Report on *Identifying Disproportionately Impacted Areas by Cannabis and Drug Prohibition*: Commissioner Questions & Research Team Answers

These questions include all public meeting questions and questions individually asked by Commissioners. They are sub-divided into: (1) RFQ/Process; (2) Report/Study; (3) Study Implications; and (4) Appendix.

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Executive Summary

Introduction

The impetus for a revised study on Areas of Disproportionate Impact (DI) originated from Commissioners Flanagan and Title who were deemed the "Commission Sponsors" of the study. The Commission posted the first Request for Quotes (RFQ) for a study on disproportionately impacted communities on December 9, 2019 and, not finding an acceptable proposal, posted the re-issued RFQ on February 6, 2020. A diverse team of staff reviewed submitted applications and recommended the University of Massachusetts (UMass) for the award, as it met all requirements and featured a diverse, interdisciplinary group of experts in criminal justice, public health, and equity. The Executive Director approved the recommendation on April 15, 2020.

Once awarded the contract, the UMass team collaborated with the Commission's Research Department on the study, and held two meetings with Commissioners to share the study's methodology and in-progress findings. To stay within the bounds of the Open Meeting Law, individual Commissioners sent questions and comments to the Director of Research to field responses and provide information when needed. On February 18, 2021, the team shared a full copy of the report with all Commissioners. On March 11, 2021, the Primary Investigators, Drs. Mark Melnik and Jennifer Whitehill, presented the report at the Commission Public Meeting.

As a result of the March 11 public meetings, Commissioners identified multiple questions for the study team. Answers are below.

RFQ Process Questions

RFQ process questions largely pertained to understanding whether internal Commission policies and procedures surrounding the DI RFQ were conducted through a social justice and racial justice lens. In these answers, we reflect on the questions regarding: (1) the two RFQ processes and the Commission staff involved in drafting, editing, and approving these documents; (2) the submitted proposals, the processes and template for reviewing the proposals and the Commission staff involved in selecting staff reviewers and the staff reviewers; (3) the rationale for National Incident-Based Reporting System (NIBRS) data expertise as identified in the RFQ; and (4) the demographics and areas of expertise of the selected study team.

Report/Study Questions

Report and study questions largely pertain to data limitations. In these answers, we reflect on questions in the following areas: (1) missing data for the City of Lawrence; (2) exclusion of data prior to 2000; (3) the cutoff point used when presenting disproportionate impact scores; (4) economic indicators used in the analytic model; (5) the use of arrest data as the only criminal justice data; (6) the use of Census tracts; (7) the project timeline; (8) the limitations of the previous disproportionate impact study; (9) the analytic model; and (10) the definition of the "War on Drugs."

Implications Questions

Implications questions largely pertain to policy implications, decisions, and stakeholder perceptions. Many of these questions are regulatory decisions that are beyond the scope of the research study team to fully answer, and in these incidences, we respectfully defer to the Commission.

I.   RFQ Process Questions

I.1. Question:

Was this study done with a lens on social justice and racial justice?

I.1. Answer:

Yes. The study and RFQ were originally requested from former Commissioners Flanagan Title. Both Commissioners made significant contributions to the study and emphasized the need for expertise in social justice and public health.

The RFQ begins with: "Vendor will provide the Cannabis Control Commission (herein referred to as "Commission") a study, relevant data procurements, and resulting list of communities disproportionately affected by the 'war on drugs'. The report will inform the Commission's work to repair damage to communities disproportionally affected by cannabis prohibition," [see Tab A]. The Commission assembled a procurement review team including: Adriana Leon, Chief Financial and Accounting Officer; Shekia Scott, Director of Community Outreach and Equity Programming (former); Rebecca Kwakye, Project Coordinator; and Julie Johnson, Director of Research. Independently, each team member ranked the UMass proposal as the best of the proprosals.

The UMass team specifically addressed the War on Drugs through a racial justice lens in text and in its analytic model. The introduction of the report states:

> In June of 1971, Nixon officially declared a "War on Drugs." This campaign aimed to stop illegal drug use and distribution, but had adverse effects on communities of color ("disproportionate impact"). The campaign increased funding for drug-control agencies and created a mandatory prison sentencing for drug crimes. This prison reform led to a disproportionate incarceration rate of people of color for drugs crimes. Many believe this was the intended effect of the "War on Drugs."
>
> In the 1980s, President Reagan leaned into the Nixon era drug policies and took on a "Law and Order" approach to the nation's perceived drug problem. The Anti-Drug Abuse Acts of 1986 and 1988 established punitive criminal sanctions for drug charges including new mandatory minimum sentences for offenses related to most drugs, including cannabis. During the Reagan Administration, drug users were targeted by law enforcement via drug possession charges. Drug control practices targeted Black men in low-income, urban areas leading to a dramatic increase ("disproportionate impact") in the proportion of Black people under correctional control. While some "War on Drugs" and "Law and Order" policies have been discontinued, they have affected many systems and social structures in the U.S., leaving a legacy of impacts that persist through the present day. (pgs. 9-10)

In the UMass team's analytic model, the team also demonstrates a racial justice lens through inclusion of the percent of the population in a particular geographic area that is Black/African

American and/or Latino. The impetus for this variable's inclusion can be found in the following excerpt:

> Additionally, enforcement of drug prohibition has resulted in disproportionately high numbers of arrest and incarceration for Black and Latino individuals. These disparities persist despite the Commonwealth's changing cannabis policies, including cannabis decriminalization, followed by medicinal and adult-use legalization. Because of this situation, it was important to account for the fact that Black and Latino persons experience race-based disparities in drug-related stops, searches, and arrests in the methodology. Further, regardless of race, there are strong correlations between poverty and involvement in drug selling and/or drug use, and after incarceration, many individuals face steep challenges to gain legal employment which can establish cycles of poverty that last generations. (pg. 11).

I.2. Question:

What are the demographics and geographics of the study team who participated in the study?

I.2. Answer:

Scientific research finds that diverse teams produce stronger science. To gauge the diversity of the research team in response to your comment, we gathered information about team members using new criteria established by the National Institutes of Health in their efforts to diversify the scientific workforce.[1] The NIH's criteria for having a disadvantaged background includes individuals who: come from a family with an annual income below established low-income thresholds (i.e., the federal poverty line); who were or are homeless; were in the foster care system; were eligible for free or reduced school lunch program, or who received Special Supplemental Nutrition Program for Women Infants and Children, as a parent or child; have/had no parents or guardians who completed a bachelor's degree; were eligible for Federal Pell grants; or grew up in a U.S. Rural area eligible for Rural Health Grants or designated Low-Income and Health Professional Shortage Areas. For any team members meeting any of those criteria, we indicated "Yes" for disadvantaged background in the table below.

There were two team members who were unavailable or declined to respond.

	Race & Hispanic Ethnicity	Sex	Disability	Disadvantaged Background	Geographic Data
Principal Investigators					
Jennifer M. Whitehill, PhD, Univ. Massachusetts Amherst	White, non-Hispanic	Female	No	No	From suburban Philadelphia; currently lives near Amherst, MA.
Mark Melnik, PhD, Univ. Massachusetts Donahue Institute	White, non-Hispanic	Male	No	Yes	From Youngstown, OH; currently lives in MA.
Project Officer					
Julie K. Johnson, PhD, Director of Research,	White, non-Hispanic	Female	No	Yes	From South Shore MA; currently lives in Westborough, MA.

Massachusetts Cannabis Control Commission					Previously lived in Boston and Chelsea, MA.
Project Team					
April Pattavina, PhD, University of Massachusetts Lowell	White, non-Hispanic	Female	No	Yes	Born and raised in Lowell, MA; currently lives in Andover, MA.
Renee M. Johnson, PhD, MPH, Johns Hopkins Bloomberg School of Public Health	Black, non-Hispanic	Female	No	No	From suburban Philadelphia; currently lives in Baltimore, MD; previously lived in Boston and Brockon, MA.
Rebecca Loveland, MRP, University of Massachusetts Donahue Institute	White, non-Hispanic	Female	No	Yes	From Central New Jersey; currently lives in Western MA.
Carrie Bernstein, MPPA, University of Massachusetts Donahue Institute					
Faith English, MPH, University of Massachusetts Amherst	White, non-Hispanic	Female	No	Yes	From and currently lives in Western MA.
Abigail Raisz, BA, University of Massachusetts Donahue Institute	White, non-Hispanic	Female	No	No	From Brookline, MA; lives in Boston, MA.
Michael McNally, BA, University of Massachusetts Donahue Institute	White, non-Hispanic	Male	No	Yes	From Queensbury, NY; currently lives in Northampton, MA.
Samantha M. Doonan, BA, Research Analyst, Massachusetts Cannabis Control Commission.	White, non-Hispanic	Female	No	No	From Ipswich, MA; currently lives in Brighton, MA.
Research Assistants					
Lauren-Ashley Daley, MPH	Black, non-Hispanic	Female	No	Declined	Lives in Baltimore, MD.
Jasmine Inim, MPH	Black, non-Hispanic	Female	No	Yes	From East Hartford, CT; currently lives in Charlton, MA.
Olivia Olayiwole	Black, non-Hispanic	Female	No	Yes	Currently lives in Marlborough, MA.
Alandra Ricci	White, non-Hispanic	Female	No	Yes	From Salem, MA.

*See criteria in the paragraph above.

[1]Lauer M. Expanding NIH's Definition of Socio-Economic Disadvantage to be More Inclusive and Diversify the Workforce. National Institutes of Health. https://nexus.od.nih.gov/all/2019/11/26/expanding-nihs-definition-of-socio-economic-disadvantaged-to-be-more-inclusive-and-diversify-the-workforce/. Published 2019. Accessed June 25, 2021.

I.3. Question:

Did the UMass team consider conducting outreach to local institutions and or public health scholars in Massachusetts who specialize in disparity studies or in communities of color?

I.3. Answer:

Yes. While developing a study proposal in response to the RFP, UMass assembled a team that would bring together relevant expertise in the fields of public health, criminal justice, and Massachusetts demographic and economic trends. This included inviting Dr. Renee M. Johnson from Johns Hopkins University to join the team. She has expertise in drug and cannabis policy and studies health disparities. ADr. Johnson has lived and worked in Boston and conducted research related to communities of color, including communities in Massachusetts. Expertise in criminology and the NIRBS dataset in particular was needed, so the team leaders contacted and engaged Dr. April Pattavina from the University of Massachusetts Lowell. Dr. Pattavina has expertise in the NIBRS data and coauthored an important report about police stops, surveillance, and race in Boston. We also wish to note that much of Dr. Melnik's work focuses on disparities and equity in a wide range of social and economic policies, primarily in Massachusetts. Dr. Whitehill's prior public health research has included a focus on low-income, urban, communities of color, and she is an affiliate of the UMass Center for Community Health Equity Research.

I.4. Question:

What baseline was used to discuss, prepare for, and/or consider a social and racial equity lens when preparing the RFQ as well as the study as a whole?

I.4. Answer:

The answer to this question is twofold, because preparing for this RFQ included both building on the original "Gettman Study," that the Commission used in to develop the list of disproportionately impacted areas, and conducting a comprehensive assessment of racial disparities in cannabis-related criminal offenses in Massachusetts.

Gettman Study:
The primary goal of the UMass study was to update the original "baseline" disproportionate impact study ("the Gettman Study"), which was the first Commission study used to define disproportionately impacted areas in Massachusetts for equity related provisions at the Commission.

The UMass Study built on the Gettman study by including: [1] more comprehensive criminal justice data (i.e., National Incident-Based Reporting System (NIBRS) vs. Uniform Crime Reporting (UCR)), [2] a longer timespan of analysis (18-year timespan in the UMass Study vs. 5-year timespan for municipalities and 2-year timespan of Boston in the Gettman Study), and [3] a larger number of areas (279 in the UMass Study vs. 160 municipalities in the Gettman Study). Additionally, the UMass study improved metrics for poverty (socioeconomic) and demographic characteristics (e.g., Black and/or Latino).

While both studies document the reality that the "War on Drugs" disproportionately harms people of color, the Gettman Study characterized its methods as "race neutral" for analytic purposes, while the UMass Study includes race and ethnicity in its methodology and statistical model:

> UMass Formula: (0.5)*average annual number of drug arrests + average annual rate of drug arrests per 100,000 population + (0.5)*percent of people living in poverty + (0.5)*percent of residents who are Black and/or Latino

Racial Disparities in Cannabis-Related Criminal Justice Offenses:

The Commission's research report, entitled: *A Baseline Review and Assessment of Cannabis Use and Public Safety: 94C Violations and Social Equity*, was used as both "baseline" data and "state of science" (i.e, literature reviews) to inform and revise the "baseline" disproportionate impact study with a greater focus on criminal justice system racial disparities across the Commonwealth.

Pertinent to the discussion, in this report, the Research Department:

- Assessed incidents of varying M.G.L. c. 94C Cannabis and Class D substance violations in Massachusetts using the available data able to be procured at this time, including: National Incident-Based Reporting System (NIBRS) 2000- 2017 (aggregate), NIBRS 2000-2013 (stratified), Massachusetts State Police (MSP) 2000-2018, MSP CrimeSOLV 2017, and Boston Police Department (BPD) data (2000-2018); and
- Conducted a series of literature reviews on impact of cannabis violations, including: (1) Cannabis Prohibition and Disproportionate Impact; (2) Employment and Drug Law Violations (i.e., *effects of cannabis and other-drug law violations on employment and potentially compounding variables)*; (3) Social Equity (i.e., *ethnic disparities and mechanisms that drive disparities for cannabis-related violations.*

Please see full report for further detail on these analyses, which include varying assessments of violations by: (1) Race/Ethnicity; (2) Gender; (3) Residency, and (4) Disproportionately impacted areas as outlined by the Gettman Study; and literature reviews.

I.5. Question:

Please explain the environment in which the RFQ was created. Who was consulted and how were the specifications created? Why?

I.5. Answer:

Commissioners Flanagan and Title identified the need for a revised disproportionate impact study. As a result, the Executive Director requested that Julie K. Johnson, Director of Research (DoR), work to create a procurement for the study. Julie worked with Adriana Leon, Chief Financial Officer (CFO), Pauline Nguyen, Deputy General Counsel (DGC), Alisa Stack, Chief Operating Officer (COO), and Samantha Doonan, Research Analyst (RA), to draft and revise a

proposal. This original RFQ was posted on December 8, 2019. The RFQ received one response from the Public Consulting Group (PCG).

Commission staff had concern regarding this response because the vendor did not have experience using the National Incident-Based Reporting System and had a public health lens but lacked expertise regarding public safety, social equity, and criminal justice. Because the proposal did not meet the standards the Commission sought in the December 2019 RFQ, the Commission reissued an RFQ, requiring access to and experience with National Incident-Based Reporting System (NIBRS), the FBI's Uniform Crime Reporting (UCR) program historically compiled the Summary Reporting System dataset ("UCR SRS") to obtain the most comprehensive data.

In drafting this RFQ, the team additionally drew upon an [equity-centered assessment of Positive Impact Plans (PIP)](#) led by Rappaport Fellow, Jessica Hamilton, (e.g., notes from drafting the RFQ indicate that the item: "Understanding of demographic changes and forced migration patterns of populations (*e.g. gentrification, movement based on the availability of work in a community, movement based on public policy, etc.)*" came directly from the PIP Report Consideration B.5.

The re-issued RFQ was posted on 2/7/2020. As a result of the second RFQ, on March 16, 2020, the Commission received two responses. The CFAO, Former Director of Community Outreach and Equity Programming, Project Coordinator, Enforcement and Investigations, and Director of Research reviewed these proposals.

I.6. Question:

How many educational institutions bid on the RFQ? Who were they and how was each evaluated? Explain what sort of equity lens was utilized and by whom.

I.6. Answer:

One. Abt Associates and the University of Massachusetts (Donahue Institute) submitted proposals. (Attached)

I.7. Question:

Considering data limitations previously known to the Commission and referenced both in the RFQ and DIA report (i.e., no information for Lawrence or Boston, information only being available from 2000 and beyond, no conviction data, and an inability to distinguish between marijuana offenses and all other drug offenses), why rely on NIBRS at the onset and for the duration of the project?

I.7. Answer:

Neither UMass nor the Commission knew that data for Lawrence was unavailable at the start of the study. By contrast, the Commission knew that Boston data were missing, and the RFQ required that Boston Police Data be procured by the vendor (UMass).

There are two large, comprehensive public safety datasets that could have been used to complete this study, including the Uniform Crime Reporting (UCR) and/or National Incident Based Security System (NIBRS). The Commission relied on NIBRS because it is the most comprehensive dataset in Massachusetts and nationally to assess cannabis ("marijuana")-related criminal justice incidents in comparison to UCR, which was used in the original Gettman Study.

Regarding data availability, certain data were available prior to 2000, including Uniform Crime Reporting (UCR) data, which were obtained for the study but lack direct comparability to data collected via NIBRS and BPD (*e.g., hierarchical reporting vs. incident-based*).

Advantages to prioritizing comparability and completeness include: ability for results could be replicable across time (as UCR data is currently being phased out by; and greater accuracy in comparison between communities).

Regarding conviction data, we agree that inclusion of conviction data would greatly strengthen research on disproportionately impacted areas. However, it will require an additional study and contract, meriting funding, topic and data source expertise, as well as data procurement and other things.

Regarding cannabis versus other drug convictions, the data contains information on whether charges were for cannabis vs. other drugs, and this data will be provided to the Commission. For purposes of data validity (e.g., cannabis is often under-reported, and most drug offenses include several substances) and study comprehensiveness, the decision to combine all drugs together in our analytic model was made in conjunction with the Commission's Research Department.

II.   Report/Study Questions

Introduction - What is "community" and what do the rankings telling us?

In reviewing the questions from the Commission, there were a couple of important themes that came up consistently——in particular the concept of impacted communities and the interpretation of the municipal rankings.

First, we consider how to conceptualize community. There are, of course, different ways to interpret what is "community". Early in this project, we consulted with Commission staff to understand if we should be thinking about "community" in geographic terms (e.g. municipalities, neighborhoods, etc.) or in demographic terms (e.g. the Black community). The Request for Quotes (RFQ) was clear in its conceptualization of community as geographic, especially because this work was to serve as an update to the 2018 Gettman study. That said, public policy makers often talk about disproportionate impacts in demographic terms. The Commission was clear in its guidance to focus on the current work on geographic community, as there were other policies within the Commission that dealt with demographic communities/groups. We understood this research study as seeking to inform an effort to update elements of social equity policy that focused on geographic groups. We also recognize that geographic groups and demographic groups overlap substantially, with many geographic neighborhoods having a larger number of specific population groups.

The research team recognizes the important racial and socioeconomic dimension of disproportionate enforcement of drug control policies. While racial segregation in Massachusetts certainly allows for geographic analyses to partially address concerns of racial inequity (i.e., the concentration of communities of color in the larger cities of Massachusetts), the research team specifically chose to include a racial/ethnic dimension in the calculation of the disproportionate impact score. That said, in the original RFQ the draft report deliverable specified that the vendor provide a "list of the impact of the 'War on Drugs' for every Massachusetts community." Being that Massachusetts is over 70 percent white and that the non-white population is concentrated in Boston and the 26 Gateway Cities, any ranking of all municipalities will include several communities with small concentrations of Black and Latinx populations. This is an important point to consider when using geography as the primary unit of analysis in understanding "community."

Relatedly, there are several questions in the document regarding the municipal rankings. It seems the organization of scores into tiers led readers to interpret the tiers as a conclusion that the Tier 1 and 2 areas were equally disproportionately impacted by drug enforcement policies or the "new list" of DIA communities for policy purposes. That is not the case. It is important to be clear that the Commission, and not the UMass Team, has regulatory authority. With that, it seemed inappropriate for the researchers to determine a list of disproportionately impacted areas (DIAs) for policy purposes. The UMass Research Team does not have knowledge of the resources available to the Commission for mitigating disproportionate impacts nor are we privy to other policy considerations that could potentially inform determinations about which municipalities end up on the DIA list. We see the DI score developed in this study as a tool for helping the Commission determine which areas should end up on a such a list, but it was not

intended to be the sole factor. In fact, there may be factors outside of our model that the Commission may want to consider for including or excluding a community from the DIA list. As a result, the research team specifically focused on developing a consistent and easily understood calculation for understanding disproportionate impact of drug enforcement that covered as many communities as possible, given availability of appropriate, comparable data in the Commonwealth. The Report provides additional context for interpreting results and data limitations, such as using both demographic and geographic criteria for making policy and targeting benefits to certain categories of individuals and/or communities.

It is a fair critique to ask about alternative metrics for reporting the extent of "disproportionate" impact rather than using percentiles for splitting tiers. We address this in some of the answers below. To summarize, it is possible with the analytic dataset compiled for this study to use measures of central tendency and dispersion to further group communities based on the relative magnitude of disproportionate impact scores. That said, communities with the highest scores in the current calculation can be thought of as "most impacted." The UMass Team encourages the Commission to leverage this knowledge and consider different levels of policy intervention knowing the relative differences in impact implied by the disproportionate impact score.

II.1. Question:

Dr. Melnik pointed out that all of Massachusetts "Gateway Cities" are included in the list of Tier 1 communities except Lawrence. Can you estimate that Lawrence would have been in that Tier 1 list if the city had been measured upon the review criteria of "[…]percent of people living in poverty ("economic deprivation"); […] the percent of residents who report Black and/or Latino race/ethnicity ("racial and ethnic composition")," and some median/average of the other two criteria?

II.1. Answer:

In 2017, Lawrence had an 11 percent unemployment rate and 24 percent of residents under the poverty line, with over 80 percent of the population of Latino ethnicity. While, we are hesitant to create an additional numeric estimation without drug arrest data for Lawrence, based on the demographics and economics of Lawrence, it is highly likely the city would rank high on the DI score if all data were available.

The research team could obtain data for Lawrence, or use statistical approaches to estimate or impute data for Lawrence by drawing upon information for similar cities, if the Commission wishes to have additional analyses conducted to determine exactly where Lawrence falls in a ranking. Such an analysis was out of scope for the prior study.

Given the socioeconomic characteristics of Lawrence, we know that it has very similar characteristics to a place like a Holyoke, like a New Bedford, like a Brockton. But for us it was important to highlight here is the degree to which we have consistency with the "Gateway Cities."

II.2. Question:

Was there use of media or publication review to consider any sources that reported on the proliferation of drug arrests, incarcerations, etc. that could have indicated the prevalence of drug crimes in the time period before consistent crime reporting was being implemented?   Is there any value to the UCR data from the 1990s?

II.2. Answer:

Study team members read several manuscripts, reports, and books pertaining to drug crimes, including those that addressed the 1980s and 1990s. However, the nature of the research design is that we sought to create a numeric index score at the municipal and/or Census tract level, and there was a need for data that would be consistently collected across places and time. We considered possible data sources, but were not aware of any additional media or publications that offered such detailed data with the necessary address-level information available.

Regarding the UCR data, this issue was raised to Commissioners in a memo submitted in December 2020. This memo noted that it is possible to incorporate data from the Uniform Crime Reporting system (UCR) going back to 1990, but UCR data can only be utilized for city-town level analysis and information on Latino ethnicity is not included. This sets up a choice between starting the analyses in 2000 and having "better" data in more recent years that is equivalent across places (*i.e., available for both cities/towns and Census tracts within cities*) or starting analysis in 1990 for cities/towns reporting to UCR only.

Based on Commissioner feedback for the study team to use its best judgment, we opted to use only NIBRS data, which is more comprehensive across municipalities and time, but agree that this represents a limitation. [Please also see answer to the question: *Considering data limitations previously known to the Commission and referenced both in the RFQ and DIA report...why rely on NIBRS at the onset and for the duration of the project?*]

II.3. Question:

Tier 1 includes the 28 cities and towns and Tier 2 includes the next 28 municipalities, which fell into the top 11-20 percent of DI scores. How did you decide where the cutoff was between Tiers?

II.3. Answer:

After reseaech team discussions, we decided to divide the final sample of municipalities (n=279), into percentiles based on their DI scores. Tier 1 represents the top 10 percent of DI scores. Tier 2 contains the municipalities that fall in the 11-20th percentile of DI scores. Each tier after that contains approximately 56 areas that represent 20 percent of ranked municipalities (e.g., Tier 6 is the bottom 20 percent of DI scores).

The tiers could have been classified differently, but our use of percentiles is a familiar format for rankings. Importantly, scores for all geographic areas are included in the report, so the Commission could opt to establish a different set of cut points. The tiers are an interpretation

ranking of the final scores and has no bearing on the actual ranking or score. The tiers organize the ranking into more vs. less impacted places.

The research report provides all DI scores for all municipalities and Census tracts as a source of information for guidance.

II.4. Question:

The report discusses the longtime challenges to employment for those who were arrested and/or incarcerated. Dr. Gettman looked at unemployment rates as well as poverty for these areas and you used only a measurement of poverty. Do you feel the poverty measurement in the report can alone adequately reflect the challenges to employment?

II.4. Answer:

Negative consequences of the war on drugs are diffuse, from challenges in housing to employment to disruption of social cohesion of neighborhoods. For this analysis, we considered multiple additional measures of economic and employment challenges. For example, in Deliverable 1, the UMass Team documented other indicators under consideration:

> "We will consider several other measures available in U.S. Census and ACS data for inclusion in our models and make determinations based on their correlation with arrests and with poverty. It will be important not to include indicators that are too tightly correlated. The indicators we will consider include:
>
> a. Unemployment rate.
>
> b. Labor force participation rate (LFPR). The construct of LFPR combines availability of jobs and availability of adults under 65 who are available to work. Communities with no childcare and many single mothers, or many people whose disabilities or criminal justice history prevent them from working also show lower LFP percent.
>
>> i. Limitations: Areas with a lot of "discouraged" workers will have a lower LFPR. We may find this is too tightly correlated with poverty and the unemployment rate to retain in our analysis.
>
> c. High school completion. We would define this measure as the percent of residents who have completed high school (HS).
>
>> i. Limitations: HS completion is highly correlated with age in MA, and this has a different standard over time—in the 1970s it was far more common not to complete high school. Thus, older communities have lower HS completion rates. Not completing HS also may partially auto-correlate with poverty alone. We will explore whether we should include GED attainment in the measure of HS completion" (Deliverable 1).

Ultimately, the team constructed an index score that could be used by policymakers without too many duplicative measures. The high correlation between unemployment and poverty, in general, led the researchers team to fear that we may ultimately be measuring (and adding) the same concept in to the model twice, which could result in misestimated rankings. Poverty is a more comprehensive measure of economic deprivation, as it captures the reality that there are working poor who are not unemployed, but who may be in poverty.

II.5. Question:

Do you happen to know how many communities in the Tier I list were contributing to NIBRS in 2000?

II.5. Answer:

In 2000, 50 percent (14 out of 28) of Tier 1 municipalities were contributing to NIBRS (see below). Most of the five largest cities started reporting before 2000. Cambridge and Lowell started contributing in 2007, but are not shown in the Table because they were analyzed separately at the Census tract level).

Table. Starting Date for Contributing Data to NIBRS, Among Massachusetts Municipalities

Jan. 1995 through May 2000		*Jun. 2000 through Dec. 2003*		*Jan. 2004 through Sept. 2012*	
North Adams, Southbridge, Webster, Chelsea, Leominster	1/1/95	Randolph	7/1/00	Attleboro, New Bedford, Taunton	1/1/04
		Holyoke	8/1/00		
Gardner, Chicopee	1/1/96	Barnstable	10/1/00	Fall River, Malden	6/1/04
Greenfield	1/1/98	Revere	5/1/01	Haverhill	7/1/04
Falmouth	1/1/99	Northampton	2/1/02	Pittsfield	1/1/05
West Springfield	1/1/00	Brockton	9/1/02	Lynn	1/1/07
Everett	5/1/00	Fitchburg	1/1/03	Salem	9/1/12
		Quincy	4/1/03		

II.6. Question:

In looking at the timeframes you created starting with 2000, was there any noticeable drop off in drug arrests in Massachusetts from before 2009 to after 2009 with decriminalization? I am interested in understanding the impact of cannabis arrests as best we can and where there might be a change in the nature of the arrests because of the rise in opioid arrests and other drug use.

II.6. Answer:

Previous research from the Commission shows a distinct drop in the absolute number of cannabis incidents and arrests following decriminalization.

Because a determination was made between the Commission's DoR and the UMass team to use all drug arrests in the creation of the DI Score (see I.7 Question and Answer), this question of the change in nature of arrests related to opioids vs. other drugs vs. cannabis would warrant additional analyses.

II.7. Question:

UMass explained that the project was rushed due to time sensitivity. What would UMass have advocated for in terms of methodology, data access, and timeline in an ideal project of this scope?

II.7. Answer:

This project was time sensitive, but not rushed. It was conducted on an aggressive timeline for research. If additional time and resources were available, say two to three years, there are several things the UMass team might seek to do. This includes taking a "mixed methods" approach, that would allow input on the definition of disproportionate impacts from stakeholders, officials from other states with adult-use cannabis, and community members negatively impacted by the war on drugs. Knowing, through interviews perhaps, about how the Commissioners understand disproportionate impact could have helped set a stage for analytic choices. Another direction could have been more up-front input and discussion of the policy interventions that the Commissioners would contemplate for addressing disproportionate impacts. For example, additional discussion about the focus on geographic vs. demographic groups. These discussions might not have changed anything about the DI score itself, but perhaps the approach to presenting cut points or tiers. Sensitivity analyses, in which we statistically test the impact of certain analytic choices on the final ranked list or "tiered" groups would have been also conducted. These additional analyses could be about the impact of using all drugs vs. only cannabis in the models, or the inclusion of sentencing and/or incarceration data. We also would have liked to undertake assessment of the relative differences of DI scores across locations (see Question II.11 below) for alternative groupings in addition to (or instead of) percentile-based tiers. Additional sensitivity analyses would have been made assessing potential imputed data for Lowell. If data imputation could be conducted with available valid and reliable data, this type of analyses permits estimated values for missing data based on other available data (e.g., local law enforcement data from Lawrence).

II.8. Question:

Our regulatory definition of DIA is "a geographic area identified by the Commission for the purposes identified in M.G.L. c. 94G, 4(a½)(iv), 935 CMR 500.040 and 500.101, and which has had historically high rates of arrest, conviction, and incarceration related to Marijuana crimes." Appreciating the data limitations discussed throughout the Report, would the project have produced a substantively different DIA list if we assessed data that more closely correlates to our definition of DIA, primarily the inclusion of:
- Conviction data;
- Incarceration data; and
- Focusing on Marijuana crimes?

II.8. Answer:

Using this data was not within the scope of this Statement of Work (SOW). This study, as specified in the RFQ, required incorporation of arrest data but did *not* require conviction and/or

incarceration data. It also required production of a ranking of all areas in the Commonwealth (recognizing that "all" must be defined as "all areas with available data"). The study focused on the assessment of "incident-level" arrest data first, as this is considered an update to the Gettman "baseline" study and prioritized our ability to be as comprehensive as possible across the entire Commonwealth. To examine these and other data, the Commission would need to seek a contract for a follow-on study.

II.9. Question:

At our public meeting on 3/11/2021, a researcher from UMass rejected ZIP codes as a Census tract alternative because of the artificial borders created by ZIP codes, but Census tracts have more acute challenges. Can you explain the challenges of a ZIP code approach appreciating Census tracts seem more problematic?

II.9. Answer:

It is not accurate to suggest there are more acute challenges to Census tract versus ZIP codes, nor that Census tracts are more problematic. Census tracts were used as a proxy for sub-municipal analyses and specifically were intended to reflect "neighborhood level" issues in disproportionate impact. When assessing disproportionate impacts, any boundary runs the risk of having "at need" populations being on the other side of the line. This challenge would exist regardless of what geographic unit we used. The most significant issue with Census tract for this analysis is the fact that they are not readily understood by the general population, whereas ZIP codes are. That said, area covered by Census tracts are much smaller than ZIP codes (particularly in the neighborhoods), giving researchers increased flexibility in analyzing small areas. A Census tract approach could allow a more precise targeting of benefits. Population-level characteristics are more homogenous with Census tracts than within ZIP codes. ZIP codes were developed by the US Postal Service for ease of delivering mail, whereas the development (and ongoing refinement) of Census tracts was based on the need to characterize neighborhoods for health and government planning purposes.

We add here Dr. Melnik's comments from the meeting which we believe to be what the question is referencing: "It's a natural concern anytime you draw lines around where a benefit may be versus the other side of a line, and so unfortunately any line you draw would have that risk, whether it was a Census tract, a neighborhood, or there's a smaller geography available, called a Census block. But in all these scenarios you run the risk that you could be on one side of the line, and now you have the benefit on the other side of the line. One of the problems, of course, is that neighborhoods become tricky. They are socially-constructed in a lot of ways. Before I was at the Donahue Institute, I worked at the Boston Redevelopment Authority and I asked residents of Boston what neighborhoods they lived in and where the boundaries of the different neighborhoods are, and there isn't a universal agreement on those kinds of things. Neighborhoods run the risk of being too big as well. The Census tract provides us, from a methodological perspective, a certain level of ease of being able to pull this data in a consistent way and analyze them in a consistent way."

II.10. Question:

Aside from ZIP codes, are there other data, tools, or methodology that can be leveraged to capture the effects of the "war on drugs" more effectively on entire neighborhood sections?

II.10. Answer:

There is the potential that qualitative and/or survey methodologies could be used in conjunction with the secondary data approach taken to understand the impact of the "war on drugs" on people and neighborhoods in a different way.

II.11. Question:

What would be the effective difference in the number of communities that are included in the DIA list if the research team identified the communities that were ***disproportionately*** impacted vs. the current approach of ***ranking the top 20% of impact?***

II.11. Answer:

First, the report does not create a DIA list. The report creates ranking that the Commissioners could use to make a DIA list. On a conceptual level, the idea of *disproportionate* impact was baked into the DI score that was generated for each area because the scores were conceptualized to reflect the idea that the impacts of the "War on Drugs" would be most burdensome in the places where high levels of arrests were combined with a high proportion of Black/Latino residents and high poverty. From that perspective, the places that ranked highest (e.g. top 10% in particular) experienced disproportionately negative impacts from the "War on Drugs."

The tiers in this report were presented as simple percentiles. This was, in part, done because it is simple and straightforward to interpret, and decisions about where to draw cut points for policy purposes is a policy maker decision.

An alternative approach to defining tiers would be to use measures of central tendency or ratios, for example, defining disproportionately impacted areas as those that scored more than a certain number of standard deviations above the mean, or examine the median and interquartile range to identify outlier areas that were most strongly impacted. Additional analyses would be necessary to examine and test the effect that using different cut points on the number of communities within a grouping designated as the "most disproportionately impacted." This would certainly be possible with the existing data, but would require a follow-on contract.

II.12. Question:

The report made a ranking order of the impact of the "War on Drugs" in Massachusetts with impact scores ranging between 69.57 - 99.52. What would UMass recommend to further clarify the comparative impact for municipalities that scored in the 90s vs. municipalities that scored in the 60s, to help assess if all these communities have truly been ***disproportionately*** impacted?

II.12. Answer:

The report did not just make a ranking of places with the impact scores in the range of 69.57-99.52 (Tier 1 and Tier 2). The research team's understanding of the task was that a rank should be provided for places "across Massachusetts" with available, readily comparable arrest data in NIBRS and the BPD datasets. Thus, a comprehensive ranking was provided that includes 279 municipalities and 305 Census tracts. There is an important distinction between the goal of providing a ranking of as many places in Massachuseets as possible vs. identifying a list only of the most disproportionately impacted places. The report provides both a ranking of as many places as possible and a framework (simple percentile cut points) for considering which places landed at the top of the ranking vs. the middle or bottom.

II.13. Question:

Appreciating the data limitation for the City of Lawrence, what could have been done to collect proxy data and adjust the study under the time limitations?
- Could community partnerships (other local research institutions) have assisted with this process?
- How do we prevent this in the future?
- How do we now rectify and collect proxy data to analyze and determine if Lawrence has been disproportionately impacted?

II.13. Answer:

Future research could start with approaching officials in Lawrence to plan to procure data directly from the local authorities. Lawrence is not on the DI list generated from the Gettman study, presumably because of the lack of arrest data.

To our knowledge, there is not a good "proxy" database, but there is the possibility that the Commission can choose to put Lawrence on its updated DIA list because of the socioeconomic and race data (consistent with other Gateway Cities).

II.14. Question:

Help me understand how we explain to the greater community including: Beverly, Salisbury, Yarmouth Port and Dennis (to name a few) as areas disproportionately affected by the War on Drugs as per our RFQ, specifically considering arrest vs. conviction and even sentencing rates?

II.14. Answer:

This is a research report that assesses the disproportionate impact score of all (available) municipality and Census tracts in the Commonwealth based on four measures: average annual number of drug arrests, average annual rate of drug arrests per 100,000 population, percent of people living in poverty, and the percent of residents who report Black and/or Latino race/ethnicity.

All areas (municipalities and Census tracts) were treated the same and analyzed in comparison to one another. This research report can be used as a baseline for future research studies and a resource for regulators.

The report itself does not state that any particular location, including the towns listed above, is or is not "disproportionately affected by the War on Drugs." The RFQ requested that all municipalities with available data in Massachusetts be ranked. It is more correct to consider that those towns listed above scored higher than some other MA municipalities in terms of the DI Score (but also lower than the Tier 1 towns). The score itself is relative to other places.

[See Report, Appendices: Table VII- 7. Disproportionate Impact Score and score components in Massachusetts by Municipality, 2000-2017, for all DI scores and components by municipality and Table VII- 8. Disproportionate Impact Score and score components in Massachusetts for Census Tracts, Marge Massachusetts Cities, 2000-2017, for all DI scores and components by Cencus Tracts]

II.15. Question:

In assessing the numbers of Black and Latinx residents by race/ethnicity, how was the category "other" approached?

II.15. Answer:

For the purposes of calculating arrest rates, rcial categories were standardized. We did not use "other" as a racial/ethnic category from our measures of population demographics for geographic areas used in this report. The Census/ACS asks persons to report race separately from Hispanic/non-Hispanic ethnicity. Therefore, the number of Black and/or Hispanic residents was determined by calculating the number who report the racial category "Black or African American" and/or "Hispanic" ethnicity. While Census/ACS data had an "other" racial category, local arrest data did not. Arrest data typically used an "unknown" category.

II.16. Question:

Appreciating the data limitations, would there be a significant difference in today's DI ranking if the data analysis included the 1980's through 1990's, when crack cocaine enforcement was rampant in the communities of color?

II.16. Answer:

Based on the data analysis that was performed, we cannot identify how the analysis would have changed with the inclusion of this data. It is noteworthy, however, that a number of Gateway Cities rank at the top of the DI scores in the report. These are all cities that have faced economic and public policy challenges for decades. It is highly likely that Gateway Cities would still rank high on the list if data from the 1980s and 1990s were included in the analysis.

II.17. Question:

Building upon this study as a resource to the Commission and not a policy document, what is your recommendation to policy makers on how to measure Equity vs. Equality using the reports methodology?

II.17. Answer:

It is important to look at equity vs. equality as a comparison between sameness vs. fairness. Equality creates "sameness" across the board, but not "fairness" across the board. Equity creates fairness. This study is intended to inform regulatory efforts to create further equity, allowing for advantages to be given to those that have been previously (and continually) disproportionately harmed by the war on drugs and various legalities involving cannabis.

II.18. Question:

Help me as a policy maker to understand or provide guidance on:
- How does the addition of these towns mentioned above, and others provide more equity for those people of color who were disproportionately arrested, convicted, and sentenced due to the war on drugs causing generational disparities?
- How do we determine if we are hurting or helping the people in the current areas of DIA list?

II.18. Answer:

The Commission was clear that the scope of this project was to generate a list of <u>geographic</u> areas that were disproportionately impacted. This approach has inherent limitation, as not every person in a geographic area will have been equally impacted. However, we suggest as a policy consideration, that the Commission:

> Consider a graduated scheme that uses different strategies to attempt to address the impacts of drug policy enforcement on areas in different tiers (or other groupings of areas). Such an approach would reflect the reality that in Tier 1 of the DI score, most residents may have experienced negative impacts from drug policy enforcement. In contrast, lower tiers are likely to be a subset of people who have such experiences. Eligibility for priority license status and other benefits could be based on a combination of requirements such as residence in a Tier 2 DIA and membership in an additional priority group (e.g., personal or family history of drug arrest or incarceration; Black race and/or Latino ethnicity)" (pg. 27-28).

Regular evaluation of policy benefits would help the Commission know if adjustments to public policy are needed and this is an evaluation that should go on regularly.

II.19. Question:

According to page 10, this study sought to expand on the Gettman analysis. What specific gaps were identified and how were they rectified? Explain the rationale behind continuing to analyze the 5 largest cities separately at the Census tract level?

II.19. Answer:

The five largest cities were subdivided as required in the RFQ, "Communities with a population of more than 100,000 people will be subdivided by Census tract numbers according to U.S. Census data." The rationale for subdivision was not all geographic areas within the largest cities were impacted to the same extent. While any geographic boundaries will have inherent limitations, using Census tracts allowed for data comparability with socioeconomic data as captured in the U.S. Census and comparability with geographic data in the NIBRS and BPD data sets.

Comparisons between Gettman Study and UMass Study

Sample Size
The main Gettman study (2017) included 160 Massachusetts cities and towns for all drug arrests. Of this sample, 148 cities and towns were analyzed for cannabis-specific charges as well.

The UMass study (2021) included 279 Massachusetts cities and towns for all drug arrests. In both studies, missing municipalities offer a major limitation.

Both studies do not include Lawrence, Massachusetts. The UMass study's larger sample size is a strength which resulted in a more geographically comprehensive study and allowed for greater comparison between municipalities. Nonetheless, missing cities are a limitation in both studies.

Time Period
The main Gettman study (2017) examined drug offenses in a five-year time period, 2006-2010 for all municipalities except Boston and Worcester. Boston data had a two-year time period, 2015-2017. In the companion study (2018), Worcester data was included which spanned 2000-2016.

The UMass study (2021) examined drug offense in an 18-year period, 2000-2017. The time variable was further broken down into smaller time frames to account for variation over time and reduce the influence of outliers (2000-2004, 2005-2009, 2010-2014, 2015-2017).

Both studies are limited because they do not account for the beginning of "war on drug" harms (e.g. 1970s onward). This time period is challenging to capture because limited data sources exist and those that do, have very limited participation across cities and towns. The larger time frame used by UMass is an advantage as trends across time can be monitored but may over-account for the impacts of the opioid crisis rather than the war on drugs, which has predominately impacted white people.

Data Source

For cities and towns (except Boston), Dr. Gettman (2017) used the Uniform Crime Reporting Database. This data is subject to a number of limitations. It is a hierarchical "summary-based" reporting system, which means only the most serious crime is reported when multiple crimes occur. For example, in a case with operating under the influence of drugs and manslaughter, only manslaughter would be recorded. Therefore, it is not representative of all drug incidents.

The UMass Team used the National Incident-Based Report System (NIBRS). NIBRS is a more specific database and contains individual level data for each crime, regardless of severity level. The strength in this, is that the data is more comprehensive of all drug offenses.

Both studies are limited because not all of Massachusetts agencies submit data (e.g. Lawrence). Thus, findings are not representative of the entire state. In the Research Department's opinion, the dataset NIBRS, used by UMass, has greater strengths for purposes of this study. NIBRS contains a more complete picture of all drugs arrests, contains richer individual level data than Uniform Crime Reporting, and is a stronger source to use for all future analysis, as Uniform Crime Reporting will be phased out soon.

Census Tracts

The Gettman study (2017) uses precinct level data to examine drug offenses in Boston but does examine other cities and towns at a more granular level. In the companion study (2018), Census-level data is used to examine Boston and Worcester.

The UMass team (2021) uses Census level data for cities and towns with populations greater than 100,000. This includes Boston, Worcester, Springfield, Lowell, and Cambridge.

Both studies are limited in using Census or precinct level data because these geographic areas may not reflect meaningful neighborhood boundaries. However, the advantage of using Census tract level data is that it allows researchers to link arrest data to other social measures, including poverty rate, proportion of population that is Black or Latino, unemployment, and other measures. Census tracts are also fairly granular and, therefore, flexible for looking at differences in small geographic areas.

Analysis

In the 2018 report, Gettman created an index ranking score based on six factors:
  i.   arrest rate for drug sales;
  ii.   arrest rate for drug possession;
  iii. total number of drug arrests;
  iv.   population size;
  v.   percent of families below poverty line; and
  vi.   employment rates.

These data were weighted with two-thirds weight given to arrest data and one-third weight given to economic conditions, however a specific formula is not provided in this report. In the 2021 report, the UMass team created an index ranking score based on four factors:

    i.   average annual number of drug arrests;
    ii.   average annual rate of drug arrests per 100,000 population;
    iii.   percent of people living in poverty; and
    iv.   the percent of residents who report Black and/or Latino race/ethnicity.

UMass Formula: (0.5)*average annual number of drug arrests + average annual rate of drug arrests per 100,000 population + (0.5)*percent of people living in poverty + (0.5)*percent of residents who are Black and/or Latino

There are strengths and limitations to both methodologies. Direct comparison is challenging because the studies used different data sources. An important difference is while both studies document the reality that the War on Drugs disproportionately harms people of color, the Gettman (2018) study characterized its methods as "race neutral" for analytic purposes, while the UMass (2021) study includes race and ethnicity in its methodology. There is also a greater level of transparency regarding analytic methodologies in the UMass report text as compared to the Gettman study.

Study timeline and team
Due to differences in contract requirements and funding, the Gettman study was conducted within an approximate three-week period (according to the original contract memo) with one analyst. The UMass study spanned more than six months and included a nine-person team of experts.

II.20. Question:

Page 4 of the report provides that "the purpose of this project was to: develop a method to empirically assess the extent to which Massachusetts communities have been impacted historically by cannabis prohibition and the "War on Drugs;" With that in mind, why were considerable efforts made to incorporate areas that do not have consistently high levels of arrests, poverty, and Black and/or Latino residents? (see page 5.)

II.20. Answer:

The RFQ specified that a ranking be provided for Massachusetts cities and towns (and Census tracts in the five largest cities). The first step for the research team was to obtain existing datasets that would allow inclusion of as many locations as possible with comparable data across locations. The second step was to determine which places were high or low with regard to arrests, poverty, and proportion of Black and/or Latino residents.

It is a misunderstanding of the research method to suggest that "considerable efforts" were made to incorporate areas that do not have consistently high levels of arrests, poverty, and Black and/or Latino residents. All areas were treated the same way in the research process. The

inclusion of so many municipalities (n=279) means that some places have high levels of arrests, poverty, and percent of residents who are Black and/or Latino and some places were low on these measures.

II.21. Question:

When we think about the criminal justice system, there are a number of different stages (entry, arrest, pre-trial, etc.). What we know is that the further into the system, the more acute the disparities are. Why was the focus on arrests and not convictions as the data point? Additionally, what was the decision to use 'arrests' as two factors within the DI score?

II.21. Answer:

This report is considered a "baseline" study. The report recommends that incarceration information be added to any future report/analysis of this subject.

Regarding arrests, by using the rate of arrest per population, we were able to capture what share of that town/area/Census tract to address what percent of residents were arrested across time. The rate of arrests take double weight, compared to each of the other factors. A community that is heavily policed will experience a higher rate and higher overall number of arrests relative to other places, so we thought it useful to include both the ranking based on count of arrests and the rate of arrests. Further, arrests are the entry point towards those other criminal justice system encounters mentioned above (conviction, incarceration).

II.22. Question:

Did your team consider alternative approaches for the larger cities, like studying drug enforcement data by ZIP codes, instead of Census tracts?

II.22. Answer:

One of the key things that drove this decision to stay with Census tracts was that measures were needed for all of the relevant indicators (poverty, arrests, etc.). The team acknowledges that some individuals live directly outside of the Census tract line drawn and this is an inherent data limitation, but one that would exist using geographic data.

The Commission's RFQ required, "Communities with a population of more than 100,000 people will be subdivided by Census tract numbers according to U.S. Census data."

As noted in other answers, ZIP codes perhaps provide for basic understanding of geography, but introduce limitations as well. There are typically far more Census tracts than ZIP codes in a city, which gives researchers the opportunity to analyze small areas in a municipality.

II.23. Question:

Did the UMass team do anything to reach out to Lawrence and get that data? There was an extra outreach to Boston but not Lawrence.

II.23. Answer:

The lack of Boston data was known before the start of the study, as outlined in the study SOW. lack of Lawrence data in the NIBRS dataset was discovered during analysis. The development of methods was done while we were waiting for the data to come through procurement processes. As the UMass team prepared the draft report that was circulated, we discovered this data was missing. We considered whether UCR data could be used for Lawrence as a substitute, but discovered that this town also did not have data available in the UCR files held by the study team. This is presumably why it is not included in the Gettman study, either. We examined and knew that this community has similar characteristics to communities that were falling into the Tier 1 category and were concerned that there was no data from Lawrence, primarily for this reason. It was known at the onset of the project that Boston's data would have to be discovered in a different manner than from the NIBRS dataset, but it was not known that data for Lawrence would be missing.

II.24. Question:

What was the timespan for data collection?

II.24. Answer:

The proposal was submitted in March 2020. The Commission awarded UMass the contract with a completion date in Fall 2020 (pre-COVID). After being notified of the award, the UMass team developed arrest data requests and worked with the Commission to submit them right away to state and local agencies. Due to COVID and data procurement issues, however, the data was received too close to the initial Fall deadline and an extension was needed. The arrest data was attached to a person and their personal information (Personal Identifying Information or "PII"). As a result, this data had to be stripped of identifying characteristics, which is a time-consuming process. It took months to obtain the data, including some back-and-forth with the agencies, resulting in final data available to us in October. The finalization of the report was in mid-February. Several aspects of this study required data "processing" after raw data were received and before analysis could take place, such as the process of mapping the address of each arrest to a particular Census tract (for the five largest cities).

II.25. Question:

When it was discovered how long it would take to receive the data, why was there not outreach to the state level to receive this data?

II.25. Answer:

As a baseline study, the purpose is to make it as comprehensive as possible. In the RFQ, it was stated that ability to access and expertise in NIBRS, Boston Police Department, and American Community Survey Census Data was required. Additional knowledge of and access to other datasets, including, Massachusetts Executive Office of the Trial Court (EOTC) Trial Court Case Management Database and Massachusetts Department of Correction (DOC) Data, were *secondary* and *optional.* Due to the time constraints of this study, it was not feasible to access these additional data sources.

NIBRS includes 85% of municipalities, and it was stated in the RFQ that Boston data would need to be separately included.

II.26. Question:

How was the "War on Drugs" defined in the beginning - from the Commission to the UMass team?

II.26. Answer:

Contemporary scholars trace the linkage of cannabis specific racial discrimination and systematic racism to *at least* the 1920s. The "War on Drugs" began in the 1970s with the Nixon administration and then curtailed into the Reagan era with the "Law and Order" policies. The nuances of the criminal justice system cannot be empirically assessed with data and disentangle all of these really complex phenomenon: poverty, housing crisis, recessions, etc. The 1970s was when it began systematically in our racial justice system and its impacts persist to the present day.

In the RFQ, the Commission stated, "The vendor will work with CNB Commissioners and staff to complete a report defining the criteria for being a Massachusetts community disproportionately affected by the "War on Drugs," (e.g., rates of drug-related arrests and imprisonment, and ranking communities across Massachusetts). For the purpose of this study, the "War on Drugs" spanned from June 1970 to December 2017. Communities with a population of more than 100,000 people will be subdivided by Census tract numbers according to U.S. Census data."

III. Study Implications Questions

III.1. Question:

The RFQ does not instruct vendors to identify the top 20% municipalities in the ranking as tier 1 and 2 DIAs. Why did the UMass team propose this number as the cut off for ranking municipalities for inclusion?

III.1. Answer:

We decided to divide the final sample of municipalities (n=279), into percentiles based on their DI scores. Tier 1 represents the top 10 percent of DI scores. Tier 2 contains the municipalities that fall in the 11-20th percentile of DI scores. Each tier after that contains approximately 56 areas that represent 20 percent of ranked municipalities (e.g., Tier 6 is the bottom 20 percent of DI scores). The research team felt that the use of percentiles would be a simple and transparent way to portray the areas that scored highest on the DI score measure.

III.2. Question:

What does this mean for communities added to DI list and communities taken off the list?

III.2. Answer:

This is a policy question and decision.

III.3. Question:

What are the specific implications that need to be known to inform discussion of this study going forward?

III.3. Answer:

This study could be used to refine eligibility decisions, such as who is eligible and what are they eligible for. This study could be helpful to determine what geographic areas could be including or excluded from Commission programs, expedited licensing processes, and other Commission benefits.

III.4. Question:

Is there staff within the Commission that can review this study with an equity lens? It might also be to the Commission's benefit to think about some organizations that can give some input on this study.

III.4. Answer:

We defer this question to the Executive Director to identify staff and their role(s) for further review of this work.

III.5. Question:

What are the implications of this study as it relates to the roll out of delivery once approved (for new towns and those coming off)?

III.5. Answer:

We are not able to answer this question as this would be a policy decision for the Commission.

III.6. Question:

What are the implications to the current SEP participants from cohort 1 and 2 if we open the DIA list to more towns without reviewing this report with stakeholders?

III.6. Answer:

We are not able to answer this question in full as this would be a policy decision for the Commission.

III.7. Question:

Timeline for briefing possible new cities and towns?

III.7. Answer:

The Director of Government Affairs and Policy has already notified the Massachusetts Municipal Association about the potential change of DIA status. Timely outreach to our municipal partners will continue as we discuss the DIA study, and ultimately, finalize the DIA list

III.8. Question:

What is the fallout of eliminating current towns? If any.

III.8. Answer:

The DIA list provides a town and its residents access to impactful benefits provided by licensees and allied partners who are making investments through Positive Impact Plans in the form of donations, incubator and accelerator programs, etc. Eliminating a town from this list will limit access to these benefits for the residents and organizations in the municipality.

III.9. Question:

How does this protect the Commission's mission of social equity and equality while reviewing this study?

III.9. Answer:

We do not understand this question and need clarity from the questioner.

III.10. Question:

How will lawmakers on Beacon Hill view this as it relates to equity commissions, cannabis commission, and other social justice issues?

III.10. Answer:

While we cannot predict how lawmakers will definitively react, Commission staff will ensure that legislators with questions regarding the process have access to all publicly-available materials. Staff will raise awareness with legislators that any policy changes were made as a result of a thorough review and on a rational basis.

III.11. Question:

How will not having a town like Lawrence, with one of the top three highest Latino populations, negatively impact equity even if it is a "no" town?

III.11. Answer:

Missing data for Lawrence is a major limitation. The Commission could include Lawrence based on other criteria; however, it is a policy decision for the Commissioners.

RESPONSIVE ANSWER FOR CONSIDERATION:
The exclusion of towns that have a high concentration of communities that have been disproportionately impacted by the "War on Drugs" (e.g.,Black, Latino)) may have an adverse impact on our equity efforts by creating eligibility gaps for populations that are critical to our mission.

Using Lawrence as the example, long-time Lawrence residents that do not have CORIs or close family members with CORIs would not be eligible for the Social Equity Program (SEP) since no addresses in the town would meet the qualifying residency criteria. As a result, a large portion of the state's Latino community may be unable to receive access to exclusive license types, technical assistance, and training. Additionally, licensees would not be incentivized to target Lawrence residents with their Positive Impact Plans. Lawrence being a "no town" has no identifiable consequence on this matter.

III.12. Question:

How does the Census tract tool continue to create barriers to entrance for top 5 cities?

III.12. Answer:

The Commission has received robust feedback on the challenges presented by the use of census tracts to designate theDIAs. Generally, the feedback argues that census tracts "arbitrarily" carve up streets in a manner that doesn't preserve the effective impact of the war on drugs for an entire neighborhood. For example, multiple addresses on the same street and in extreme proximity will be classified in different census tracts. Some of these tracts will be included while others will be excluded from the DIA list.

The constituents generally argue that the reality is that households that are in such extreme proximity are facing the same harsh outcomes created by the "War on Drugs" (e.g., over-policing, high crime and unemployment rates, etc.) despite their census tract designation. The constituents have argued that voting wards or zip-codes will more effectively capture the fabric of the neighborhood including the socio-economic impact of the War on Drugs while ensuring wealthier communities that aren't suffering from past harms are not included in the DIA designation.

Further, they note that there is an extreme disparity between this approach and smaller towns, where the entire community has been designated as a DIA even if there are districts and neighborhoods that have not technically been disproportionately impacted by the War on Drugs. In this scenario, a financially secure, unaffected resident may be eligible for our programs based on residency while residents from arguably more effected neighborhoods in large cities remain ineligible for the program.

Data limitations don't permit assessment at this more granular neighborhood level. We defer to Commissioners and Commission Leadership on policy decisions.

IV. Appendix

1. PUBLICATIONS: SOCIAL EQUITY INCLUSION

A. Table I.1. Cannabis Control Commission Research Reports with Social Equity Assessment Included

Linked Commission Research Reports and G.L. c. 94G Agenda Item	Description of Report
A Baseline Review and Assessment of Cannabis Use and Public Safety Part 2: 94C Violations and Social Equity: Literature Review and Preliminary Data in Massachusetts. [G. L. c. 94G, § 17 (a) (b]	This report included a(n): (1) Comprehensive assessment of incidents of G.L.c. 94C violations in the Commonwealth, including: (1) G.L. c. 94C, § 32C (Cultivate/Manufacture Class D Substance); (2) M.G.L. c. 94C, § 32C (Distribute or Intent to Distribute Class D Substance); (3) G.L. c. 94C, § 34 (Cannabis Possession (>1 ounce until 7/2017 and >2 ounces after 7/2017); and (4) M.G.L. c. 94C, § 32L (Cannabis Possession (<1 ounce until 7/2017 and <2 ounces after 7/2017), and review of Public Awareness Data relating to knowledge of cannabis provisions in the Commonwealth. This report also includes a review of the literature regarding social equity and arrests, a review of the social equity provisions in the Commonwealth. and, closes with (4) Policy Considerations for the Commonwealth to consider.
A Baseline Review and Assessment of Cannabis Use and Youth: Literature Review and Preliminary Data in Massachusetts. [G. L. c. 94G, § 17 (a) (b]	This report included a(n): (1) Assessment of youth cannabis use behaviors and risk/protective factors associated with cannabis use behaviors from 2007-2017 in the Commonwealth using the Youth Risk Behavioral Surveillance System, (YRBS); (2) Review of the literature on youth cannabis use behaviors and associated topics; (3) Public health framework, (4) Prevention framework; and ending with (5) Policy Considerations for the Commonwealth.
Special Report: A Baseline Review and Assessment of the Massachusetts Cannabis Industry's Required Positive Impact Plans.	Collaboration with Summer Rappaport Institute Fellow and Boston University Student, Jessica Hamilton, this report assessed the first full year of Positive Impact Plans (PIPs) submitted to the Commission and associated data, including: Key Stakeholder Interviews with Commissioners and Social Equity Program (SEP) applicant applications and survey data, and ending with Policy Considerations for the Commonwealth to consider.

A Preliminary Assessment of the Massachusetts Cannabis Industry: Literature Review and Preliminary Data in Massachusetts. [G. L. c. 94G, § 17 (a) (b]	This report included preliminary insight into the first year of the Massachusetts Cannabis Industry and state of the science in regard to early legal cannabis markets (first 12 months).
Massachusetts Public Awareness Campaign, More About Marijuana Effectiveness: Summary and Effectiveness [G. L. c. 94G, § 17 (a) (b)]	The Department assessed the Massachusetts #MoreAboutMJ Public Awareness Campaign ("Campaign"), scientific impetus, and effectiveness using data from the Campaign, which included focus groups and pre-and-post Campaign implementation surveys.
A Baseline Review and Assessment of Adult and Emerging Adult Cannabis Use: High-Level Findings from the International Cannabis Policy Study (2018-2019) and Literature Review [G. L. c. 94G, § 17 (a) (b)]	The Department in collaboration with Dr. Hammond, University of Waterloo, assessed emerging adult (16-20) and adult (≥21) cannabis use and related behaviors from 2018-2019, including: cannabis use, mode of consumption, source of cannabis, ease of cannabis access, driving and riding behaviors, and perceptions of cannabis.
Identifying Disproportionately Impacted Areas by Drug Prohibition in Massachusetts [March 2021]	Collaboration and contract with UMass and Johns Hopkins. [PIs: Mark Melnik, PhD, Jennifer Whitehill, PhD] to update the Gettman 2017 study to comprehensively assess Massachusetts's communities disproportionately impacted by drug prohibition.

B. Table I.2. Commission Research Staff Cannabis Scientific Publicationswith Social Equity Assessment Included

Commission Research Scientific Publications
Geissler KH, Kaizer K, **Johnson JK, Doonan SD**, Whitehill JM. Evaluation of Availability of Survey Data about Cannabis Use. The Journal of the American Medical Association (JAMA) Open Network, Accepted March 24, 2020. doi:10.1001/jamanetworkopen.2020.6039 https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2766927?widget=personalizedcontent&previousarticle=0
Doonan SM., Hamilton JR., **Johnson JK**. Using National Incidence Based Reporting System (NIBRS) to Examine Racial and Ethnic Disparities in Cannabis Violations. Perspective Paper. The American Journal of Drug and Alcohol Abuse. Accepted July 22, 2020. https://doi.org/10.1080/00952990.2020.1803894
Johnson JK., **Doonan SM**., Cannabis policy heterogeneity and effects on research—complexity expected. Scientific Commentary. Journal of American Medical Association (JAMA) Network Open. Accepted February 2021. Published March 18, 2021. https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2777628
Doonan SM., Hamilton JR., **Johnson JK**. "Discussion of the National Incident-Based Reporting System's (NIBRS) Potential to Assess and Monitor Cannabis Incident Disparities: Response to Drs. McCormack and Walfield" Scientific Commentary. American Journal of Drug and Alcohol Abuse (AJDAA). Accepted and Published February 2021. https://www.tandfonline.com/eprint/W5NQUIHPIWGR4AKYGU9Y/full?target=10.1080/00952990.2021.1881531