**ZIP Code and Census Tract Analysis in MOPHIMS**

One eagerly anticipated enhancement of the new MOPHIMS application (MOPHIMS stands for Missouri Public Health Information Management System) features the ability for users to generate custom datasets using ZIP Code or Census Tract level data. Census tract data is available only at the Registered user level, so if you've not yet signed up this might be the deciding factor! We'll walk through some scenarios using ZIP Codes as the example, but this guidance is largely applicable to the census tract data, as well.
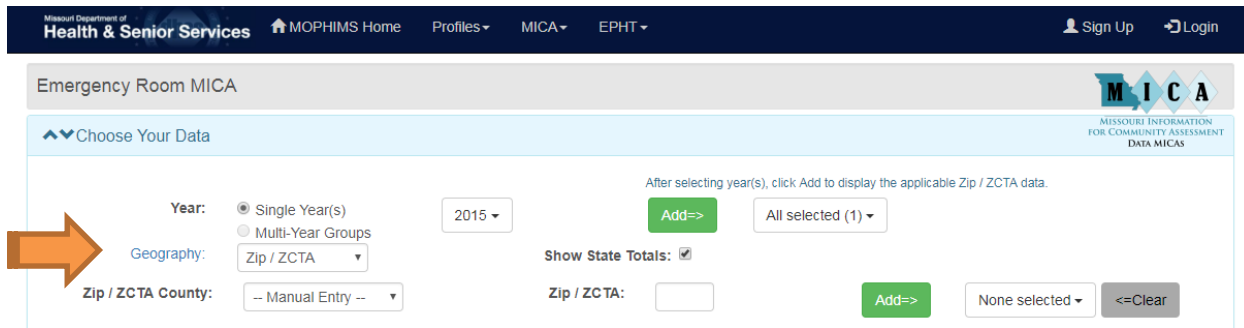
There are a few things to note before you trot down this path of generating ZIP Code level data. First, make sure that the data years you are selecting do not cross the 2010 boundary. Because of geographical changes associated with the US Census, MOPHIMS will only allow users to group data for years 2001-2010 or 2011-most recent. If you know that there have been no major shifts in boundaries for the areas you're interested in, go ahead and compare away. Just keep in mind that you'll just have to run two queries to do so. Next, those green 'Add' buttons will come in very handy. Make sure to click them after you choose your data year ranges and after you make initial ZIP Code selections, or MOPHIMS won't know that you're finished.

There are several ways to generate ZIP Code level data: 1) users can choose all (or a selection) of ZIP Codes for a specific county of interest; 2) users could generate a very large table that includes every ZIP Code in the state; 3) users can manually key in ZIP Codes; or 4) users can copy/paste a set of ZIP Codes into MOPHIMS from an outside application.

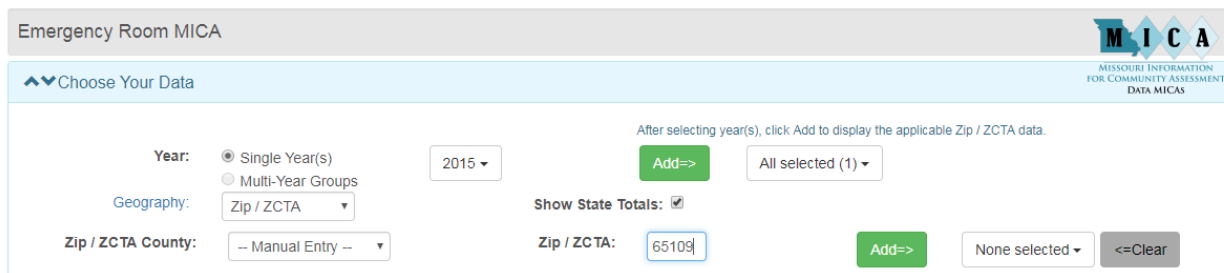**#1- I'm only interested in the zip codes that fall in my county.**
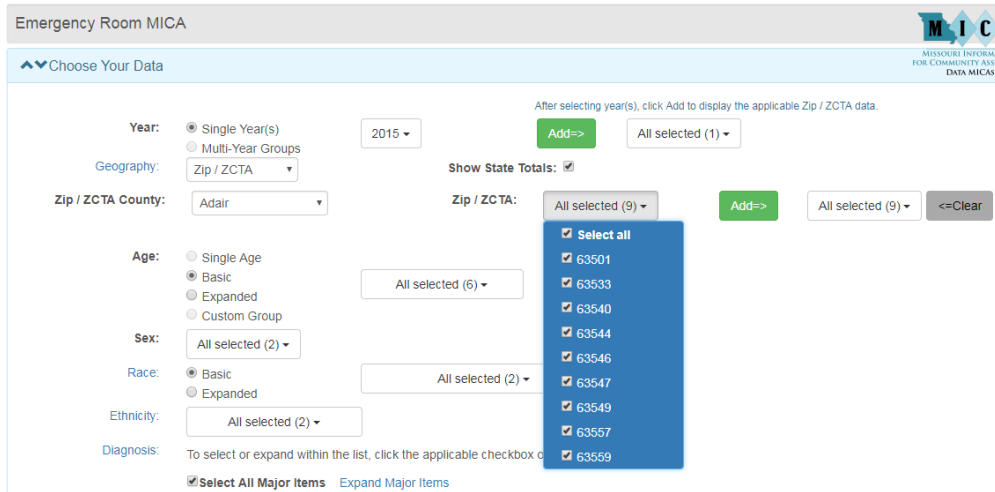
This option is good if a user only needs data for the ZIP Codes of their county. Select a specific county from the Zip/ZCTA County dropdown and make choices in the ZIP list. Keep in mind- MOPHIMS will grab every ZIP in your county and display all of the data for that geography, even if only a piece falls within county boundaries. (For example, ZIP 63549 is part of both Adair and Macon Counties.) The ensuing data table will show the count for the entire ZIP Code, not just the Adair County piece.

#2- Give me everything!
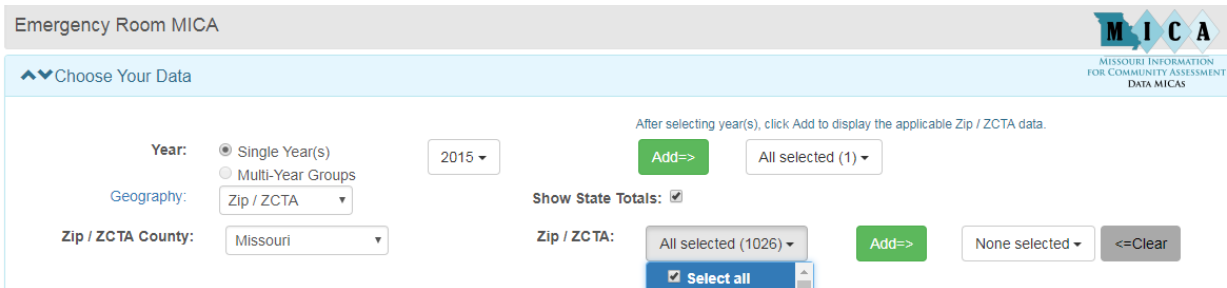
If a user is working on a project that is doing aggregation or comparison of ZIP Codes, it could be useful to download everything at once and export the data to Excel. To do so, users can simply 'Add' all 1,026 Missouri ZIP Codes by choosing 'Missouri' from the Zip/ZCTA County.

#3- I only want a few ZIP Codes and I know them off the top of my head.

Users who are only interested in data from a very few ZIP Codes can easily access that information by choosing 'Manual Entry' in the Zip/ZCTA County box and then keying in the ZIPs in the text box that appears. Don't forget to click 'Add'!

#4- I have a list of ZIP Codes, but it is too long to manually type and I don't need EVERYTHING!
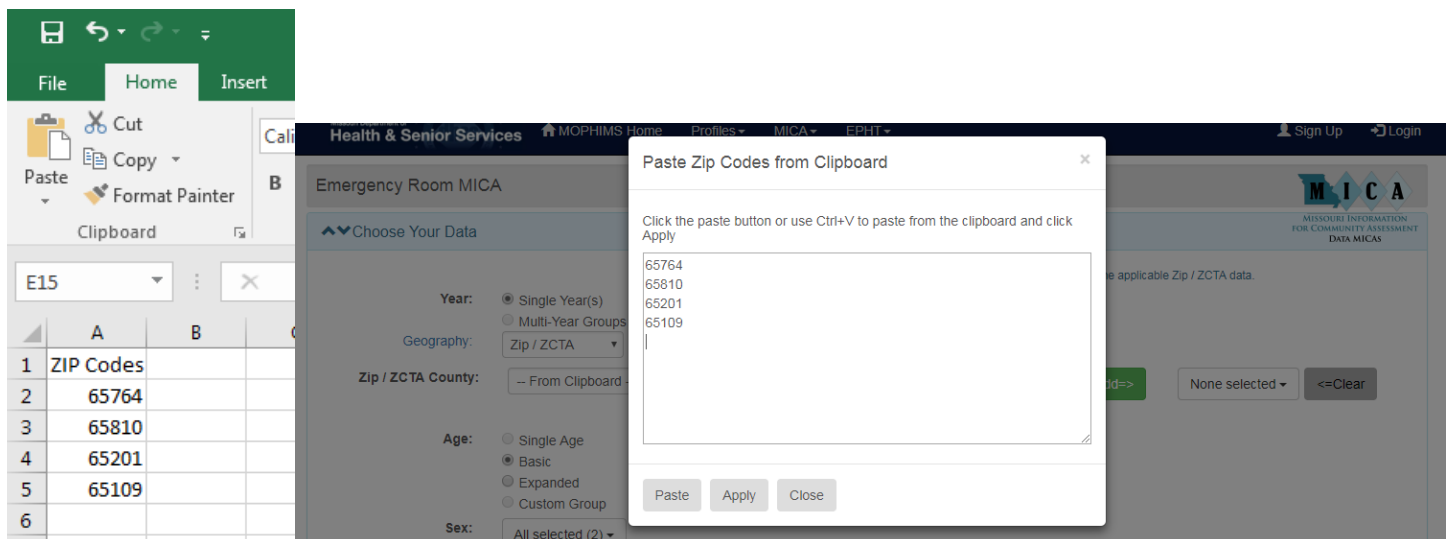
MOPHIMS has an option for those users who would like to copy/paste a list of ZIP Codes from another program into the system. Choose 'From Clipboard' in the Zip/ZCTA County dropdown and then use the text box to paste the relevant data. Most carriage returns will work in the MOPHIMS system. Once a user clicks 'Apply', they can close the pop up box.

Users should remember to choose 'Geography' as either the Row or Column variable when building a table so that they can see the individual ZIP Code or Census Tract breakouts. Also, don't be alarmed when no rates are shown on the table. Due to the high error rates of small area population estimates, rates are not shown in MOPHIMS at these granular geographic levels.

Public Health Spotlight

Chelsea Fischer is the newest member in the Bureau of Health Care Analysis and Data Dissemination team. She is a Research Analyst I, who joined us in May of this year. In this position, Chelsea will serve as the primary data abstractor for the Enhanced State Opioid Overdose Surveillance (ESOOS) project, the purpose of which is to provide more timely and comprehensive data on fatal and nonfatal opioid overdoses. She is very enthusiastic about this role since she will be working in the background to make sure Missouri opioid data is readily available at the right time to fight this epidemic.

Chelsea graduated from the University of Missouri in May of 2018 with Bachelors in Anthropology and a minor in Art history. While attending Mizzou, Chelsea had the opportunity to complete two internships. The first was with the State Historic Preservation Office where she did outreach to educate the public on historic preservation throughout Missou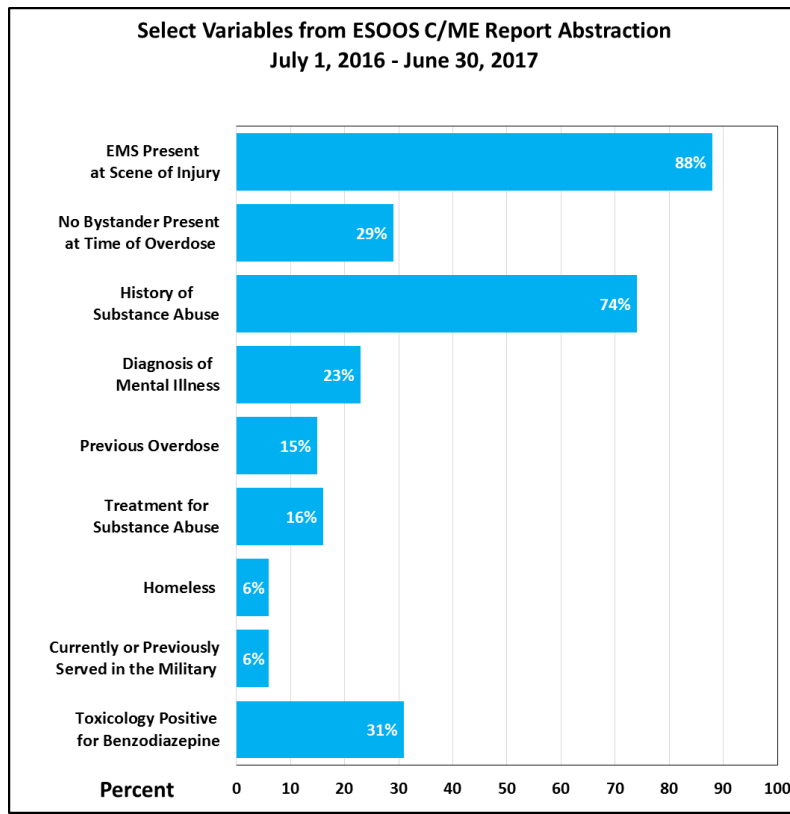ri. The second was with the Boone County Historic Museum where she learned a ton about the ins and outs of museums. Prior to her current role, she also held a Research Assistance position with the Department of Conservation where she worked with surveys and data in their Resource Science Division. What a busy bee!☺

When asked what drew her to the field of public health and what that transition has been like, she said, "I've always been interested in humans and the different aspects of our lives, and a great way to gain insight into that is through the data that we work with." She continued to say, "The great people that I have worked with have made the transition from 'college life' to 'working life' a lot easier than I would have expected."

Chelsea was also willing to share her long-term goals: "I hope to someday be able to impact others with the work that I do, whatever work that may be. If l could make a difference in at least one person's life, I would be happy."

Outside of work, you will either catch Chelsea spending time outside with her beagle Cooper, watching her favorite sports team, or reading a good book. Currently, she is busy wedding planning as she is getting married at the beginning of December. She could not be more excited about this next step in her life. Welcome to the team Chelsea, we are happy to have you!

Two New Datasets-
Enhanced Opioid Overdose and Violent Death Surveillance in Missouri (PART I)

In 2016, the Missouri Department of Health and Senior Services (DHSS) received two grants, one related to opioid morbidity and mortality surveillance and the other related to violent death reporting. In some ways, these two grants have key similarities, but they also have some major differences. This is the first in a three part series where we introduce the grant programs and discuss some data related products that will be available. The Enhanced State Opioid Overdose Surveillance (ESOOS) grant is the first of the grants we will discuss. In the current publication and the next issue, we will introduce aspects of the ESOOS project, and in a future edition we will highlight the National Violent Death Reporting System (NVDRS).

For this issue, we will share some of the work being done on the mortality side of the equation and in the next edition we will highlight the morbidity (emergency room visits) portion of the project. The mortality, or death, side of the ESOOS grant is in some ways the most unique part of the project. The grant requires BHCADD to work with county coroners and medical examiners (C/MEs) to collect investigation and toxicology reports for suspected opioid overdose cases. Exceptions are made for opioid related homicides and suicides as they are captured by NVDRS. Analysts here at the Department, including Chelsea (highlighted above in this issue's Public Health Spotlight), identify relevant information (what we call 'abstract') and enter that abstracted material into a web-based database maintained by CDC where de-identified records are stored. The toxicology portion of the C/ME report provides specific information about the drug or drug combinations used. The investigation reports includes information about various risk factors such as mental illness, past or current substance abuse and other social/family environmental issues, some of which is analyzed below. These are important pieces to solving the puzzle that is the opioid crisis. It is also noteworthy that this information is not contained on the death certificate or other systems the Department would normally have the ability to access. As such, being able to obtain and analyze this data really has the potential to unlock valuable insights that might not otherwise be well understood. After the data is abstracted, CDC and BHCADD have the ability to generate reports and conduct further analysis at the state, regional or county level.

Participation in the program is voluntary; although coroner and medical examiner offices are provided a small reimbursement for every report submitted to the Department. Timeliness is a key factor in the project. Abstracting for a 6-month block of time (January through June 2017) must be completed no later than 8 months after the end of the reporting period (February 2018). Currently, we have 53 counties participating in the program and these counties make up over 85% of all qualifying suspected opioid deaths statewide.

While we are still in the relatively early stages of collection, Missouri has a full year of data to analyze. From the toxicology analysis of ESOOS cases, we know that in Missouri, in the first half of 2017, 73% of

opioid related deaths (with an unintentional/undetermined manner of death) involved fentanyl. This was up from 60% in the second half of 2016. Likewise, the chart below provides the incidence percentages for a number of risk factors available through the project.

Select Variables from ESOOS C/ME Report Abstraction
July 1, 2016 - June 30, 2017

Variable	Percent
EMS Present at Scene of Injury	88%
No Bystander Present at Time of Overdose	29%
History of Substance Abuse	74%
Diagnosis of Mental Illness	23%
Previous Overdose	15%
Treatment for Substance Abuse	16%
Homeless	6%
Currently or Previously Served in the Military	6%
Toxicology Positive for Benzodiazepine	31%

Data Updates

The following table lists the most current data years available on MOPHIMS MICAs. Please note much of the data from the Data MICAs feed the Community Data Profiles, which have also been updated.

MICA	Most Recent Data Year Available	MICA	Most Recent Data Year Available
Birth MICA	2016	Population MICA	2016
Cancer Incidence MICA	2014	Pregnancy MICA	2016
Chronic Disease Deaths MICA	2016	Preventable Hospitalization MICA	2015
Chronic Disease Emergency Room MICA	2015	Procedures MICA	2015
Chronic Disease Inpatient Hospitalization MICA	2015	TANF MICA	2012
Death MICA	2016	WIC Prenatal MICA	2015
Emergency Room MICA	2015	WIC Postpartum MICA	2015
Fertility and Pregnancy Rate MICA	2016	WIC Linked Prenatal – Postpartum MICA	2015
Injury MICA	2015	WIC Infant MICA	2015
Inpatient Hospitalization MICA	2015	WIC Child MICA	2015
Mo Healthnet (Medicaid) MICA	2016		

Training Updates

We have had quite a busy spring/summer hitting the road on the MOPHIMS Health Data Training Tour. Since March, we have traveled to Branson, Sikeston, Moberly, and just down the road to the Missouri Technical Training (MOTEC) center in Jefferson City. Over 75 terrific individuals have come together over eight days with the shared goal of learning how to obtain and utilize Missouri's health statistics to positively impact their communities. We've heard awesome stories about how our users are leveraging this information to do good—in Branson hospital staff are using the data to improve patient outcomes, our Sikeston crew told us how much this information impacts their funding streams, and the Moberly group featured some university staff who are planning on incorporating MOPHIMS into their informatics and public health curriculums.

Our road show usually takes a break during the winter months, but we have one more training scheduled in the St Louis area in November. Details are below. While on hiatus, our team plans on revising training materials and working up new exercises, examples, games, and other super-secret excitement to incorporate into the courses next spring. Do you have suggestions? Is there something you would love to see featured in our health data trainings? Let us know at MOPHIMSUserGroup@health.mo.gov!

Location:	Course 1-MOPHIMS: Introduction to Profiles and MICA	Course 2-MOPHIMS: Health Data Analysis	Registration Link
BJC- The Commons 4249 Clayton Ave St Louis, MO 63110	November 13 (Deadline: Nov 7) Limit: 22 participants	November 14 (Deadline: Nov 7) Limit: 22 participants	**https://www.surveymonkey.com /r/7PJRDV2**

Q & A

I am interested in obtaining Partner level access on MOPHIMS. What steps do I need to take in order to become a Partner level user?

Partner level access to MOPHIMS will allow users to view data that is suppressed due to confidentiality purposes. This data can be helpful to Local Public Health Agencies (LPHA) for program planning and intervention purposes in their respective geography. Currently, Partner level access is available only to LPHA professionals.

In order for individuals from LPHAs to obtain access, your first step would be to ensure you have a free MOPHIMS Registered level account. The step by step directions can be found by following the link on the MOPHIMS home page at the bottom left hand side.

This will provide instructions on how to sign up and should take no longer than five to ten minutes. Below is the link to the MOPHIMS Home page:

https://webapp01.dhss.mo.gov/MOPHIMS/MOPHIMSHome

Additional Access for Appropriate LPHA Staff

As intimated above, LPHA employees who need access to unsuppressed data can request Partner level access. After you have a MOPHIMS Registered level account, LPHA staff can submit an Automated Security Access Processing (ASAP) request to receive additional user access as a Partner level user. The ASAP page is located on the MODHSS site. The link below will take you directly to the ASAP page:

http://health.mo.gov/information/asap/

From this page you can select the appropriate user manual. For example, if you are with a Local Public Health Agency you can select the LPHA User Manual in order to obtain detailed information over how an LPHA employee should register for and submit an ASAP request.

You can also find the ASAP Login on this page. After logging into ASAP, you will then be able to submit your request for Partner level access. This access request may take up to two weeks to fulfill or to deny. If at any time during this process you have trouble, please remember the BHCADD team is always here to help. Feel free to contact us at any point and we will do our best to assist in this process.

Remember, Partner level access is currently only available for appropriate LPHA staff.

Practice Exercise

The Bootheel Region is one of the Missouri regions with high teenage pregnancy rates. As a result, a nonprofit organization in the Bootheel has gotten a grant to effectively promote adolescent health and reduce teenage pregnancy and other associated risks. Answer the following questions, using the Women's Reproductive Health Profile and the RPC Region geography.

a) What is the Teen Pregnancy rate Age 15-17 in the Bootheel region? _____

b) How does this rate compare to the state rate? _____

_____

c) The nonprofit organization want to start deciding on which of the six Bootheel counties to focus on to effectively allocate resources. It decides to allocate its funds to counties that have teen pregnancy rates statistically significantly higher than the state rate. How would they go about finding those counties? (Hint: Counties that fall in the Bootheel Regional Planning Commission region are Dunklin County, Mississippi County, New Madrid County, Pemiscot County, Scott County, and Stoddard County.

_____

_____

_____

d) Other than statistical significance, what other metric could they use to provide a general idea of how a particular county ranks for teen pregnancy compared to the rest of the counties in Missouri?

_____

e) Which counties in the Bootheel region fall in the fifth quintile ranking?

_____

_____

f) How has teenage pregnancy rate changed overtime in the Bootheel RPC Region?

_____

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Final Thoughts

As of this writing we have now completed 9 of the full two-day MOPHIMS trainings since the new layout and display screens were introduced during the spring and summer of 2017. The first of these were held in Jefferson City in December 2017 and the most recent was also in Jefferson City at the beginning of September. I had reservations about what the public reaction would be considering the previous system had been functioning successfully for many years. But I am both relieved and pleased to report that the overwhelming feedback has been positive. Most people feel the query screens are much easier to use and people love the fact that the query page and output screens are now together. We fully realize that not everything is functioning as we would like and we continue to work with our IT staff to make modifications that will improve the ease of use and utility of the tool. Your feedback is crucial for us to make the necessary adjustments. In the next few months we hope to roll out several new functions including to, name just a couple: a search box so that people can more easily find the data they are needing and table headers that lock in place so that users aren't having to scroll up and down to see what column of data they are looking at.

Thanks to everyone in Kansas City, St. Louis, Moberly, Branson and Sikeston, and of course Jefferson City, who assisted with providing a computer lab and provided hospitality to us this year. I've included couple of photos from our travels in Sikeston (above: Three Rivers College at Sikeston, MO) and St Louis (right: The Old Court House in St. Louis, where the Dred Scott case was decided) this year. My new favorite trivia question is to ask people what three rivers are included in the Three Rivers College at Poplar Bluff and Sikeston?

About the MOPHIMS User Newsletter Group

The MOPHIMS User Group Newsletter was created in response to user requests for communication on updates to the MICA system, descriptions of new features, additional practice exercises, announcements of training opportunities, and any other new information about data that might help them perform their jobs more efficiently.

Newsletters will be published on a semi-annual basis. If you have ideas for content, please send them to Andrew.Hunter@health.mo.gov or Whitney.Coffey@health.mo.gov. We would especially like to feature stories describing your success at completing projects or obtaining grants using the MICA tools as well as interviews with public health professionals about your duties and how you use MICA to accomplish them.

Past issues are available at http://health.mo.gov/data/mica/MICA/newsletters.html.

Contributors:

Andy Hunter, Whitney Coffey, Kristina Johnson, Teresia Karuga, and Evan Mobley

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How to Sign Up or Opt Out

If you have enjoyed this newsletter, please feel free to share it with your colleagues and community partners. We encourage them to sign up for the MICA User Group by sending an email to MOPHIMSUserGroup@health.mo.gov with the subject line MOPHIMS User Group. This will let us know to send newsletters to them directly so they do not miss any information. Also, we may occasionally distribute time-sensitive information on topics such as training opportunities via e-mail if the newsletter is not scheduled for publication prior to a registration deadline. Finally, the MOPHIMS User Group list helps us track the types of organizations using the tools, which is one of our performance measures.

If you would like to opt out of the MOPHIMS User Group, please send an e-mail with Unsubscribe in the subject line to MOPHIMSUserGroup@health.mo.gov. PLEASE NOTE: Depending on your position title, you may still receive other types of e-mail messages from us. For example, we are requested to send training information to all LPHA Administrators, even if they have unsubscribed from the MOPHIMS User Group.

Contact Information

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