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UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF OREGON  
PORTLAND DIVISION

UNITED STATES OF AMERICA

Plaintiff,

vs.

CITY OF PORTLAND,

Defendant.

Case No. 3:12-cv-02265-SI

DECLARATION OF JUAN C. CHAVEZ

I, Juan C. Chavez, submit the following declaration:

I am the counsel of record for the Mental Health Alliance, and I make this declaration in support of the Mental Health Alliance's Memorandum in Response to the Plaintiff's Motion For An Order for the purpose of identifying exhibits. My statements are true to the best of my own knowledge, except as to those matters which are therein alleged on information and belief, and as to those matters, I believe them to be true.

1. **Exhibit 1** is the written testimony of Jonathan Brown.

**I hereby declare that above statement is true to the best of my knowledge and belief, and that I understand it is made for use as evidence in court and is subject to penalty for perjury.**

DATED: April 15, 2021.

/s/ Juan C. Chavez

Juan C. Chavez, OSB #136428

## Testimony of Jonathan Brown, MPP, PhD

My name is **Dr. Jonathan Betz Brown**. I have been working as volunteer with the Mental Health Alliance to analyze Portland Police Bureau data to see whether the Bureau's use of force on citizens who are impaired by mental illness has been decreasing.

I hope to assist the court with two contributions.

First, I will preview new research findings about **whether use of force against the mentally ill has been decreasing**.

Second, I will describe lessons that I have learned from performing this research, **lessons that are relevant to the court's review of how Body-Worn Cameras should be regulated** under Article 11 of the proposed revised Settlement Agreement.

### **I. IS THE PORTLAND POLICE BUREAU'S USE OF FORCE ON MENTALLY ILL PORTLANDERS DECREASING?**

Let me begin by describing my **qualifications and motivation** to do this research work. I am a PhD health services researcher and epidemiologist. I was born in Portland and educated at Portland State University and Harvard University. I taught at the Harvard School of Public Health, served as a senior scientist at Kaiser Permanente's Center for Health Research in Portland, and later created and led economic and epidemiologic studies of diabetes on five continents, while Vice President of the International Diabetes Federation. I have published 100 papers in peer-reviewed scientific journals, mainly medical journals. In sum, I am an experienced data scientist and that I care about my native city, its public safety officers, and its citizens. I admit, however, that the research I am about to describe is my first foray into data on policing.

Without diving deeply into the weeds, I want to start by mentioning five key facts about the methods that I used. This will make my findings understandable, and show why my results might be more useful than previous estimates that the court has seen. If you want more detail, you or **anyone can view and run all my data and computer code** by visiting the website listed at the bottom of this testimony. I am writing a detailed report that I will circulate in draft for comments from the parties and from other experts, a report I hope to publish.

**(1) So that tests of statistical significance will be meaningful, I stated in advance (and posted beforehand on the internet) two primary hypotheses** and said exactly how I would test them. The two hypotheses are:

**(a) since 2017, the RATE of use of force by the Portland Police Bureau has decreased** among citizens likely to be mentally impaired;

**(b) since 2017, the RATE of use of SEVERE force has decreased** against citizens likely to be mentally impaired.

**(2) The datasets I used were downloaded in early January, 2022, from the PPB's own website.** These are (a) a dataset describing most of the use of force reports (Force Data Collection Reports,

FDCRs) submitted by PPB officers since late 2017, and (b) datasets describing police dispatches by the Portland Bureau of Emergency Communications (911) dating back to 2012. My understanding is that the use-of-force dataset is the same dataset that the Compliance Officer/Community Liaison (COCL) and the Bureau draw on for their own reports.

**(3) I created a new citizen-level (incident-level) dataset from the FDCR reports.** This is important because a use-of-force incident on one civilian may often involves actions by several officers. Only civilian-level / incident-level data can accurately describe the impact on citizens, and shed clear light on the constitutionality of the Police Bureau's use of force.

**(4) I tested the CHANGE in the RATE of use of force PER DISPATCH.** Simple counts of uses of force are uninformative, even when they change over time. One would prefer to know about changes in the likelihood the officers impose force *when they have the opportunity*. Many factors change the number of opportunities that officers experience, including epidemics and the policies devised to curb them, changes in crime rates, changes in population size and demographics, and change in people's willingness to report crimes and seek police help. Fortunately, the large majority of police encounters with civilians start with 911 dispatches. To test the primary hypotheses, I matched force events to dispatches, then calculated rates per dispatch, which is to say, the probability of substantial or severe force given a dispatch.

**(5) I focused on the dispatch categories that are most likely to involve the mentally impaired.** This allowed me to address the original intent of the Settlement Agreement, the protection of the mentally ill from excessive force.

Now on to the **RESULTS**.

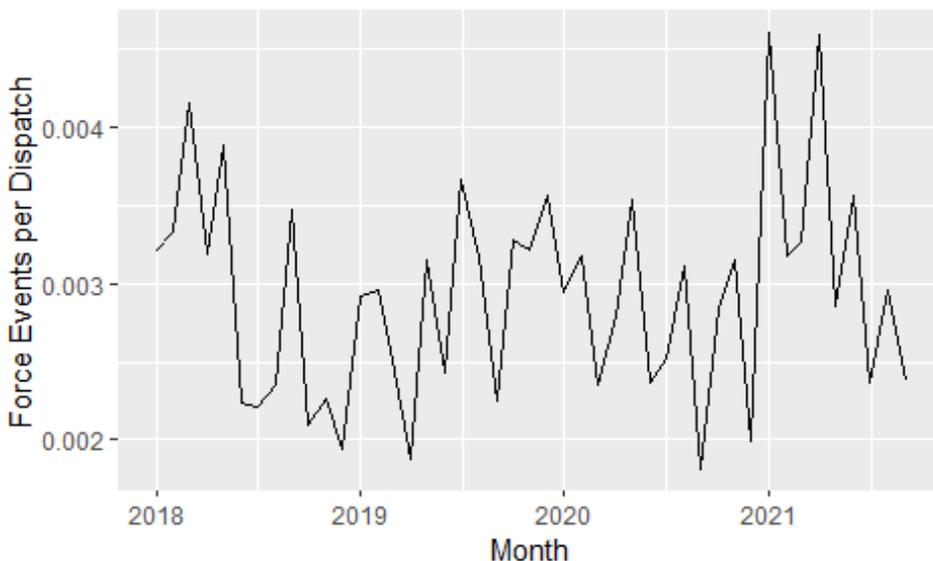
I was surprised by what I found--surprised, and disappointed.

**The first primary hypothesis, that the rate of use of force on the mentally impaired has decreased, was not confirmed.** After controlling for the number and type of dispatches, I found no statistically significant change the rate of use of force. In fact, I observed a slight increase.

A graph of rates of significant force per dispatch by month since 2017 is shown in **Figure 1**. The average rate per month jumps around because of randomness--there are only about 60 use-of-force events for every 2500 dispatches.

**Table 1. Force Incidents per 911 Dispatch by Month**

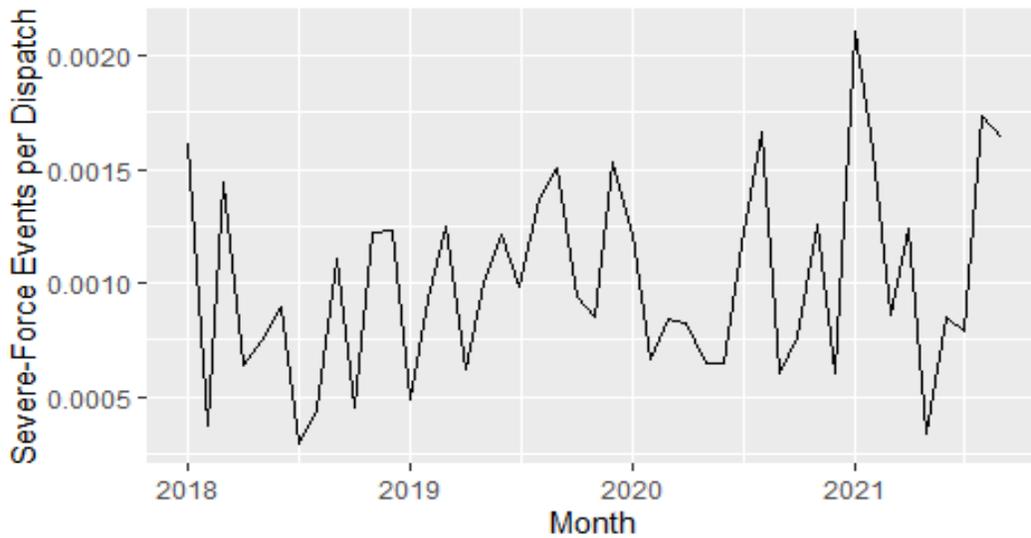
Portland Police Bureau, among Dispatch Types with High Mental-Illness Impair



*Based on the number of policing incidents involving significant force that occurred as a result of dispatches, divided by all 911 dispatches. Numerator and denominator limited to dispatches that are more associated with officers' perceptions of impairment due to mental health crisis or ingestion of drugs other than alcohol. See text for the specific call types included. P value = 0.654*

The second primary hypothesis, that there has there been a lessening in the use of severe force per dispatch, was also not confirmed. As Figure 2 makes clear, the frequency of severe impositions of force during dispatches likely to involve a mentally ill Portlanders has been **going up, not down, since 2017**. The rate of that increase is almost “statistically significant,” by the traditional scientific standard,  $p = 0.11$ . In other words, there is about a 1 in 10 chance that this increase is due to random variation.

**Table 2. High-Severity Force Incidents per 911 Dispatch by M**  
 Portland Police Bureau, among Dispatch Types with High Mental Impairme



*Based on the highest-level of force reported by officers to have been used during use-of-force incidents that occurred as a result of dispatches, divided by all 911 dispatches. Both numerator and denominator limited to dispatches that are more associated with officer perception of impairment due to mental health crisis or ingestion of drugs other than alcohol. Highest force level = 1, lowest force level =*

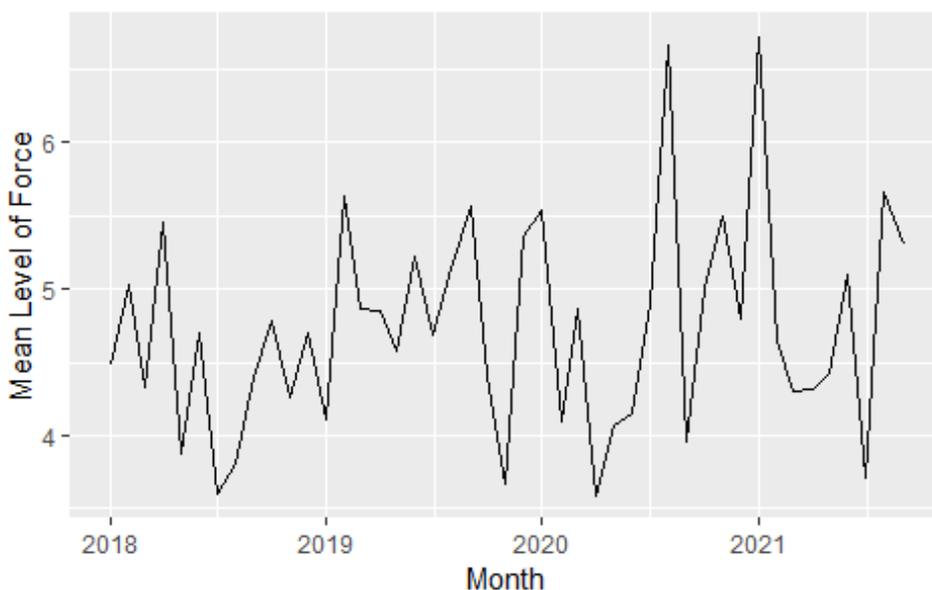
I also pre-specified secondary hypotheses, based on the dataset describing incidents of force. This allowed me to study what happened to civilians whom officers reported to be in mental crisis or drug impaired. (Dispatch data do not include direct assessments of mental illness or other impairments.)

**I was surprised to discover that the number of applications and the severity of force used in force events involving mentally impaired citizens has been rising quickly and steadily over the last four years.**

As shown in **Figure 3**, total amount of force applied per mental-health incident has steadily increased ( $p < 0.05$ ). The dependent variable in this figure is the total number of applications of force per incident, weighted by the severity of each application, 1 for lower severity and 2 for higher severity.

### 3. Mean Severity-Weighted Applications Force per Force-Incider

Portland Police Bureau Q1:2018 - Q3:2020

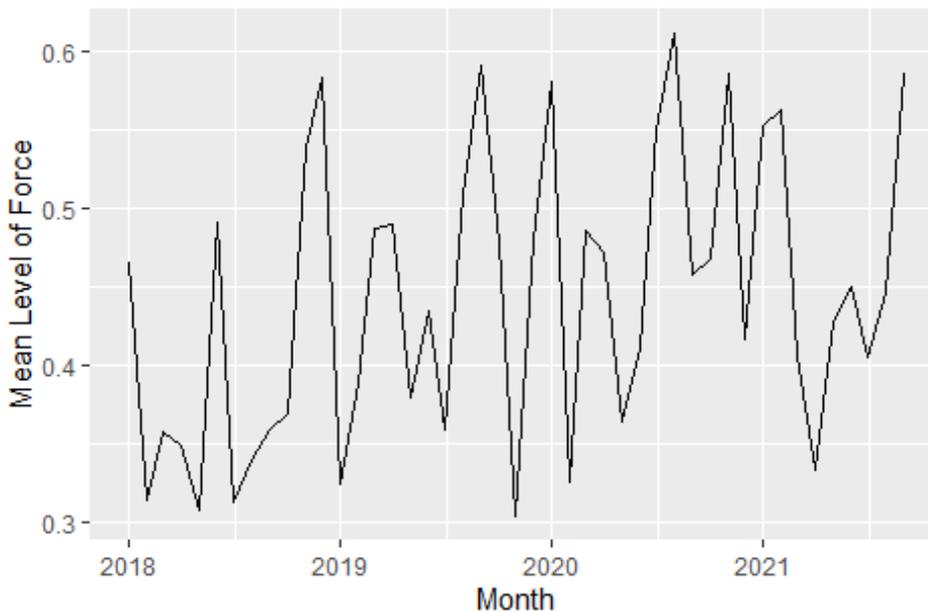


Based on the number of distinct applications of force reported by officers at each use-of-force incident, times the severity of each application (1 = low, 2 = high). P-value for trend (negative binomial regression) < 0.05

Figure 4 shows that the proportion of mental health incidents involving any application of level 2 force has also been increasing ( $p < 0.001$ ). To summarize this level of statistical significance in plain words, there is less than one chance in a thousand that the severity of police force did not increase during force events that officers themselves report as involving persons impaired by mental illness and/or non-alcoholic drug-use.

**Figure 4. Average Severity of Force per Force-Incident by Month**

Portland Police Bureau Q1:2018 - Q3:2020



*Based on the highest severity of force reported by officers to have been used during each use-of-force incident. Severe force = 1, Less Severe Force = 0. P-value for trend*

Over the same time period, **PPB officers did NOT statistically significantly increase the severity of the force they used on Portlanders who they did not perceive as impaired by drugs or mental illness.** In 2018, persons whom officers thought were in a mental or drug-induced crisis received severe force much less frequently than others. By 2021, the rate of high-severity force had equalized.

I also looked at whether officers might be using more severe force because mentally impaired violators are acting in an increasingly threatening manner, based on officers' own reports of threatening behavior. On preliminary analysis, the data contradict this explanation.

## II. LEARNINGS RELEVANT TO REVISION OF THE SETTLEMENT AGREEMENT, PARTICULARLY SECTION 11 AND THE USE OF BODY-WORN CAMERAS

I want to thank and recognize the Police Bureau, the City, and Rosenbaum and Associates for the many years of work they have invested in entering data and making it available to outsiders. Extremely detailed reports are published every quarter. Producing these reports is a lot of work and the heroes who do that work, including the officers who enter all the data, are typically unsung.

Based on my work so far, I have some observations and suggestions.

**(1) The publicly available versions of the use-of-force dataset and the dispatch dataset have been designed so that it is very difficult to link them.** Because this linkage is essential to any controlled understanding of rates of police behavior, the ability to link should be improved.

**(2) More generally, the Bureau makes available only a small fraction of the data that it holds.** There are, for example, no publicly posted datasets describe the many police-civilian encounters that do not involve substantial force-- 99% of all encounters. If a person wanted to study racial patterns in traffic stops, and measure how traffic stops lead to use-of-force events, this dataset would be essential. Although by Oregon law Portland collects and provides (traffic) "STOP" data to the Oregon Criminal Justice Commission, and although the Portland Police Bureau publishes its own very detailed annual report using STOP data, as does the State, Portland does not make its STOP dataset available to the public.

**(3) A more modern approach might increase trust, lower the Bureau's processing costs, and greatly promote citizen involvement and assistance.** Portland's (and Oregon's) practice is to produce extremely detailed and expensive printable reports while guarding the data on which these reports depend. I am truly impressed by all the thought and effort that goes into the reports. Yet, in the end, they provide one team's choices about how to analyze the data. Other sets of eyes will discover other ecosystems in the forest, as my own work illustrates. And I am not sure that many people (besides the authors) read dense reports and get deep understanding from them.

By way of comparison, the New Orleans Police Department, which has been working with the U.S. Department of Justice since 2010, releases near-daily updates of many electronic datasets, including all Calls for Service, all Electronic Police Reports, all Stop and Search Reports (Field Interview Cards), Use of Force events, Misconduct Complaints, In-car Camera Metadata, and Body Camera Metadata. Importantly, the practice of the New Orleans Police Department is to automatically post its data almost as soon as it enters the Department's computers, without guarantees or assumption of liability for absolute accuracy. They simply amend the data later as required. In Portland, however, there is a long approval and correction process before officers' use-of-force reports get keyed into spreadsheets, apparently by hand and, eventually, posted. And the Portland data still require retrospective correction.

Portland's process feels insular. It also breeds suspicion about the accuracy of the data. In my analysis, because I could not ascertain whether and how events were censored from the use-of-force dataset, it was impossible for me to know how biased that dataset is. In January, I reached out to the Bureau for clarification about these and other questions but, after an initial promise of a meeting, I have not heard back.

I would have recommended that the City's official auditors and analysts develop, analyze, and make publicly available an incident-level/civilian-level dataset. This is the only level of data that truly describes police force as it is experienced by civilians. However, **an incident-level dataset is now available from me** in the Github repository where I document my work, and where I am starting to collaborate with others. I welcome the City's official analysts to use it, and to collaborate.

**(4) It is vital that the court and the DOJ set clear rules via Section 11 of the Settlement Agreement to make video data from Body-Worn Cameras accurate, complete, and PUBLICLY AVAILABLE.** I do not believe that statistical research of the kind that I am doing, and that COCL and the

Bureau are producing, will ever be able to prove, or even provide managerially actionable annual assurance that the Bureau's use of force is appropriate, or improving. The analysis of data from officers' reports is important. It will never be enough.

Direct video documentation from body-worn cameras can get much closer to the heart of officer performance. Video can address more questions and I am sure video provides a better learning and training tool than dense statistical reports. **Do not approve a contract with a private body camera vendor who retains ownership of the data, or releases footage incident by incident only by special request, or for a fee.** If the only encounters that get studied are cases that get tried in court, or in the media; if the only people who really study body-worn-camera data are contending lawyers and juries, we will harvest very little of this vast resource.

**(5) Public access and full use of video data require the creation of a special sort of institution with special rules.** New machine-learning methods are being developed to search and analyze video files. In the meantime, social scientists have well-developed methods to code human interactions by hand. But personal privacy must be protected. Medical researchers like me are skilled and very successful at protecting privacy but this requires institutions, review processes, and continuous management.

**(6) I urge the court to appoint a Master to govern the creation and performance of the necessary data repositories, both video and traditional.** A quasi-public repository can hold data and approve and oversee official and citizen-researchers. Just like bank records, data use can be tracked and monitored. If necessary, access can be limited to controlled computing environments. (Using widely available technology, New Orleans provides this now.) Successful models exist. But I cannot imagine that the current process of arm's length rule-writing for existing police processes will get the job done.

I hope I have demonstrated that a skilled citizen can be helpful to government by analyzing data when data are made available to the public. It is not just a question of the so-called public's right to know, it's also a question of the public's ability to help. Citizen involvement committees created by the Settlement Agreement have failed. The 21st century is an electronic data world. Many thousands of Oregonians are good at handling data and—believe it or not—enjoy doing it. Please help us lend a hand.

My data, computer code, and results are posted at <https://github.com/songbard/ppb/tree/main>. If you have any questions, please let me know. Thank you for requesting and considering my testimony.