005</i> to ensure 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. It is anticipated that the National registry will become operational in late 2022 (subject to Commonwealth legislation being in place). <sup>8</sup>
Progress Disclosure agreement(s) with RSHQ/OIR, pursuant to section 279AO of the <i>Public Health Act 2005</i>	Another focus of the new financial year 2021-22, will be to progress a Disclosure agreement with RSHQ and separately with OIR. The purpose of a Disclosure agreement is to enable Queensland Health to disclose Confidential Information regarding notifiable dust lung diseases recorded in the NDLD Register to RSHQ (and separately to OIR) under section 279AO of the <i>Public Health Act 2005</i> . This will assist these state entities to perform their functions, including protecting the health of workers in the resources (RSHQ) and other industries (OIR). The Disclosure agreements must be prescribed by regulation before coming into effect. Therefore, amendments to the Public Health Regulation 2018 will also need to be progressed.
Ongoing communications with occupational and respiratory specialists	Ongoing communications with occupational and respiratory specialists by direct mail or through e-newsletters of their professional associations are also planned. This is with the view to ensuring medical specialists continue to be fully informed of their reporting obligations to the NDLD Register and the NDLD Register receives complete and accurate information about all cases of notifiable dust lung diseases, enabling the purposes of the NDLD Register to be met.
Ongoing meetings with RSHQ and OIR	During 2021-22, 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 also nationally.
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. A review of consumer information on the website is planned for 2021-22 to ensure current information is provided for patients. An updated <a href="#">Approved Form</a> for making notifications was released on 1 July 2021.
Prepare the NDLD Register 3rd Annual Report	At the end of the 2021-22 financial year, the NDLD Register's third annual report will be prepared. As the NDLD Register matures, more data will become available to monitor and analyse the incidence of notifiable dust lung diseases. In our third annual report (2021-22) the NDLD Register will have two complete financial years of data, by date of diagnosis, and will therefore be able to commence making comparative statements about these diseases.

# 13 Appendices

## Appendix 1. Actions to address the risk of occupational dust lung diseases in Queensland

In addition to the establishment of the NDLD Register, the Queensland Government (primarily led by RSHQ and OIR) has undertaken a range of planned and deliberate actions to address the risk of workers developing illness due to occupational dust exposure. These key actions are described below.

### Under the auspices of RSHQ, these actions include:

- Development of new dust control and monitoring standards for reducing the level or risk for people working in mines and quarries.
- Reduced occupational exposure limits (OEL) for respirable coal dust and respirable crystalline silica.
- Progressed targeted audits and inspections at mines and quarries to evaluate dust control measures, including operator cabin design and the effective use of respiratory protection.
- Implemented enhanced dust monitoring, including a requirement for mines and quarries to report dust monitoring results quarterly to the Mines Inspectorate.
- Quarterly review of the monitoring data at tripartite mining advisory committees.
- Delivery of training by the Safety in Mines Testing and Research Training (Simtars) to the resources industry on monitoring and respirable dust in coal mines.
- Regulatory changes to ensure all Queensland mine and quarry workers will receive a respiratory health assessment upon entry to the industry, at least every 5 years while employed in the industry and at retirement (on a voluntary basis).
- Implemented free lung checks for retired and former miners and quarry workers.
- Development of the Coal Mine Worker's Health Scheme (CMWHS) Clinical pathway guideline that lays out the recommended processes for follow-up investigations and referrals resulting from regular screening.
- Development of new standards for conducting spirometry (lung function) tests and for providing X-ray imaging services to Queensland mine and quarry workers, including a requirement for chest X-rays to be examined against International (ILO) standards.
- Released ResHealth, a new electronic occupational health surveillance system that allows coal mine workers, doctors and employers to engage directly with an online platform to complete a health assessment.
- In collaboration with the Office of Industrial Relations and WorkCover Queensland, established the Mine Dust Health Support Service to enable current and former workers and their families to access to lung checks, compensation pathways, and support services including psychological support services.

For further information visit: <https://www.business.qld.gov.au/industries/mining-energy-water/resources/safety-health/mining/medicals/dust-lung-disease/government-response>

### Under the auspices of OIR, these actions include:

- Development of the Managing respirable crystalline silica dust exposure in the stone bench top industry Code of Practice 2019, which sets enforceable minimum standards stone benchtop fabrication businesses must meet to ensure the risks of exposure to respirable crystalline silica are minimised for workers.
- An industry wide audit campaign of all known stone benchtop fabrication businesses to assess compliance with the requirements of the Stone Benchtop Code.
- Development of a Guideline for assessing engineered stone workers exposed to silica to support medical practitioners, which was finalised in November 2019.
- Support for an immediate reduction in the Workplace Exposure Standard for respirable crystalline silica from 0.1 milligrams per cubic metre (mg/m<sup>3</sup>) to 0.05mg/m<sup>3</sup>, with the clear expectation that consideration of a further reduction of the exposure standard should occur within three years of the date of decision of Workplace Health and Safety Ministers to reduce the exposure standard.
- Funding of free initial health screenings for current or former workers in Queensland who have been exposed to dust from engineered stone in their workplaces.
- Provision of support to workers affected by exposure to respirable crystalline silica through workers' compensation, which includes high-quality medical treatment and rehabilitation.
- Support for research into treatment for occupational dust lung disease. The Queensland Government has committed \$5 million over four years to support research into supporting the wellbeing of workers suffering from occupational dust lung disease.
- Support for return to work for workers with occupational dust lung disease including commissioning research to inform return to work and vocational rehabilitation support for workers diagnosed with silicosis.<sup>8</sup>

For further information visit: [Work-related respiratory diseases | WorkSafe.qld.gov.au](https://www.worksafe.qld.gov.au/work-related-respiratory-diseases)

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## Appendix 2. Acknowledgements

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