Oklahoma Central Cancer Registry

OCCR QUARTERLY

Fall 2020

Missing Race and Ethnicity Data: Why Is It Important?

by Alexandra Feld, MPH

From finding a cure, to administering successful treatments, to detecting early stage cancers, researchers, policymakers, and physicians all need accurate data on which to further cancer prevention and control efforts. We already know that cancer doesn't impact everyone the same. Different groups of the population are affected by cancers at different rates. Even within one cancer site, we know that the **incidence** (the probability of disease occurrence in a given population within a specific time frame) and the **mortality** (deaths due to disease in a given population within a specific time frame) vary by sex, age, race, and more.

One of the main components epidemiologists, researchers, and others use to better understand how cancer impacts different populations is **race and ethnicity**. When cancer cases are submitted with missing or incorrect race, the impacts are far-reaching. If we cannot define and understand the differences in cancer rates and deaths by race, we cannot improve and save the lives of those impacted by cancer – locally, throughout Oklahoma, or nationwide.

Historically, research was done on and by white males, and results were applied to the general population. We now know this isn't good practice and unfortunately, minority groups experience more preventable diseases and poorer health outcomes (known as "health disparities"). Including accurate and complete race and ethnicity in each cancer case submitted to the Central Registry helps further our understanding of these diseases and better address health disparities.

If we want to promote good health for all, thorough, accurate, and complete information on minorities must be included in our state and national databases. The inclusion of minorities affects more than minority health and health disparities – it impacts all populations and our greater understanding of disease. The more we can understand a disease and all aspects of who it impacts and how, the closer we get to detecting early stage cancers, increasing chances of survival, administering successful treatments, and ultimately finding a cure for each cancer type and site.

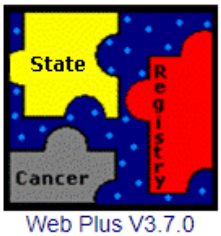
Photo by Sharon Roglitz-Warlick, used with permission

Software Updates from the Data Manager

By Christy Dabbs, AA, CTR

Web Plus for 2018

Oklahoma Central Cancer Registry



Web Plus V3.7.0

On July 1, 2020 new security measures were implemented for all Web Plus account holders. This is to ensure additional protection against unauthorized access. Security measures that were changed were increased password complexity, password expiration every 90 days and only 5 invalid login attempts will be allowed before being locked out for 2 minutes. Later in the year we plan to implement a challenge question at login. More information to come on this. As a reminder each Web Plus user should have their own account. If you need a Web Plus account, please contact me at christyd@health.ok.gov

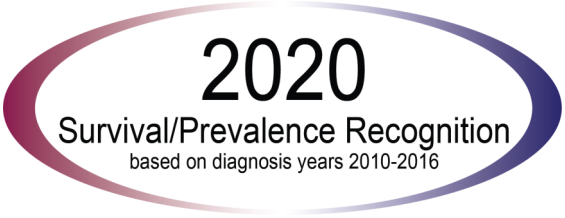
RMCDS Version 18

NAACCR version 21 is almost here. It feels like we just completed the conversion to version 18 not long ago. In the next few months RMCDS users will be receiving more information about the conversion to NAACCR v21. Typically the NAACCR record layout version is updated annually to implement data item changes by standard setters. We were fortunate to not have any updates for 2019 and 2020. Version 21 is applicable beginning with cases diagnosed 01/01/2021 and forward and will be compatible with earlier diagnosed cases. New required data items for 01/01/2021 and forward are: **Prostate:** Gleason Patterns Clinical, Gleason Pattern Pathological, Gleason Score Clinical, Gleason Score Pathological, Gleason Tertiary Pattern if available; **All primary sites:** Grade Post Therapy clin (yc) when available and Grade Post Therapy path (yp) when available. Maiden name will change to Birth Surname.

There are currently no major changes to the software. Please remember to update RMCDS monthly. This will keep the software up-to-date with any small bug fixes that are made each month.

OCCR Receives NAACCR Recognition

Complementary to the NAACCR Certification is the new 2020 *Fitness for Use in Survival & Prevalence* Recognition for registries that meet the inclusion requirements for the *CiNA Survival* and *CiNA Prevalence* Volumes of the CiNA Monograph and the related *CiNA Survival* research dataset. This recognition is based on meeting the CiNA incidence criteria for all relevant years, and either meeting the SEER standards for follow-up or ascertain deaths through the study cutoff date. The OCCR met both of these requirements and was awarded this recognition.



OCCR Death Clearance and NAACCR Certification

by Paula Marshall, BBA, CTR

The annual NAACCR Call for Data is fast approaching for the Oklahoma Central Cancer Registry (OCCR). Death Clearance is included in the criteria for NAACCR certification. The percentage of death certificate only (DCO) cases must be 3% or less in order for OCCR to meet this criteria for GOLD Certification. The standard formula used to calculate DCO percentage is:

$$\left[\frac{\text{Total \# of DCO cases for the year}}{\text{Total \# of Incidence cases for the year}}\right] \text{ X 100 = DCO Percentage}$$

If follow-back information is obtained, the case may be added as a missed incidence case. If no information other than the death certificate is available, the case must be entered in the registry database as a DCO (Death Certificate Only).

The OCCR actively searches for additional information on potential incidence cases from sources such as hospitals, certifying physicians, nursing homes, and other health care practitioners in addition to linking with multiple sources such as hospital discharge data and path cases. At times, follow-back requires communication with the individual facilities and often benefits from a positive ongoing relationship that OCCR has maintained with the facilities. A confirmation of cancer by clinical diagnosis and a date of diagnosis are the two key pieces of information needed to determine the disposition of a case.

As you can imagine, the death clearance follow-back process is a lengthy and intense process which encounters many sources in order to reach the 3% of DCO to meet the criteria for GOLD Certification. We say THANK YOU and appreciate everyone that has already responded to the OCCR death clearance follow-back requests! We look forward to hearing from you!

PLEASE RESPOND TO FOLLOW-BACK REQUESTS NO LATER THAN SEPTEMBER 30th.

If you have any questions, please contact me, paulam@health.ok.gov

2020-2021 NAACCR Cancer Registry & Surveillance Webinars

By Leslie Dill

The OCCR has purchased the 2020-2021 NAACCR webinar series. For no cost you may participate in the LIVE webinars or listen to a recording of the webinar at a later date. Registration is required. If you are interested, please email the Education Specialist, Barbaram@health.ok.gov.

Prostate, 10/01/2020
Lung, 11/05/2020
Thyroid, 12/02/2020
Treatment, 1/07/2021
Lymphoma, 2/04/2021
Abstracting and Coding Boot Camp, 3/04/2021
Larynx, 4/01/2021
Pancreas, 5/06/2021
Kidney, 6/17/2021
Quality in CoC Accreditation, 7/08/2021
Breast, 8/05/2021
Coding Pitfalls, 9/02/2021

The Quick Brown Fox

by Kerri Torgler, AAS, RHIT

How many recognize this sentence?

"The quick brown fox jumped over the lazy sleeping dog."

It is an English-language pangram—a sentence that contains all of the letters of the English alphabet. Back in the '60's and '70's, those of us who learned to type on the old manual, Royal typewriters, and then had the privilege to move to an electric typewriter, should know well. For me it was the beginning of a relationship with what is today called "Data Entry".

The two most important measurements of Data Entry are quality and timeliness. Today's keyboards allow most to not only achieve, but exceed meeting deadline for data entry. Achieving data quality is more challenging. There are dozens of articles available that demonstrate the cost of data entry errors. One of the most commonly known rules is: $1-$10-$100:

"It costs: $1 to verify the accuracy of data at the point of entry, $10 to correct or clean up data in batch form, and $100 (or more) per record if nothing is done" (source: http://read.nxtbook.com/informationtoday/crm/march2014/fourstepstoimprovecrmdata.html)

With Electronic Health Records and the interoperability between the various systems, the repercussions of data entry errors are high. One digit off on a Social Security number results in the perpetuation of billing, identity and record keeping issues. To narrow this down, let's look at how data entry affects cancer registry.

When maintaining a registry, the importance of accurate data is crucial. In attempting to properly ascertain the reoccurrence rate, success of treatment, trends in diagnosis, common risk factors, etc., having good quality data is paramount. Data accuracy is key for success in being able to assess cancer burden within Oklahoma while using cancer registry data. If a patient's demographic information is incorrect, the amount of administrative work that goes into correcting the information is substantial.

Reports are generated for possible duplicates and distributed for research. Verification has to be obtained for which information is correct. Records then have to be manually corrected. Errors can result in injury, higher costs of services and skew results. So, let's remember to take the time needed to get it right the first time and save everyone time and money, and keep that quick brown fox jumping!

OCCR Secure E-mail: Sending Confidential Information

By Leslie Dill

In the past we used Global Certs to send emails requesting patient information from a reporting facility. Mimecast has now replaced Global Certs for sending secure email with attachments.

The first time a secure message is sent to a cancer reporter using Mimecast you will receive two email messages from a postmaster address. The first has a temporary password. The second includes a link to the secure messaging portal.

When accessing the portal for the first time, the recipient will be asked to login using the temporary password. You will also be required to set a new password. Once you have logged in, you will be taken to your portal page where you can read your secure messages.

Coding Review – Lymph Vascular Invasion

by Barbara Murray, AAS, CTR

Lympho**V**ascular **I**nvasion (LVI) was introduced to the cancer reporting community as a data item in 2010 with the release of AJCC's Seventh edition staging manual. Lymphovascular invasion is a useful prognostic factor because it represents the presence of cancer cells in the vessels that spread the disease regionally and distantly. At that time, LVI was limited to 4 codes: 0, not present; 1 present; 8, not applicable; and 9, unknown.

In 2018, three additional codes—2, 3, and 4—were added to more precisely define the presence of vessel invasion. The codes are simple enough to understand as can be seen in the following table:

Code:	Text Description:
0	Lymphovascular invasion not STATED on path report not present/identified
1	Lymphovascular invasion present/identified, NOS
2	Lymphatic; small vessel invasion present/identified
3	Venous; large vessel invasion present/identified
4	BOTH lymphatic; small vessel AND venous; large vessel invasion present/identified
8	Not applicable
9	Unknown/not stated in path report/stated as indeterminate in path report.

The difficulty comes when trying to determine when you can use the codes. If any neo-adjuvant treatment is administered before LVI status is established from a biopsy or resection, coding negative LVI from subsequent surgical procedues is not allowed. Codes. 1,2,3, and 4 can be used if specific conditions are met. Use the following table (or the one in the STORE manual) to arrive at the correct code when neo adjuvant treatment has been administered.

LVI status on pathology report BEFORE neoadjuvant treatment	LVI status on pathology report AFTER neoadjuvant treatment	Code LVI to:
not present/not identified	not present/not identified	0
not present/not identified	present/identified	1,2,3, or 4
not present/not identified	not stated/indeterminate	9
present/identified	not present/not identified	1,2,3, or 4
present/identified	present/identified	1,2,3, or 4
present/identified	not stated/indeterminate	1,2,3, or 4
not stated/indeterminate	not present/not identified	9
not stated/indeterminate	present/identified	1,2,3, or 4
not stated/indeterminate	not stated/indeterminate	9

Continued on page 6

Coding Review – Lymph Vascular Invasion, cont'd

Continued from page 5

Don't forget there are schema ID's that never have LVI information and they are always coded to 8. They are:

00060 Cervical Lymph Nodes, Occult Head and Neck
00118 Pharynx Other
00119 Middle Ear
00128 Sinus Other
00140 Melanoma Head and Neck
00150 Cutaneous Carcinoma Head and Neck
00278 Biliary Other
00288 Digestive Other
00358 Trachea
00370 Pleural Mesothelioma
00378 Respiratory Other
00458 Kaposi Sarcoma
00478 Skin Other
00551 Ovary
00552 Primary Peritoneal Carcinoma
00553 Fallopian Tube
00558 Adnexa Uterine Other
00559 Genital Female Other
00598 Genital Male Other
00638 Urinary Other
00650 Conjunctiva
00680 Retinoblastoma
00690 Lacrimal Gland
00698 Lacrimal Sac
00710 Lymphoma Ocular Adnexa
00718 Eye Other
00721 Brain
00722 CNS Other
00723 Intracranial Gland
00770 NET Adrenal Gland
00778 Endocrine Other
00790 Lymphoma
00795 Lymphoma (CLL/SLL)
00811 Mycosis Fungoides
00812 Primary Cutaneous Lymphoma non MF
00821 Plasma Cell Myeloma
00822 Plasma Cell Disorders
00830 Heme/Retic
99999 Ill-Defined Other

This article was in the planning stages prior to the excellent LVI information given at the recent NAACCR webinar, "Coding Pitfalls 2020." If you did not have a chance to attend live, it is not too late to sign up for the recorded version here:

https://forms.office.com/Pages/ResponsePage.aspx?id=ZHgwmpg-CE-5CnKLYs8yxcVPSGgHreZNrIbLpZpBwxRUMTAzVk9GQUlKMEtVSlkyVkQ0Vk1KUlFLWi4u

Thirty-Three

By Leslie Dill

The number thirty-three represents many different things. Just to name a few, there are thirty-three vertebrae in a normal human spine. Most bird eggs gestate in thirty-three days. Arsenic is the 33rd element of the periodic table of elements.

To the OCCR, thirty-three represents the daily average of lookups that our team specialists perform to verify discrepancies found in abstracts, such as incorrect address, social security number, misspelled names, date of birth or death, etc. Typically this is due to abstractor typing errors or the transposition of numbers or letters. Each of these discrepancies must be verified by running a search in CLEAR, an investigational software.

Once the correct information is identified, the records can be corrected and consolidated into one accurate patient record. Unfortunately, the amount of time spent performing this task seems to be growing. Please spend an extra minute or two reviewing data items to ensure accuracy before uploading cases. Help the OCCR maintain Oklahoma's gold certification status.

Text Documentation

by Barbara Murray, AAS, CTR

Hello fellow cancer reporters! The subject of text documentation is so vitally important to the cancer registry field that we just cannot stop talking about it! Job duties at the Oklahoma Central Cancer Registry (OCCR) include consolidating cancer information from multiple facilities into one patient abstract. Discrepancies in data from one facility to another are common. Clear documentation supporting **your** codes helps us unravel the patient's true and accurate cancer journey. Let's talk about that. First, some ground rules:

- Abbreviations are **welcome** and **encouraged** as long as they are interpretable. Use NAACCR approved abbreviations when possible. If you want to abbreviate something **not** on the list, use common sense. Use the first half of the word, such as invol for involvement, or leave out unnecessary vowels such as ft for foot. Do **not** include acronyms that you devise. If an acronym is on the abbreviation list, use it; otherwise, be more specific. http://datadictionary.naaccr.org/default.aspx?c=17&Version=21

- Do **not** copy and paste text from the medical record into an abstract. The data may look correct to you, but imbedded formatting within the text may not translate once uploaded, making the text unreadable.

- Do **not** include useless information. Stick to information specific to the reported tumor. Example: A patient with colon cancer has a CT of the chest to look for lung mets. The radiologist reports that the patient has an old collarbone fracture. The radiologist included the information because she reports all findings; however, it is not pertinent to this patient's colon cancer and should not be included in the abstract text.

- Do **not** repeatedly copy and paste the same information in multiple text fields. Each text field has a specific purpose and should have unique information.

- **Do** be thorough, but be succinct.

- **Do** document how the initial diagnosis was made and where it was made. Many times a diagnosis is made by imaging at a facility that reports the diagnosis, and then the patient goes to another facility for biopsy. The cancer registry at the facility performing the biopsy may not know there was a clinical diagnosis already, and will report the diagnosis date and place of diagnosis from their pathology report. These types of discrepancies can easily be sorted out at OCCR if the information has been documented.

The focus of this article is to explain the layout of text fields and what they mean. Software vendors may differ in the layout and arrangement of text fields; however, text fields are standard regardless of which software your facility uses. The best way to improve your text documentation is to complete the text fields first and then abstract from what you have documented. This may seem awkward at first, but if you persist, you will soon wonder how you ever abstracted any other way. I promise! Improvement in text documentation will occur naturally over time when using this abstracting method. Abstracting from your text will highlight areas you have neglected to document. You will then have to go back to the medical record to find the missing information. After this happens a few times, you will begin to incorporate accurate, complete text into your abstract.

Some software providers have a separate tab for documenting all text in one place. Rocky Mountain software, for example, has a different layout, but the same fields are all present. Physical exam, X-ray/Scans, Scopes, Lab, and Operative Procedure text fields are what happened along the way from suspicion of cancer through diagnosis and staging. Pathology, Primary Site, Histology, and Staging text fields are for reporting the results of the workup. The next grouping of fields document the treatment prescribed and/or given to the patient. The primary differences between the Operative Procedures and Surgery text fields is that Operative Procedures falls into the diagnosis and staging section and Surgery is in the treatment section. Document findings from operative reports and biopsies in Operative Procedures for diagnostic and staging purposes, and document the extent of primary site surgery in the Surgery field. The remaining fields are for documenting demographic type information. I hope these tips will soon have you "texting" like a pro!

Researching for the Cure

by Julie Bennett, BS, RHIT

Across several countries, October has become known as: ***"National Breast Cancer Awareness Month"*** (NBCAM).

It was created out of a collaboration between a variety of sponsors to raise awareness and gain funding for research for a cure for breast cancer.

The National Cancer Institute (NCI)-funded researchers are working to advance the understanding of how to prevent, detect, and treat breast cancer. They are also looking at how to address disparities and improve quality of life for survivors of the disease.

Breast cancer is one of a few cancers for which an effective screening test, mammography, is available. MRI (magnetic resonance imaging), ultrasound, and clinical breast exams are also used to detect breast cancer, but not as routine screening tools. Two concerns in breast cancer screening, as in all cancer screening, are the potential for diagnosing tumors that will not become life-threatening (over diagnosis) and the possibility of receiving false-positive test results.

The mainstays of breast cancer treatment are surgery, radiation, chemotherapy, hormone therapy, and targeted therapy. But scientists continue to study novel treatments and drugs, along with new combinations of existing treatments.

It is now known that breast cancer can be divided into subtypes that respond differently to various types of treatment. The three main clinical subtypes of breast cancer are:

- **Hormone receptor (HR) positive**. HR-positive breast cancers are those that contain the estrogen receptor (ER) and/or progesterone receptor (PR). These cancers grow in response to these hormones and can be treated with hormone therapies.
- **Human epidermal growth factor receptor 2 (HER2) positive**. HER2-positive breast cancers are those that have high amounts of the HER2 protein; they can be HR positive or HR negative. These cancers can be treated with therapies that target HER2.
- **Triple-negative breast cancer**. Such cancers do not contain ER, PR, or HER2.

As we learn more about the subtypes of breast cancer and their behavior, we can use this information to guide treatment decisions.

The programs listed below are just a small sampling of NCI's research efforts in breast cancer. The Breast Specialized Programs of Research Excellence (Breast SPOREs) are designed to quickly move basic scientific findings into clinical settings. The Breast SPOREs support the development of new therapies and technologies, and studies to better understand tumor resistance, diagnosis, prognosis, screening, prevention, and treatment of breast cancer.

The NCI Cancer Intervention and Surveillance Modeling Network (CISNET) focuses on using modeling to improve our understanding of how prevention, early detection, screening, and treatment affect breast cancer outcomes.

The Confluence Project, from NCI's Division of Cancer Epidemiology and Genetics, will develop a research resource that includes data from thousands of breast cancer patients and controls of different races and ethnicities. This resource will be used to identify genes that are associated with breast cancer risk, prognosis, subtypes, response to treatment, and second breast cancers.

The goal of the Breast Cancer Surveillance Consortium (BCSC) Exit Disclaimer, an NCI-funded program launched in 1994, is to enhance the understanding of breast cancer screening practices in the United States and their impact on the breast cancer's stage at diagnosis, survival rates, and mortality.

Each of us has gained an awareness and knowledge of cancer and its effects. We never know when something we have read or heard will help out a family member or friend.

For more information: https://www.cancer.gov/types/breast/research

Portions of article reproduced with permission from NCI

The Buzz Among Researchers

by Judy Hanna, HT(ASCP), CTR

Education and knowledge are what make it possible for us as registrars to maintain the quality and commitment to continue to document the course of cancer for disease and development. Registrars are expected to provide a high level of data accuracy and completeness with minimal time and staff. This expectation leaves little time for educational opportunities. To assist with that, OCCR would like to provide a sampling each quarter of the most current published research articles that we feel may be of interest to the registrars in our community.

How Do Tumor Cells Divide in the Crowd?

Date: September 2, 2020

Scientists led by Dr. Elisabeth Fischer-Friedrich, group leader at the Excellence Cluster Physics of Life (PoL) and the Biotechnology Center TU Dresden (BIOTEC), studied how cancer cells are able to divide in a crowded tumor tissue and connected it to the hallmark of cancer progression and metastasis, the epithelial-mesenchymal transition (EMT).

Most animal cells need to become spherical in order to divide. To achieve this round shape, the cells must round up and deform their neighboring cells. In a growing tumor tissue, the tumor cells need to divide in an environment that is becoming more crowded than the healthy tissue. This means that the dividing tumor cells likely need to generate much higher mechanical forces to round up in such a densely packed surrounding. Yet, tumor cells seem to be adapted to overcome these difficulties. Scientists led by Dr. Elisabeth Fischer-Friedrich were curious how do the tumor cells gain this enhanced ability to deal with the crowded tumor environment?

The researchers found that the EMT could be one of the answers. What is it exactly? "EMT or epithelial-mesenchymal transition is a hallmark of cancer progression," says Kamran Hosseini, PhD student who performed the experiments. It is a cell transformation during which tumor cells lose their asymmetric organization and detach from their neighbors, gaining the ability to migrate into other tissues. This, together with other factors, allows tumors to metastasize, i.e., move into the blood and lymphatic vessels and ultimately colonize other organs.

"So far, EMT has been mainly linked to this enhanced cell dissociation and cell migration. Our results suggest that EMT might also influence cancer cells by promoting successful rounding and cell division. These results point towards a completely new direction of how EMT could promote metastasis of carcinoma in the body," explains Kamran Hosseini.

Just as we test the ripeness of the fruits by squeezing them gently with our hands, the scientists examined the mechanical properties of individual human cells. Except, they squished the cells using an atomic force microscope. This state-of-the-art setup measured properties such as cell stiffness and cell surface tension before and after the EMT. In addition, the group of Dr. Elisabeth Fischer-Friedrich in collaboration with Dr. Anna Taubenberger (BIOTEC, TU Dresden) and Prof. Carsten Werner (IPF, Dresden) cultured mini-tumors and trapped them inside elastic hydrogels to check how mechanical confinement affects cell rounding and division of tumor cells.

The authors identified changes in rounding and growth of the tumor. EMT influenced the cancer cells in two contrasting ways. The dividing tumor cells became stiffer while surrounding non-dividing cells became softer. Furthermore, the researchers found hints that the observed mechanical changes could be linked to the increased activity of a protein called Rac1, a known regulator of the cytoskeleton.

"Our findings will not only provide important results to the field of cell biology but may also identify new targets for cancer therapeutics," says Dr. Elisabeth Fischer-Friedrich.

This study was founded by the German Research Foundation (DFG) and performed in collaboration with the Light Microscopy Facility (LMF) of the CMCB Technology Platform at TU Dresden. Dr. Elisabeth Fischer-Friedrich is a core group at the newly formed Physics of Life Cluster of Excellence (PoL) at TU Dresden.

Technische Universität Dresden. "How do tumor cells divide in the crowd?." ScienceDaily. ScienceDaily, 2 September 2020. <www.sciencedaily.com/releases/2020/09/200902101814.htm>.

South Central Cancer Registrars Associations 2020 Regional Webinar Series

by Lisa Fulkerson, RMA

Covid-19 has taught us many things so far in 2020 such as thinking outside the box and being open to new ways of doing things.

This year's regional conference will be virtual. The conference is free to Oklahoma, Louisiana and Arkansas Cancer Registrars Association members and just $25 for non-members. While the planning committee is still finalizing the details, it has been confirmed that favorites, Dr. William Dooley and Denise Harrison, will be present to share their great wealth of knowledge.

The conference will take place over several days at the request of members. The dates are as follows:

Fri, Oct 07, 2020 9:00 AM CDT

Fri, Oct 16, 2020 1:00 PM - 3:00 PM CDT

Wed, Oct 21, 2020 12:00 PM - 1:00 PM CDT

Wed, Oct 21, 2020 1:00 PM - 1:30 PM CDT

Thu, Oct 22, 2020 1:00 PM - 3:00 PM CDT

Fri, Oct 23, 2020 12:00 PM - 1:00 PM CDT

Thu, Oct 29, 2020 12:00 PM - 1:30 PM CDT

Fri, Oct 30, 2020 1:00 PM - 3:00 PM CDT

In additional to all of the great material we will conquer together, a one hour class for registrars preparing for the CTR exam will be offered. Continuing education (CE) hours will be awarded.

As mentioned before, the education committee is still working to finalize the agenda. Please keep an eye out for emails for more details and information. Also, you will receive an email from Registry Partners with details for registration.

This is a great opportunity for us to grow and learn even though it is not exactly as we had planned. Albert Einstein once said, "The measure of intelligence is the ability to change." Covid-19 and 2020 are just opportunity to increase our intelligence.

South Central

Cancer Registrars Associations

2020 Regional Webinar Series

Oklahoma Central Cancer Registry

Oklahoma State Department of Health
Center for Health Statistics
1000 NE 10th St., Room 807
Oklahoma City, OK 73117-1299

http://occr.health.ok.gov

OCCR Staff Directory
405-271-9444

Alexandra Feld, MPH, ext. 57131

Barbara Murray, CTR, ext. 55720

Christy Dabbs, AA, CTR, ext. 57121

Judy Hanna, HT (ASCP), CTR, ext. 57148

Julie Bennett, BS, RHIT, ext. 57138

Kerri Torgler, AAS, RHIT, ext. 57108

Leslie Dill, ext. 57120

Lisa Fulkerson, RMA, ext. 57119

Paula Marshall, BBA, CTR, ext. 57006

Funding is provided by the Centers for Disease Control and Prevention (CDC) and the National Program of Cancer Registries, grant #1 NU58DP006285-03-00, Center for Health Statistics, Oklahoma State Department of Health (OSDH).

This publication was issued by the Oklahoma State Department of Health (OSDH), an equal opportunity employer and provider. A digital file has been deposited with the Publications Clearinghouse of the Oklahoma Department of Libraries in compliance with section 3-114 of Title 65 of the Oklahoma Statutes and is available for download at documents.ok.gov. September 2020