Libby Montana's Public Health Emergency, Asbestos Health Screening Center for Asbestos Related Disease Grant Number 5 NU61TS000295-05 Year 5, Quarter 3 (March 1, 2024, through May 31, 2024)

MAJOR FINDINGS

The goal of the funding opportunity is "early detection of certain medical conditions related to environmental health hazards." The Center for Asbestos Related Disease (CARD) screening program has been successful in the early detection of asbestos related disease (ARD) and lung cancer resulting from the Libby asbestos exposure public health emergency. Outreach and education locally, regionally, and nationally are also conducted to support the screening programs. These efforts contribute significantly to the success of the grant. The clinical data in this report includes both the ARD and lung cancer screening (LCS) programs. Outcomes reported in the tables below are for year 5 quarters 1- 3 and cumulative totals from prior grants including screening activities since 7/1/2011, the beginning of our first four-year screening grant.

Table 1 reports the number of ARD screenings, the number who needed CT evaluations to determine diagnostic status, the number of patients diagnosed with ARD, and the number of individuals who had a positive outside CT or CXR read but no clinical diagnosis from CARD's screening program. Previously this group of people was considered eligible for ARD Medicare based on the Affordable Care Act, but following the June 2023 court decision, CARD is no longer filling out the form (EHH checklist) to verify a Medicare-eligible condition based on outside radiology reads alone. It is noteworthy, however, that one patient in this category who was denied Medicare based on an outside radiology read alone reported that they had submitted an appeal to Medicare and subsequently received it this grant year. Individuals were previously considered eligible for Medicare through the Environmental Health Hazard designation criteria even though they were not clinically diagnosed with ARD in three different situations: (1) A positive chest x-ray B-read. (2) A positive CT read by an outside radiologist. (3) A documented diagnosis of an asbestos related cancer (mesothelioma, lung, colon, rectum, larynx, stomach, esophagus, pharynx, and ovarian). An appeal of the court's decision that 337 false claims had been filed is pending but at this point, CARD is not initiating Medicare applications for those who fall into these categories. Table 1 also includes percent diagnosed with environmental exposure only because most of CARD's screening participants were environmentally exposed to Libby Amphibole (LA) rather than having occupational or household exposures.

TABLE 1: ASBESTOS RELATED DISEASE SCREENIN				
Screening Outcomes	Yr. 5 Q1 9/1/23 - 11/30/23	Yr. 5 Q2 12/1/23 - 2/28/24	Yr. 5 Q3 3/1/24 - 5/31/24	Cumulative totals
# ARD screenings	114	71	148	8,934
# CT diagnostic appointments	60	45	59	5,412
# ARD diagnosed	7	16	11	2,933
Positive outside read- no clinical diagnosis	8	9	2	not cumulative
% diagnosed w/ environmental exposure only	86%	88%	73%	not cumulative

GOALS/OBJECTIVES

Goal 1: Provide medical screening in the Libby area and across the nation

Asbestos Related Disease screening in Libby and across the nation:

Table 2 details the types of screening appointments. Even after years of asbestos health screening programs in Libby, Montana; new screening patients participating for the first time make up a significant portion of those seen (30% this quarter). Approximately half of all screening participants live outside of Lincoln County, and this has remained true since the program began. It is estimated that over 80,000 people could have spent significant time in the Libby, Montana area while the mine was in full operation, so there are likely many potential screening patients who have not yet been through the program. For those who qualify, asbestos health screening is offered either in Libby at the CARD Clinic or from a distance if they cannot travel to Libby. LDS stands for long distance screening. Successful completion of long-distance screening (LDS) occurs when the participant completes all screening-related activities (questionnaires, phone interview, spirometry, chest x-ray, and CARD medical provider visit by phone, plus a CT and second medical provider visit by phone if appropriate). Mobile clinics are a type of LDS where CARD staff travel to other communities and offer screening. This guarter a mobile clinic was held in Kalispell. The total number of appointments reported exceeds the number of patients because many screenings include two appointments: an initial appointment and then a CT follow-up appointment. Each screening participant is asked if they would like to share their health information and screening results with ATSDR's Tremolite Asbestos Registry (TAR), and with their primary care provider (PCP). Most say yes to both consents. If screening patients are diagnosed with ARD, they are no longer eligible for asbestos health screenings, but they are followed long-term by CARD for monitoring and disease management.

TABLE 2: TYPES OF SCREENING APPOINTMENTS AN				
Appointment Type	Yr. 5 Q1 9/1/23 - 11/30/23	Yr. 5 Q2 12/1/23 - 2/28/24	Yr. 5 Q3 3/1/24 - 5/31/24	Cumulative totals
# screenings	114	71	148	8,934
# new screening patients	44	21	44	5,716
# rescreenings	70	50	104	3,218
# Lincoln County, MT residents	63	42	65	4,528
# LDS eligible screenings done in clinic	25	13	16	3,117
# Mobile Clinic LDS	0	0	34	not collected
# of LDS patients	16	11	58	1,106
# in clinic appointments (includes both visits)	129	90	126	11,943
# LDS appointments (includes both visits)	45	26	81	2,402
Consented for TAR registry	93	58	113	6,839
Consented to notify PCP of screening results	85	52	113	not collected
# past screeners diagosed with ARD seen for f/u	285	206	222	not collected

Table 3 details demographic data including age, gender, primary language, race/ethnicity, and disability status of the screening population.

TABLE 3: DEMOGRAPHICS OF				
Demographics	Yr. 5 Q1 9/1/23 - 11/30/23	Yr. 5 Q2 12/1/23 - 2/28/24	Yr. 5 Q3 3/1/24 - 5/31/24	Cumulative totals
# screenings	114	71	148	8,934
# females	63	41	79	4,846
# males	51	30	69	4,088
# under age 35	6	2	5	451
# between 35-49	12	11	20	1,722
# between 50-64	55	23	59	4,321
# age 65+	41	35	64	2,440
Primary language (English)	104	63	140	not collected
race (other than white)	2	2	5	not collected
ethnicity (Hispanic/Latino)	3	1	6	not collected
disability status (any)	22	17	28	not collected

Table 4 summarizes important clinical findings including the number of participants who reported respiratory symptoms that may be asbestos related, and the number with abnormal spirometry breathing test results. Symptoms and spirometry results are used in conjunction with health and exposure histories for clinical decision-making to determine whether a CT scan should be performed. A CXR is done on every screening participant but occasionally participants will refuse their chest x-ray and participate in screening anyway. This is usually because only a CT is medically warranted based on past

medical care or referral, the individual is too young to be exposed to radiation for screening purposes, or she is concerned about possible pregnancy. The number of abnormalities identified on CXR is low because CARD's medical providers do not diagnose ARD from X-rays. If ARD is suspected, a CT scan is typically ordered. CT scans are closer to the gold standard for ARD imaging.

TABLE 4: CARD CLINICAL FINE				
CARD Clinical Findings	Yr. 5 Q1	Yr. 5 Q2	Yr. 5 Q3	Cumulative
CAND Clinical Findings	5/1/25 - 11/50/25	12/1/23-2/20/24	3/1/24 - 3/31/24	totais
# screenings	114	71	148	8,934
# symptomatic	68	48	91	5,913
# abnormal spirometry	31	19	33	2,300
# abnormal BMI (<u>></u> 30)	41	26	50	not collected
# CXRs completed	113	71	145	8,697
# no CXR done	1	0	3	236
# abnormal CXR (CARD)	1	0	0	416
pleural only	1	2	0	382
interstitial only	0	0	0	20
both	0	0	0	21
# CTs completed	60	45	59	5,412
# abnormal CT (CARD)	7	16	11	2,905
pleural only	7	16	10	2,332
interstitial only	0	0	0	19
both	0	0	1	554

Table 5 describes other findings of ARD screening. These findings include focal opacities, incidental findings, recommended follow-ups, and depression follow-ups completed as part of screening. As appropriate, patients with significant findings are referred for follow-up. Many are referred to primary care rather than specialists for initial evaluation. Not all patients share the results of their other medical appointments with CARD. Focal opacities are tracked even though they are common in screening studies, and their prevalence is well documented in the literature. Only a small percentage of focal opacities turn out to be cancers, however, they are all tracked to be followed in future screenings. They are also tracked because individuals between the ages of 50 and 84 with at least 15 pack years of smoking history and documented exposure to asbestos with a nodule greater than 6mm can enroll in the lung cancer screening program. Lung masses reported in this table <u>do not</u> include those identified through the lung cancer screening program. One of the questionnaires completed by screening patients includes a depression assessment. If participants' scores are abnormally high, they are sent a letter offering information about resources available and referrals to other community support services. CARD does not offer counselling, but we do assist patients in finding the help that they need.

TABLE 5: SIGNIFICANT FINDINGS IDENTIFIED				
Significant Findings	Yr. 5 Q3 3/1/24 - 5/31/24	Cumulative totals		
# masses identified	0	0	0	201
# focal opacities	30	17	23	1699
# cancers verified possibly asbestos related	2	1	0	not collected
# participants w/ incidental findings	53	42	46	not collected
# of Incidental Findings	73	76	77	not collected
# follow-ups recommended	33	27	26	not collected
# depression letter sent	12	14	18	not collected

Fecal Immunochemical Testing:

Fecal immunochemical testing (FIT), previously fecal occult blood testing (FOBT) is offered to all screening participants between the ages of 50-75 since asbestos exposure can increase the risk of developing colon cancer. FIT tests detect hidden blood in the stool, specifically blood originating from the lower gastrointestinal tract. If a screening participant had regularly scheduled colonoscopies or refused participation for another reason, they were not given a FIT test kit. For those who are given a FIT but do not return it, a follow-up letter is mailed as a reminder. For those with positive results, a repeat FIT is offered as well as a referral for further follow-up.

TABLE 6: FECAL IMMUNOCHEMICAL TESTING FOR EARLY DETECTION OF COLON CANCER						
Fecal Occult Blood	Yr. 5 Q1 9/1/23 - 11/30/23	Yr. 5 Q2	Yr. 5 Q3 3/1/24 - 5/31/24	Cumulative totals		
# FITs given	37	23	56	3,009		
# FITs returned	9	10	13	1,176		
# FITs abnormal	0	0	0	4		

Outside Radiology Reads:

A reader from a panel of five certified B-readers and three thoracic radiologists reads every image taken through the screening program. Screening CT scans are only distributed to the three radiologists; chest X-rays are distributed to the five B-readers on the panel. Images are distributed by mail to readers in a systematic cyclic process to ensure even workloads. Outside reads typically take weeks to be returned, so the number of returned reads reported for each new quarter is usually lower than the number of images done. Cumulative end of the grant year totals will reflect all outside reads received even if they were not received during the grant quarter that the participant was screened in. A local radiologist also reads every image obtained as part of the screening program. Although the local radiologists do not specialize in reading asbestos related abnormalities, their reading is important to identify medically significant abnormalities promptly. Local reads were not previously reported but they have been added to table 7 starting in quarter two.

CARD

TABLE 7: SINGLE OUTSI				
Outside Read Findings	Yr. 5 Q1 9/1/23 - 11/30/23	Yr. 5 Q2 12/1/23 - 2/28/24	Yr. 5 Q3 3/1/24 - 5/31/24	Cumulative totals
# CXRs	113	71	145	8,697
# B reads	94	47	74	8,427
# B reads abnormal	6	3	4	662
Pleural	3	1	3	532
Interstitial	2	2	1	97
Both	1	0	0	33
# Local CXR Reads	1	3	2	not collected
Pleural abn.	0	3	1	not collected
Interstitial abn.	1	0	0	not collected
Both abn.	0	0	1	not collected
# Local CT Reads	2	2	4	not collected
Pleural abn.	1	2	3	not collected
Interstitial abn.	1	0	0	not collected
Both abn.	0	0	1	not collected
# CTs	60	45	59	5,414
# Outside CT reads	36	40	38	5,228
# Outside CT reads	6	10	4	1,680
Pleural abn.	4	4	3	865
Interstitial abn.	1	4	0	480
Both abn.	1	2	1	335

Quality control panel readings of radiographs and HRCT scans:

Twice annually, peer review sessions are held as a quality control measure required in the FOA. For each peer review session, the same 24 CT scans are sent to all thoracic radiologists, and the same 54 CXR images are sent to all B-readers. Each image is read by all readers independently then results are compiled by CARD. Readers then join a Zoom call to discuss any images that the readers did not agree on. Post peer review comparison analysis was completed by Dr. Curtis Noonan, CARD's contracted epidemiologist. The second peer review session of this grant year was held in early June which was not until quarter 4, but results are included below. The comparisons are based on a SAS macro, %MAGREE, which allows for the comparison of multiple raters when multiple responses (ratings) are on a nominal scale. This methodology employed by the macro is based on Fleiss (2003) and Fleiss et. al. (1979). The graphs below depict interrater agreement (kappa) throughout the grant's peer review sessions from 2011 (1A) until the current grant year (13B). The graphs are labeled, and they depict the level of agreement in the identification of parenchymal abnormalities and pleural abnormalities combined for CXRs and CT scans separately. It is noteworthy that the agreement dropped in the last two grant years

due to a new panel of image readers who haven't previously worked together. Levels of agreement using the kappa statistic range from 0 (no agreement) to 1 (perfect agreement). Fleiss et al. (2003) stated that for most purposes, values greater than 0.75 or so may be taken to represent excellent agreement beyond chance, and values below 0.40 or so may be taken to represent poor agreement beyond chance. Values between 0.40 and 0.75 may be taken to represent fair to good agreement beyond chance.



CARD also continues to work with Dr. Reeves at Cornell to validate the software that will detect pleural disease on CT. Dr. Tallacksen, one of the CT readers on our panel is now working with Dr. Reeves to assist in the development of a CT report that will be autogenerated and comparable to the ICO ERD reports that the panel uses to read CT scans. The reports are expected to be finalized before the end of the grant year.

Lung Cancer Screening for High-Risk Individuals:

Early detection of possible asbestos-related cancers through participation in Lung Cancer Screening (LCS) is available to high-risk individuals. Participants eligible for the LCS program are between the age of 50-84, have at least 15 pack years of smoking history, and were diagnosed with ARD <u>or</u> had Libby asbestos exposure and a nodule greater than 6 mm. A thoracic radiologist experienced in lung cancer detection reads all low-dose CT scans (LDCTs). Lung cancers reported in Table 8 <u>do not</u> include lung cancers identified through the asbestos related disease screening program. 19% of this quarter's lung cancer screening participants were active smokers and they were given brief cessation education and counseling and offered referrals for other resources as well. Each active smoker participating in the program received smoking cessation materials with their lung cancer screening results. For those with normal lung cancer screening results, the participant is typically contacted by CARD staff with results after a medical provider reviews them. A provider visit is scheduled to discuss results if requested by the participant if they are coming to CARD for another reason, or if CARD's medical provider feels results warrant it. Every participant is educated about the option of having a provider visit and about the benefits and risks of LDCT screening in a pre-engagement pamphlet sent before participation. Results

letters are sent to each participant after screening to keep for their records. Other findings reported include the identification of abnormalities by the ELCAP readers for which additional follow-up recommendations were made.

CARD has been working with Mount Sinai to build a new screening database over the past few grant years. Now that the asbestos health screening database is nearly finalized the current project is moving the LCS data into the new database. We anticipate completion of this project before the end of the grant year.

TABLE 8: LUNG CANCER SCREENING OUTCOMES SPECIFICALLY FROM LUNG CANCER SCREENING PROGRAM					
Lung Cancer Screening	Yr. 5 Q1 9/1/23 - 11/30/23	Yr. 5 Q2 12/1/23 - 2/28/24	Yr. 5 Q3 3/1/24 - 5/31/24	Cumulative totals	
# completed LDCTs	89	42	57	5,099	
# new LCS participants	9	2	4	not collected	
# of LCS done long distance	5	10	0	not collected	
# of established participants	80	40	52	not collected	
# less than annual f/u	5	9	4	not collected	
# referrals	2	1	2	not collected	
# confirmed cancers	0	0	0	40	
# other findings	7	9	0	not collected	
# current smokers	23	9	11	not collected	
# no longer participating	12	0	1	not collected	

Table 9 details consecutive years of LCS participation. Lung cancer screening is considered most effective when conducted annually so that cancers can be found at the earliest stages and be treated quickly. CARD's lung cancer screening coordinator sends recall letters to annual lung cancer screening patients to encourage their ongoing participation in the program. Participants join the program whenever they become eligible and interested, but some drop out due to being diagnosed with lung cancer, dying, aging out of the program, or being lost to follow-up for some other reason. In addition, during the pandemic, many participants did not get their annual LCS because only essential imaging was being done. For participants who remain eligible for the program, three recall attempts are made annually to encourage ongoing participation.

TABLE 9: CONSECUTIVE YEARS LUNG CAN	CER SCREENING			
Consecutive years	Yr. 5 Q1 9/1/23 - 11/30/23	Yr. 5 Q2 12/1/23 - 2/28/24	Yr. 5 Q3 3/1/24 - 5/31/24	Cumulative totals
Established LDCT participants	80	40	52	not cumulative
Participated 2-4 consecutive years	27	11	15	not cumulative
Participated 5-8 consecutive years	20	17	12	not cumulative
Participated 9+ consecutive years	18	6	11	not cumulative
Rescreened but not consecutive years	15	4	14	not cumulative

Autoimmune screening:

A screening blood test for antinuclear antibodies (ANA) was added to the ARD screening program for this grant, and in grant year 3, an additional blood test called anti-PLG has also been added. Anti-PLG is a subset of MCAA, so MCAA results are also reported. The tests are offered to ARD screening participants based on research that has shown a relationship between Libby asbestos exposure and autoimmune disease. Results are sent to Dr. Jean Pfau (ANA) and Dr. Kinta Serve (anti-PLG) quarterly for review.

Quarterly Report – Autoantibody screening – Third Quarter of 2023-2024 grant year – March-May 2024 - Jean C. Pfau, Ph.D.

A de-identified spreadsheet of screening participants for the third quarter of the 2023/2024 grant year was received by Jean Pfau Consulting. A total of 148 screening participants (SP) were included, with an average age of 61.4 years, 79 females and 69 males.

Interpretation:

This 3rd quarter screening group for the 2023-2024 grant year shows evidence of a frequency of positive ANA tests (12.2%) similar to the expected frequency in the US, and lower than we previously reported in publications or reports. The reason for this is unknown. It is possible that more people with suspected autoimmune disease are going elsewhere for testing. It is also possible that this represents a trend related to exposure levels and latency. In support of that hypothesis is the lower frequency of Systemic Autoimmune Diseases for which ANA tests are diagnostic, such as Systemic Lupus Erythematosus (no cases) and Scleroderma (2 cases) this quarter.

The frequency of autoimmune diagnoses this quarter was 18.9%, which is higher than expected in the U.S., similar to previous quarters, and close to what we have previously reported in publication. Although positive ANA tests are not strongly diagnostic in all autoimmune diseases, they occur in almost all of the diseases listed in Chart 1.

This screening group has a very high frequency of autoimmune symptoms (65%), similar to previous quarters' reports. This suggests a continuing concern about undiagnosed autoimmune conditions that do not meet diagnostic criteria, but that fit the diffuse characteristics of the autoimmune conditions seen in people exposed to Libby Asbestiform Amphiboles (LAA) (Diegel R., 2018).

chart 1. Reported Autominiane Diagnoses, Q5 2023/2024					
	Cases (# Evaluated	Cases (# Evaluated Percent			
	for AID = 148)		prevalence in US)?		
All Reported Autoimmune Cases	28 (3 with >1 Al	18.9%	Yes (7%)		
	diagnosis)				
Rheumatoid Arthritis	11	7.4%	Yes (1%)		
Psoriasis/Psoriatic arthritis	8	5.4%	Yes (1%)		
Scleroderma	2	1.4%	Yes (<0.1%)		
Hashimoto's thyroiditis	2	1.4%	Yes (0.1%)		
Sarcoidosis	2	1.4%	Yes (<0.1%)		

Chart 1: Reported Autoimmune Diagnoses, Q3 2023/2024

Fibromyalgia/Chronic Fatigue	6	4.0%	No (3.4%)
Syndrome			
Ulcerative colitis, Celiac Disease	1	0.6%	No (1.3%)
Ankylosing Spondylitis	1	0.6%	No (1%)
Multiple Sclerosis	1	0.6%	No (0.2%)
Type I Diabetes	1	0.6%	No (0.6%)
Lichen Planus	1	0.6%	No (1%)
Eosinophilic Esophagitis	1	0.6%	Slightly (0.1%)

Most of these expected prevalence values are from the CDC, Medscape, rarediseases.org or the foundation for that disease.

References

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Smoking Cessation:

Smoking cessation continues to be extremely important for patient health maintenance and the screening program goals. Table 10 details smoking cessation activities. Respiratory therapists and spirometry techs provide brief counseling to all identified smokers upon review of their tobacco use history questionnaire. Past quit attempts and current interest in quitting are explored. If interested, educational material is given, and a referral is made to the Montana Quit Line. Medical providers also educate about the importance of smoking cessation. CARD's Outreach Specialist provides education and resources about smoking and vaping prevention at various outreach and educational events attended. It is expected that during the next grant a new case manager will be hired and trained to do in-clinic smoking cessation counseling.

TABLE 10: SMOKING CESSATION OUTCOMES AND OURTREACH ACTIVITIES							
Smoking Cessation Yr. 5 Q1 Yr. 5 Q2 Yr. 5 Q23 Cumular 9/1/23 - 11/30/23 12/1/23 - 2/29/24 3/1/24 - 5/31/24 total							
# of screeners who smoked	14 9 17 1,065						
# who quite since last screening appointment	1	1	7	99			
# brief cessation ed by medical staff	14	9	12	682			
# booklets mailed regionally/nationally	7	9	5	not collected			
# booklets given in clinc/local	30	18	23	not collected			
community members educated re: smoking cessation/prevention	12	0	84	not collected			

Goal 2: Conduct Nationwide Outreach to Raise Awareness (of screening and certain Medicare benefits) and Goal 3: Provide Nationwide Health Education (to detect, prevent, and treat environmental health conditions)

Outreach and education go hand in hand. The goals of providing outreach and education, about asbestos health and lung cancer screening, risk factors, asbestos related disease, health management, and certain Medicare benefits are often approached as one combined goal. Quality control processes are in place as all CARD employees involved in outreach and education work very closely with the screening Project Director and, as appropriate, the Medical Providers, to develop and conduct screening outreach and educational activities. All final printed materials and community engagement activities are approved by the Project Director. CARD's physician reviews and approves all technical and medical education materials for professional audiences. Three main outreach and education target audiences include current and potential screening participants, members of the public who could encounter Zonolite attic insulation or other environmental health hazards, and medical professionals. Each screening participant receives a patient education book along with in-person education by CARD staff, and all smokers are offered free smoking cessation service referrals. In addition, anyone diagnosed by CARD with ARD receives benefits education about possible Medicare benefits and the Medicare Pilot Program for Asbestos Related Disease (MPPARD).

Why Are Individuals Being Screened?

CARD tracks why individuals are being screened to better understand and meet the needs of new and potential screening participants. This facilitates our efforts to continue reaching potential participants who aren't aware of the free screening program. The information also helps CARD develop effective outreach materials and focus educational efforts on areas of interest to potential and current screening participants.

TABLE 11: WHY ARE YOU BEING SCREENED?				
	Yr. 5 Q1 9/1/23 - 11/30/23	Yr. 5 Q2 12/1/23 - 2/29/24	Yr. 5 Q3 3/1/24 - 5/31/24	Cumulative totals
# answered the question	98	69	131	5,192
# LDS	21	20	77	1,302
# in clinic	77	49	54	3,923
Medical concerns	39	32	38	1,931
Family member diagnosed	44	27	70	1,234
Access to Benefits	18	8	6	405
Support research	12	5	9	475
Legal reasons	4	0	2	84
Screening purposes/multiple	53	41	94	1,473
Employer Requested Screening	0	0	0	125

Outreach Effectiveness Measure:

When individuals engage in screening, they are asked the multiple-choice question, "How did you hear about the CARD screening program?" This is intended to help CARD measure the effectiveness of outreach activities. Answers are reported in Table 12 with in-clinic and long-distance identified separately as outreach efforts for those two populations are different. Results are reviewed by the Project Director, and our contracted marketing firm, Brand It, to determine the most effective methods and where to focus efforts moving forward.

TABLE 12: HOW DID YOU HEAR ABOUT THE CARD SCREENING PROGRAM?					
	Yr. 5 Q1	Yr. 5 Q2	Yr. 5 Q3	Cumulative	
IC= in clinic, LD= long distance	9/1/23 - 11/30/23	12/1/23 - 2/29/24	3/1/24 - 5/31/24	totals	
IC- # who answered	77	49	54	4,523	
IC- traditional advertising (radio, TV, newspaper)	42	31	29	2,395	
IC- website/social media	18	11	11	304	
IC- Community networking (parades, local events)	49	22	28	2,123	
LD- # who answered	21	20	77	1,279	
LD- traditional advertising (radio, TV, newspaper)	14	14	63	616	
LD- website/social media	12	7	23	204	
LD- Community networking (events, word of mouth)	16	11	61	741	

Screening Satisfaction:

To provide the best possible customer service, CARD began using screening satisfaction surveys in year 2 of this grant. Surveys are mailed out to all program participants and made available on our website. The vast majority of those returned provided positive feedback. The surveys ask about program participants' experiences overall and their interactions with CARD's staff. Results can remain anonymous, or respondents can choose to identify themselves. Any negative responses are followed up on immediately to address patient concerns and facilitate improvement. Follow-up includes reaching out to patients if

TABLE 13: SCREENING SATISFACTION SURVEY RESULTS				
	Yr. 5 Q1	Yr. 5 Q2	Yr. 5 Q3	Cumulative
	9/1/23 - 11/30/23	12/1/23 - 2/29/24	3/1/24 - 5/31/24	totals
# surveys sent	330	238	400	not collected
# surveys returned	75	88	135	not collected
overall: excellent	54	67	102	not collected
overall: good or very good	19	21	22	not collected
overall: fair or poor	0	0	1	not collected
staff: excellent	60	68	104	not collected
staff: good or very good	14	20	26	not collected
staff: fair or poor	0	0	1	not collected

the survey is not anonymous and evaluating workflow processes related to any specific complaints or constructive feedback.

Targeted Outreach and education- Local and regional/national:

Many residents of the local area have still not participated in screening, and others have only been screened only once many years ago. For this reason, recruitment continues locally, and education as well as community outreach are extremely important. In addition, with CARD's recent lawsuit, ongoing appeal, and bankruptcy, re-engaging community members and maintaining and rebuilding confidence are priorities for the screening program. Ongoing education to locals helps remind them about the free screening program, and the good work that CARD does in the community, reinforces the importance of rescreening, and corrects any misinformation that takes hold through social media or community conversations. Maintaining and improving relationships with local businesses and tourism efforts are also very important to counter a deep-rooted community concern that Libby's asbestos legacy hurts the local economy and deters tourism. CARD works to be a positive force in the community supporting local causes and participating in community events as much as possible, especially educationally. These efforts are especially important following the BNSF lawsuit.

Table 14 details local outreach and education efforts. Community meetings attended included Rotary, Kiwanis, and Spring Up which is a newly developed youth-focused community outreach effort. During quarter 3 CARD participated in numerous community meetings and events. Highlights included setting up information tables at all three Lincoln County farmer's markets (Libby, Troy, and Eureka Montana), attending a large volunteer expo hosted by the LOR foundation, the Amish auction in Libby, a large workforce expo in which over 356 high school students and nearly 100 non-students attended. Sponsorship highlights included Krusher's Softball team, Kootenai River Stampede, Libby Loggers Baseball, and the Riverfront Blues Festival. Sponsorships allow for large CARD Screening signage to be placed at event venues where diverse groups can be educated. Many of these events also offered CARD's staff opportunities to interact with others educating about our screening programs. Website visits include all traffic that is coming to the website. Education website visits are the total web visits to all web pages that contain patient education information. Clicks are when someone clicks on the ad and impressions are counted each time our ad is shown on someone's Facebook page.

TABLE 14: TARGETED OUTREACH AN				
Method	Yr. 5 Q1 9/1/23 - 11/30/23	Yr. 5 Q2 12/1/23 - 2/29/24	Yr. 5 Q3 3/1/24 - 5/31/24	Cumulative totals
Local newspaper ads	32	12	94	1,258
Education article in newspapers	6	6	6	125
Health Link and Health Resource Guide	0	0	0	12
Radio ads	500	450	202	22,909
TV ads	266	780	1,439	28,132
Educational brochures given (screening, LCS, CARD)	41	52	167	3,810
Patient Education booklets	63	42	65	4,604
Parades	1	0	0	44
Community events sponsored	6	8	8	284
Commmunity meetings	7	13	14	534
Google AdWords Impressions	66,155		31,352	not collected
Google AdWords Clicks	1,541		3,640	not collected
Website visits	1,523	4,996	3,384	not collected
Website visits to patient education pages	315	58	229	not collected
community presentations/ events attended	7	5	13	197
website visits to provider education pages	30	46	77	not collected
newsletters sent locally	3,831	3,231	3,791	not collected

Table 15 details regional and national outreach and education efforts. YouTube channel numbers are a count of how many times our videos were viewed. Health promotion events attended this quarter included a hospital-sponsored health fair and the state public and environmental health conference.

TABLE 15: TARGETED OUTREACH AN				
Method	Yr. 5 Q1 9/1/23 - 11/30/23	Yr. 5 Q2 12/1/23 - 2/29/24	Yr. 5 Q3 3/1/24 - 5/31/24	Cumulative totals
Newspaper -outreach	20	48	48	413
Radio ads -outreach	366	0	0	12,129
TV ads -outreach	266	84	231	153,104
Website -outreach	9,094	6,357	10,797	not collected
Website -patient education	273	300	344	not collected
Website -provider education	171	180	203	not collected
Educational brochures given	115	97	50	not collected
YouTube Channel	1,387	2,864	3,552	91,707
Patient Education booklets	41	41	74	4,410
Lung cancer screening brochures	9	9	0	577
Health promotion events	1	0	2	61
Newsletters sent	3,472	2,961	2,921	not collected

Targeted Outreach/Education to healthcare professionals:

Table 16 details outreach efforts to healthcare professionals. These primarily include professional conferences. This quarter Tracy McNew held a public health seminar titled "Clearing the Air about Asbestos" at the University of Montana and Jean Pfau, PhD presented a talk called "Asbestos in vivo: Current Issues in Understanding Disease Mechanisms" at the 2024 ASTM International Michael Beard Conference. CARD also attended the American Occupational Health Conference with hundreds of attendees to increase awareness about asbestos in the healthcare provider community. Raising awareness about Libby asbestos within the medical community is important to help facilitate referrals and coordinate care. Provider education packets are sent to primary care providers of screening participants with their screening results.

TABLE 16: TARGETED OUTREACH TO				
	Yr. 5 Q1	Yr. 5 Q2	Yr. 5 Q3	
Method	9/1/23 - 11/30/23	12/1/23 - 2/29/24	3/1/24 - 5/31/24	Cumulative totals
Website -provider education	201	288	280	not collected
Mailings	6	4	1	not collected
CARD newsletter -education	627	540	577	37,351
provider education book mailed	20	30	24	2,100
Professional Conferences -	2	0	3	
education/outreach				78
Medical professionals -education	175	0	450	2,242
Press release pick ups	88	462	12	not collected
other targeted outreach efforts	1	0	6	not collected

Website Use:

CARD's website is an important tool for outreach, education, and communication with target populations. Table 17 summarizes the use of CARD's website during quarter 3. Website materials are regularly updated, and use is tracked to help improve content for users. In addition to the numbers reported below Brand It performed monthly web backups and plugin updates sitewide.

TABLE 17: Website use					
	Yr. 5 Q1	Yr. 5 Q2	Yr. 5 Q3		
Website Use	9/1/23 - 11/30/23	12/1/23 - 2/29/24	3/1/24 - 5/31/24	Cumulative totals	
Screening applications submitted via website	30	28	64	758	
Contact CARD emails via website	9	39	9	832	
# of website sessions	11,069	11,353	14,181	265,083	
# of users	9,550	9,379	11,753	179,639	
new users	88%	99%	99%		
returning users	12%	1%	1%	not cumulative, reported as a percentage	
Male users	55%	38%	35%		
Female users	45%	62%	65%		

Other outreach efforts:

In addition to the above outreach and education, CARD continues to increase our social media presence on both Facebook and Instagram. Our Facebook page has 2,835 followers and during quarter 3 we made 30 posts. CARD's Instagram page has 172 followers and ten posts were made on that account. CARD also held our annual Rally at the local elementary school where over 75 people attended and learned about different aspects of safety in the outdoors. The theme this year was a great Montana health adventure and tbooths educated elementary-age students about the dangers of smoking and vaping, the dangers of asbestos, eating healthy, getting regular exercise, and more.

CHALLENGES:

REASON FOR DELAY AND ANTICIPATED CORRECTIVE ACTION OR DELETION

Audit

CARD's auditing firm, Rudd and Company declined working with us for our 2023 annual financial audit due to our pending bankruptcy status and CARD was unable to secure another firm. Fortunately the bankruptcy was dismissed this quarter and Rudd once again agreed to work with CARD. Our audit, however, will be later than usual this year due to the delay. This has also impacted our federally negotiated indirect cost application which was due in June and our taxes which were due in April. CARD has filed for and had extensions approved for both required activities.

STATUS OF PROGRAM, SCREENING, INFRASTRUCTURE, AND STAFF

The grant's goals and objectives were implemented successfully during the 3rd quarter of this grant year despite difficulties with the BNSF lawsuit and subsequent Ch. 11 bankruptcy. The bankruptcy was dismissed by the court rendering the judgment uncollectable and a new Notic of Award was issued so that CARD is no longer required to do manual drawdown of grant funds. Screening participation numbers increased, and an application was submitted for a new 5-year grant period. CARD's infrastructure remains solid with a strong administrative and implementation team. Quality assurance processes remain successfully in place for the delivery of ARD and LCS screening activities, data management, outreach, and educational activities. All screening CT scans are read by a qualified physician, so CARD's physicians read all CT images ordered by our physician assistant.

MEASURES OF EFFECTIVENESS

Measures of effectiveness were reported under each specific goal above.

FINANCIAL RECAP OF GRANT EXPENDITURES

As of this report, 64% has been spent of the \$2,999,999 grant year 5 funds allocated. This amount only reflects expenses through May and although they are less than budget forecasts in the contracts category, all other areas are on track and the grant is expected to be expended.