Health and Safety in the Workplace Case Study: Asbestos

Audience:
Secondary Students
Union Orientation

Activity Summary: Participants will gather a historical perspective of asbestos exposure in BC.

Participants will consider the continuing legacy of asbestos dangers for workers and their families.

Participants will discuss future directions for asbestos production in Canada.

Framework for Learning

This activity (like the Babine Lake case study) is rooted in several important concepts about workers and adult learners. First, two 1993 studies of teaching labour history to unionists revealed such workers were actually interested in labour history for more than pragmatic reasons (i.e. a promotion). They also sought to "improve themselves," by learning more about their role in society. They appreciated opportunities to connect themselves as part of a larger whole: the labour movement in history. Second, this activity is also ***based upon the six Principles of Adult Learners (Andrew Knowles) who:***

- *Are internally motivated and self-directed.*
- *Are goal oriented*
- *Are Practical*
- *Seek relevance*
- *Bring life experiences and knowledge to the learning experience.*
- *Want to be respected*

Materials Provided

Handout 1: Asbestos Backgrounder

Handout 2: Asbestos Production, Historical Images

Handout 3: Asbestos Safety Gear Today

Handout 4: Dave Ford's Story-images and backgrounder

Handout 5: General Discussion Questions-Asbestos in Canada

Handout 6: CBC article "Asbestos: 'Magic' mineral was once Canada's gold"

Access to video "History of Asbestos in BC". May be found on the Labour Heritage Centre's YouTube page at https://youtu.be/nCLlqLztLeo

Workshop Instructions

1. Gauge workshop prior knowledge by asking: How do you feel when you hear the word "**asbestos**"? What do you know about it?
2. If participants have little knowledge of asbestos, distribute **Handout 1: Asbestos Backgrounder** and review some highlights.
3. In small groups, have participants examine the images and discuss the questions from **Handout 2: Asbestos Production, Historical Images**. Points to emphasize might be:
    a. both men and women were exposed
    b. no protective gear is apparent
    c. people NOT exposed would be shareholders, CEOs
    d. the risks continue
    e. facilitator may wish to contrast the safety gear in these pictures to that found in today's regulations, pictured in **Handout 3: Asbestos Safety Gear Today**
4. Distribute **Handout 4: Dave Ford's Story and Backgrounder.** In small groups or as a large group, examine pictures and questions. Discuss.
5. Watch video "History of Asbestos in BC", found on the Labour Heritage Centre's YouTube page at https://youtu.be/nCLlqLztLeo
6. Debrief any questions from film.
7. Distribute **Handout 5: General Discussion Questions-Asbestos in Canada**. In small groups or as a large group, discuss questions provided.

Workshop Adaptations

1. This workshop could be shortened by focusing on just the film and general discussion questions in Handout 5.
2. A longer **CBC article in Handout 6** has been included as it includes a history of the industry, and some more current debates around exporting asbestos, job losses due to collapse of the industry, and some political issues attached to asbestos mining in Canada.
3. WorkSafeBC's has additional real-life stories that the facilitator may wish to examine depending on local need and interest at https://www.worksafebc.com/en/health-safety/hazards-exposures/asbestos/think-asbestos

Resources

1. WorkSafeBC. https://www.worksafebc.com/en/health-safety/hazards-exposures/asbestos/think-asbestos
2. WorkSafeBC (2012). Safe Work Practices for Handling Asbestos, http://www.worksafebc.com/publications/health_and_safety/by_topic/assets/pdf/asbestos.pdf
8. Labour Heritage Centre (2015). History of Asbestos, https://youtu.be/nCLlqLztLeo
3. CBC News (2012). Asbestos: 'Magic' mineral was once Canada's gold. http://www.cbc.ca/news/canada/asbestos-magic-mineral-was-once-canada-s-gold-1.986519
4. Working People A History of Labour in British Columbia: Bea Zucco

Credit: Workshop/Teaching Activities and Lesson Plan developed by Sarah Purdy

Handout 1: Asbestos Backgrounder

What is Asbestos?

Asbestos is a naturally occurring fibrous material that was a popular building material from the 1950s to 1990s. It was used extensively because it is an insulator, has good fire protection properties, has tensile strength, and is resistant to chemical erosion.
Unfortunately, it's hard to know if you're working with asbestos because it is often mixed with other materials. However, if you work in a building built before 1990, it's likely that at least some parts of the building will contain asbestos.

Common Uses

Spray Applied Fireproofing
Linoleum
Drywall Taping Compound
Asbestos cement board and tiles
Textured decorative coating
Mechanical Insulation
Floor tiles
Vermiculite
Asbestos cement pipes

What is the Danger?

Asbestos is described as a hidden killer because without proper analysis, it's very difficult to determine its presence. Asbestos fibres are extremely fine and can remain suspended in the air for hours.

Exposure is the Danger

If not handled correctly, workers are in danger of inhaling asbestos-contaminated air.

Asbestos related diseases

If an exposure occurs, serious chronic health problems can occur. These diseases will not affect you immediately; they often take a long time to develop, but once diagnosed, it is often too late for corrective treatment. There is a need for you to protect yourself now.

Resources:

https://www.worksafebc.com/en/health-safety/hazards-exposures/asbestos/think-asbestos

Handout 2: Asbestos Production, Historical Images

Images from "History of Asbestos in BC", https://youtu.be/nCLlqLztLeo

Instructions: in your group, examine these historical images and discuss the questions

1. Who appears to have been affected by asbestos exposure? Who was likely not affected?

2. What kind of safety equipment might better protect these workers?

3. While many asbestos workers may not have known about the long-term effects of asbestos exposure, it was generally well known that asbestos miners faced respiratory illnesses. Why do you think workers were willing to take these kinds of jobs without proper safety gear? Would you have taken any of the jobs pictured above?

Handout 3: Asbestos Safety Gear Today

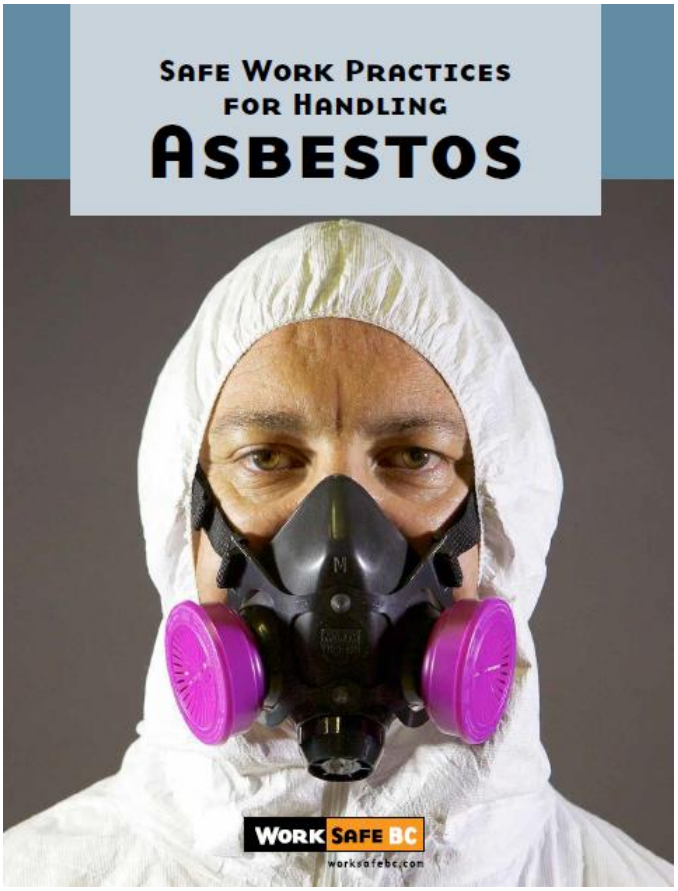

Image 2:

WorksafeBC (2012). Title page from “Safe Work Practices for handling Asbestos”.

http://www.worksafebc.com/publications/health_and_safety/by_topic/assets/pdf/asbestos.pdf

Handout 4: Dave Ford's Story

Understanding the impact of asbestos: Dave Ford's story

As a young man, Dave was an avid athlete; he swam and cycled competitively in England. Once in Canada, he became an active member of Kinsmen, a community volunteer service, and by the time he had a family to care for, he shared his passion for sports by coaching and sponsoring a youth soccer team. Dave always found time to attend his kids' ball games, chaperone at Cub camps and help out at school sports days and other activities. A big kid at heart, Dave hosted a neighbourhood Halloween bonfire–fireworks display for many years and spent as much time goofing around at Christmas as the kids. The grandchildren loved his silly antics and called him their magical Granddad. Summers were spent on beautiful Savary Island where Dave and his wife, Lesley, built a family summer home, one small step at a time, over more than 30 years — a true labour of love.

Although Dave enjoyed many things, his real passion was for electronics. At a young age he chose this field of work because "electricity always fascinates me," as he would say. He was a highly skilled electrician and was the electrical foreman at the local pulp and paper mill where he worked for over 30 years. His interest in electronics and desire to be his own boss eventually led to the start-up of his own security alarm company.

But it was after he retired that Lesley began noticing that Dave would get extremely short of breath when working outside, requiring frequent breaks. She also noticed he seemed to need much more sleep and that his breathing was laboured as he slept, causing him to sound "like he was snoring underwater." But it wasn't until Dave had difficulty breathing, and landed in the hospital, that they would learn that mesothelioma was causing these symptoms. The news was earth-shattering. The family immediately

started researching for information on mesothelioma treatment and soon found out how little appeared to be known about recognizing and treating this disease. Dave underwent chemotherapy treatment, surgery, and then more chemotherapy. He showed great strength of character and courage throughout his illness. Lesley said, “We never gave up hope.” Eighteen months after he was diagnosed, Dave passed away, on October 18, 2008, at age 70.

When Lesley reflects back on Dave she describes him as “a true people-person because he always found time to spend with family and friends, telling stories, lending a helping hand, or just hanging out.” As a special gift for his 70th birthday, Dave’s family created Daveology, a collection of tall tales, unique quotes, questionable advice, and other tidbits from Dave’s life, capturing the essence of a life filled with family, friends, and adventure. Memories of time spent with Dave will always be treasured — in Lesley’s words, “His presence will truly be missed.”

Educating people about asbestos

Despite the fact that asbestos use is extremely limited in Canada today, Lesley expresses concern about young workers who may — unknowingly — be exposed to asbestos today as they work on buildings constructed many years earlier when asbestos was used.

Through Dave’s experience, Lesley and her family learned more about asbestos and mesothelioma than they ever would have expected. She says, “Considering that this is a cancer most frequently contracted as a direct result of workers being exposed to asbestos while carrying out their job, I was surprised to discover that there was no fund in Canada for asbestos-related cancer initiatives.” And so, in tribute to Dave and his memory, and in the hope that the situation could be improved for others, in 2010 the Ford family founded the AREA Fund — the Asbestos-Related Research, Education & Advocacy Fund. The Vancouver Foundation, Canada’s largest community foundation, manages the fund, which provides a funding source for the wide variety of asbestos-related research, education, and advocacy initiatives.

Answer this question based on the pictures and the film “The history of Asbestos in BC”.
https://youtu.be/nCLlqLztLeo

1. In what ways did Dave Ford’s illness, contracted through asbestos exposure on the job, affect him and his family?

Handout 5: General Discussion Questions-Asbestos in Canada

1. Until quite recently, the Canadian government has defended the continued mining of asbestos and export to India and China. In India, many workers have only a bandana as protection, if at all. Most industrialized counties including Australia and the European Union have banned the substance. While Canada's asbestos industry has gone bankrupt, we still have not banned asbestos.

    a. What are your thoughts on banning asbestos?

2. Worldwide, asbestos production has increased. Russia is now the top producer, and exports to China and India. How can we support workers in other countries that are facing asbestos exposure today?

3. What are your thoughts on the following statements?

    a. "The tragic legacy of asbestos was that manufacturers, for self-interest, shareholder interest, continued applying and selling something they knew was dangerous long after they should have, and the people who suffered from that weren't the shareholders, weren't the directors of those companies that made those decisions, it was the workers." Larry Stoffman, Health and Safety Director, UFCW.

    b. "My Dad was very safety conscious…If somebody would have just told him, he would have done it." Dave Ford's daughter.

    c. "The legacy of asbestos is fraught with loss. There have been unnecessary deaths as a result of this. And that is going to continue for a period of time to come." Lee Loftus, Insulator's Union Local 118

4. Dave Ford's wife Lesley shared "concern about young workers who may — unknowingly — be exposed to asbestos today as they work on buildings constructed many years earlier when asbestos was used" (Dave Ford's Story, Hidden Killer, 2014). What is the best way to make sure that new generations of workers are not exposed to asbestos dangers? What can we do as workers, community members, and citizens and to honor the victims of asbestos exposure?

Handout 6: CBC News Article, 2012

Asbestos: 'Magic' mineral was once Canada's gold

Critics decry Canadian production but industry, government says it's safe

CBC News Posted: Jun 14, 2011 7:36 AM ET| Last Updated: Feb 25, 2012 12:08 PM ET

Asbestos wasn't always a dirty word.

The needle-like fibre had many uses and inventors were tripping over each other to find more: it was woven into clothes, building insulation and coffee pots. It was even mixed with children's play dough and, at one point, had roughly 4,000 other applications.

But in the 1960s and '70s, when a growing number of asbestos miners started showing signs of respiratory diseases, the sheen wore off.

As a result, Canada has spent the last 25-plus years trying to rid our homes, schools and offices — including Parliament Hill — of the dangerous dust that was often loosely sprayed as insulation. However, the country continues to mine and export the controversial mineral — though only chrysotile, or white asbestos, which the government says is safe to use.

This has drawn international and domestic condemnation from health and labour groups who say the material is causing tens of thousands of deaths, primarily in the developing world.

Adding to their argument, in February 2012, an Italian court convicted two construction company executives of criminal negligence for failing to take preventative measures at factories where asbestos had been used and which resulted in the asbestos-related deaths of over 2,000 workers. The two men were sentenced to 16 years in prison and were appealing.

The 'magic mineral'

Asbestos was first mined in Quebec in the 1870s. In the mineral's heyday, Canada boasted the world's biggest open pit mine, the Jeffrey Mine located in the province's Eastern Townships. The industry thrived and a town was even named after it, Asbestos, Que.

"These enormous asbestos deposits in the province of Quebec are immensely valuable to Canada in war and peace, and they form a very important part of our great heritage of mineral wealth," said CBC Radio's Lorne Greene in 1942, on-site at the Jeffrey Mine in Asbestos, Que.
But by the late 1960s, things started to change.

A town called Asbestos

Asbestos, Que., named after the once-thriving local mining industry, became a target of the American satirical news program, The Daily Show with Jon Stewart, on May 2011.

A comedic segment produced by one of the show's reporters, Aasif Mandvi, poked fun at the town for promoting the mineral that has been linked to cancer and lung disease.

During the five-minute sequence, Bernard Coulombe, president of the Jeffrey Mine, said its product, chrysotile, also known as white asbestos, was "relatively" safe.

Coulombe denounced the segment a few days later, saying it was in poor taste and that he didn't know it was a parody until it was too late. He also insisted that chrysotile has been proven safe.

An increasing number of miners had shortness of breath, extreme fatigue and were coughing up blood. Studies linking asbestos to voracious diseases such as lung cancer, scarred lungs (asbestosis), and mesothelioma (cancer of the stomach and chest, which is only caused by exposure to asbestos) began to rack up.

One of the very things that made asbestos so popular — its indestructibility — was what also made it so vicious. Once a person inhaled the deadly dust, it was impossible for the body to break the fibres down and it eventually led to severe scarring and death.

In the fall of 1974, Dr. Irving J. Selikoff, the world's foremost authority on asbestos-related diseases, and a team of doctors examined the workers at Thetford Mines in Quebec. He condemned the working conditions as the worst on the continent, further cementing asbestos' notorious legacy.

The sentiment spread to Baie Verte, Nfld., in 1978. Miners walked off the job and demanded protections to reduce their exposure to the deadly asbestos dust. The 15-week strike was the longest health-related strike in Canadian history, and caught the nation's attention.

Trying to dust itself off

In the 1980s, the asbestos industry in Quebec tried to mend its crumbling image and salvage its shrivelling industry. The province was quickly becoming the centre of the controversy and many of the mines' customers began phasing out the mineral from their products.

The industry, backed by the Canadian government, spent millions on research and to fight bans on the product at home and abroad. In 1984, Ottawa established The Asbestos Institute — now called The Chrysotile Institute — to promote the safe use of white asbestos.

But in 1989, the industry was dealt a hefty blow: the U.S. announced plans to ban asbestos because of the health risks. While Canada's neighbours to the south weren't big importers of the mineral, the asbestos industry feared the move would have a domino effect worldwide.

However, the U.S. didn't completely ban the use of asbestos though the market is relatively small today. The country imported only 820 tons in 2010, according to estimates released by the U.S. Geological Survey.

Most developed countries, including Japan, Australia and all of the European Union, have banned the substance.

The same cannot be said of many developing countries, including India, Brazil and Kazakhstan, which continue to import large amounts of the material. China, by far the world's leading asbestos consumer, used more than 600,000 tonnes in 2007, according to the U.S. Geological Survey.

Chrysotile or white asbestos

Canada continues to be a proponent of the controlled use of white asbestos.
Ottawa argues that chrysotile is different than the type (amphibole) that has wreaked so much havoc.

"Most of these health hazards come from the past use of amphibole asbestos and from inappropriate practices such as sprayed-on insulation. These practices have been discontinued in Canada since the 1970s," the Ministry of Natural Resources says on its website.

Chrysotile is less crumbly and is used for things like cement, a solid that is less likely to release the deadly fibres into the atmosphere, says the Chrysotile Institute, the government-funded organization that promotes the use of the mineral worldwide.

The institute says the industry has learned from previous problems and has strict controls in place at the plants. Provincial governments now regulate the use and handling of asbestos on job sites.

Current asbestos production

Canada mined 150,000 tonnes of the mineral in 2009, according to data from the U.S. Geological Survey; a significant drop from the 714,000 tonnes produced in 1989.

All of the country's deposits are found in a 100-kilometre-long stretch of land in southeastern Quebec between the towns of Asbestos and East Broughton.

More than 90 per cent is exported to some 60 countries, primarily in Asia, Africa and Latin American, according to the Ministry of Natural Resources.

Canada ranks fifth in terms of global asbestos production, behind China, Brazil, Kazakhstan and Russia — which is the world's leader, mining 1,000,000 tonnes in 2009.

107,000 die each year: WHO

The industry continues to face criticism from health and labour officials both here in Canada and abroad.

The World Health Organization has labelled all types of asbestos, including chrysotile, as carcinogenic.

According to WHO statistics, 125 million people are exposed to asbestos in the workplace around the world and more than 107,000 die each year from related illnesses.

In December 2010, the British medical journal The Lancet published an article critical of the continuing production and export of asbestos in this country.

While Canada continues to pull the mineral out of its own buildings, the article entitled "Canada accused of hypocrisy over asbestos exports" noted, it still sends the product to less wealthy countries.

Critics say safety requirements — including respirators and protective clothing — are less stringent in many developing countries.
An investigation by the CBC's Melissa Fung in June 2009, revealed that many workers in India wear little more than bandanas when handling asbestos — sometimes nothing at all.

On Feb. 15, 2011, the Canadian Cancer Society, along with 25 other health organizations, urged the federal government to stop funding the Chrysotile Institute and to halt exports to developing countries.

However, Canadian production of asbestos might actually increase in the coming years.
On April 13, the Quebec government gave conditional support to a project that would revive one of Canada's last-remaining asbestos mines — the Jeffrey Mine.

A consortium of investors asked the province to guarantee a $58-million bank loan that would be used to convert the open-pit mine to an underground operation and increase production ten-fold - to 180,000 tonnes by 2012.
http://www.cbc.ca/news/canada/asbestos-magic-mineral-was-once-canada-s-gold-1.986519