NOSORH

National Organization of
State Offices of Rural Health

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NOSORH Comments – Notice of Inquiry Related to Mapping Broadband Health in America Platform

Introduction

On October 20, 2023, the Federal Communications Commission (FCC) published a Notice of Inquiry (NoI) seeking public comment on ways that the Commission can further expand, refine, and enhance its *Mapping Broadband Health in America* online platform. That platform was developed in response to the mandate in the *Data Mapping to Save Moms' Lives Act* - Public Law 117-247. The platform was developed to help decisionmakers identify where telehealth resources are critically needed - i.e., those areas where maternal mortality rates and/or severe maternal morbidity rates are especially high and where broadband access and/or adoption are lower. The NoI seeks comments on how the platform could be enhanced and expanded to better meet the needs of current and potential users.

In this communication, the National Organization of State Offices of Rural Health (NOSORH) provides input to the FCC for the NoI. NOSORH was established in 1995 to assist State Offices of Rural Health (SORHs) in their efforts to improve access to, and the quality of, health care for over 60 million rural Americans. All 50 states have a SORH, and each SORH helps their state's rural communities to build effective health care delivery systems. NOSORH and its members work closely with rural providers nationwide, including Critical Access Hospitals, Rural Health Clinics, Federally Qualified Health Centers, and rural hospitals. NOSORH brings its knowledge of rural essential community providers to the provisions of this NoI.

The comments below present NOSORH's perspective on the data needs of rural health policymakers and program managers that could be served by the FCC online platform. The comments also present a delineation of where broadband-enabled telehealth services can best improve pregnancy-related health outcomes. Finally, the comments include several recommendations for how the FCC mapping platform could be enhanced in the future.

NOSORH believes that the issue of maternal mortality is integral to a larger policy and program issue – *pregnancy-related maternal and infant health*. This topic includes prenatal, delivery, and post-partum concerns. Telehealth services, enabled by broadband, can contribute to improvements in maternal and infant (M&I) health and a reduction of health disparities – particularly those disparities which exist between rural and urban areas.

NOSORH is encouraged that the FCC is exploring ways to improve its Mapping Broadband Health in America platform. NOSORH believes that an enhanced and expanded platform can be useful to health service decisionmakers, including those concerned with rural health issues. NOSORH stands ready to provide additional feedback in the future, should the FCC wish to explore these comments in greater depth.

Background: Pregnancy-Related Maternal and Infant Health

NOSORH appreciates the model used by the FCC in its approach to maternal health. The model comprehensively considers *maternal health outcomes*, *health risk factors*, the *social determinants of health,* and the *health care system*. NOSORH's perspective on pregnancy-related M&I health is similar to the model used by the FCC. NOSORH's analysis includes more *maternal health status* outcomes than the FCC model, and also incorporates multiple *fetal and infant health status* factors. NOSORH considers a broader range of *health risk factors*, including *social determinants*, *environmental* factors, *health service* factors, and *rurality* factors. NOSORH's perspective is presented below.

Pregnancy-Related Maternal and Infant *Health Status* Considerations:
NOSORH and health system decisionmakers consider several categories of pregnancy-related M&I health status indicators. These cover different aspects of the prenatal, delivery, and post-partum continuum. Key categories of maternal and infant health status include:

- **Maternal Mortality:** including both *maternal mortality* through the first six post-partum weeks and the broader measure of *pregnancy related death* through the first post-partum year.
- **Maternal High Risk Health Problems During Pregnancy**: identifying pregnancies with diagnoses including gestational diabetes, pre-eclampsia, and eclampsia. NOSORH notes that maternal substance use disorder is a significant high-risk problem for which data is available.
- **Fetal Death:** identifying incidents of unintentional fetal death.
- **Fetal Health/Developmental Problems During Pregnancy**: identifying fetal health diagnoses such as birth defects and genetic anomaly.
- **Neonatal Mortality/Infant Mortality**: including *neonate mortality* – in the first 28 days after birth - and *infant mortality* – in the first year after birth.
- **Neonatal Health/Disability/Developmental Problems**: identifying neonates with these diagnoses.
- **Pre-Term Birth**: including identification of live birth up to 37 weeks after gestation.
- **Low Birth Weight:** including identification of live births of infants below 2,500 grams (5.5 pounds) at birth.
- **Births With Low/No Prenatal Care**: identifying live births with inadequate prenatal care.

There are specific measures and indicators for each of these categories. Most are part of nationwide datasets available from the Centers for Disease Control and Prevention (CDC). The datasets could be incorporated into the FCC mapping platform without significant difficulty. In a subsequent section of these comments NOSORH will recommend many of these datasets for inclusion in the FCC mapping project. NOSORH believes that such enhancements to the FCC

platform will significantly expand its usefulness to pregnancy-related M&I health system decisionmakers.

Pregnancy-Related Maternal and Infant *Health Risk* Factors:

There are multiple risk factors which can be associated with pregnancy-related M&I health disparities. These include *social determinant* factors, *environmental* factors, and *structural factors*. NOSORH considers several specific health risk factors when conducting its analyses. These include:

- **Social Determinants**: including socioeconomic factors shown to correlate with health risk. It should be noted that, in addition to single factor social determinants, there are several *multi-factorial social determinant indexes* combining social determinant measures. Among the more useful indexes are the *Social Vulnerability Index (SVI)*, the *Social Deprivation Index (SCI)*, and the *Area Deprivation Index (ADI)*.
- **Environmental Issues**: including air quality, water, solid waste, and toxic risks in local communities. Environmental risks extend to residential issues such as lead paint and lead water pipe exposures. Natural hazard risks, including climate change related risks, can also be a contributing factor to pregnancy-related M&I health disparities. There are multiple sources of county level data related to these environmental issues, including several datasets compiled by the EPA. The FEMA *Resilience Analysis and Planning Tool (RAPT)* dataset contains several composite subindexes including ones highlighting environmental hazards and risks and climate change related factors.
- **Health System Structural Factors**: including inadequate health services and facilities. Health system decisionmakers consider several risks, including *the lack of delivery facilities*, *inadequate prenatal care services*, and *overall health care workforce shortages*.
- **Rural Considerations**: Rural residents, in general, must travel further to secure access to pregnancy-related M&I services than do urban residents. This is particularly true for specialty high risk services, such as caesarian delivery services, which are more likely to be located outside of small communities. This places rural residents at higher risk for poor pregnancy-related outcomes.

Broadband's Role in Improving Pregnancy-Related M&I Health

Broadband access can play a role in the improvement of pregnancy-related M&I health. Broadband enables the use of telehealth technologies, which can improve access of patients to services and improve connection between M&I service providers. This is particularly important during the pre-natal and post-partum periods.

While telehealth technologies are not a substitute for all face-to-face service encounters, they can be used to supplement those encounters in ways which improve access, service utilization and, ultimately, service outcomes. They are particularly important for rural patients, who face greater transportation-related travel barriers than do urban patients.

Broadband-enabled telehealth services can be used for several types of service delivery to patients. Telehealth can be used to extend:

- **Care Management/Coordination**: providing overall management of both clinical care and supportive services. Telehealth can improve coordination of clinical care by multiple providers. It can also improve the provision of supportive services related to the social determinants of health.
- **Education**: on topics related to pregnancy, self-care, nutrition, delivery, and post-partum concerns. Group birthing classes, post-partum/new mother/parenting education classes, and birthing and post-partum support groups can also be conducted using telehealth technologies.
- **Home Visiting**: regular home visits to first-time mothers and other pregnant persons by nurses, doulas, and community health workers has been demonstrated to have a positive impact on M&I health. Some routine home visits can be conducted using telehealth technologies to increase productivity and reduce costs.
- **Risk Reduction Services**: telehealth services can be used to assist pregnant persons during the prenatal and post-partum periods in management of smoking, alcohol misuse, and substance use disorders – all high health risk considerations.
- **Behavioral Health Services**: the behavioral health of pregnant persons, during both pregnancy and the post-partum period can be supported through the use of telehealth technologies. This approach may be particularly useful in helping new mothers and other pregnant persons deal with issues of post-partum depression.

In addition to improving patient access to pregnancy-related M&I services, broadband-enabled telehealth technologies can also be used to improve coordination and communication between service providers. For example, a primary care physician can use telehealth to coordinate high risk pregnancy prenatal care with specialists in urban centers. Similarly, telehealth can be used to coordinate discharge planning, linking delivery hospitals with primary care providers. This will ensure that mothers, other pregnant persons, and newborns will have continuity of care when they return home. These uses of telehealth are particularly important for rural health, where the coordination of local health care with services located out of the community does not always occur.

Recommendations

NOSORH has several recommendations for the FCC on how the Mapping Broadband Health in America Platform might be enhanced. These are detailed below.

Issue: Expansion of Focus to Pregnancy-Related Maternal and Infant Health

- **Discussion**: Within the mandate of the Data Mapping to Save Moms' Lives Act, the FCC platform has largely focused on maternal mortality, with a limited inclusion of maternal health status problems. This is a narrow focus and does not meet the broader concerns of pregnancy-related M&I health policymakers and program managers. These decisionmakers typically consider the full range of prenatal, delivery, and post-partum factors. These factors are discussed previously in these comments.

- **Recommendation**: NOSORH suggests that subsequent versions of the mapping tool include a broader range of pregnancy-related M&I Health Status and Health Risk indicators. Suggested measures/indicators are discussed in greater depth in the following recommendations.

Issue: Useful Maternal and Infant Health Status Measures

- **Discussion:** A previous section of these comments outlined the range of pregnancy-related M&I Health measures and indicators used by policymakers and program managers. These include measures of fetal health, maternal health, and neonatal/infant health. They include both morbidity and mortality. Useful measures/indicators also include important birth outcomes, including low birth weight and pre-term births. Consideration of this range of indicators is necessary in formulating a comprehensive response to pregnancy-related M&I health issues.

- **Recommendation**: NOSORH suggests that subsequent versions of the mapping tool include a greatly expanded number of pregnancy-related M&I health status measures/indicators. Data for many of these are readily available for U.S. counties, simplifying their inclusion in the mapping effort. Many are compiled into nationwide datasets by the CDC. NOSORH suggests that a full range of maternal, fetal, and neonatal/infant measures be considered.

Issue: Useful Health Risk Measures – Social Determinants of Maternal and Infant Health

- **Discussion**: There are multiple social determinant measures/indicators of importance for pregnancy-related M&I health. NOSORH has found that *composite indexes* combining groups of social determinants are more useable for M&I concerns than individual measures. The Social Vulnerability Index (SVI), identified earlier, is particularly helpful, as it can be disaggregated into four separate subindexes: *socioeconomic factors*, *household factors*, *racial/minority factors,* and *housing/transportation factors*. Each of these separate subindexes can be useful in formulating pregnancy-related M&I health policy and programs.

- **Recommendation**: NOSORH suggests that subsequent versions of the FCC mapping tool include one or more composite indexes reflecting the social determinants of pregnancy-related M&I health. Data for many of these are readily available for U.S. counties, simplifying their inclusion in the mapping effort. NOSORH further suggests that the mapping tool prioritizes inclusion of SVI and its subindexes.

Issue: Useful Health Risk Measures – Health System Structural Problems

- **Discussion**: *Unavailable* or *inadequate* pregnancy-related services – including prenatal care, delivery, and post-partum services – can pose a significant health risk to pregnant persons, fetuses, and newborns. Unfortunately, there are few good direct measures of the availability and adequacy of these services.

  The best data, routinely reported, are data on maternity care 'deserts' – counties with no provider offering obstetric care and no hospital or birthing center offering delivery services. These data are based on regular surveys and reviews of licensing data. Even this has its limits, as it does not take into account access barriers in large counties – typically in the Western U.S. For example, Rio Arriba County in New Mexico has hospital delivery services and personnel in the very south of the county and is not considered a maternity care desert. However, the travel-time from the north of the county to that

hospital is almost 90 minutes, one way. This makes these services inaccessible to pregnant women remote from the hospital.

There is no reliable nationwide assessment of *high-risk* delivery services. Not all hospitals and birthing centers are able, for example, to provide caesarian deliveries or other high-risk procedures. At best, only a subset of delivery facilities can offer these services. Women with high-risk pregnancies are in particular danger of poor outcomes, including maternal mortality. The lack of data on available high-risk delivery services makes it more difficult to assess the extent of health system associated risk.

NOSORH notes that there is no nationwide measure of available prenatal care. While various licensed clinicians can deliver this care, simple clinician counts provide no insight as to whether they are actually delivering such care. A variety of factors influence the decision of clinicians to provide prenatal care, and many of the factors – including the cost of malpractice insurance for this care – cause them to refrain from providing this type of care.

There is indirect data that can be used to infer the availability of prenatal care. Data on the number of births with low or no prenatal care, described previously, is a measure of prenatal care accessibility. A significant percentage of these births are likely in areas with unavailable or inadequate levels of supply. In the absence of direct measurement, it may be possible to use these data in efforts to increase availability.

NOSORH observes that areas with shortages of health care providers are likely to be areas with an inadequate supply of prenatal and post-partum care. It should be noted, however, that Health Professional Shortage Areas (HPSAs), the most commonly used identifier of primary medical and behavioral health care provider shortages, are an *imperfect* measure.

HPSAs are not *comprehensively* designated throughout the nation. There are areas of primary care provider shortage that are not currently identified. In addition, not all HPSAs are *geographically* defined. The majority of primary care and behavioral health HPSAs designate *subpopulations* in an area – such as the low-income population of a geographic area – or *facilities* – such as community health centers. These designations are less useful in identifying areas of overall primary care provider shortage.

- **Recommendation**: NOSORH suggests that subsequent versions of the FCC mapping tool continue to include maternity care desert data from the Area Resource files. NOSORH recommends that the FCC monitor, in the future, for new data releases. Groups like the March of Dimes have begun compiling data related to pregnancy-related health care unavailability and inadequacy. Future data releases would be a good candidate for inclusion in the mapping tool.

  NOSORH also suggests that subsequent versions of the mapping tool include data on primary medical and behavioral health HPSAs, restricted to those HPSAs designated on a geographic basis. NOSORH believes that, even given the limitations of HPSA designation, this information will be useful to policymakers and program managers.

Issue: Useful Health Risk Measures – Environmental Factors

- **Discussion**: There are multiple measures/indicators of environmental risks which can affect pregnancy-related M&I health. These include individual measures and composite indexes which combine several measures. The measures and indexes cover potential environmental toxins as well as natural hazard and climate change related risks.

- **Recommendation**: NOSORH suggests that subsequent versions of the FCC mapping tool include one or more environmental risk factors. NOSORH believes that the FCC should consider available data on air, water, solid waste and toxics risks. NOSORH also suggests that the FCC consider inclusion of data on natural hazard and climate change related risks. Data for many of these are readily available for U.S. counties, simplifying their inclusion in the mapping effort.

Issue: Appropriate Rural Definitions

- **Discussion**: There are several definitions of rural, each definition associated with specific purposes. The definition currently used in the FCC mapping tool reflects the percentage of rural population in each county, with *rural* defined to be consistent with 2019 Census definitions.

  NOSORH notes that the Census has radically redefined rural (non-urban) areas for the 2020 Census. This new definition identifies populations outside of settlements with fewer than 5,000 people where previously it indicated populations outside of settlements with fewer than 50,000. This redefinition is overly restrictive and is not useful for M&I program and policy decisions. This change will also make consistency between the current version of the tool and subsequent versions problematic.

- **Recommendation**: NOSORH suggests that subsequent versions of the FCC mapping tool include ***multiple*** definitions of rural that can be toggled on and off for different uses. NOSORH also suggests that the Federal Office of Rural Health Policy (FORHP) definition of rural be used as one of the map elements. The FORHP definition is inclusive and is used as the basis for many rural health programs.

We appreciate the opportunity to submit comments on this important Request for Information and hope you find value in the recommendations outlined.

Let me know if you have questions, would like discussion, or if I may be of assistance.
Thanks so much.

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