MINORITY REPRESENTATION IN THE JURY SELECTION PROCESS IN PENNSYLVANIA

MAY 2003

2002 SENATE RESOLUTION NO. 268 PRINTER'S NO. 2300



Staff Report
General Assembly of the Commonwealth of Pennsylvania
JOINT STATE GOVERNMENT COMMISSION
108 Finance Building
Harrisburg, Pennsylvania 17120

The release of this report should not be interpreted as an endorsement by the members of the Executive Committee of the Joint State Government Commission of all the findings, recommendations and conclusions in this report.

JOINT STATE GOVERNMENT COMMISSION ROOM 108 FINANCE BUILDING HARRISBURG, PA 17120-0018

717-787-4397 FAX: 717-787-7020

E-mail: jntst02@legis.state.pa.us Website: http://jsg.legis.state.pa.us

The Joint State Government Commission was created by the act of July 1, 1937 (P.L.2460, No.459) as amended, as a continuing agency for the development of facts and recommendations on all phases of government for the use of the General Assembly.

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717-787-4397 FAX 717-787-7020

May 2003

TO THE MEMBERS OF THE GENERAL ASSEMBLY:

The Joint State Government Commission is pleased to present its staff report regarding minority representation in the jury selection process in Pennsylvania. This study was undertaken pursuant to 2002 Senate Resolution No. 268. The Commission recognizes with gratitude the assistance of the County Court Administrators and Jury Commissioners in the gathering data for this report.

Respectfully submitted,

Roger A. Madigan

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The criminally accused enjoy a constitutional right to be tried by an impartial jury. The U.S. Constitution requires the jury to be "of the State and district wherein the crime shall have been committed," and Pennsylvania's Constitution requires the jury to be "of the vicinage." Being a criminal defendant is likely a lonely ordeal because it is the entire Commonwealth or the entire nation against one person. It is likely a distressing circumstance because the criminal defendant's life, liberty and property may be jeopardized. While impartial jurors may be either sex and all races and ethnicities, it is understandable if a criminal defendant faces a homogeneous or nearly homogeneous jury whose demographic characteristics obviously differ from his and wonders whether the jury judging him will be impartial.

Residents in a community whose demographic characteristics differ noticeably from persistently homogeneous or nearly homogeneous juries might also question the impartiality of these juries. Since any potential juror may be challenged for cause, and one who is unable or unwilling to be impartial would be dismissed, the demography of a jury should theoretically not matter. In fact, homogeneous juries are permissible, but large, distinctive groups may not be excluded from the jury pool.⁴ To fulfill the guarantee of an impartial jury in all criminal prosecutions, a fair cross section of the community must be on venires from which juries are drawn.⁵ This right is explained in the succeeding section as is its statutory⁶ and judicial implementation.

On October 9, 2002, Pennsylvania's Senate adopted Senate Resolution 268 directing the Joint State Government Commission to compare the level of representation of minorities in juries for criminal proceedings to that of the general population of counties. If necessary, the Commission is directed to determine methods to improve the jury pooling process to ensure that the level of minority representation in jury pools is generally proportional to a county's percentage of minorities in residence. This resolution also directs the Commission to study the real

¹ U.S. Const. amend. VI; Pa. Const. art. I, § 9.

² U.S. Const. amend. VI.

³ Pa. Const. art. I, § 9.

⁴ Taylor v. Louisiana, 419 U.S. 522, 530 (1975).

⁵ *Id.* at 526-30, 537.

^{6 42} Pa. C.S. ch. 45.

and nominal amounts of compensation for jurors and the effect of inadequate compensation.

The primary rationales expressed by the Senate in adopting this resolution are:

- A procedural reliance on outdated informational resources to pool juries.
- Recent evidence that minority citizens are likely being overlooked when pooling jurors in certain counties.
- The possibility that compensation for jurors is inadequate because it has not been adjusted for inflation in decades.

In response to the resolution, counties across this Commonwealth submitted data to the Commission including each respondent's actual practice as directed by statute as well as the names and addresses of potential jurors over a one-year period. This data was compiled and studied and is included and explained. Several other recent studies are briefly summarized. For nearly every jurisdiction in the country, the report also publishes statutory qualifications for jurors, sources for master lists of prospective jurors and the amount of juror compensation. To better enable the reader to place this report's data in the context of constitutional claims of invalid jury selection, tables of opinions from U.S. appellate courts are also included.

Finally, the Commission's conclusions and recommendations follow its foregoing analysis. These conclusions and recommendations were drawn following staff's:

- collection and analysis of the data appearing herein;
- review of relevant academic and professional literature;
- consideration of practices across our country;
- examination of constitutional and statutory requirements;
 and
- conversations with several court administrators.

These conclusions and recommendations are more fully explained in a later section but are summarized here.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

- From the data gathered for this report it is unlikely that any county excludes large, distinctive groups from the jury pool in proportions that violate the constitution. Even so, some counties could stand to improve their representation of minorities on juries.
- The judicial system should voluntarily, routinely monitor itself to determine if it is fulfilling its constitutional obligation to draw jurors from a cross section of the community. This might require court administrators to record how many individuals from which distinctive groups are summoned for jury service.
- 3. To change unfavorable public attitudes about jury service, the judicial system should more effectively inform the citizenry of its obligation to comply with summonses to serve, how to defer or seek excusal from service, and what to expect while serving. It is difficult to know what to specifically recommend to accomplish this; however, it is likely that a sustained and varied effort will be required to obtain more favorable attitudes about jury service.
- 4. Judicial districts should reconsider more vigorously enforcing summonses.
- 5. Judicial districts should explore whether childcare facilities are viable and provide them if so. If numerous districts consider these facilities to be desirable but economically unviable, the judiciary should consult our General Assembly to determine if these facilities can be feasibly provided across our Commonwealth.
- 6. Given the varying experiences of courts, it is difficult to conclude that specific or multiple sources be statutorily prescribed. This report summarizes two recent studies that revealed opposite outcomes when similar measures were taken in attempts to make jury pools more representative.
- 7. The compensation for jurors is outdated and severely insufficient. If adjusted for inflation, jurors would receive more

- than \$53.00 per day. If paid the minimum wage, they would receive \$41.20 for an eight-hour day.
- 8. Employers should be encouraged to compensate their employees while serving as jurors, but it would be inequitable to mandate that they do so.
- 9. Jury service is a compulsory public service that our judicial system relies upon to constitutionally protect individual rights. Citizens are obliged to serve so that their rights would likewise be protected were they accused of a crime. In other words, it is a responsibility shared between particular individuals and society at large. Ultimately, it is up to individuals to fulfill this obligation.

CONSTITUTIONAL RIGHTS

An Impartial Jury

The constitutional right to a jury trial in all federal criminal cases guaranteed by amendment VI is extended to state criminal cases via amendment XIV⁷ because "trial by jury in criminal cases is fundamental to the American scheme of justice." Americans adopted the British practice of trial by jury to protect against arbitrary rule. "A right to jury trial is granted to criminal defendants . . . to prevent oppression by the Government." Similarly, our Commonwealth grants the criminally accused a right to be speedily, publicly tried when prosecuted "by indictment or information." 11

The criminally accused enjoy a constitutional right to be tried by an impartial jury. The guarantee of an impartial jury in all criminal prosecutions is fulfilled by requiring that a fair cross section of the community be on venires from which juries are drawn. Most simply stated, this requirement forbids systematically excluding large, distinctive groups from the jury pool so that the pool reasonably represents the community. The community of the community of

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⁷ A state may not "deprive any person of life, liberty or property, without due process of law." U.S. Const. amend. XIV, § 1.

⁸ Duncan v. Louisiana, 391 U.S. 145, 149 (1968). A category of petty crimes is not subject to the amendment VI jury trial provision so that amendment XIV does not extend the application of this provision to the states for that category. *Id.* at 159. ⁹ *Id.* at 151-52.

¹⁰ *Id.* at 155 (citation omitted).

¹¹ Pa. Const. art. I, § 9.

¹² U.S. Const. amend. VI; Pa. Const. art. I, § 9. The U.S. Constitution requires the jury to be "of the State and district wherein the crime shall have been committed," and Pennsylvania's Constitution requires the jury to be "of the vicinage."

¹³ Taylor v. Louisiana, 419 U.S. 526-30, (1975).

¹⁴ *Id*. at 530, 537-38.

The foundation for this fundamental requirement is solid because it:¹⁵

- quards against the arbitrary exercise of power;
- avails the justice system to the commonsense judgment of the community:
- instills and maintains public confidence in the systematic fairness of criminal justice;
- preserves the constitutional concept of a jury trial;
- assures a diffused impartiality; and
- relies upon civic responsibility to administer justice.

This fundamental requirement does not mean that juries actually chosen must "reflect the various distinctive groups in the population" or be particularly composed, "but the jury wheels, pools of names, panels, or venires from which juries are drawn" may "not systematically exclude distinctive groups in the community and thereby fail to be reasonably representative thereof." This principal is to be applied with "much leeway" because relevant qualifications and reasonable exemptions may be prescribed. 17

Supreme Court of United States declined to extend the fair-crosssection requirement to petit juries because it would be practically impossible to do so. 18 "[T]he only groups that have consistently been held to be 'distinctive' for the purposes of determining fair representation in jury systems are those defined by" sex, race and Hispanic surname. 19

Theoretically, the demography of a jury does not matter because any potential juror may be challenged for cause and one who is unable or unwilling to be impartial would be dismissed.²⁰ Practically, the

17 Id. at 537-38 (citations omitted).

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¹⁵ *Id.* at 530-31 (citations omitted).

¹⁶ *Id.* at 538 (citations omitted).

¹⁸ Lockhart v. McCree, 476 U.S. 162, 173-74 (1986).

¹⁹ Ted C. Newman, Fair Cross-sections and Good Intentions: Representation in Federal *Juries*, 18 Just. Sys. J. 211, 213 (1996). ²⁰ See Powers v. Ohio, 499 U.S. 400, 411 (1991).

demography of a jury does not matter because homogeneous juries are permissible.21

Equal Protection of the Laws

A state also may not "deny to any person within its jurisdiction the equal protection of the laws."22 Discriminating in the selection of jurors because of their color, amounts to a denial of the equal protection of the laws to an African American when he is put upon trial for an alleged offence against the State, and Congress can enforce the provisions of the Fourteenth Amendment by appropriate legislation.²³ possessing all other qualifications which are or may be prescribed by law shall be disqualified for service as grand or petit juror in any court of . . . any State on account of race" or color. 24 The federal government may not likewise discriminate in the selection of jurors because life, liberty and property may not be deprived absent due process of law. 25 "What an accused is entitled to demand, under the Constitution of the United States, is that, in organizing the grand jury as well as the impaneling of the petit jury, there shall be no exclusion of his race, and no discrimination against them, because of their race or color."26

Establishing a Prima Facie Violation of Either Right

Broadly restated, the criminally accused have a right to be tried by a jury drawn from a fair cross section of the community, and the government may not discriminate against a recognizable group when selecting jurors.²⁷ When litigated, the former is often identified as "the Sixth Amendment fair cross-section requirement";28 the latter is often referred to as an equal protection challenge under the Fourteenth²⁹ or Fifth Amendments.³⁰ Until U.S. Supreme Court expressly accepted "the

²³ Strauder v. West Virginia, 100 U.S. 303, 310 (1879); U.S. Const. amend. XIV, § 5. ²⁴ 18 U.S.C.A. § 243 (West 2000).

²¹ The Sixth Amendment requirement of a fair cross section assures an impartial rather than a representative jury. Holland v. Illinois, 493 U.S. 474, 480 (1990).

²² U.S. Const. amend. XIV, § 1.

²⁵ U.S. Const. amend. V. "[T]he Due Process Clause" of U.S. Const. amend. V "has been construed as having the same significance as the Equal Protection Clause" of U.S. Const. amend. XIV. Hampton v. Mow Sun Wong, 426 U.S. 88, 100 (1976).

²⁶ Martin v. Texas, 200 U.S. 316, 321 (1906) (citations omitted).

²⁷ Castaneda v. Partida, 430 U.S. 482, 494 (1977).

²⁸ *E.g.*, United States v. Chanthadara, 230 F.3d 1237, 1256 (10th Cir. 2000). ²⁹ *E.g.*, United States v. Esquivel, 88 F.3d 722, 725 (9th Cir. 1996).

³⁰ E.g., United States v. Grisham, 63 F.3d 1074, 1077 (11th Cir. 1995).

fair-cross-section requirement as fundamental to the jury trial guaranteed by" U.S. Constitution amendment VI,³¹ most challenges to selection of jurors were based upon the equal protection components of U.S. Constitution amendments V and XIV. Since 1975, it seems that most challenges to selection of jurors have been based on U.S. Constitution amendment VI, although many contestants argue violations of both equal protection and fair cross-section requirements. Based upon published appellate opinions, most of these challenges fail to prove a violation under either basis.

"[T]o establish a prima facie violation of the fair-cross-section requirement, the defendant must show" that:

- 1) the allegedly excluded group is distinctive in the community;
- 2) the representation of this group in venires from which juries are selected is unfair and unreasonable in relation to the number of such persons in the community; and
- 3) this under-representation is due to systematic exclusion of the group in the jury-selection process.³²

The first prong states that aside from being distinct from allegedly included groups, allegedly excluded groups must contain sufficiently numerous members so that if they are systematically eliminated, "the fair-cross-section requirement cannot be satisfied." "[T]he only groups that have consistently been held to be 'distinctive' for the purposes of determining fair representation in jury systems are those defined by" sex, race and Hispanic surname. 34

The second prong involves a statistical comparison between the allegedly excluded group on jury venires and its percentage in the community to determine if the discrepancy is too gross to conclude that the group is fairly represented in the source from which juries are drawn. This part of the test is a statistical comparison whereby courts routinely rely upon U.S. census numbers but require a fair and reasonable relationship between the two statistics rather than a precise match. The second property of the second property

³⁴ Newman, *supra* note 19, at 213.

³¹ Taylor v. Louisiana, 419 U.S. 522, 530 (1975).

³² Duren v. Missouri, 439 U.S. 357, 364 (1979).

³³ *Id.* at 364 (citation omitted).

³⁵ *Duren*, 439 U.S. at 366.

³⁶ Newman, *supra* note 19, at 213.

"Most judicial decisions have relied upon absolute measures of disparity."³⁷ This absolute disparity, as it is commonly referred to, is simply the actual difference between the percentages of the two statistics that are compared. Therefore, if the percentage of women in the community is 54% and the percentage of women in the venire is 14.5%, the absolute disparity is 54% minus 14.5%, which equals 39.5%. An alternative measure of disparity is comparative disparity.³⁸ This is simply the relative difference between the percentages of the two statistics that are compared. Using the same percentages of women in the example for absolute disparity, one would expect that more than half of the venire would be women, yet less than one out of six in the venire were women. This results in a comparative disparity of more than 67% because the proportion of women in the venire is less than one out of six when it would be expected to be more than three out of six.

The final prong is proven by demonstrably large discrepancies occurring "not just occasionally but in every . . . venire for a period . . . manifestly" indicating "that the cause of the under-representation was . . . inherent in the particular jury-selection process." A litigant might demonstrate each element to establish a prima facie violation, yet a state could adequately justify this infringement. 40 To be adequate, a significant state interest would have to be "manifestly and primarily advanced by those aspects of the jury-selection process . . . that result in the disproportionate exclusion of a distinctive group."⁴¹

Similarly, "to show that an equal protection violation has occurred[,]" one must:

- 1) establish that the group is recognizable, distinctive and singled out for different treatment;
- 2) prove proportional under-representation of that group by comparing the total population to those called to serve over a significant period; and

³⁷ *Id*.

³⁹ Duren, 439 U.S. at 366. Alternatively stated, this requires a showing of underrepresentation generally and on the petitioner's venire. *Id.* ⁴⁰ *Id*. at 368 n.26.

⁴¹ *Id.* at 367-68.

3) support the statistically presumed discrimination with a selection procedure that is susceptible of abuse or not racially neutral.⁴²

This test was announced in the context of grand jury selection,⁴³ but it is also applied to judge if an equal protection violation had occurred when selecting petit juries.⁴⁴ The assertion of this claim also required the petitioner alleging discrimination to belong to the substantially underrepresented group;⁴⁵ however, one may likely now assert an equal protection violation whether or not he belongs to the substantially underrepresented group.⁴⁶ Once the prima facie case has been made, it is up to the state "to dispel the inference of intentional discrimination."⁴⁷

The first two showings under either prima facie test are effectively the same.⁴⁸ The third showing under these prima facie tests differs in that the equal protection violation is really one that involves purposeful discrimination. Both of these tests are necessarily applied alleging either violation in a United States or a Commonwealth court.⁴⁹

Although both claims are sometimes raised by an appellant challenging jury selection,⁵⁰ if one is more commonly solely raised than the other, it is now probably the fair-cross-section claim. Theoretically, it is easier to prove than an equal protection claim because it does not allege purposeful discrimination; it simply alleges a persistently disproportionate demographic outcome. The reason that purposeful discrimination is theoretically more difficult to establish is because during the last 35 years, probably every jurisdiction in this country has modified its selection

⁴² Castaneda v. Partida, 430 U.S. 482, 494 (1977).

⁴³ Id

⁴⁴ *E.g.*, Alston v. Manson, 791 F.2d 255, 256-57 (2d Cir. 1986).

⁴⁵ Castaneda, 430 U.S. at 494.

⁴⁶ An objection based upon the equal protection clause and 18 U.S.C. § 243 is permissible "to race-based exclusions of jurors effected through peremptory challenges whether or not the defendant and the excluded juror share the same race." Powers v. Ohio, 499 U.S. 400, 402 (1991). The statute forbids qualified citizens from being disqualified as jurors based upon race or color. Although this judicial finding allowing third-party equal protection claims of excluded jurors expressly applies to prosecutors' racial exclusions, it is unlikely that it would not be extended beyond peremptory challenges to other jury selection procedures because states may not racially discriminate and a prosecutor simply represents the state.

⁴⁷ Castaneda, 430 U.S. at 497-98.

⁴⁸ Although possibly applied somewhat differently, "[t]he requirements a party must meet when challenging the jury selection process . . . are comparable under equal protection and fair cross-section analysis." Ramseur v. Beyer, 983 F.2d 1215, 1230 (3d Cir. 1992). ⁴⁹ *E.g.*, Commonwealth v. Harris 424 A.2d 1245, 1247, 1248 n.2 (Pa. 1981).

⁵⁰ *E.g.*, Commonwealth v. Cameron, 664 A.2d 1364, 1369 (Pa. Super. 1995).

procedures to make certain that they are racially neutral and not susceptible to abuse. In the past, jury commissioners individually delivered names of persons qualified to be jurors to a clerk of court. These lists were combined into a master list which was reduced to slips of paper with names that were drawn from a jury wheel to select jurors.⁵¹ In many if not most jurisdictions, there were no prescribed sources for the master list so that appointed and elected jury commissioners had much discretion about whom to include. Sometimes they would seek out leaders of the various churches, social and fraternal clubs, and committeemen of the political parties asking for a list of names for jury service. These leaders were regarded to be keymen in the community and were relied upon to identify sober, intelligent and judicious persons for the jury commissioners. This common method of gathering names for a master list became known as the keyman system, but jury commissioners also received additional names from friends and acquaintances. Some jurisdictions had only relatively objective qualifications of jurors such as age, residency and comprehension of English while other jurisdictions added more subjective qualifications such as honesty, intelligence, and a reputation for integrity, good character and sound judgment.⁵² Clerks and jury commissioners were typically white and would not know the reputations of most African Americans in a segregated county except the ones who have been convicted of crimes.⁵³ Moreover, they might not have been eagerly assertive in attempting to list and select more African Americans eligible to serve as jurors. Jury commissioners might have spent only one day annually in this capacity.⁵⁴ The practice often was the partial application of statutory criteria that led to routinely excluding sectors of a community who did not share the characteristics of jury commissioners who were themselves appointed.⁵⁵

PENNSYLVANIA'S STATUTE

Until 1948, U.S. district courts applied the same qualifications and exemptions as the state in its district applied. From 1948-57, the federal judicial code established its own qualifications, exemptions and exclusions but still required federal jurors to be competent to serve under state law. In 1968. United States of America enacted a jury selection and service act that mandated random selection from a cross section in the community.⁵⁶

 ⁵¹ *E.g.*, Act of April 16, 1925, P.L.244, No.158.
 ⁵² *E.g.*, Carter v. Jury Comm'n, 396 U.S. 320, 323 (1970).

⁵³ See id. at 324-25.

⁵⁴ *Id.* at 325-26.

⁵⁵ E.g., id. at 326-27.

⁵⁶ 28 U.S.C.A. §§ 1861-78 (West 1994 & West Supp. 2003).

Other jurisdictions in this country eventually enacted jury selection and service acts that similarly limited the discretion of jury commissioners by specifying a source or sources to identify prospective jurors and mandating random selection therefrom. This largely eliminated laws and procedures that might not have been racially neutral and selection systems that were susceptible to abuse. Switching from mostly subjective keymen systems to mostly objective random systems to select prospective jurors was probably primarily due to social demands and a judiciary that became less tolerant of the potential for systematic unfairness under the keymen systems.

Most of our Commonwealth's current law relating to juries and jurors⁵⁷ were enacted in 1980.⁵⁸

42 Pa. C.S. Chapter 45

The Commonwealth's declared policy is that:

- all entitled to a trial by jury have the right to randomly selected jurors from a representative cross section of those eligible for jury duty within a county;
- all who are qualified to serve as jurors shall have the opportunity to be considered therefor and are obligated to serve when summoned; and
- 3) a citizen may not be excluded from jury service for race, color, religion, sex, national origin or economic status.⁵⁹

Every citizen in a county old enough to vote is qualified for jury duty unless he is:

- 1) illiterate or not fluent in English;
- 2) too mentally or physically infirm to efficiently serve; or
- 3) has been convicted of a crime that is punishable by imprisonment for more than a year and has not been pardoned.⁶⁰

⁵⁷ 45 Pa. C.S. ch. 45.

⁵⁸ Act of June 26, 1980, P.L.266, No.78.

 $^{^{59}}$ 45 Pa. C.S. § 4501. Other jurisdictions have declared a similar policy. *E.g.*, Ala. Code § 12-16-55 (1995).

Exemptions are for those:

- 1) on active military duty;
- 2) who have served during the last three years unless the service was fewer than three days, which allows an exemption for one year;
- 3) demonstrating undue hardship or extreme inconvenience; and
- 4) relatives of victims of criminal homicide under 18 Pa. C.S. § 2501 (relating to criminal homicide).⁶¹

Selection of Prospective Jurors

At least annually, the jury selection commission shall prepare a master list of prospective jurors that lists all registered voters in its county or names from other lists whose number equals or exceeds the names of registered voters. The commission may supplement the list by phone directories, tax rolls, governmental programs, school censuses, volunteers qualified to be jurors applying for listing and otherwise. Officials controlling these lists of names must allow the commission to reproduce them unless they are regulated as privileged by Office of Attorney General.

The master list of prospective jurors is publicly available. 65 At least annually, prospective jurors must be randomly selected from the master

⁶⁰ 45 Pa. C.S. § 4502(a). This criminal conviction doesn't apply to some provisions of a former act, The Vehicle Code. *Id.* at (b). Other jurisdictions have similar qualifications. *E.g.*, Alaska Stat. §§ 09.20.010, 09.20.020, 12.40.010, 12.45.010 (LexisNexis 2002).

⁶¹ 45 Pa. C.S. § 4503(a). "This subchapter shall not affect the existing practice with respect to peremptory challenges and challenges for cause." *Id.* at (b). See also 51 Pa. C.S. § 4106. Allowing one to be excused because service as a juror would impose an undue hardship is common. *E.g.*, Ariz. Rev. Stat. Ann. § 21-202(2) (West 2002).

⁶² 45 Pa. C.S. § 4521(a). It is common to create a master list annually starting with a list of registered voters. *E.g.*, Colo. Rev. Stat. § 13-71-107(1) (2002).

⁶³ 45 Pa. C.S. § 4521(a). Other jurisdictions also allow using other lists to select persons for jury service including customer mailing lists, utility company lists and other "source or sources inclusive of a representative cross section of the population of the area served by the court." *E.g.*, Cal. Civ. Proc. Code § 197(a) (West Supp. 2003). ⁶⁴ 45 Pa. C.S. § 4521(f)(2).

⁶⁵ 45 Pa. C.S. § 4521(b). At least one jurisdiction forbids its master list of jurors' names and addresses to be available for public inspection, publication, or copying; instead, it permits litigants or their attorneys to examine the master list in the presence of the circuit

list numbering an amount equal to that designated by the president judge. The commission may mail a limited questionnaire to selectees to determine their qualification to serve as jurors. The addressee must complete the form under penalty of perjury and return it. Any person who fails to adequately respond may be summoned to complete the questionnaire in person. Counties not employing a questionnaire must select jurors in accordance with 42 Pa. C.S. § 4524 and collect information to determine whether the selectee is qualified or exempt with the summons. Based upon the juror qualification forms received under § 4521 and the qualifications under § 4502, the jury selection commission determines who are qualified to serve as jurors and publicly lists those persons. The jury selection commission must publicly list the names of disqualified, prospective jurors and why they are disqualified.

The jury selection commission shall maintain a master list or jury wheel with the names of qualified jurors. When ordered by a court, the commission publicly, randomly selects a requisite number of names to be summoned for assignment to jury arrays. The names and addresses of those assigned to each jury array must be publicly available at least 30 days prior to its first day of service. Additionally, a jury selection commission may use machines to randomly list jurors.

If the opportunity did not exist before, "a challenge to the array shall be made not later than 5 days before the first day of the week the case is listed for trial of criminal cases for which the jurors have been summoned

judge to verify that names drawn from the wheel or box were placed there in the manner provided by law. Ark. Code Ann. § 16-32-103(e) (Michie 1999).

⁶⁶ 45 Pa. C.S. § 4521(c). Not all jurisdictions select an amount designated by the president judge. Jury administrators in Connecticut select a number of prospective jurors from each town based upon a percentage of the town's population that the jury administrators determine. Conn. Gen. Stat. Ann. §§ 51-220, 51-222a(d) (West Supp. 2003).

⁶⁷ 45 Pa. C.S. § 4521(d)(1). Other jurisdictions likewise mail forms to randomly selected prospective jurors to determine whom among those drawn are qualified to be jurors. *E.g.*, Idaho Code § 2-208(1) (Michie Supp. 2002).

^{68 45} Pa. C.S. § 4521(d)(2).

⁶⁹ 45 Pa. C.S. § 4521(d)(4).

⁷⁰ 45 Pa. C.S. § 4521(e).

⁷¹ 45 Pa. C.S. § 4522.

⁷² 45 Pa. C.S. § 4523.

⁷³ 45 Pa. C.S. § 4524.

⁷⁴ *Id.* Probably every jurisdiction now randomly selects persons for a jury venire from the jury list, but jurisdictions might require the random selection to be supervised by a judge of any court of record rather than mandate a public, random selection. *E.g.*, Fla. Stat. Ann. § 40.221 (West 1998).

⁷⁵ 45 Pa. C.S. § 4524.

⁷⁶ 45 Pa. C.S. § 4525.

and not thereafter."⁷⁷ The facts specifying the ground for challenge must be written, 78 and one may challenge the array only "on the ground that the jurors were not selected, drawn, or summoned substantially in accordance with law."⁷⁹

At a hearing, the movant may present any relevant evidence. For substantial noncompliance with this subchapter, a court shall stay the proceedings and grant appropriate relief. Unless superseded by general rules, this is the exclusive means to challenge an array of jurors selected in nonconformance with this subchapter. Nonpublic records used by the jury commissioners in the selection process remain private unless used as evidence supporting a motion challenging compliance with selection procedures or after the list or wheel has been emptied and refilled and those selected to serve before emptying the list or wheel have been discharged.

After a court's administrative staff selects a panel of jurors but before commencing its interrogation, a panel "may be challenged only on the grounds that it was not selected at random from the array. . . . Nothing in this subchapter shall affect the existing practice with respect to peremptory challenges and challenges for cause." Unless a general rule says otherwise, a verdict waives any errors and omissions selecting jurors under this subchapter. 85

Summoning Jurors

"Court orders directing the jury selection commission to select an array of jurors shall be issued in the form prescribed by" rule. 86 Persons selected to serve as jurors shall be summoned in a manner determined by

⁸² 45 Pa. C.S. § 4526(c).

⁷⁷ Pa. R. Crim. P. 630(B)(1). The challenge to the array is worded differently in 45 Pa. C.S. § 4526(a); however, Pa. Const. art. V, § 10(c) empowers our supreme court "to prescribe general rules governing practice, procedure and the conduct of all courts" so long as those rules are constitutional, don't modify substantive rights of litigants and don't eliminate the General Assembly's determination of a court's jurisdiction nor alter a statute of limitation or repose. Because Pa. Const. art. V, § 10(c) suspends statutes inconsistent with permissible rules, 45 Pa. C.S. § 4526(a) is suspended.

⁷⁸ Pa. R. Crim. P. 630(B)(1).

⁷⁹ Pa. R. Crim. P. 630(B)(2).

⁸⁰ 45 Pa. C.S. § 4526(b).

⁸¹ *Id*.

⁸³ 45 Pa. C.S. § 4526(d).

^{84 45} Pa. C.S. § 4526(e)(f).

^{85 45} Pa. C.S. § 4527.

⁸⁶ 45 Pa. C.S. § 4531.

the jury selection commission and president judge.⁸⁷ Jury round ups are authorized by 42 Pa. C.S. § 323 and Pa. R. Crim. P. 635. The county and multicounty investigating grand juries "shall be impaneled in the manner provided . . . by law."⁸⁸

Expenses of Investigating Grand Juries

"The expenses of a county investigating grand jury" are "borne by the county in which it is impaneled[,]" and "[t]he expenses of any multicounty investigating grand jury" are "borne by the Commonwealth." These multicounty investigating grand jurors are to receive \$40 per day reporting for service. They also are allowed to be reimbursed for travel at the same rate as employees of Office of Attorney General and a per diem of \$10 for lunch. Those who lodge overnight at the site of a multicounty investigating grand jury because they live too far to commute are also to be given per diem meal expenses of \$6 for breakfast and \$25 for dinner.

Compensation and Travel Allowance for Jurors

Persons summoned to serve as jurors receive \$9 for each of the first three days of service in a calendar year and \$25 for each day thereafter. Except in the first judicial district where no allowance is paid for travel, those summoned are paid "17¢ per mile circular." If a juror is participating in a trial or grand jury proceeding (except a multicounty investigating grand jury), the Commonwealth reimburses counties 80% of the "compensation and travel allowance beyond the first three days of service."

Retailers and service providers who employ 15 or more and manufacturers who employ 40 or more employees may not "deprive an employee of his employment, seniority position or benefits" because the employee is summoned, complies with the summons and serves as a

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87 45 Pa. C.S. § 4532.

88 45 Pa. C.S. § 4543(d); 45 Pa. C.S. § 4544(c).

89 45 Pa. C.S. § 4553(a).

90 45 Pa. C.S. § 4553(b).

91 Id.

92 Id.

93 Id.

94 42 Pa. C.S. § 4561(a).

96 42 Pa. C.S. § 4561(b).
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juror, but the employer is not required to "compensate the employee for employment time lost because of such jury service." Employees of small employers who are statutorily unprotected from losing their jobs when serving as a juror shall be excused from jury service upon request. 98

OTHER JURISDICTIONS

Qualifications of Jurors

Entitled Qualifications of Jurors by State, Appendix D99 specifies qualifications of jurors for most jurisdictions in United States of America. It also specifies sources for master lists of prospective jurors. Alabama, California, Tennessee, Utah, and Vermont seem to be similar to our Commonwealth in that they also allow wide discretion of sources for master lists. 100 Alaska, Florida Maine and New York are the only jurisdictions in addition to our Commonwealth that expressly, statutorily allow applicants to volunteer for jury service. Some jurisdictions expressly forbid volunteers from serving. 101 Including our Commonwealth, approximately ½ the jurisdictions prepare a master list at least annually. A statutorily prescribed timeliness to prepare or update master lists was not found for all jurisdictions, perhaps not all specify how often this must be done; however, some jurisdictions require lists be prepared or updated both more frequently and less frequently than annually. Alabama allows its list to exist for four years before requiring it to be updated. Arizona, California, Florida, New Mexico, and Utah require their lists to be compiled or updated more often than annually.

Exemptions, Excusals, Employer Liability and Fees of Jurors

Entitled Exemptions, Excusals, Employer Liability and Fees of Jurors by State, Appendix E¹⁰² specifies exemptions and excusals from jury service as well as employers' obligation to pay their employees while serving as jurors and fees and mileage reimbursement for jurors for most jurisdictions in United States of America. Our Commonwealth is the only jurisdiction that expressly, statutorily exempts relatives of victims of

⁹⁹ *Infra* pp. 102-12.

⁹⁷ 42 Pa. C.S. § 4563.

⁹⁸ Id

Citations to relevant regulations, rules of court and statutes appear in the appendix.

¹⁰¹ Md. Code Ann., Cts. and Jud. Proc. § 8-104(b) (2002).

¹⁰² *Infra* pp. 113-33.

criminal homicide from serving as jurors; however, some jurisdictions exempt or excuse jurors for any compelling reason so that this exemption might not be unique to Pennsylvania. 103 Our Commonwealth allows prospective jurors to be excused for undue hardship and extreme inconvenience. Similarly worded excuses are also available to prospective jurors in approximately four-fifths of the jurisdictions specified. Like more than four-fifths of the jurisdictions, our Commonwealth does not statutorily require private employers to compensate their employees while serving as jurors. Approximately four-fifths of the jurisdictions pay their jurors more during the first three days of service than our Commonwealth requires its jurors to be compensated. 104 Almost two-fifths of the jurisdictions pay their jurors more for each day in excess of three than our Commonwealth requires its jurors to be paid. 105 The amount of reimbursement per mile varies widely. Like our Commonwealth, some jurisdictions statutorily specify reimbursement of a number of cents per mile while other jurisdictions reimburse mileage at an administratively authorized rate.

¹⁰³ Citations to relevant regulations, rules of court and statutes appear in the appendix. ¹⁰⁴ Some jurisdictions allow varying compensations so that this number could be a little higher.

¹⁰⁵ Some jurisdictions allow varying compensations so that this number could be a little higher.

This section briefly outlines what other studies have done to determine if there is a jury selection bias against minorities. Three of these studies sampled counties in our Commonwealth and one study was of Connecticut's largest judicial district.

The section also summarizes studies relating to expanding or switching sources of prospective jurors. In particular, two studies examine what impact expanding sources of prospective jurors had on two U.S. District Courts. One study found that minorities were more proportionally represented and the other study found that minorities were less proportionally represented when similar measures were taken. The final two studies also consider citizens' response and nonresponse to summonses. They explain what occurred in several jurisdictions and offer recommendations. It should be noted that this list of studies is by no means a complete list of all the studies currently available; however, an effort was made to include a variety of approaches to the question of minority juror selection bias.

A JURY OF PEERS

One of the first studies the Commission staff looked at prior to beginning its study of possible jury selection bias in Pennsylvania was a study done by Mark Houser of the *Pittsburgh Tribune-Review*. This study was specifically referenced in Senate Resolution 268 and provided an outline how one could estimate jurors' race using geocoding techniques. Geocoding has been used by others studying jury selection and was used (with slight modifications) for this report. 107

Houser's study began by personally observing the race of prospective jurors over a two-week period in the Allegheny County Courthouse. During that period, he found only 42 African-American jurors out of a total of 1,031 jurors or approximately 4% of the total jury

Telephone Interview with Mark Houser, Pittsburgh Trib.-Rev. (Sept. 24, 2002); Mark Houser, *A Jury of Peers?*, Pittsburgh Trib.-Rev., July 21, 2002, *available at* http://www.pittsburghlive.com/x/search/s 82236.html (last visited Jan. 14, 2003).

Geocoding involves electronically mapping a juror address to a map and linking this map to census data. This technique will be described in greater detail later in the report.

population. 108 Allegheny County's adult African-American population is about 11% of the county's total adult population. 109

To determine if African-American jurors were not showing up for jury duty or if they were not even being summoned, he requested 18 months' worth of jury array lists for criminal trials from the Allegheny County Court Administrator's office. These are the lists that must be publicly available 30-days before the array is to serve. After removing the duplicates, the jury array lists were geocoded using a computer software program called Arcview 3.2. After manually correcting address errors (sometimes with the use of a street map), about 99% of the county residents who were summoned were geocoded and compared to U.S. census 2000 race demographics. 111

In comparing the geocoded jurors to census data, Houser designated neighborhoods (Arcview blocks) as either African-American or white based on the population. Any block that had a white population of 98% or greater was considered a white neighborhood, and any block that had an African-American population of 50% or greater was considered a African-American neighborhood. In white neighborhoods, he found 53 out of every 1,000 people were summoned for jury duty; in African-American neighborhoods, he found that only 26 out of every 1,000 people were summoned for jury duty. In reality, this 26 is actually an overestimation of African Americans called to jury duty because it assumes everyone selected in a neighborhood at least 50% African-American were all African-American.

Houser concluded, "The system that picks people for jury duty in Allegheny County consistently overlooks blacks and favors whites." ¹¹⁵

¹¹⁰ 42 Pa. C.S. § 4524.

¹⁰⁸ Mark Houser. *A Jury of Peers?*, Pittsburgh Trib.-Rev., July 21, 2002.

¹⁰⁹ Id

Telephone Interview with Mark Houser, Pittsburgh Trib.-Rev. (Sept. 24, 2002).

¹¹³ Houser, *supra* note 108.

¹¹⁴ Houser, *supra* note 111.

¹¹⁵ Houser, *supra* note 108.

STATISTICAL REPRESENTATIVENESS OF A SAMPLE OF PERSONS SELECTED FOR JURY DUTY IN ALLEGHENY COUNTY, PENNSYLVANIA

Similar to Houser's study, John Karns also centered his research on any possible bias in jury selection in Allegheny County. Karns's research was done to determine if there were any substantial differences between the demographic profile of Allegheny County and the demographics of the criminal court jury panel; if so, it was also to determine if jury selection was systematically biased or the luck of the draw. The demographic variables for this study were age, sex and race.

Karns began by sending out a questionnaire to all persons called for potential service in a criminal case from May 12 through October 11, 2001. The questionnaire asked:

- What is your sex?;
- What is your age in years?; and
- What is you race? 118

The responses were then compared to actual and estimated 2000 U.S. census data for the jury-eligible population 18 years of age and above. The survey discovered notable age and race differences between the county population and the sample of survey respondents.

In particular, while 18 to 24 year olds were 10.95% of the county population, they only account for 0.75% of the surveyed jury panels. Other age categories were over-represented on jury panels. Specifically, while 18.15% of the county population was 45 to 54 years old, about 31.90% of the surveyed jury panels were composed of individuals within this age group. Additionally, individuals 55 to 59 years old were 6.35% of the county population but were 11.47% of the jury panel, while individuals 60 to 64 years old were 5.43% of the county population but were 10.24% of the jury panel. 119

Racial differences were also found between the county population and the individuals on jury panels. The main difference was that African Americans were under-represented in the surveyed jury panel while

John F. Karns, Statistical Representativeness of a Sample of Persons Selected for Jury Duty in Allegheny County, Pennsylvania (October 31, 2001) *in* Pa. Sup. Ct. Comm. on Racial & Gender Bias in the Just. Sys., Final Rep. app. vol. I (2003).

¹¹⁷ *Id.* at 1.

¹¹⁸ *Id.* at 2.

¹¹⁹ *Id. at 3.*

whites were over-represented. Specifically, while African Americans comprised 4.57% of the surveyed jury panel, they comprised 12.41% of the county population. Additionally, whites comprised of 83.81% of the population and 94.08% of the surveyed jury panel. 120

A CONNECTICUT JURY ARRAY CHALLENGE

David Pollard's study provided statistics for unsuccessful jury array challenges and detailed if Hispanics were being under-represented on juries in Connecticut's Superior Courts. 121 To determine if Hispanics were under-represented, records were gathered for each person sent a summons for court years 1992-93 through half of 1996-97 in Connecticut's largest judicial district, Hartford-New Britain. 122 Each record contained the person's name, address, and indication whether he or she was qualified or disqualified for some reason.

Two different statistical methods were used to determine how many Hispanics were being called to jury duty. First, addresses were geocoded to estimate disqualifications for each minority group (including Hispanics) at the census tract level. 123 Second, the last names of potential jurors were compared to the "Spanish Surname List" collected by the Bureau of the Census. 124 Pollard concluded that undeliverable summons were a problem in traditionally Hispanic areas of Hartford, which contained at least three-fifths of the Hispanics in the district. 125 Both statistical methods found high undeliverable rates for Hispanics and these rates were consistent over time. 126 The disproportionate number of undelivered summonses to Hispanics combined with non-responding Hispanics are considered to be the primary reasons for Hispanics failing to appear among qualified jurors. 12

Notwithstanding Pollard's research, the court compared the population of Hispanics on the master list to the number of Hispanics on the jury arrays and found the low absolute disparity (or difference between the percentage of the population that is Hispanic and the percentage of

¹²⁰ *Id*.

David Pollard, A Connecticut Jury Array Challenge (1999) (manuscript on file with the Jt. St. Gov't Comm'n). 122 *Id.* at 3-6.

¹²³ *Id.* at 9. Geocoding was based on data from the 1990 census.

¹²⁴ *Id*.

¹²⁵ *Id.* at 11.

¹²⁶ *Id*. at 12.

¹²⁷ *Id*.

the jury array lists found to be Hispanic) to have an insubstantial impact. The differences between Hispanic and non-Hispanic participation were due to external factors that were not systematic and were due to legitimate qualifications. 129

FINAL REPORT OF THE PENNSYLVANIA SUPREME COURT COMMITTEE ON RACIAL AND GENDER BIAS IN THE JUSTICE SYSTEM

Ralph Taylor, Lillian Dote and Jerry Ratcliffe from Temple University analyzed minority participation in jury service in Pennsylvania. Entitled Understanding the Juror Selection Processes Through Jury Documents and Administrator Surveys: Exploring Implications for Under-representation of Populations of Color, phase I provides the current jury selection procedures and practices among the counties in Pennsylvania. Procedural data was gathered from most county court administrators across the Commonwealth.

In surveying the county court administrators from across Pennsylvania, the researchers found the summoning process varied across the counties and was separated into six different models. Counties that mailed a summons directly with the pre-qualifying questionnaire were the most common. This allows recipients who were disqualified or excused to avoid having to report and only the remaining qualified people are expected to appear at the courthouse. Some counties followed another model that separated the questionnaire and the summons. Counties would mail a pre-qualifying questionnaire and summon only the qualified respondents. Under both models, potential jurors fill out a Jury Information Questionnaire (JIQ), when they arrive at the courthouse. The remaining models mainly differ when the JIQ is filled out.

Taylor et al. found the sources used for the master list differed among the counties, but lists of registered voters and licensed drivers were the two most widely used. Several rural counties relied on per capita or occupational tax lists as their source. 133

¹²⁸ *Id*. at 19-20.

¹²⁹ *Id.* at 20-21.

¹³⁰ Pa. Sup. Ct. Comm. on Racial & Gender Bias in the Just. Sys., Final Rep. 55 (2003).

¹³¹ *Id.* at 56.

¹³² *Id.* at 58.

¹³³ *Id*. at 58-59.

In addition to asking how the jury selection process is implemented and what source list is used, counties were also asked about what they consider to be valid excuses for excusal from jury service. Over 90% of the counties reported that they accept family responsibilities as a valid excuse. Despite family responsibilities, such as childcare, being a widely accepted excuse for dismissal from jury service, only Montgomery County stated that it provides free childcare services at a licensed facility near the courthouse. Calculated estimates of the percentages of summoned jurors who were excused ranges from a low of 7.95% in Allegheny County to a high of 59% in Bucks County.

While this phase concluded that there is little actual data gathered on the race of potential jurors, the variation in the jury selection process among the counties could have implications for under-representation. Differences in the sources for and frequency of updating the master list, summoning models, reasons accepted for excusing jurors, and time served for jury service could all influence the potential under-representation of minorities. With low minority populations in many of the counties, it may be difficult to find minorities on some jury pools throughout the Commonwealth. 139

Entitled Potential Under-representation by Race and Class in the Middle Stages of Juror Selection in the Commonwealth of Pennsylvania: A Located Analysis, 140 phase II was done to find potential under-representation in the middle stages of jury selection. The middle stages of jury selection included any part of the jury selection process after the court's initial contact with an individual until the potential juror arrives at the courthouse. 141

Philadelphia, Allegheny, Montgomery and Lehigh were the counties examined because of their significant 1999 minority populations. Addresses of all potential jurors contacted during the 2001 calendar year and their outcome (as pertaining to jury selection) was requested from each county. Similar to steps used by Pollard and Houser, these

10. at 59. 1d. at 58.

¹⁴² *Id.* at 65.

¹³⁴ *Id*. at 59.

¹³⁶ *Id.* at 60.

¹³⁷ *Id.* at 61.

¹³⁸ *Id.* at 62.

¹³⁹ *Id.* at 61-62.

¹⁴⁰ *Id.* at 63.

¹⁴¹ *Id*.

¹⁴³ *Id*.

¹⁴⁴ Pollard, supra note 121.

juror addresses were then geocoded at the census block group level. Multilevel models were built to predict potential juror outcomes. They contained racial/ethnic and age data from the 2000 census and socioeconomic and stability data from the 1990 census. These models predicted whether or not a contacted potential juror appeared on the day requested (juror yield) in each micro-neighborhood. While Allegheny County's results were cautioned due to only having been able to geocode 83% of the addresses, the other three counties were above the geographers' recommended threshold of 85%.

The study concluded that all four counties under-represented neighborhoods with higher proportions of African Americans in jury pools. Additionally, the study found that neighborhoods with higher proportions of Latinos were under-represented in Philadelphia, Montgomery, and Lehigh Counties' jury pools, while Philadelphia County had an under-represented juror yield from neighborhoods with a higher proportion of Asian Americans. 150

FAIR CROSS-SECTIONS AND GOOD INTENTIONS: REPRESENTATION IN FEDERAL JURIES

United States District Court for the Northern District of Illinois experimented relatively recently with jury wheels to determine whether a random sample of licensed drivers would more adequately represent its population than a random sample of voters supplemented with lists of licensed drivers and discovered the jury wheel of voters supplemented with lists of licensed drivers was less representative of African Americans than when based entirely on licensed drivers. United States district courts must select prospective jurors from registered or actual voters and may supplement that source. In 1994, this district considered supplementing its source for prospective jurors with licensed drivers but decided to experiment with the supplementation before amending its jury plan. Usage of drivers' licenses as a supplemental source increased the proportion of young adults to a more accurately representative level,

¹⁴⁵ Houser, s*upra* note 108.

¹⁴⁶ Pa. Sup. Ct. Comm. on Racial & Gender Bias in the Just. Sys., *supra* note 130, at 65-

¹⁴⁷ *Id.* at 65.

¹⁴⁸ *Id.* at 67.

¹⁴⁹ *Id.* at 70.

¹⁵⁰ *Id*.

¹⁵¹ Newman, *supra* note 19, at 211.

¹⁵² 28 U.S.C.A. § 1863(b)(2) (West 1994).

¹⁵³ Newman, *supra* note 19, at 212.

but the test suggested that it would decrease the representation of African Americans in the district's eastern division. 154

Including the one for the northern district of Illinois, most U.S. district courts are required to select prospective jurors from lists of registered or actual voters from its district. 155 Each United States district court is required to add a source of names if necessary to assure that the selection is from a fair cross section of the district, all citizens have an opportunity to be considered for service and no citizen is discriminatorily, illegally excluded from service. 156 At least at the time of this experiment, "the only additional source of names used in" U.S. district courts were licensed drivers. 157 Anecdotally, the consensus among clerks who were informally surveyed seemed to agree that the usage of licensed drivers increased the proportion of young adults among prospective jurors. 158 It was previously widely acknowledged that the demographics of registered voters differ from the demographics of the general population. 159 To increase the number of registered voters among eligible citizens and ensure the maintenance of currently accurate registrations, 160 each state now has to register voters:

- 1) simultaneously when it licenses drivers;
- 2) via post; and
- 3) in person at designated agencies. 161

Enacted in 1993, the law that requires these multiple methods of registration presumably narrows the previous differences between the demographics of registered voters and the general population (if it is effectively achieves its purposes). Theoretically, simply adding sources of names will not assure that a previously under-represented group will become properly proportionally representative because usage of those other sources could likewise under-represent the same group or result in under-representation of a previously properly proportionally representative group. 162 In other words, additional sources may increase

¹⁵⁴ *Id*.

¹⁵⁵ 28 U.S.C.A. § 1863(b)(2) (West 1994).

¹⁵⁷ Newman, *supra* note 19, at 216.

¹⁵⁸ *Id.* at 217.

¹⁵⁹ *E.g., id.* at 215.

^{160 42} U.S.C.A. § 1973gg(b)(1) & (4) (West 1994).
161 *Id.* § 1973gg-2(a).

¹⁶² Newman, *supra* note 19, at 217 n.11.

a group's proportion, decrease a group's proportion or neither increase nor decrease a group's proportion. 163 Combined lists have corrected disparities in Connecticut, shifted an under-represented group in Delaware to an over-represented group, failed to make a difference for an underrepresented group in Iowa and improved the representativeness of a group in California while decreasing the representativeness of another group. 164

Although the requirement that a jury be drawn from a fair cross section of the community has not been interpreted to require the venire be representative by age, the experiment in the northern district of Illinois confirmed that usage of licensed drivers combined with registered voters increased the proportion of young adults and lowered the median age of prospective jurors by three years from the source of just registered voters 165

In the eastern division of this district, African Americans' disparity decreased from the master wheel to the qualified wheel and ended up with acceptable levels in the latter of 1.53% absolutely and 8.5% In this same division, Hispanics' disparity increased comparatively. slightly from the master wheel to the qualified wheel and ended up with acceptable levels in the latter of 1.89% absolutely and 36.42% comparatively. 166 When this division experimented with licensed drivers, it further decreased the proportion of African Americans on the master wheel thereby exacerbating its under-representation while shifting Hispanics from a position of under-representation to that of slight overrepresentation. 167 On the qualified wheel, the results were similar, the under-representation of African-Americans was exacerbated experimenting with licensed drivers while Hispanics' proportion increased but did not result in over-representation when testing licensed drivers as a supplemental source of juror names. 168

In the western division of this district, there is no significant disparity between the master wheel and the qualified wheel, but both African Americans and Hispanics had small absolute disparities and sizeable disparities. 169 Using licensed comparative drivers improved representativeness for both of these groups, but still left African Americans

¹⁶³ *Id.* at 217.

¹⁶⁴ *Id.* at 218. ¹⁶⁵ *Id.* at 219-20.

¹⁶⁶ *Id.* at 221.

¹⁶⁷ *Id.* at 222.

¹⁶⁸ *Id.* at 224.

¹⁶⁹ *Id.* at 225.

under-represented and Hispanics slightly over-represented. The effect of the supplementation in this division was characterized as marginal. 171

Based on a statistical test, "it is extremely unlikely that using lists of licensed drivers" to supplement registered voters would result in proportional representation for African Americans in either division but would likely result in proportional representation for Hispanics in the western division and their over-representation in the eastern division. 172 Given these results, the district court did not amend its jury plan to supplement registered voters with licensed drivers. 173

To keep the selection truly random, the combination of sources would have to eliminate duplicate names; otherwise, a registered voter who drives would be more likely to be selected than a registered voter who is unlicensed to drive or a licensed driver who is not registered to vote. 174 Eliminating duplicate names adds costs and selection must be random. 175 Because supplemental sources might "reduce the size of the very groups whose numbers courts wish to increase[,] . . . courts should explore the likely results of supplemental sources before" jury plans are amended. 176

THE SEARCH FOR GREATER JUROR DIVERSITY: THE CASE OF THE U.S. DISTRICT COURT FOR THE EASTERN DISTRICT OF WASHINGTON

Although U.S. District Court for the Eastern District of Washington selected its prospective jurors exclusively from registered voters prior to 1995, in 1992, State of Washington enacted its own version of a voter registration act that each state had to similarly enact after the enactment of National Voter Registration Act of 1993. In 1995, it began to supplement that source with lists of licensed drivers and state identification cards. 178 Expanding the ease of registration of voters "had little to do with the jury pool's diversity[; h]owever," Washington renews

¹⁷² *Id.* at 227-28.

¹⁷⁰ *Id.* at 226.

¹⁷¹ *Id*.

¹⁷³ *Id.* at 230.

¹⁷⁴ *Id.* at 229.

¹⁷⁵ *Id.* at 230-31.

¹⁷⁷ William D. Schreckhise & Charles H. Sheldon, *The Search for Greater Juror Diversity:* The Case of the U.S. District Court for the Eastern District of Washington, 20 Just. Sys. J. 95 (1998). ¹⁷⁸ *Id.*

licenses of drivers every six years so that only part of those licensed to drive would have renewed their licenses and been offered an opportunity to simultaneously register to vote between the time of the act making that possible and the publication of a study attempting to determine the extent that this possibility and usage of the supplemental sources affected the diversity of prospective jurors. 179

The authors of this study compared the demographic characteristics of potential jurors by comparing completed qualification questionnaires that were returned in 1992 with ones returned in 1995. 180 Because the supplemental sources are licensed drivers and holders of state-issued identification cards, these lists can contain registered voters as well as individuals who are unregistered. 181 Of course, driving this whole exercise is the constitutional mandate to draw jurors from a representative cross section of the community and, previously, jury pools in that district were disproportionately older, more educated and white than the population thereof. 182 Studies suggest that the supplemental sources will be more demographically representative than registered voters. 183

Although unable to certify that expanding the opportunity to register to vote increased minority representation in the jury pool, the authors attributed greater ethnic diversity in the 1995 pool compared with the 1992 pool to usage of the supplemental sources. While the percentages of those in 1995 who were qualified and drawn from registered voters was substantially greater than those drawn from the supplemental sources and the latter had greater percentages of those excused and with incorrect addresses, "the overall number of qualified minorities in the jury pool" was higher in 1995 than in 1992. Overall, the racial characteristics were more representative in the 1995 sample than in the 1992 sample when compared to the 1990 census; however, there were inconsistent corrections. African and Asian Americans went from a position of under-representation to one of slight over-representation. Whites remained over-represented but less so. Native Americans remained

¹⁷⁹ *Id.,* at 96 n.6, at 98.

¹⁸⁰ *Id.* at 98.

¹⁸¹ *Id*.

¹⁸² *Id.* at 95.

¹⁸³ *Id.* at 98.

¹⁸⁴ *Id.* at 108.

¹⁸⁵ *Id.* at 104, 109.

¹⁸⁶ *Id.* at 107.

¹⁸⁷ *Id*.

¹⁸⁸ *Id*.

under-represented and became slightly more under-represented. The representativeness of Hispanics increased substantially but remained under-represented. 190

THE VANISHING JUROR: WHY ARE THERE NOT ENOUGH AVAILABLE JURORS?

A relatively recent study of potential jurors in District of Columbia "found that approximately 20 percent of jurors ignore the jury qualification questionnaire and another 40 percent did not receive it at all. Only 18 percent of potential jurors actually serve." Although financial hardship and inconvenience discouraged jury service for many, the study did not recommend either increasing the fee for jurors or punitive measures to increase the likelihood of juror response. ¹⁹²

At the time of this study, jurors were drawn from among registered voters, licensed drivers and holders of non-driver identification cards. 193 Studies and theories attribute evasion of jury duty to economic hardship, inconvenience, discomfort, non-receipt of summonses, distrust of the judicial system and non enforcement of summonses. 194 The study "analyzed all jurors sent jury qualification questionnaires over a two-week period." A significantly higher percentage of registered voters were qualified than the percentage of the other sources, but the percentage of registered voters who were disqualified was slightly higher than the percentage of the other sources. 196 The most common disqualifications were due to residency and disability. 197 Questionnaires returned as undeliverable were approximately 25% of those sent and were attributed to postal service mistakes, problems with the sources, relocation of residents and refusals to accept the mail. 198

Of the jurors qualified during this period, they were relatively representative of the district's population relating to sex and race; however, there was some significant disproportionality between the

^{189 |} Id. 190 | Id. 191 | Richard Seltzer, The Vanishing Juror: Why Are There Not Enough Available Jurors?, 20 Just. Sys. J. 203 (1999). 192 | Id. 193 | Id. at 204. 194 | Id. at 204-05 (citations omitted). 195 | Id. at 206. 196 | Id. at 207. 197 | Id. 198 | Id. at 206-08, 211.

qualified jurors and the district's population relating to age and education. The researchers attempted to contact hundreds of potential jurors who did not respond to the questionnaire. 200 Of those, slightly more than half moved, almost 4% of them would have been disqualified had they responded, almost 25% of them could not be contacted and a little over 20% of them (who should have returned the questionnaire) were interviewed.²⁰¹

The other sources were less accurate than the list of registered voters.²⁰² While those who ignored the summons and questionnaire considered compensation to be an important reason to ignore the summons, most indicated that increasing juror pay "would be unlikely to encourage them to respond in the future" although a large fine might affect their recalcitrance. While these delinquent citizens were predictably antagonistic towards forcing them to respond to these questionnaires via large fines for failure to do so, the inaccuracy of the sources "would likely result in tremendous difficulty in applying and later removing sanctions."204

The study recommended continually maintaining the sources so that they are more accurate and "creating a more positive experience for jurors" with clean and comfortable surroundings, free day care, an easier deferral of service, and "a greater role in the process." 205

IMPROVING CITIZEN RESPONSE TO JURY SUMMONSES: A REPORT WITH RECOMMENDATIONS

A few years ago, American Judicature Society surveyed court administrators and summoned jurors (whether or not they responded) in four jurisdictions to investigate "the relationship between jury reforms and jury summons nonresponse rates." The authors concluded that "courts should make a greater effort to make jurors' deferral and hardship excuse options clearer" because financial obstacles prevent less wealthy citizens from serving and the more highly educated citizens perceive jury service to be a waste of time. 207 Increasing response rates to summonses

²⁰⁰ Id.

¹⁹⁹ *Id.* at 208.

²⁰¹ *Id.* at 209.

²⁰² *Id.* at 212.

²⁰³ *Id.* at 212-13.

²⁰⁴ *Id.* at 213.

²⁰⁵ *Id.* at 216-17.

²⁰⁶ Robert G. Boatright, Improving Citizen Response to Jury Summonses: A Report with Recommendations vii (1998).

²⁰⁷ Id.

"increases the degree to which juries represent the general population." The theories for nonresponse to summons are economical and perceptive. "Research has shown that citizens whose employers do not compensate them for jury service . . . are less likely to serve on juries then those whose employers compensate them or who are salaried." The perceptive theory for nonresponse is simply a negative perception "about the nature of jury service."

The types of reforms that courts implemented varied with smaller jurisdictions "more able to introduce reforms with a fixed cost per juror, such as summons enforcement, while larger courts are able to introduce reforms that have a large initial cost" that doesn't increase with the size of the jury pool.²¹¹ The administrators attributed nonresponse most commonly to economic or situational reasons.²¹²

The study found that the citizens who did not respond to summonses "are less well-informed about the mechanics of requesting an excuse or deferral than are jurors." They also "are less likely to be compensated by their employers for jury service than are summons respondents" and "far less likely . . . to believe they will be penalized for failure to respond."

By far the most common reason for nonresponse is that citizens never received their summonses in the first place. A substantial percentage of the citizens we attempted to contact no longer resided at the address provided by the court. The percentage of individuals who consciously ignore their summonses is far lower than is the percentage we were provided with by each of the courts studied.²¹⁵

The Court of Common Pleas in the County of Montgomery is one of the courts that were studied. Among the courts studied for this report, it is the only one using a two-step summons and qualification process. This process is characterized as one that expends more resources in drawing a

²⁰⁸ Id.
209 Id. at viii.
210 Id.
211 Id.
212 Id. Situational frequently referred to employment and transportation. Id.
213 Id.
214 Id.
215 Id. at x.
216 Id. at x.
216 Id. at xi.

jury pool but results "in greater response among those who are eventually summoned."217

The report denied that there is a way to conclusively determine who summons nonrespondents are and called for employers to accommodate their summoned employees and legislators to "recognize the importance of improving response rates." The report "sought to recommend policies that will not severely tax courts' resources."219 Among these recommendations are:²²⁰

- 1) Courts should enforce summonses.
- 2) Citizens should know how to defer or be excused from service.
- 3) Courts should expand or initiate community educational programs.
- 4) Courts should be as efficient as possible in juror use.
- 5) Jury summonses should be clear.
- 6) Sources should be as accurate and updated as frequently as is possible.
- 7) Courts should encourage employers to compensate their employees for jury service.
- 8) Courts should work with the legislature to reform juries.
- 9) Childcare should be a priority of courts.
- 10) Jurors should be paid more as a sign of respect.
- 11) The courthouse and its neighborhood should be friendly to jurors.

²¹⁷ *Id*.

²¹⁸ *Id.* at xii.

²²⁰ *Id.* at xii-xv.

Senate Resolution 268 directed the Joint State Government Commission "to study the level of representation of minorities in comparison to the general population of the respective counties in the jury pooling process for criminal proceedings across this Commonwealth." Since counties are not required to record the race or ethnicity of jurors in the jury pool and typically do not, determining the minority representation in jury pools is necessarily imprecise. Instead of being able to directly count the number of minorities in jury pools, a technique similar to that used by Mark Houser, 222 David Pollard 223 and Ralph Taylor 424 was used to estimate the number of minorities being called to jury duty by mapping juror addresses to census data.

JURY LISTS USED

Prior to mapping the juror addresses to census data, the list of potential jurors that would be used had to be selected. Since Senate Resolution 268 requested that the Commission "study the level of representation of minorities . . . in juries for criminal proceedings," only individuals who were deemed qualified to serve were requested to be listed by each county. (Qualified jurors were those jurors who were not disqualified or excused and who did not have their juror qualification form or summons returned as "undeliverable" by the post office.) However, the lists requested still contained individuals who may have been later dismissed once they entered the courthouse. These individuals were included because counties have little control over whether or not jurors serve on a jury once an individual enters the courthouse. Therefore, lists of qualified jurors for criminal proceedings, prior to removing individuals who were excused or dismissed in the courthouse, were requested. For ease of discussion, these lists are referred to as the jury array lists throughout the remainder of this report. It was decided that one calendar year of these lists would suffice. Since the lists would be mapped to U.S.

²²¹ S. Res. 268, Gen. Assem., 186th Reg. Sess. (Pa. 2002). App. A, *infra* p. 95.

²²² Houser, *supra* note 106. ²²³ Pollard, *supra* note 121.

²²⁴ Pa. Sup. Ct. Comm. on Racial & Gender Bias in the Just. Sys., *supra* note 130, at 63-70.

census data for 2000, that year's jury lists were used whenever possible. 225

SURVEYING COUNTIES

Because counties independently pool juries, the lists were obtained from each county in Pennsylvania to calculate the level of minority representation in criminal jury pools. All court administrators in Pennsylvania were asked to

provide all jury array lists from the 2000 calendar year including names and addresses of persons assigned to each jury array. . . . The jury array lists should identify those who were randomly selected to be summoned for assignment to jury array and be the same list of names and addresses that are publicly available as required by 42 Pa. C.S. § 4524 (relating to selection of jurors for service). 227

Since 42 Pa. C.S. 45 (relating to juries and jurors), allows counties some flexibility in the process used to create jury pools, the counties were also asked open-ended questions regarding the master list source(s), the randomization process, their use of qualification form and/or summons, the qualification form/summons response rate as well as the percentage of potential jurors appearing for jury duty, the follow-up for non-respondents and no-shows, and the travel allowance given to jurors who serve. ²²⁸

The first open-ended question asked, "What source or sources does your judicial district use when it creates the master list of prospective jurors as directed by 42 Pa. C.S. § 4521(a) (relating to selection of prospective jurors)?" This question was posed to the counties to determine what sources are used and whether counties use more than one source.

Actually, the 60 judicial districts in Pennsylvania were surveyed. Fifty-three of the judicial districts contain only one county while seven of the districts have two counties within its borders. In these seven cases, each county within the judicial district responded to the survey.

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²²⁵ Counties unable to provide the jury array list for 2000 were allowed to substitute jury array lists from 2001.

Memorandum from Jt. St. Gov't Comm'n to ct. adm'rs in all jud. dists. across Pa. 1 (Oct. 24, 2002). Each county was asked to provide jury array lists for only criminal proceedings, but many counties do not segregate criminal and civil jury array lists. In cases were civil and criminal jury array lists could not be separated, the composite jury array list was requested and obtained.

228 Id. at 2.

The second question asked, "After the master list is compiled, how does your judicial district randomly select from the master list to determine who will be mailed a juror qualification form or summons as directed by Pa. C.S. § 4521(c), (d), and (e)?" This served to verify that each county randomly selects potential jurors from the master list.

To determine how many counties use the juror qualification form to eliminate disqualified and excused jurors prior to sending the summons, the third question on the survey asked, "Does your judicial district use a juror qualification form or a summons to determine the qualification of prospective jurors?"

To determine if any counties had a significant problem with either potential jurors not returning the qualification forms/summons or a high number of undeliverable qualification forms/summons the fourth question asked, "what percent of juror qualification forms or summonses were completed and returned?"

To determine to what extent the county currently follows up with those individuals who fail to respond to a qualification form and/or summons question five asked, "Does your judicial district follow up noncompliance with the juror qualification forms or summonses by measures such as additional mailings, phone calls, and/or legal action? If so, please explain what procedures your judicial district follows and whether or not this is done routinely." The question was also posed to ascertain whether or not counties that do not follow up for failure to return qualification forms/summonses see an increased number of individuals who ignore the qualification form/summons.

The [jury] commission may mail to each person whose name has been selected . . . a juror qualification form . . . [to] determine . . . whether or not the prospective juror is qualified. . . . In those counties which do not use the juror qualification form . . ., the selection of persons for jury service shall be made in accordance with section 4524 (relating to selection of jurors for service) and provision shall be made for the collection of information with the summons in order to comply with sections 4502 (relating to qualifications of jurors) and 4503 (relating to exemptions from jury duty). 229

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²²⁹ 42 Pa. C.S. § 4521(d) and (e).

Therefore, to verify that each county was randomly selecting potential jurors for the jury array lists, question six asked, "Once the list of qualified jurors is created as directed by 42 Pa. C.S. § 4522 (relating to list of qualified jurors), how does your judicial district randomly select the jurors to be summoned for assignment to jury arrays as directed by Pa. C.S. § 4524?"

To determine if any counties had a significant problem with potential jurors not appearing for jury duty, question seven asked, "what percentage of those listed on the jury array lists actually appeared at the courthouse as summoned?"

To determine to what extent the county currently follows up with those individuals who fail to respond to a qualification form and/or summons, question eight asked, "Does your judicial district follow up non-appearances for a jury array? If so, please explain what procedures your judicial district follows and whether or not this is done routinely." The question was also posed to try to ascertain whether or not counties that do not follow up with potential jurors for failure to appear at the courthouse experience an increased number of individuals who fail to appear for jury duty.

Since Senate Resolution 268 also asked the Commission to study "the amount of compensation for jurors" question nine asked, "What travel allowance does your judicial district provide to jurors?" In research prior to surveying the counties, it was determined that the per day compensation for jurors of \$9 per day for the first three days and \$25 per day for any day after the third day was consistent across our Commonwealth; however, some of the counties had increased the per mile travel reimbursement above the current State mandated \$0.17 per mile. Therefore, question nine was posed so that the total juror compensation could by analyzed.

COLLECTION OF SURVEY RESULTS

In October 2002, the memo surveying counties requested that each county respond promptly. After 30 days, a reminder memo was sent to each county that had not responded asking it to respond as soon as possible. Those counties that failed to respond to the reminder memo were then contacted by phone. Many counties that responded to the memo were contacted later regarding submitted and missing data.

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²³⁰ 42 Pa. C.S. § 4561(a).

Variations in Jury Array Lists Sent by Counties

As mentioned previously, jury array lists from 2000 were requested, but other years were accepted if the lists from 2000 were unavailable. There were several problems that occurred if a year different than 2000 was used. First, lists from recent years could include jurors living along new roads or in subdivisions and homes that were not included in the 2000 census data; therefore, addresses of potential jurors living in new housing would not be able to mapped to a particular census block. Second, the demographic U.S. census block data was data from 2000. Consequently, any migration or demographic changes occurring in a particular census block after this data was collected would not be represented. As seen in Appendix B, 231 36 counties were able to provide 2000 data, while 26 counties provided 2001 data, four counties provided 2002 data, and one county provided 1999 data.

Some counties sent a juror qualification form directly with a summons, but others sent only a juror qualification form and later summoned only from among qualified respondents. Because of the different jury selection procedures among counties, an identical list of potential jurors is unavailable. As mentioned before, counties were asked to provide the lists of individuals selected to appear for jury duty for criminal proceedings after the undeliverable questionnaires and disqualified or excused jurors were removed; however, some counties do not keep lists with just those who were selected to appear. In those cases, the county's closest list possible was used. As seen in Appendix B, the only counties where the list differed significantly from the requested list were Bucks, Jefferson, and Monroe, which could only provide lists that included individuals who were later deferred or excused and individuals sent a summons that was returned undeliverable. Additionally, some counties did not distinguish between civil and criminal trials when creating the jury array lists. If a county did not divide the jury array lists into criminal and civil lists, all jury array lists were used.

Another issue that had to be dealt with was what to do with potential jurors who were listed on more than one jury array list. Since counties were requested to provide a year's worth of lists, a juror could be excused after one list was printed and appear on a future list within the same year. For example, if an individual was summoned to serve in January but was sick on the day he or she was to serve, then that individual may be rescheduled for February. In this case, this individual would be on both January's and February's jury array lists. In nearly all

²³¹ *Infra* pp. 99-100.

cases where an individual was listed on more than one jury array list, the duplicate entries were removed. The only exception to this statement was in Northampton, where the list of individuals on the jury array list was large (over 19,000 names) and not in electronic form. Additionally, the list was divided into 45+ alphabetized criminal sessions, and duplicate names were not necessarily back-to-back. Consequently, it was too burdensome to personally eliminate all duplicate entries.

If possible, the counties were asked to provide these lists in electronic format. Unfortunately, 43 (or 64%) of the counties could only provide a hard copy of the list and Commission staff had to type them into machine-readable form prior to mapping the potential juror addresses to census data.

Once a correct jury array list was received from a county (and typed if necessary), the potential jurors' addresses were mapped to the 2000 census data for that county. Although a detailed analysis of exactly how the addresses were mapped to census data will be explained later, it may be easier to understand if first explained more generally.

Overview of Mapping Potential Juror Addresses to 2000 Census Data

United States Bureau of the Census has divided Pennsylvania into 322,424 small census blocks. The bureau defines census blocks as

areas bounded on all sides by visible features such as streets, roads, streams, and railroad tracks, and by invisible boundaries such as city, town, township, and county limits, and short imaginary extensions of streets and roads. Generally, census blocks are small in area; for example, a block in a city bounded by streets.²³³

The total number of people living in each census block is recorded into several categories including race and ethnicity.

The process of mapping potential juror addresses to the census data included the following: First, potential juror addresses were placed in

Bureau of the Census, U.S. Dep.'t of Comm. Tiger/Line[®] Files 2000: Technical Documentation. 4-15 (Apr. 2002).

²³² If the Commonwealth's population in 2000 (12,281,054 people) was evenly distributed over all blocks, each block would have about 38 people; however, the Commonwealth's population is unevenly distributed so that some blocks contain significantly more or less individuals in them than the average.

their appropriate census blocks. Next, the potential jurors in each census block were proportionately distributed according to the racial demographics within each block. For example, in a block of eight white and two African-American people, one juror would be distributed as 0.8 white and 0.2 African-American. All the blocks were then summed by racial category for each county. Finally, these county totals were converted into percentages of total race and compared to the census data percentages for the respective county. This is a simplified version of the mapping of potential juror addresses to 2000 census data; the following section contains more technical details on mapping addresses to census data.

Technicalities in Mapping Potential Juror Addresses to 2000 Census Data

To map the potential juror addresses to the census data, Census 2000 TIGER/Line® Shapefiles were downloaded into ArcView GIS 3.2 for Line Features-Roads Shapefiles and Census Block 2000 Windows. Shapefiles were added to a project for each county. This is the necessary framework for geocoding²³⁴ a juror's address into a census block. In other words, a juror can be assigned to a geographic location based on his or her address. Once this is accomplished a juror can be analyzed with demographic data at a very small level. Next, the Census 2000 Summary File 1-Pennsylvania/prepared by the U.S. Census Bureau, 2001 was added to each county project. This table contains demographic data for every block in Pennsylvania. The racial classifications used by the Census Bureau include: White, Black or African American, American Indian and Alaska Native. Asian. Native Hawaiian and Other Pacific Islander, some other race, and two or more races. The file also includes Hispanic but for ethnicity rather than for race. The various racial categories add to 100% and cannot be combined with the percent that are Hispanic.

Next, each file was saved and added to the existing ArcView project. Before the addresses could be geocoded, a reference theme had to be built enabling ArcView to locate an address based on the data in each county file. For most counties, "US streets with zone" was chosen as the address style. ArcView used the zone to match records when there was more than one street with the same name in a county. A zip code was selected as the zone for this type of reference theme. For the counties in which their jury array lists did not contain a zip code, "US

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²³⁴ Geocoding an address is electronically locating that address on a map.

streets" was used as the address style. This style can still accurately match addresses but will result in a larger percentage of addresses not geocoded. During the first attempt at geocoding a county's lists, the default geocoding preferences were not changed. After the initial geocoding run, each address that was found had a match score. A perfect match scored 100, but a score between 75 and 100 was considered a good match. Any addresses not found or scoring less than 75 were then individually viewed by performing an interactive re-match. After relaxing the spelling sensitivity, for each potential juror address not initially geocoded, ArcView presented a list of likely addresses the unmatched address could be manually matched to in the "Line Features-Roads Shapefile." For example, an apartment number may cause the street number to be misinterpreted or "McDonald Drive" may contain a space and be "Mc Donald Drive." The manually matched addresses and those having a match score of 75 or better are added as locations to the map.

The remaining addresses were not geocoded for several reasons. The largest problem was a lack of street names for rural routes and post office boxes, which cannot be handled by the geocoding software. This was quite a significant problem in many of the rural counties in Pennsylvania. In 20 of the counties, rural route and post office box addresses accounted for over half of the addresses on the jury array lists provided. Despite the serious problem of addresses unable to have been geocoded, counties with a high number of rural route and post office box addresses tended to have small percentages of minorities. Therefore, the effect of not being able to map these rural route and post office box addresses is not as great as it first appears. Other reasons for addresses not having been able to be geocoded included typographical and spelling errors and multiple spellings of a street name. 235

Once the addresses were geocoded, linking the geocoded addresses mapped in the Line Features-Roads Shapefile to the County Block Shapefile could then tie demographic data to the jurors at the census block level. A summary table was created to get a count of geocoded addresses in each block. Finally, "Summary File 1 - Pennsylvania" was opened and joined with the summary table. This new table contained demographic data and a count of geocoded juror addresses in each block.

²³⁵ These other reasons accounted for a total of about 35% of all addresses unable to have been geocoded. The remaining 65% of non-geocoded addresses were rural route and post office box addresses.

The jurors were then proportionately distributed according to the racial demographics within each block. Again, using the example discussed previously, in a block of eight white and two African-American people, one juror would be distributed as 0.8 white and 0.2 African-About 1.9% of all geocoded jurors were classified as an unknown race because the demographic data in a small percentage of census blocks were missing. All the blocks were then summed by racial category for each county (minus those geocoded jurors classified as an unknown race). These county totals were converted into percentages of total race and compared to the Census 2000 Redistricting Data (Public Law 94-171) Summary File, Matrices PL1 and PL2. Because of small county percentages of American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, some other race, and two or more races, these races were combined into the category of "other." counties with larger percentages of some of these minorities, some additional detailed analysis was done.

County census data included individuals from federal or state criminal detention centers, medical and health care facilities, and institutions of higher education that often house people ineligible to serve on a jury in that county. Therefore, caution should be used when comparing census data demographics to jury pool demographics because census data includes the total population regardless of eligibility to serve on jury duty.

In addition, the racial population from the census data includes individuals of all ages in each block. Since only those 18 year of age or older can serve for jury duty, the assumption is made that people under the age of eighteen are racially representative of the entire population within a particular census block. In other words, it is assumed that people under the age of 18 do not unduly distort the data.

METHODS OF STATISTICAL ANALYSIS

Absolute Disparity

Once the jury array lists from all the counties had been collected, electronically formatted, geocoded, and mapped to census data, it was then necessary to analyze the results. The first step was to compare the estimated jury array minority composition with the census data minority composition. One way to accomplish this task is to calculate the absolute disparity for all the counties' minority groups. Absolute disparity is calculated for each minority category by subtracting its percentage of potential jurors in an array from the percentage of that population in the summoning jurisdiction. Therefore, the higher the figure, the greater the minority group was under-represented in the jury array lists.

This measure of disparity seems to be the one most commonly relied upon in published judicial opinions. Although referred to simply as disparity, this measure was used in the U.S. Supreme Court opinions that articulated the three-prong tests to establish a prima facie violation of the fair-cross-section requirement and equal protection guarantee.

Despite being a very intuitive measure of the magnitude at which minority groups are under-represented, the absolute disparity has two major drawbacks. First, using absolute disparity to compare two counties with significantly different percentages of minority composition can be misleading. For example, suppose there were two counties, "county A" with an African-American population of 4% and "county B" with an African-American population of 30%. Now suppose that it was determined that "county A's" jury array list did not have any African American on it while "county B's" list was composed of 25% African-American. The absolute disparity of "county A" would be 4% (4%-0%) and "county B's" absolute disparity would by 5% (30%-25%). Considering only absolute disparity, it would appear that "county B" has a more significant under-representation of African-American individuals on its jury array list than does "county A". On closer examination, it would appear that "county A" may have a more significant under-representation of African Americans on jury array lists because it did not have any African American on its array lists. Second, in counties with few minorities, the absolute disparity will be small even if no minorities are selected to be on the jury array lists. For example, a county with a 2% population African-American can have a maximum absolute disparity for African Americans of only 2%, which does not appear all that poor even though the county is not including any African Americans on its jury array lists.

Comparative Disparity

Since absolute disparity has its limitations, comparative disparity may be helpful in examining a county's representation of minorities on jury array lists. The comparative disparity of a minority group is calculated by dividing the absolute disparity of a minority group of potential jurors in an array by the percentage of that minority group in the population. Like absolute disparity, the larger the percentage, the more underrepresentative the jury array lists are as compared to the population. The advantage of comparative disparity is that it reflects proportionality so that counties with larger percentages of minorities can be compared to counties with smaller percentages of minorities; however, using comparative disparity for counties with a very small minority population can still be misleading. As mentioned before, using absolute disparity for counties with a small minority percentage tends to underestimate any under-representation of minorities on a jury array list since absolute disparity can only be a large as the percentage of minorities in the county. Conversely, comparative disparity tends to have the opposite effect and overestimates any under-representation of minorities on a jury array list in a county with a small number of minorities. This occurs because dividing a small absolute disparity by a very small percentage (i.e. the percentage of minorities in a county) can magnify an insignificant difference between the percentage of the population and jury array lists. For example, suppose a county's population has 0.4% Hispanics. Since Hispanics are such a small percentage of the total population, it is guite possible that a random (or nearly random) selection of the population to create the jury array lists could result in only selecting 0.2% Hispanic. The Hispanic comparative disparity for this county would equal [(0.4 - 0.2)/(0.4)] x 100 or 50%. A Hispanic comparative disparity of 50% seems rather high, yet the county's absolute disparity is only 0.2%.

This measure of disparity is often specified in judicial opinions that also disclose absolute disparity. Commission staff doesn't recall reading any judicial opinions that only relied upon comparative disparity; based on

appendices F and G,²³⁶ more opinions specify only absolute disparity than specify both absolute and comparative disparity. United States Court of Appeals for the Third Circuit, the circuit to which our Commonwealth is assigned, has used both measures of disparity.²³⁷

Substantial Impact (or Absolute Impact)

Because both absolute and comparative disparity tend to distort or exaggerate disparities in opposite directions, courts sometimes calculate what is called substantial impact or absolute impact to determine how the under-representation actually impacts the selection of jurors from a fair cross section of the community. While absolute and comparative disparity both express under-representation in percentages, substantial impact expresses under-representation by specifying a number of individuals affected by the under-representation. Substantial impact is calculated in the following way.

First, the total number of individuals on the jury array list is multiplied by the percent of the county population who are of a particular minority race to get the total number of minority jurors that should be called to jury duty to make racial demographics of the jury array lists proportionally identical to the county population's demographics. Second. the total number of individuals on the jury array lists that are of that particular minority group are subtracted from the total number found above to get the total number of additional individuals the county needs from that particular minority group in order to have the same racial demographics on the jury array lists as in the county's population. Third, as a way of comparing small counties to larger counties, 1,000 is divided by this number. The resulting figure can be interpreted in the following manner: For every 'so many' summoned jurors one additional minority would be needed to correct under-representation of minorities on jury array lists. Consequently, the smaller the number is, the higher the percentage of minority jurors that would have to be called in order to correct underrepresentation. 238

Since substantial impact is just a different way of looking at absolute disparity, it also suffers from some of the same drawbacks as absolute disparity. For instance, suppose there are two counties with the same substantial impact so that for every 100 jurors summoned, one

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²³⁶ *Infra* pp. 134-41.

Untied States v. Weaver, 267 F.3d 231, 243 (3d Cir. 2001).

This statement is true for all numbers greater than zero, since zero indicates that the court cannot add anymore to its jury array lists without over-representing the group.

additional African American is needed to correct under-representation of African Americans on the jury array lists. However, the first county, a relatively small county, only summons an average of 500 jurors the entire year while the other county, a relatively large county, summons about 100,000 jurors in an average year. In this example, the small county only needs to summon five more African Americans during the year to make its jury array lists proportionally representative while the large county needs to summon 1,000 more African Americans during the year to be proportionally representative. Therefore, while the smaller county's under-representation of African Americans by five could have been by chance, the probability of the larger county under-representing African Americans by 1,000 is possibly less likely to be by chance.

Significance Testing (or Statistical Decision Theory)

Sometimes referred to as statistical decision theory by courts, significance testing may provide another measurement as to the possible under-representation of minorities on jury array lists. A significance test measures the probability that any variation between the racial make-up of a summoning jurisdiction's population and the racial make-up of its jury array lists is a result of random selection or chance. One drawback to significance testing is that although the magnitude of the z score gives an indication of how likely or unlikely the variation between the population and the jury array lists' race demographic composition is due to a random selection of the population, it does not indicate anything about the magnitude of any difference.²³⁹

Another obvious drawback to applying this test to determine if jurors are indeed drawn by chance from a fair cross section of the community is that jurors are not drawn purely by chance from a fair cross section of the community. Jurors are instead drawn from those who are statutorily eligible to serve, who appear on a source used to identify them, who received a summons and responded to the summons as directed. No jurisdiction knowingly summons those known to be ineligible to serve as a juror. In fact, some jurisdictions question potential jurors before summoning them precisely to learn who is statutorily ineligible to serve so that only those confirmed to be eligible are summoned. No jurisdiction routinely questions or summons potential jurors who do not appear on the source list that jurisdiction uses for its master list; and finally, nobody responds to a summons that is not received because of an incorrect

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 $^{^{239}}$ The significance test and the z score will be explained in greater detail later in the report.

address. Therefore, significance testing is relatively infrequently relied upon by courts considering and reviewing challenges to jury selection.

Even though absolute disparity, comparative disparity, substantial impact and significance testing all have drawbacks, examining these measures together allows a more complete and meaningful picture of the under-representation of minority groups on jury array lists that may exist.

ESTIMATION OF MINORITY JURY REPRESENTATION

Unfortunately in several counties, particularly rural ones, the percentages of addresses on the jury array lists collected from each county that actually were able to be geocoded were rather low. As mentioned in the methodology section of this report, the reasons an address may not be able to be geocoded included: the address had no street name such as a rural route or post office box address, the address was an address that did not exist in 2000, the street name was misspelled, Since geocoding allows one to identify the actual demographic characteristics of a census block as it was populated when the census block data was collected, many of the results found using the techniques described in the previous section are predictably less accurate in counties with a substantial percentage of jury addresses not geocoded. Counties with higher percentages of geocoded addresses are presented separately from those with lower percentages of geocoded addresses to more easily provide an accurate picture of each of the county's racial make-up of the jury array lists and the reliability of the data. Therefore, the counties were divided into four separate tables based on the total percentage of jury array addresses that were mapped to census data. The reliability of the data is presumably highest on the table where greater than 90% of the addresses were geocoded. Obviously, the data where lesser percentages of addresses were geocoded is likely to be less reliable.

Absolute and Comparative Disparities of Minority Groups by County

Table 1 includes all counties with greater than or equal to 90% of the addresses geocoded. All together, 15 counties (mostly urban) are included in this table. As shown on this table, the largest absolute disparities were found in Dauphin County's African-American absolute disparity and Lehigh's Hispanic absolute disparity, both at 5.0%. The largest comparative disparities were found in Cambria County's African-American population and Hispanic population at 78.6% and 55.6%, respectively, as well as Cumberland and Erie's African-American

populations at 58.3% and 50.8%, respectively. African Americans in Delaware County and City of Philadelphia were over-represented. As mentioned before, neither absolute nor comparative disparities should be looked at in isolation of the other measure. For instance, although Cambria's Hispanic comparative disparity is 55.6% (a high comparative disparity), Cambria's Hispanic absolute disparity is only 0.5% (a low absolute disparity). In other words, a high absolute disparity and a high comparative disparity together might indicate that further analysis may need to be done to assure that certain minority groups are not (either intentionally or unintentionally) excluded from jury service.

As shown in Table 2, there were nine counties in which greater than or equal to 80% and less than 90% of the jury array addresses were geocoded. While 80% is still a relatively high percentage of geocoded jury array addresses, some caution should be used when analyzing the absolute and comparative disparities for these nine counties. Among these counties, Berks County's Hispanic absolute disparity and York County's African-American absolute disparity are the highest two minority absolute disparities at 3.6% and 2.6%, respectively. The highest minority comparative disparities are the African-American comparative disparities of Somerset County at 93.8% and York County at 70.3%; however, as mentioned before, these figures should be viewed with caution since up to 20% of the jury array addresses could not be geocoded and are therefore not included in these estimations.

As shown in Table 3, there were eight counties in which greater than or equal to 70% and less than 80% of the jury array addresses were geocoded. Of these eight counties, Centre County's other minority absolute disparity and Lycoming County's African-American absolute disparity were the highest minority absolute disparities at 2.6% and 1.9%, respectively. Westmoreland County's other minorities were slightly over-represented. Additionally, Carbon County and Centre County's African-American comparative disparity were the highest comparative disparities of the eight counties at 66.7% and 57.7%, respectively; however, these figures should be viewed with extreme caution since up to 30% of the jury array addresses in these eight counties could not be geocoded and are not included in the analysis.

The remaining 35 counties not on Table 1, 2 or 3 are included in Table 4. Table 4 includes counties where less than 70% of the jury array addresses were able to be geocoded. Therefore, the data included in this table is likely the least reliable among the four tables, but is included because all counties submitted data and it was unknown until geocoding

was complete which counties had higher percentages of geocoded addresses.

In addition to the African-American and Hispanic categories, a few counties had a significant number of individuals of Asian race or two or more races. Therefore, any county comprised of more than 2% Asian or individuals with two or more races are mentioned in Table 5. However, both of these categories already appear in Tables 1, 2, 3 and 4 under the heading of other minority.

TABLE 1
COMPARISON OF GEOCODED QUALIFIED JURORS AND 2000 CENSUS DATA BY COUNTY
WITH GREATER THAN OR EQUAL TO 90 PERCENT OF THE ADDRESSES GEOCODED
PENNSYLVANIA

				Race				E	thnic desce	<u>nt</u>
	White	Af	rican Americ	can	(Other minorit	ty		Hispanic	
			Absolute	Comparative		Absolute	Comparative		Absolute	Comparative
County	Percentage	Percentage	disparity	disparity	Percentage	disparity	disparity	Percentage	disparity	disparity
Allegheny										
Census data	84.3%	12.4%			3.3%			0.9%		
Geocoded jurors	89.4	8.1	4.3%	34.7%	2.5	0.8%	24.2%	0.7	0.2%	22.2%
Beaver										
Census data	92.5	6.0			1.5			0.7		
Geocoded jurors	94.1	4.6	1.4	23.3	1.3	0.2	13.3	0.7	0.0	0.0
Bucks										
Census data	92.5	3.2			4.3			2.3		
Geocoded jurors	93.6	2.5	0.7	21.9	3.9	0.4	9.3	2.0	0.3	13.0
Cambria										
Census data	95.8	2.8			1.4			0.9		
Geocoded jurors	98.3	0.6	2.2	78.6	1.1	0.3	21.4	0.4	0.5	55.6
Chester										
Census data	89.2	6.2			4.6			3.7		
Geocoded jurors	91.1	5.0	1.2	19.4	3.9	0.7	15.2	2.7	1.0	27.0
Cumberland										
Census data	94.4	2.4			3.2			1.3		
Geocoded jurors	95.9	1.0	1.4	58.3	3.1	0.1	3.1	1.2	0.1	7.7
Dauphin										
Census data	77.1	16.9			6.0			4.1		
Geocoded jurors	83.5	11.9	5.0	29.6	4.6	1.4	23.3	2.7	1.4	34.1
Delaware										
Census data	80.3	14.5			5.2			1.5		
Geocoded jurors	80.0	15.5	а	а	4.5	0.7	13.5	1.3	0.2	13.3
Erie										
Census data	90.9	6.1			3.0			2.2		
Geocoded jurors	95.0	3.0	3.1	50.8	2.0	1.0	33.3	1.3	0.9	40.9
Lancaster										
Census data	91.4	2.8			5.8			5.7		
Geocoded jurors	94.0	1.8	1.0	35.7	4.2	1.6	27.6	3.4	2.3	40.4
Lehigh										
Census data	87.0	3.6			9.4			10.2		
Geocoded jurors	92.1	2.0	1.6	44.4	5.9	3.5	37.2	5.2	5.0	49.0
Mercer							-			
Census data	93.1	5.3			1.6			0.7		
Geocoded jurors	93.4	5.0	0.3	5.7	1.6	0.0	0.0	0.6	0.1	14.3
Montgomery										
Census data	86.4	7.5			6.1			2.0		
Geocoded jurors	89.8	5.1	2.4	32.0	5.1	1.0	16.4	1.6	0.4	20.0
Northampton		-			±			***		
Census data	91.2	2.8			6.0			6.7		
Geocoded jurors	92.9	2.2	0.6	21.4	4.9	1.1	18.3	5.3	1.4	20.9
Philadelphia	-=.0	_· _	-		•					
Census data	45.0	43.2			11.8			8.5		
Geocoded jurors	47.7	43.8	а	а	8.5	3.3	28.0	5.6	2.9	34.1

a. Geocoded jurors are over-represented.

TABLE 2

COMPARISON OF GEOCODED QUALIFIED JURORS AND 2000 CENSUS DATA BY COUNTY

WITH GREATER THAN OR EQUAL TO 80 PERCENT AND LESS THAN 90 PERCENT OF THE ADDRESSES GEOCODED PENNSYLVANIA

				Race				E	Ethnic desce	nt
	White	African American		Other minority			Hispanic			
			Absolute	Comparative		Absolute	Comparative		Absolute	Comparative
County	ty Percentage P	Percentage	disparity	disparity	Percentage	disparity	disparity	Percentage	disparity	disparity
Adams										
Census data	95.4%	1.2%			3.4%			3.6%		
Geocoded jurors	96.8	0.9	0.3%	25.0%	2.3	1.1%	32.4%	1.9	1.7%	47.2%
Berks										
Census data	88.2	3.7			8.1			9.7		
Geocoded jurors	91.8	2.6	1.1	29.7	5.6	2.5	30.9	6.1	3.6	37.1
Butler										****
Census data	97.8	0.8			1.4			0.6		
Geocoded jurors	98.2	0.6	0.2	25.0	1.2	0.2	14.3	0.6	0.0	0.0
Crawford	00.2	0.0	V. <u>–</u>	_0.0		V. <u>–</u>		0.0	0.0	
Census data	97.0	1.6			1.4			0.6		
Geocoded jurors	97.5	1.1	0.5	31.3	1.4	0.0	0.0	0.4	0.2	33.3
Franklin										
Census data	95.3	2.3			2.4			1.8		
Geocoded jurors	95.8	2.0	0.3	13.0	2.2	0.2	8.3	1.6	0.2	11.1
Lebanon										
Census data	94.5	1.3			4.2			5.0		
Geocoded jurors	95.4	1.2	0.1	7.7	3.4	0.8	19.0	3.6	1.4	28.0
Luzerne	00		•	• • • •	.	0.0		0.0		
Census data	96.6	1.7			1.7			1.2		
Geocoded jurors	97.6	0.8	0.9	52.9	1.6	0.1	5.9	0.9	0.3	25.0
Somerset	00	0.0	0.0	02.0		•	0.0	0.0	0.0	
Census data	97.4	1.6			1.0			0.7		
Geocoded jurors	99.1	0.1	1.5	93.8	0.8	0.2	20.0	0.4	0.3	42.9
York	30.1	U. 1		23.0	0.0	3.2	_5.0	Ų.,	0.0	
Census data	92.8	3.7			3.5			3.0		
Geocoded jurors	96.8	1.1	2.6	70.3	2.1	1.4	40.0	1.2	1.8	60.0

a. Geocoded jurors are over-represented.

TABLE 3

COMPARISON OF GEOCODED QUALIFIED JURORS AND 2000 CENSUS DATA BY COUNTY

WITH GREATER THAN OR EQUAL TO 70 PERCENT AND LESS THAN 80 PERCENT OF THE ADDRESSES GEOCODED PENNSYLVANIA

				Race				E	Ethnic desce	nt
	White	Af	rican Americ	can	(Other minorit	ty		Hispanic	
			Absolute	Comparative		Absolute	Comparative		Absolute	Comparative
County	Percentage	Percentage	disparity	disparity	Percentage	disparity	disparity	Percentage	disparity	disparity
Bedford										
Census data	98.5%	0.4%			1.1%			0.5%		
Geocoded jurors	98.8	0.3	0.1%	25.0%	0.9	0.2%	18.2%	0.4	0.1%	20.0%
Carbon										
Census data	97.8	0.6			1.6			1.5		
Geocoded jurors	98.6	0.2	0.4	66.7	1.2	0.4	25.0	0.9	0.6	40.0
Centre										
Census data	91.4	2.6			6.0			1.7		
Geocoded jurors	95.5	1.1	1.5	57.7	3.4	2.6	43.3	0.9	0.8	47.1
Elk										
Census data	99.0	0.1			0.9			0.4		
Geocoded jurors	99.1	0.1	0.0	0.0	0.8	0.1	11.1	0.3	0.1	25.0
Lackawanna										
Census data	96.7	1.3			2.0			1.4		
Geocoded jurors	97.9	0.6	0.7	53.8	1.5	0.5	25.0	0.9	0.5	35.7
Lycoming										
Census data	93.9	4.3			1.8			0.7		
Geocoded jurors	96.0	2.4	1.9	44.2	1.6	0.2	11.1	0.5	0.2	28.6
Washington										
Census data	95.3	3.2			1.5			0.6		
Geocoded jurors	95.5	3.1	0.1	3.1	1.4	0.1	6.7	0.5	0.1	16.7
Westmoreland										
Census data	96.6	2.0			1.4			0.5		
Geocoded jurors	96.9	1.6	0.4	20.0	1.5	а	а	0.5	0.0	0.0

 $a. \ \ Geocoded\ jurors\ are\ over-represented.$

TABLE 4
COMPARISON OF GEOCODED QUALIFIED JURORS AND 2000 CENSUS DATA BY COUNTY
WITH LESS THAN 70 PERCENT OF THE ADDRESSES GEOCODED
PENNSYLVANIA

				Race					Ethnic desce	nt
County	White Percentage	Af	rican Americ Absolute disparity	can Comparative disparity	Percentage	Other minorit Absolute disparity	ty Comparative disparity		Hispanic Absolute disparity	Comparative disparity
A										
Armstrong Census data Geocoded jurors	98.3% 97.9	0.8% 1.0	a	a	0.9% 1.1	a	а	0.4% 0.4	0.0%	0.0%
Blair Census data Geocoded jurors	97.6 97.4	1.2 1.3	а	а	1.2 1.3	а	а	0.5 0.6	а	а
Bradford										
Census data Geocoded jurors Cameron	97.9 96.6	0.4 0.7	а	а	1.7 2.7	а	а	0.6 0.9	а	а
Census data	98.8	0.4	2 40/	400.00/	0.8			0.6		400.0
Geocoded jurors Clarion	99.1	0.0	0.4%	100.0%	0.9	а	а	0.0	0.6	100.0
Census data Geocoded jurors	98.2 96.0	0.8 0.6	0.2	25.0	1.0 3.4	а	а	0.4 0.6	а	а
Clearfield Census data Geocoded jurors	97.4 98.5	1.5 0.2	1.3	86.7	1.1 1.3	а	а	0.6 0.4	0.2	33.3
Clinton Census data	98.3	0.5			1.2			0.5		
Geocoded jurors Columbia	98.4	0.6	а	а	1.0	0.2%	16.7%	0.4	0.1	20.0
Census data Geocoded jurors	97.6 97.7	0.8 0.9	а	а	1.6 1.4	0.2	12.5	0.9 0.9	0.0	0.0
Fayette Census data	95.3	3.5			1.2			0.4		
Geocoded jurors	95.9	2.8	0.7	20.0	1.3	а	а	0.4	0.0	0.0
Forest Census data Geocoded jurors	95.9 94.1	2.2 0.0	2.2	100.0	1.9 5.9	а	a	1.2 0.0	1.2	100.0
Fulton Census data	98.2	0.7			1.1			0.4		
Geocoded jurors Greene	97.2	0.6	0.1	14.3	2.2	а	а	0.9	а	а
Census data Geocoded jurors	95.1 97.4	3.9 1.0	2.9	74.4	1.0 1.6	а	а	0.9 0.4	0.5	55.6
Huntingdon Census data	93.3	5.2 3.3	1.9	36.5	1.5 1.3	0.2	13.3	1.1	0.5	45.5
Geocoded jurors Indiana	95.4		1.9	30.5		0.2	13.3	0.6	0.5	45.5
Census data Geocoded jurors Jefferson	96.9 97.3	1.6 1.0	0.6	37.5	1.5 1.7	а	а	0.5 0.4	0.1	20.0
Census data Geocoded jurors	99.0 99.3	0.1 0.1	0.0	0.0	0.9 0.6	0.3	33.3	0.4 0.5	а	а
Juniata Census data Geocoded jurors	98.0 96.3	0.4 0.1	0.3	75.0	1.6 3.6	a	a	1.6 3.7	a	a
Lawrence Census data	95.0 95.5	3.6			1.4			0.6		
Geocoded jurors McKean Census data	96.5	3.3 1.9	0.3	8.3	1.2 1.6	0.2	14.3	0.5 1.1	0.1	16.7
Geocoded jurors Mifflin	98.4	0.3	1.6	84.2	1.3	0.3	18.8	0.5	0.6	54.5
Census data Geocoded jurors	98.5 98.7	0.5 0.3	0.2	40.0	1.0 1.0	0.0	0.0	0.6 0.4	0.2	33.3
Monroe Census data Geocoded jurors Montour	88.2 88.1	6.0 5.8	0.2	3.3	5.8 6.1	а	а	6.6 7.6	а	а
Census data Geocoded jurors	96.7 95.9	1.0 0.8	0.2	20.0	2.3 3.3	а	а	0.9 0.8	0.1	11.1

COMPARISON OF GEOCODED QUALIFIED JURORS AND 2000 CENSUS DATA BY COUNTY WITH LESS THAN 70 PERCENT OF THE ADDRESSES GEOCODED (CONTINUED)

				Race				E	thnic desce	nt
	White	Af	rican Americ Absolute	an Comparative		Other minority Absolute	y Comparative	Hispanic Absolute Compara		
County	Percentage	Percentage	disparity	disparity	Percentage	disparity	disparity	Percentage	disparity	disparity
Northumberland										
Census data	97.1	1.5			1.4			1.1		
Geocoded jurors	98.2	0.5	1.0	66.7	1.3	0.1	7.1	0.8	0.3	27.3
Perry										
Census data	98.6	0.4			1.0			0.7		
Geocoded jurors	98.7	0.2	0.2	50.0	1.1	а	а	0.7	0.0	0.0
Pike										
Census data	93.1	3.3			3.6			5.0		
Geocoded jurors	94.8	1.5	1.8	54.5	3.7	а	а	2.8	2.2	44.0
Potter							-			
Census data	98.1	0.3			1.6			0.6		
Geocoded jurors	98.1	0.2	0.1	33.3	1.7	а	а	0.3	0.3	50.0
Schuylkill										
Census data	96.6	2.1			1.3			1.1		
Geocoded jurors	98.3	0.4	1.7	81.0	1.3	0.0	0.0	0.7	0.4	36.4
Snyder										
Census data	97.9	0.8			1.3			1.0		
Geocoded jurors	98.1	0.9	а	а	1.0	0.3	23.1	2.1	а	а
Sullivan										
Census data	95.6	2.2			2.2			1.1		
Geocoded jurors	100.0	0.0	2.2	100.0	0.0	2.2	100.0	0.0	1.1	100.0
Susquehanna										
Census data	98.5	0.3			1.2			0.7		
Geocoded jurors	98.5	0.5	а	а	1.0	0.2	16.7	0.7	0.0	0.0
Tioga							-			
Census data	98.1	0.6			1.3			0.5		
Geocoded jurors	97.2	0.8	а	а	2.0	а	а	0.5	0.0	0.0
Union							-			
Census data	90.1	6.9			3.0			3.9		
Geocoded jurors	96.5	1.5	5.4	78.3	2.0	1.0	33.3	1.2	2.7	69.2
Venango										
Census data	97.6	1.1			1.3			0.5		
Geocoded jurors	98.0	1.0	0.1	9.1	1.0	0.3	23.1	0.5	0.0	0.0
Warren										
Census data	98.7	0.2			1.1			0.3		
Geocoded jurors	99.0	0.1	0.1	50.0	0.9	0.2	18.2	0.4	а	а
Wayne							-	-		
Census data	96.7	1.6			1.7			1.7		
Geocoded jurors	96.6	0.8	0.8	50.0	2.6	а	а	2.1	а	а
Wyoming					-	-	-		-	-
Census data	98.3	0.5			1.2			0.7		
Geocoded jurors	98.4	0.1	0.4	80.0	1.5	а	а	0.3	0.4	57.1

a. Geocoded jurors are over-represented.

TABLE 5
COMPARISON OF GEOCODED QUALIFIED JURORS AND 2000 CENSUS DATA
BY COUNTY AND RACES FROM OTHER MINORITY
WITH GREATER THAN TWO PERCENT OF POPULATION
PENNSYLVANIA

County	Percentage of minority	Absolute disparity	Comparative	Porcontago of		
County	minority	dienarity		reidenlage of	Absolute	Comparative
		чізранцу	disparity	minority	disparity	disparity
Bucks County						
Census data	2.3%			а		
Geocoded jurors	2.1	0.2%	8.7%	a		
Centre County	2.1	0.2 /0	0.7 70	a		
Census data	4.0			а		
Geocoded jurors	2.1	1.9	47.5	a		
Chester County	2.1	1.5	47.5	a		
Census data	2.0			а		
Geocoded jurors	1.8	0.2	10.0	a		
Dauphin County	1.0	0.2	10.0	u		
Census data	2.0			а		
Geocoded jurors	1.7	0.3	15.0	a		
Delaware County	1.7	0.5	13.0	a		
Census data	3.3			а		
Geocoded jurors	2.7	0.6	18.2	a		
Lehigh County	2.1	0.0	10.2	а		
Census data	2.1			а		
Geocoded jurors	2.0	0.1	4.8	a		
Monroe County	2.0	0.1	4.0	а		
Census data	а			2.0%		
Geocoded jurors	a			2.0	0.0%	0.0%
Montgomery County	u			2.0	0.070	0.070
Census data	4.0			а		
Geocoded jurors	3.4	0.6	15.0	a		
Philadelphia County	0.7	0.0	10.0	u		
Census data	4.5			2.2		
Geocoded jurors	3.3	1.2	26.7	1.9	0.3	13.6

a. The population contained less than two percent of minority group.

Substantial Impact of Minority Groups by County

Using the identical breakdowns of the counties into four separate tables based on the total percentage of jury array addresses that could be mapped to census data (as in Tables 1, 2, 3 and 4), the substantial impact of minority groups by county are included in the Tables 6, 7, 8 and 9. Additionally, Table 10 includes any county with two percent or more of its population in a particular minority group other than African American and Hispanic.

Table 6 includes all counties with greater than or equal to 90% of the addresses geocoded. Recall that the lower the figure (greater than zero) in the Table 6, the higher the under-representation of the minority group on the jury array lists. This is easiest to see in an example. In Allegheny County, one additional African American is needed out of every 23 summoned jurors in the County in order to correct the under-representation of African Americans while in Beaver County, one additional African American is needed out of every 71 summoned jurors in the county in order to correct the under-representation of African Americans. Comparing the two counties using only substantial impact would indicate that Allegheny County under-represents its African-American citizens more than Beaver County does; however, without looking at other measurements, such as absolute and comparative disparity, and other factors, such as ineligible jury populations, it may be unwise to draw a conclusion based solely on substantial impact.

The substantial impact of Lehigh County's Hispanic population at one additional Hispanic needed out of 20 summoned jurors, Dauphin County's African-American population at one additional African American needed out of 20 summoned jurors, and Allegheny County's African-American population at one additional African American needed out of 23 summoned jurors are the most significant substantial impact figures on Table 6.

Tables 7, 8, 9 and 10 are similar to Table 6 except Table 7 includes counties with greater than or equal to 80% and less than 90% of the addresses geocoded, Table 8 includes counties with greater than or equal to 70% and less than 80% of the addresses geocoded, Table 9 includes counties with less than 70% of the addresses geocoded, and Table 10 includes all other minority races beside African-American and Hispanic with more than two percent of the total county population.

Entries displaying 0 indicate that if a minority person were to be added, his group would become over-represented. For example, table 6 shows that Beaver County's Hispanic and Mercer County's other minority populations are numerically proportionally represented.

TABLE 6
TO CORRECT UNDER-REPRESENTATION, ONE ADDITIONAL MINORITY
WOULD BE NEEDED OUT OF THE FOLLOWING NUMBER OF SUMMONED JURORS
WITH GREATER THAN OR EQUAL TO 90 PERCENT OF THE ADDRESSES GEOCODED
PENNSYLVANIA

	Ra	ice	Ethnic descent
Occupation	One additional African American needed out of the following number	One additional other minority needed out of the following number	One additional Hispanic needed out of the following number
County	of summoned jurors	of summoned jurors	of summoned jurors
Allegheny	23	125	500
Beaver	71	500	0
Bucks	143	250	333
Cambria	45	333	200
Chester	83	143	100
Cumberland	71	1,000	1,000
Dauphin	20	71	71
Delaware	a	143	500
Erie	32	100	111
Lancaster	100	63	43
Lehigh	63	29	20
Mercer	333	0	1,000
Montgomery	42	100	250
Northampton	167	91	71
Philadelphia	а	30	34

a. Geocoded jurors are over-represented.

TABLE 7
TO CORRECT UNDER-REPRESENTATION, ONE ADDITIONAL MINORITY
WOULD BE NEEDED OUT OF THE FOLLOWING NUMBER OF SUMMONED JURORS
WITH GREATER THAN OR EQUAL TO 80 PERCENT
AND LESS THAN 90 PERCENT OF THE ADDRESSES GEOCODED
PENNSYLVANIA

	Ra	ce	Ethnic descent
	One additional African	One additional other	One additional
	American needed out of	minority needed out of	Hispanic needed out of
	the following number	the following number	the following number
County	of summoned jurors	of summoned jurors	of summoned jurors
Adams	333	91	59
Berks	91	40	28
200			1
Butler	500	500	0
Crawford	200	0	500
Franklin	333	500	500
Lebanon	1,000	125	71
Luzerne	111	1,000	333
Somerset	67	500	333
York	38	71	56

a. Geocoded jurors are over-represented.

TABLE 8
TO CORRECT UNDER-REPRESENTATION, ONE ADDITIONAL MINORITY
WOULD BE NEEDED OUT OF THE FOLLOWING NUMBER OF SUMMONED JURORS
WITH GREATER THAN OR EQUAL TO 70 PERCENT
AND LESS THAN 80 PERCENT OF THE ADDRESSES GEOCODED
PENNSYLVANIA

	Ra	ice	Ethnic descent
	One additional African	One additional other	One additional
	American needed out of	minority needed out of	Hispanic needed out of
	the following number	the following number	the following number
County	of summoned jurors	of summoned jurors	of summoned jurors
Bedford	1,000	500	1,000
Carbon	250	250	167
Centre	67	38	125
Elk	0	1,000	1,000
Lackawanna	143	200	200
Lycoming	53	500	500
Washington	1,000	1,000	1,000
Westmoreland	250	а	0

a. Geocoded jurors are over-represented.

TABLE 9
TO CORRECT UNDER-REPRESENTATION, ONE ADDITIONAL MINORITY
WOULD BE NEEDED OUT OF THE FOLLOWING NUMBER OF SUMMONED JURORS
WITH LESS THAN 70 PERCENT OF THE ADDRESSES GEOCODED
PENNSYLVANIA

			
	Ra	ice	Ethnic descent
	One additional African	One additional other	One additional
	American needed out of	minority needed out of	Hispanic needed out of
	the following number	the following number	the following number
County	of summoned jurors	of summoned jurors	of summoned jurors
			_
Armstrong	а	а	0
Blair	а	а	а
Bradford	а	а	а
Cameron	250	а	167
Clarion	500	а	а
Clearfield	77	а	500
Clinton	а	500	1,000
Columbia	а	500	0
Fayette	143	а	0
Forest	45	а	83
Fulton	1,000	а	а
Greene	34	а	200
Huntingdon	53	500	200
Indiana	167	а	1,000
Jefferson	0	333	а
Juniata	333	а	а
Lawrence	333	500	1,000
McKean	63	333	167
Mifflin	500	0	500
Monroe	500	a	a
Montour	500	a	1,000
Northumberland	100	1,000	333
Perry	500	a	0
Pike	56	a	45
Potter	1,000	a	333
Schuylkill	59	0	250
Snyder	а	333	a
Sullivan	45	45	91
Susquehanna	a	500	0
Tioga	a	а	0
Union	19	100	37
Venango	1,000	333	0
Warren	1,000	500	a
Wayne	125	a	a a
Wyoming	250	a a	250
v v yourning	250	a	250

a. Geocoded jurors are over-represented.

TABLE 10
TO CORRECT UNDER-REPRESENTATION, ONE ADDITIONAL MINORITY
WOULD BE NEEDED OUT OF THE FOLLOWING NUMBER OF SUMMONED JURORS
BY COUNTY AND RACES FROM OTHER MINORITY
WITH GREATER THAN TWO PERCENT OF POPULATION
PENNSYLVANIA

County	One additional Asian needed out of the following number of summoned jurors	One additional two or more races needed out of the following number of summoned jurors
Bucks County	500	а
Centre County	53	a
Chester County	500	a
Dauphin County	333	a
Delaware County	167	a
Lehigh County	1,000	a
Monroe County	a	0
Montgomery County	167	a
Philadelphia County	83	333

a. The population contained less than two percent of minority group.

Statistical Significance of Under-Representation of Minority Groups on Jury Array Lists by County

Even though very few counties' absolute disparities for minorities were 0%, it is quite possible that any variation between the percentage of a minority group in the population and the percentage of that minority group on the jury array lists could still be statistically insignificant. Statistically insignificant simply means that significant evidence does not exist to conclude that the difference between the two percentages (otherwise known as the absolute disparity) was not just caused by chance. On the other hand, if the absolute disparity is sufficiently large, then it is less likely that pure chance could have caused the difference. In this case, the absolute disparity would be considered statistically significant. Therefore, to determine if any apparent under-representation of a minority group was statistically significant, a hypothesis test was performed. The null hypothesis²⁴⁰ tested to see whether the percentage of minorities was the same in the county's population as on the jury array lists, against the alternative hypothesis that the percentage of minorities

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²⁴⁰ The null hypothesis is a term often used to indicate the statistical hypothesis tested. The purpose of most statistical tests is to determine if the obtained results provide a reason to reject the hypothesis that they are a product of chance.

on jury array lists was less than the percentage of minorities in the county's population. If the null hypothesis was rejected, it was said that the under-representation of a particular minority group was statistically significant. On the other hand, if the null hypothesis was not rejected, the under-representation of that particular minority group was not statistically significant. In general terms, this hypothesis was tested using the following steps.

First, a critical value of 1.645 was determined. To determine this critical value, a significance level was chosen. Since a wide majority of social sciences use a significance level of 95%, commonly referred to as an alpha level of 0.05, an alpha level of 0.05 was selected. An alpha level represents the risk one is willing to take that under-representation of a particular minority group on the jury array lists is determined to be statistically significant when it is actually statically insignificant. An alpha level of 0.05 indicates that the degree of risk of being incorrect is 5% or less. Then, the chosen alpha level was located on a standard normal distribution table, and the corresponding critical value of 1.645 was found.

Second, a z test statistic (or z score)²⁴¹ was calculated and compared the critical value in various minority groups in every county. 242 If the z score was greater than the critical value, then the null hypothesis was rejected in favor of the alternative hypothesis. In other words, the under-representation of that particular minority group was statistically significant. On the other hand, if z score was less than or equal to the critical value, then the null hypothesis was not rejected, and the underrepresentation of that particular minority group was not statistically significant. Recall that if the under-representation of a particular minority group is found to be statistically significant, then there is a high probability that an absolute disparity greater than zero is not just a fluke or a random occurrence. Alternatively, if the under-representation of a particular minority group is found to be statistically not significant, there is not enough evidence to conclude that an absolute disparity greater than zero is caused by anything but chance.

To correctly analyze the results of the statistical hypothesis test, one must understand the assumptions used in the analysis. First, it is assumed that the jury array addresses that were able to be geocoded have the same racial structure as all of the jury addresses on the jury array lists. Said another way, all the addresses on the jury array lists

²⁴² A more detailed explanation of the formulas appears in app. C, *infra* p. 101.

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²⁴¹ The z score indicates how far a certain population deviates from another population distribution's mean, expressed in units of its distribution's standard deviation.

should have the same racial makeup as the addresses that were able to be geocoded. For counties where over 90% of the jury array addresses were geocoded, this assumption is probably reasonably accurate. In counties where a smaller percentage of addresses were able to be geocoded, this assumption may be less reasonable. Therefore, the counties will again be divided into four tables by the total percentage of addresses geocoded.

This hypothesis test requires that both populations being compared (in this case the county's total population and individuals on the county's jury array list) be sufficiently large. Statistics textbooks vary in what is considered sufficiently large. Some use a population size of 30, others use 100, and still others use a value of 120. For this study, a population size of 120 would be considered sufficiently large. Therefore, if a county's jury array list had fewer than 120 addresses plotted, the hypothesis test was not run.

Third, as mentioned previously, even if the hypothesis test found that the difference between the population and the jury array lists was statistically significant, the magnitude of the variation could not be determined using only the test. Said another way, the only analysis the significance test can provide is whether or not evidence existed to say, with some certainty, that an absolute disparity greater than zero is not just a fluke or a result of the chance. Therefore, finding the difference between the percent of the population being of a certain minority group and the percent of the jury array lists composed of that particular minority group to be statistically significant does not begin to describe the magnitude to which the two percentages differ.

Looking at Table 11, in most counties with greater than or equal to 90% of jury array addresses geocoded, the African-American, other minority, and Hispanic population were statistically significantly underrepresented at the 0.05 alpha level. However, this finding does not necessarily mean that the counties are not randomly selecting from the eligible population. As stated previously the census data includes individuals who are ineligible for jury duty. Therefore, those eligible to serve on jury duty may or may not have the same racial make-up as a random selection of the general population.

Tables 12, 13 and 14 show similar results as does Table 11. However, one main difference should be noted. As stated before, as fewer of the addresses are able to be geocoded, the jury population percentages may become less and less reliably accurate. Therefore, most especially on Table 14, where less than 70% of the jury array

addresses plotted, extreme caution should be used when reviewing these figures.

Finally, Table 15 shows the results of significance testing in counties were other minority groups (besides African American and Hispanics) make-up more than two percent of the population.

TABLE 11
SIGNIFICANCE TEST FOR UNDER-REPRESENTATION OF MINORITY GROUPS ON THE JURY ARRAY LISTS
BY COUNTY WITH GREATER THAN OR EQUAL TO 90 PERCENT OF THE ADDRESSES GEOCODED
PENNSYLVANIA

				Ra	ice					Ethnic o	lesent	
		African A	merican			Other minority			Hispanic			
				Population				Population				Population
	Census	Jury		significantly	Census	Jury		significantly	Census	Jury		significantly
	population	population		under-	population	population		under-	population	population		under-
County	percentage	percentage	Z score	represented1	percentage	percentage	Z score	represented1	percentage	percentage	Z score	represented
Allegheny	12.4%	8.1%	32.974	Yes	3.3%	2.5%	10.748	Yes	0.9%	0.7%	5.034	Yes
Beaver	6.0	4.6	2.653	Yes	1.5	1.3	0.701	No	0.7	0.7	0.000	No
Bucks	3.2	2.5	9.135	Yes	4.3	3.9	4.235	Yes	2.3	2.0	4.385	Yes
Cambria	2.8	0.6	8.342	Yes	1.4	1.1	0.850	No	0.9	0.4	2.335	Yes
Chester	6.2	5.0	8.035	Yes	4.6	3.9	5.284	Yes	3.7	2.7	8.975	Yes
Cumberland	2.4	1.0	4.004	Yes	3.2	3.1	0.165	No	1.3	1.2	0.262	No
Dauphin	16.9	11.9	7.841	Yes	6.0	4.6	3.394	Yes	4.1	2.7	4.382	Yes
Delaware	14.5	15.5	-4.695	No	5.2	4.5	5.708	Yes	1.5	1.3	2.984	Yes
Erie	6.1	3.0	23.283	Yes	3.0	2.0	9.284	Yes	2.2	1.3	10.267	Yes
Lancaster	2.8	1.8	5.060	Yes	5.8	4.2	5.370	Yes	5.7	3.4	8.533	Yes
Lehigh	3.6	2.0	8.270	Yes	9.4	5.9	10.771	Yes	10.2	5.2	16.284	Yes
Mercer	5.3	5.0	0.825	No	1.6	1.6	0.000	No	0.7	0.6	0.775	No
Montgomery	7.5	5.1	12.853	Yes	6.1	5.1	5.368	Yes	2.0	1.6	3.763	Yes
Northampton	2.8	2.2	5.191	Yes	6.0	4.9	6.477	Yes	6.7	5.3	7.935	Yes
Philadelphia Philadelphia	43.2	43.8	-3.513	No	11.8	8.5	34.054	Yes	8.5	5.6	36.167	Yes

^{1.} A one-tailed z test at the 0.05 alpha level was done using a critical value used of 1.645. See Appendix C for more details.

TABLE 12
SIGNIFICANCE TEST FOR UNDER-REPRESENTATION OF MINORITY GROUPS ON THE JURY ARRAY LISTS
BY COUNTY WITH GREATER THAN OR EQUAL TO 80 PERCENT AND LESS THAN 90 PERCENT OF THE ADDRESSES GEOCODED
PENNSYLVANIA

				Ra	ace					Ethnic o	lesent	
		African A	merican			Other m	inority			Hispa	anic	
County	Census population percentage		Z score	Population significantly under- represented ¹	Census population percentage		Z score	Population significantly under- represented ¹	Census population percentage		Z score	Population significantly under- represented ¹
Adams	1.2%	0.9%	1.013	No	3.4%	2.3%	2.338	Yes	3.6%	1.9%	3.959	Yes
Berks	3.7	2.6	8.723	Yes	8.1	5.6	13.720	Yes	9.7	6.1	18.932	Yes
Butler	0.8	0.6	1.229	No	1.4	1.2	0.873	No	0.6	0.6	0.000	No
Crawford	1.6	1.1	1.764	Yes	1.4	1.4	0.000	No	0.6	0.4	1.166	No
Franklin	2.3	2.0	0.863	No	2.4	2.2	0.549	No	1.8	1.6	0.642	No
Lebanon	1.3	1.2	0.327	No	4.2	3.4	1.570	No	5.0	3.6	2.671	Yes
Luzerne	1.7	0.8	6.662	Yes	1.7	1.6	0.529	No	1.2	0.9	2.106	Yes
Somerset	1.6	0.1	15.136	Yes	1.0	8.0	0.793	No	0.7	0.4	1.672	Yes
York	3.7	1.1	12.298	Yes	3.5	2.1	4.842	Yes	3.0	1.2	8.177	Yes

^{1.} A one-tailed z test at the 0.05 alpha level was done using a critical value used of 1.645. See Appendix C for more details.

TABLE 13
SIGNIFICANCE TEST FOR UNDER-REPRESENTATION OF MINORITY GROUPS ON THE JURY ARRAY LISTS
BY COUNTY WITH GREATER THAN OR EQUAL TO 70 PERCENT AND LESS THAN 80 PERCENT OF THE ADDRESSES GEOCODED
PENNSYLVANIA

	Race								Ethnic desent			
		African A	merican			Other m	inority		Hispanic			
				Population				Population				Population
	Census	Jury		significantly	Census	Jury		significantly	Census	Jury		significantly
	population	population		under-	population	population		under-	population	population		under-
County	percentage	percentage	Z score	represented1	percentage	percentage	Z score	represented1	percentage	percentage	Z score	represented
Bedford	0.4%	0.3%	0.562	No	1.1%	0.9%	0.652	No	0.5%	0.4%	0.488	No
Carbon	0.6	0.2	4.433	Yes	1.6	1.2	1.885	Yes	1.5	0.9	3.237	Yes
Centre	2.6	1.1	3.812	Yes	6.0	3.4	3.808	Yes	1.7	0.9	2.248	Yes
Elk	0.1	0.1	0.000	No	0.9	0.8	0.257	No	0.4	0.3	0.419	No
Lackawanna	1.3	0.6	10.577	Yes	2.0	1.5	4.932	Yes	1.4	0.9	6.301	Yes
Lycoming	4.3	2.4	8.349	Yes	1.8	1.6	1.085	No	0.7	0.5	1.920	Yes
Washington	3.2	3.1	0.333	No	1.5	1.4	0.492	No	0.6	0.5	0.818	No
Westmoreland	2.0	1.6	4.123	Yes	1.4	1.5	-1.072	No	0.5	0.5	0.000	No

^{1.} A one-tailed z test at the 0.05 alpha level was done using a critical value used of 1.645. See Appendix C for more details.

TABLE 14
SIGNIFICANCE TEST FOR UNDER-REPRESENTATION OF MINORITY GROUPS ON THE JURY ARRAY LISTS
BY COUNTY WITH LESS THAN 70 PERCENT OF THE ADDRESSES GEOCODED
PENNSYLVANIA

				Ra	ace					Ethnic d	esent	
		African Ar	merican			Other m	inority			Hispa	nic	
County	Census population percentage		Z score	Population significantly under- represented ¹		Jury population percentage	Z score	Population significantly under- represented ¹		Jury population percentage	Z score	Population significantly under- represented ¹
Armstrong	0.8%	1.0%	-0.552	No	0.9%	1.1%	-0.527	No	0.4%	0.4%	0.000	No
Blair	1.2	1.3	-0.771	No	1.2	1.3	-0.771	No	0.5	0.6	-1.134	No
Bradford	0.4	0.7	-0.597	No	1.7	2.7	-1.024	No	0.6	0.9	-0.527	No
Cameron	0.4	0.0	а		0.8	0.9	а		0.6	0.0	а	
Clarion	0.8	0.6	а		1.0	3.4	а		0.4	0.6	а	
Clearfield	1.5	0.2	5.677	Yes	1.1	1.3	-0.350	No	0.6	0.4	0.627	No
Clinton	0.5	0.6	-0.174	No	1.2	1.0	0.270	No	0.5	0.4	0.213	No
Columbia	0.8	0.9	-0.266	No	1.6	1.4	0.428	No	0.9	0.9	0.000	No
Fayette	3.5	2.8	1.828	Yes	1.2	1.3	-0.381	No	0.4	0.4	0.000	No
Forest	2.2	0.0	а		1.9	5.9	а		1.2	0.0	а	
Fulton	0.7	0.6	а		1.1	2.2	а		0.4	0.9	а	
Greene	3.9	1.0	5.344	Yes	1.0	1.6	-0.888	No	0.9	0.4	1.462	No
Huntingdon	5.2	3.3	а		1.5	1.3	а		1.1	0.6	а	
Indiana	1.6	1.0	1.515	No	1.5	1.7	-0.390	No	0.5	0.4	0.398	No
Jefferson	0.1	0.1	0.000	No	0.9	0.6	1.214	No	0.4	0.5	-0.446	No
Juniata	0.4	0.1	а		1.6	3.6	а		1.6	3.7	а	
Lawrence	3.6	3.3	0.704	No	1.4	1.2	0.770	No	0.6	0.5	0.594	No
McKean	1.9	0.3	7.868	Yes	1.6	1.3	0.742	No	1.1	0.5	2.364	No
Mifflin	0.5	0.3	0.514	No	1.0	1.0	0.000	No	0.6	0.4	0.446	No
Monroe	6.0	5.8	0.283	No	5.8	6.1	-0.414	No	6.6	7.6	-1.248	No
Montour	1.0	8.0	0.436	No	2.3	3.3	-1.095	No	0.9	0.8	0.219	No
Northumberland	1.5	0.5	17.132	Yes	1.4	1.3	1.127	No	1.1	0.8	4.260	Yes
Perry	0.4	0.2	0.677	No	1.0	1.1	-0.145	No	0.7	0.7	0.000	No
Pike	3.3	1.5	2.839	Yes	3.6	3.7	-0.102	No	5.0	2.8	2.561	Yes
Potter	0.3	0.2	0.307	No	1.6	1.7	-0.106	No	0.6	0.3	0.750	No
Schuylkill	2.1	0.4	19.313	Yes	1.3	1.3	0.000	No	1.1	0.7	3.674	Yes
Snyder	0.8	0.9	а		1.3	1.0	а		1.0	2.1	а	
Sullivan	2.2	0.0	а		2.2	0.0	а		1.1	0.0	а	
Susquehanna	0.3	0.5	а		1.2	1.0	а		0.7	0.7	а	
Tioga	0.6	8.0	-0.534	No	1.3	2.0	-1.190	No	0.5	0.5	0.000	No
Union	6.9	1.5	а		3.0	2.0	а		3.9	1.2	а	
Venango	1.1	1.0	0.255	No	1.3	1.0	0.765	No	0.5	0.5	0.000	No
Warren	0.2	0.1	0.567	No	1.1	0.9	0.381	No	0.3	0.4	-0.285	No
Wayne	1.6	0.8	1.887	Yes	1.7	2.6	-1.196	No	2.1	2.1	0.000	No
Wyoming	0.5	0.1	а		1.2	1.5	а		0.3	0.3	а	

a. The number of plotted jurors is too small (<120) to calculate a Z score.

^{1.} A one-tailed z test at the 0.05 alpha level was done using a critical value used of 1.645. See Appendix C for more details.

TABLE 15
SIGNIFICANCE TEST FOR UNDER-REPRESENTATION OF OTHER MINORITY GROUPS ON THE JURY ARRAY LISTS
BY COUNTY AND RACES WITH GREATER THAN TWO PERCENT OF POPULATION
PENNSYLVANIA

		Asia	an		Two or more races				
County	Census population percentage	Jury population percentage	Z score	Population significantly under- represented ¹	Census population percentage	Jury population percentage	Z score	Population significantly under- represented	
Bucks	2.3%	2.1%	2.860	Yes	а	а			
Centre	4.0	2.1	3.516	Yes	а	а			
Chester	2.0	1.8	2.202	Yes	а	а			
Dauphin	2.0	1.7	1.179	No	а	а			
Delaware	3.3	2.7	6.246	Yes	а	а			
Lehigh	2.1	2.0	0.520	No	а	а			
Monroe	а	а			2.0%	2.0%	0.000	No	
Montgomery	4.0	3.4	3.910	Yes	а	а			
Philadelphia	4.5	3.3	19.328	Yes	2.2	1.9	6.356	Yes	

a. The population contained less than two percent of minority group.

RESPONSES TO WRITTEN QUESTIONS

Aside from requesting jury array lists from counties, counties were also asked about their process of juror selection.

Composition of Master List

One of the questions posed to all counties was "What source or sources does your judicial district use when it creates the master list of prospective jurors . . .?" As shown in Table 16, 36 counties use one source list while the remaining 31 use more than one of the following lists: registered voters, licensed drivers, various tax rolls and high school graduates. The majority of counties use at least voter registration lists to create their master lists. Out of the 67 counties, 40 counties use voter registration lists, and 30 of those 40 counties supplemented the voter registration lists with some other list such as drivers' licenses and various tax rolls.

^{1.} A one-tailed z test at the 0.05 alpha level was done using a critical value used of 1.645. See Appendix C for more details.

TABLE 16
MASTER LIST SOURCES USED BY ALL COUNTIES IN PENNSYLVANIA

County	Voter registration	Driver's license	Per capita tax rolls	Occupational tax rolls	Income tax rolls	Real estate tax rolls	High school graduation	Total number of lists used
Adams			х					1
Allegheny	X	х						2
Armstrong	x		Х					2
Beaver	X							1
Bedford			X					1
Berks		Х						1
Blair	X	х						2
Bradford				\mathbf{x}^{1}				1
Bucks	x	х						2
Butler	x	х						2
Cambria	x							1
Cameron	x		Х					2
Carbon	x	Х		Х		X	Х	5
Centre	x	х						2
Chester	x							1
Clarion			Х					1
Clearfield			Х					1
Clinton			Х					1
Columbia	x		Х					2
Crawford			Х					1
Cumberland	χ^2							1
Dauphin	x^3							1
Delaware	X	х						2
Elk	х		Х					2
Erie	X	х						2
Fayette	X							1
Forest			х					1
Franklin	x	х						2
Fulton	,		х					1
Greene	Х	х	Α					2
Huntingdon	^	^	х					1
Indiana	Х		Х					2
Jefferson	X		Α	Х				2
Juniata	^		х	^				1
Lackawanna		Х	^					1
Lancaster	х	X						2
Lawrence	X	^						1
Lebanon	^		x					1
Lehigh		v	^					
Lenign		Х						1

County	Voter registration	Driver's license	Per capita tax rolls	Occupational tax rolls	Income tax rolls	Real estate tax rolls	High school graduation	Total number of lists used
Luzerne		х						1
Lycoming	Х	Х		Х				3
McKean			Х					1
Mercer	x	Х						2
Mifflin			Х					1
Monroe	x	Х						2
Montgomery	х	Х						2
Montour			Х					1
Northampton	x	Х						2
Northumberland		Х						1
Perry			Х					1
Philadelphia	x	Х						2
Pike	x	Х						2
Potter		Х						1
Schuylkill		Х						1
Snyder	x^4		x^4					2
Somerset			x^5					1
Sullivan	x							1
Susquehanna	x		Х	Х				3
Tioga				Х				1
Union	x^4		χ^4					2
Venango	x							1
Warren			Х					1
Washington	x	х						2
Wayne	x^6							3
Westmoreland	Х	х						2
Wyoming			Х					1
York	X		Х		Х			3
Total Number	40	27	27	6	1	1	1	
Percent of Counties Using List	59.7%	40.3%	40.3%	9.0%	1.5%	1.5%	1.5%	

^{1.} Bradford County uses occupational tax rolls which include all citizens over the age of 18, whether employed or not.

^{2.} The county is currently considering whether this list will be supplemented by using the county tax roll list or the PennDOT motor vehicle registration list.

^{3.} Dauphin County used voter registration but discarded it in January of 2002. Voter registration records were not being purged of non-voters and were becoming increasingly obsolete.

^{4.} Snyder and Union Counties recently switched from using voter registration and per capita tax rolls to only using per capita tax rolls.

^{5.} In former years, the per capita list were used, however, beginning in 2002, the county began using the list of licensed drivers.

^{6.} Wayne County will be switching over to driver's licenses in May of 2003.

Random Selection from Master List and Selection to the Jury Arrays

Two of the questions posed to counties dealt with the random selection of individuals from the master list and the random selection of jurors for assignment to jury arrays (or summoned to jury duty). While many counties use computer software programs to randomly select, some counties (mostly rural ones) still to randomly select manually. For instance, one county reported the "jury commissioners manually pull names out of the jury wheel six times a year." Although some counties have rather old-fashioned methods of random selection, all of the counties responding to this question used a procedure that should produce a random sample from the list the names on the master list.

The One-Step Versus the Two-Step Juror Selection Process

[The jury] commission may mail to each person whose name has been selected . . . a juror qualification form . . . [to] determine . . . whether or not the prospective juror is qualified. . . . In those counties which do not use the juror qualification form . . ., the selection of persons for jury service shall be made in accordance with section 4524 (relating to selection of jurors for service) and provision shall be made for the collection of information with the summons in order to comply with sections 4502 (relating to qualifications of jurors) and 4503 (relating to exemptions from jury duty). 243

To determine how many counties use the juror qualification form to eliminate disqualified and exempt jurors prior to sending the summons and how many use just a summons, counties were asked, "Does your judicial district use a juror qualification form or a summons to determine the qualification of prospective jurors?" Nearly all counties stated that they use both a juror qualification form and a summons, but they differed on whether the juror qualification form and summons were mailed in one or two mailings. More than half of the counties indicated either in their written responses or over the phone that they sent both the juror qualification form and summons in the same mailing. This process will be referred to as the one-step process.

The one-step process generally follows this sequence of events. First, the county creates the master list and randomly selects from the

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²⁴³ 42 Pa. C.S. § 4521(d), (e).

master list who will be sent both a juror qualification forms and summons. Second, the potential jurors return the qualification forms and the county determines who is qualified and unexcused based on the answers to the juror qualification forms. The qualified respondents who are unexcused are expected to show-up at the courthouse. Some counties slightly vary this process, such as adding an additional randomization process between the master list and the random selection of those who received the juror qualification form and summons. Other variations include placing some jurors on stand-by (meaning they will only be required to report if they are needed) and having jurors call the courthouse the day before they are scheduled to appear for jury duty to see if they are still needed.

Although most counties in Pennsylvania use some variation of the one-step process, some counties still use a two-step process. The two-step process begins by creating the master list and randomly selecting from the master list who will be sent a juror qualification forms. Next, the potential jurors return the qualification forms and the county determines who is disqualified or excused based on the answers to the juror qualification forms. The county then randomly selects from qualified respondents who are unexcused to summon to report for jury duty. Like the one step process, the two-step process can vary slightly. For instance, some counties place some jurors on stand-by or have jurors call the courthouse the day before they are scheduled to appear for jury duty to see if they are still needed.

The Percent of Juror Qualification Forms Returned

Another question posed to counties was "what percent of juror qualification forms . . . were completed and returned?" Counties gave a wide range of responses to this question. Some counties took this question to mean, what percent of juror qualification forms were returned undeliverable and not returned by the potential juror (the response sought), while other counties only included the percentage of forms not returned by the potential juror (excluding those returned undeliverable). Still other counties did not keep any records on the total number of juror qualification forms returned. Due to the wide range of responses and interpretations to this question, no conclusions could be drawn from the responses.

Percent of Jurors Appearing for Jury Duty

Similarly, a wide range of responses and interpretations were given to the question "what percentage of those listed on the jury array lists actually appeared at the courthouse as summoned?" Some counties responded with the percentage of individuals appearing for jury duty out of all potential jurors, whether or not they had been disqualified or excused, while other counties responded with the percentage of individuals appearing for jury duty out of all individuals expected to appear at the courthouse (the response sought). Additionally, some counties did not keep these types of records. Therefore, like the percentage of juror qualification forms returned question, no conclusions could be drawn from the responses to this question.

Follow-ups for Failure to Return Juror Qualification Form or Appear for Jury Duty

Two questions were posed to counties regarding their follow-up for failure to return the juror qualification form and for failure to appear for jury service. The responses to these questions also varied greatly in their details; however, a few conclusions can be drawn from the responses counties gave to these two questions.

First, many counties indicated they do not follow up with individuals who fail to return the juror qualification form. Some counties reported that it is inefficient to track down every individual who does not return the qualification form or does not receive the qualification form because he or she has relocated. One county stated that it "follows up with noncompliance [for failure to return qualification forms] by sending out second mailers, and then if [we get] no response we write them off. It is not cost effective to send investigators out." Another county stated, "Some time ago, we did follow up and we discovered most non-compliance was due to change of address, death or some similar problem. Therefore, we felt that is was an unwarranted use of resources to continue following up."

Second, of those counties that do follow-up on individuals for failure to return the juror qualification form, most use additional mailings (either in the form of reminder post cards or letters) and telephone calls. Few counties indicated that they took any legal action against individuals who fail to return a qualification form. Furthermore, counties who reported that they took legal action for failure to return qualification forms normally were counties that sent both a summons and qualification form to an individual,

and the individual failed to both return the qualification form and report for jury duty.

Third, even though most counties did not report taking legal action against individuals who failed to return the qualification form, numerous counties indicated that they take appropriate legal action against individuals who failed to appear for jury duty. The legal action ranges in severity from court appearance to fines and jail time (in a very few cases). For the most part, counties did not indicate they take legal action in all cases. Many times, counties reported that individuals failing to appear for jury duty were rescheduled for another date. Several counties also stated that they normally do not take legal action until after an individual has failed to appear for jury duty a few times. For instance, one county responded,

The first time a juror does not report, a call is made to his home and/or work. If a satisfactory reason for his absence is not provided, the juror is rescheduled and sent a new summons. [The juror is given two more chances.] If the same juror does not report the third time, with no satisfactory reason, a hearing will be set at the judge's discretion.

Regardless of whether appropriate legal action is taken for failure to appear for jury duty, nearly all counties follow-up through additional mailings and telephone calls.

Juror Compensation

A person summoned to serve as a juror shall receive . . . \$9 a day for the first three days in any calendar year . . . and \$25 a day for each day thereafter in such calendar year that such person is required to report. In addition, persons so summoned shall be paid a travel allowance at the rate of 17¢ per mile circular 244

While all counties provide the \$9 a day for the first three days and \$25 for every day after three days, some counties provide jurors with a greater mileage reimbursement than 17ϕ per mile. Table 17 shows the amount each county reimburses per mile. As the table below indicates, 53

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²⁴⁴ 42 Pa. C.S. § 4561(a).

counties provide jurors with the minimum mileage reimbursement required by the state. $^{245}\,$

This figure includes 52 counties at 17ϕ per mile and one county (Philadelphia) in which no travel reimbursement is required by 42 Pa. C.S. § 4561(a).

TABLE 17
JUROR MILEAGE REIMBURSEMENT FOR ALL COUNTIES IN PENNSYLVANIA

County	Mileage reimbursement (in ¢/mile)	County	Mileage reimbursement (in ¢/mile)
Adams	17.0	Lackawanna	17.0
Allegheny	17.0	Lancaster	17.0
Armstrong	17.0	Lawrence	17.0
Beaver	17.0	Lebanon	31.0
Bedford	17.0	Lehigh	17.0
Berks	17.0	Luzerne	17.0
Blair	17.0	Lycoming	20.0
Bradford	17.0	McKean	36.0
Bucks	17.0	Mercer	17.0
Butler	17.0	Mifflin	32.5
Cambria	17.5	Monroe	17.0
Cameron	17.0	Montgomery	17.0
Carbon	17.0	Montour	30.0
Centre	17.0	Northampton	17.0
Chester	17.0	Northumberland	а
Clarion	17.0	Perry	17.0
Clearfield	17.0	Philadelphia	b
Clinton	30.0	Pike	17.0
Columbia	17.0	Potter	17.0
Crawford	17.0	Schuylkill	17.0
Cumberland	17.0	Snyder	25.0
Dauphin	17.0	Somerset	17.0
Delaware	17.0	Sullivan	35.0
Elk	17.0	Susquehanna	17.0
Erie	17.0	Tioga	17.0
Fayette	17.0	Union	17.0
Forest	30.0	Venango	17.0
Franklin	17.0	Warren	17.0
Fulton	17.0	Washington	17.0
Greene	25.0	Wayne	17.0
Huntingdon	17.0	Westmoreland	17.0
Indiana	20.0	Wyoming	17.0
Jefferson	17.0	York	36.5
Juniata	17.0		

a. The county gives jurors a flat rate based on what the juror's zip code is at their residence. Therefore, a per mile reimbursement cannot be determined.

b. State law does not require Philadelphia County to reimburse for mileage.

ANALYSIS OF SURVEY DATA AND RESPONSES

In analyzing the data collected from the counties, it appears that although many counties did not see a major under-representation of minority groups on jury array lists, some counties show some high comparative disparities. However, even those counties with the most severe under-representation of a distinctive group on jury array lists probably do not violate the constitutional obligation to draw jurors from a fair cross section of the community as seen by recent court cases. The absolute disparities in these same counties are low.

Appendices F and G²⁴⁶ display published and unpublished opinions of U.S. Courts of Appeals that ruled on allegations of unconstitutional pooling of jurors if those opinions mentioned absolute or comparative disparity. Although claims asserting equal protection violations were first made more than a century ago, only appellate opinions containing the modern terms, absolute and comparative disparity, are included. All of these appellate rulings occurred after the U.S. Supreme Court announced the showings required to prove a prima facie violation of the equal protection guarantee in 1977 and the fair-cross-section requirement in 1979. These opinions were obtained via an electronic search.

The permissible absolute disparities ranged from a low of -0.7% to a high of 21.7%. The absolute low of -0.7% means that the jury venire was actually found to have over-represented Asians rather than the converse assertion.²⁴⁷ The absolute high of 21.7% for women is far below the 39% absolute disparity "found unreasonable in *Duren*[,]" but the court avoided deciding whether 21.7% is unreasonably high because it concluded that women were not systematically excluded because the statistics were based upon only two samples rather than on every weekly venire for nearly a year and no evidence showed that a particular system excluded women.248

The permissible comparative disparities ranged from a low of 10.7% to a high of 100%. The comparative low of 10.7% is from an opinion that relied upon an absolute disparity of 6.5% that was considered to be negligible. 249 The comparative high of 100% for African Americans

²⁴⁶ *Infra* pp. 134-41.

²⁴⁷ United States v. Cannady, 54 F.3d 544, 548 (9th Cir. 1995). Several ethnicities were alleged to have been constitutionally underrepresented. The highest absolute disparity was 3.1% for Hispanics. All these absolute disparities were insubstantial and constituently permissible.

²⁴⁸ Ford v. Seabold, 841 F.2d 677, 684-85 (6th Cir. 1988). ²⁴⁹ Newberry v. Willis, 642 F.2d 890, 894 (5th Cir. 1981).

was only mentioned in a footnote; an absolute disparity of approximately 5% was applied to resolve the claim.²⁵⁰

The impermissible absolute disparities ranged from a low of 1.58% to a high of 42%. The absolute low of 1.58% for African Americans was specified in an opinion that relied upon statistical decision theory to calculate that the outcome could not have reasonably been ascribed to chance so that discrimination was statistically presumed.²⁵¹ At the time, each county in that state compiled jury arrays based upon a strict quota in those counties favoring smaller towns.²⁵² In one county, the smallest town contributed 4.2% of its adult population to the jury array while the largest town contributed 1.1% of its adult population. ²⁵³ The larger concentration of African Americans in that state lived in the more populated urban settings so that a district that could mathematically be expected to have 501 African Americans on an array based upon gross population yet be expected to have 368 African Americans on an array based upon the quota system did not equally protect the population.²⁵⁴ An absolute disparity for women of 42% was constitutionally excessive because at that time, women could exempt themselves from jury service in that state so their under-representation resulted from systematic exclusion. 255 one of the cases with impermissible disparities mentioned comparative disparity in addition to absolute disparity, and the comparative disparities were 17.6% and 31.28%.²⁵⁶

Two opinions in Appendix F²⁵⁷ deserve particular mention because they both are from U.S. Court of Appeals for the Third Circuit, the circuit to which our Commonwealth belongs. The most recent opinion considered both absolute and comparative disparity to obtain the most accurate view and because circuit precedent does not dictate one method over the other.²⁵⁸ This opinion noted that absolute disparity "seems to be the preferred in most cases" and was used in the U.S. Supreme Court opinion that announced the requirements to prove an amendment VI fair cross

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Thomas v. Borg, 159 F.3d 1147, 1150-51 (9th Cir. 1998). This disparity was insufficient for a prima facie case. The opinion gratuitously found that the petitioner-appellant would have been unlikely to necessarily establish that African Americans were systematically excluded had he been able to present a sufficient disparity. *Id.* at 1153.

²⁵¹ Alston v. Manson, 791 F.2d 255, 258-59 (2d Cir. 1986).

²⁵² *Id.* at 256.

²⁵³ Id.

²⁵⁴ *Id.* at 256, 258-59.

²⁵⁵ Machetti v. Linahan, 679 F.2d 236 (11th Cir. 1982).

²⁵⁶ Berry v. Cooper, 577 F.2d 322, 326 (5th Cir. 1978).

²⁵⁷ *Infra* p. 134.

²⁵⁸ United States v. Weaver, 267 F.3d 231, 241-43 (3d Cir. 2001).

section violation.²⁵⁹ The quite high comparative disparities in this third circuit opinion were distortional of the small populations, and the low absolute disparities were insufficient to establish unfair and unreasonable representation.²⁶⁰ An earlier opinion included from this circuit considered absolute and comparative disparities along with "deviation from expected random selection."²⁶¹ Although it considered the 14.1% absolute and approximately 40% comparative disparities to be "at the margin of the range found acceptable by courts" and noted that the 28.9 standard deviations is a deviant amount almost identical to an amount condemned by U.S. Supreme Court, it found these figures insufficient to establish an equal protection violation because the sample size was limited and from a brief duration and the selection lists were racially neutral.²⁶²

The ranges of disparities are mentioned above and detailed in the tables so that the reader can compare the disparities in counties across our Commonwealth with disparities that have been judicially considered. The tables contain the dispositions and decisional reasons for each case. This should reinforce for the reader that constitutional violations are only established if multiple requirements are shown by a petitioner and unsuccessfully rebutted by a respondent. In other words, constitutional analysis of properly pooling jurors exceeds a mathematical calculation. The judiciary has not been eager to invalidate juror selection processes that use nondiscriminatory sources to randomly select therefrom in a manner that is not susceptible to abuse. If no claim is specified in the column, *Disposition & reason*, the reader should presume that it is based directly or indirectly upon U.S. Constitution amendment VI. Claims asserting equal protection violations are designated as amend. V, amend. XIV or = protection.

Appendix H²⁶³ displays published opinions of U.S. appellate courts that ruled on allegations of unconstitutional pooling of jurors if those opinions mentioned standard deviation. These opinions were obtained via an electronic search.

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²⁵⁹ *Id.* at 237, 242. This U.S. Sup. Ct. opinion does not appear in the table because only appellate opinions specifying absolute and comparative disparity were retrieved; however, it would show an absolute disparity of approximately 40% had it been included. The tables provide a relatively recent sample of cases and are included to allow a reader to compare the disparities in our commonwealth with adjudicated cases on point. ²⁶⁰ *Id.* at 243.

²⁶¹ Ramseur v. Beyer, 983 F.2d 1215, 1231 (3d Cir. 1992).

²⁶² *Id.* at 1232-33.

²⁶³ *Infra* p. 142.

The permissible standard deviations ranged from a low of 1.02 to a high of 8.46. The low of 1.02 was allowed in an atypical opinion that ruled on excusing jurors from a pool of jurors to be presented to attorneys for peremptory challenges. The high of 8.46 was allowed in a more typical opinion that decided the deviation or disparity didn't matter because the appellant combined statistics from different years into one number when one year could have differed greatly from the other making the combined statistic meaningless. Page 1.02 to a high of 8.46.

The impermissible standard deviations ranged from a low of 6 to a Both of these opinions sustained assertions of equal protections in violation of U.S. Constitution amendment XIV. 266 Both of these opinions reviewed deviations that occurred under keymen systems of selecting grand jurors that were susceptible to abuse and are now defunct (in those jurisdictions and in Pennsylvania). Interestingly, one of these opinions is the landmark U.S. Supreme Court opinion that established the showing required to make a prima facie case of an equal protection violation in the context of grand jury selection.²⁶⁷ Curiously, the majority opinion textually specified the absolute disparity, yet the footnote to that paragraph applied statistical decision theory to the facts of this case to disclose the standard deviation. 268 This has led some inferior courts to consider equal protection under-representation via absolute disparity and others via standard deviation. Inferior courts also sometimes consider under-representation via comparative disparity, perhaps because this same opinion also says that "the degree of under-representation must be proved, by comparing the proportion of the group in the total population to the proportion called to serve ... over a significant period."269

The ranges of deviations mentioned above are detailed in the table so that the reader can compare the deviations in counties across our Commonwealth with deviations that have been judicially considered. The table contains the dispositions and decisional reasons for each case. This should reinforce for the reader that constitutional violations are only established if multiple requirements are shown by a petitioner and unsuccessfully rebutted by a respondent. In other words, constitutional analysis of properly pooling jurors exceeds a mathematical calculation. If no claim is specified in the column, Disposition & reason, the reader

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²⁶⁴ McGinnis v. Johnson, 181 F.3d 686, 689, 691 (5th Cir. 1999).

²⁶⁵ United States v. LaChance, 788 F.2d 856, 868-69 (2d Cir. 1986).

²⁶⁶ Jefferson v. Morgan, 962 F.2d 1185 (6th Cir. 1992); Castaneda v. Partida, 430 U.S. 482 (1977).

²⁶⁷ Castaneda, 430 U.S. at 494-95.

²⁶⁸ *Id.* at 495-96, n.17.

²⁶⁹ *Id.* at 494.

should presume that it is based directly or indirectly upon U.S. Constitution amendment VI. Claims asserting equal protection violations are designated as amend. V, amend. XIV or = protection.

In addition to these rulings from recent court cases, the data collected for most counties throughout Pennsylvania demonstrate that they likely do not have large enough under-representation of minority groups on jury array lists to violate the constitution. It should also be reiterated that the process used in this report to determine the percent of minorities on the jury array lists is imperfect. First, some of the jury array lists collected were from a year other than 2000 and therefore any migration that took place into, out of or within the county would not be in the 2000 census data that the jury array addresses were linked to. Second, even if no migration occurred, if an individual's address on the jury array list was found in a block that did not contain 100% of one race, then the individual's race could not be precisely determined. Instead, the individual's race was pro-rated based on the overall racial composition of the census block. Third, about 12.9% of the jury array addresses could not be plotted because the address was a rural route or a post office box, the street address was misspelled, the address did not exist at the time the 2000 census was taken, etc. Fourth, the census data used contained individuals who were ineligible for jury duty such as individuals under the age of 18 years; individuals who have been convicted of a crime punishable by imprisonment for more than one year; individuals unable to read, write, speak and understand the English language; individuals with mental or physical disabilities that make it impossible to serve; those not citizens of the United States; etc. Therefore, comparing the racial composition of census data to jury array lists may over- or under-estimate any minority under-representation on jury array lists that may exist. Without surveying every individual on the jury array lists as well as every citizen of Pennsylvania, it is impossible to determine with 100% accuracy whether minorities are being under-represented in the jury selection process. Therefore, the estimation procedures used in this report give a fairly close, but not exact, approximation of the racial composition of the jury array lists.

Possible Reasons Minorities are Under-represented on Jury Pools

Even though few, if any, Pennsylvania counties have a severe enough under-representation of minorities on jury array lists to be considered a violation of providing an impartial jury, some counties in Pennsylvania could stand to improve their representation of minorities on juries. However, in order to make improvements, one first has to look at

the possible reasons minorities are under-represented on jury array lists and then determine practical solutions.

Unrepresentative Source Lists

[First, a] long tradition of voting research more than suggests that registered voters are not representative of the general population, and therefore, it would be logical to conclude jurors drawn from this source would also be unrepresentative. . . . African-Americans tend to be less likely to vote (and register to vote) than their Caucasian counterparts, and voters tend to be older than nonvoters and more affluent. 270

As shown in Table 16 earlier, 10 counties in Pennsylvania indicated they used only voter registration lists. While these lists may not be representative of the county population as a whole, drawing jurors only from registered voters has probably never been judicially invalidated and has been expressly permitted in our Commonwealth. ²⁷¹ One possible solution to this problem is for the county to supplement the voter registration lists with other lists such as drivers' licenses, tax rolls, etc. The downsides to doing this are that purchasing or collecting these lists can sometimes be expensive and using multiple lists increases the chance of duplicate names that may be difficult to remove and, at the very least, can be very time consuming to remove. Furthermore, using multiple source lists can exacerbate under-representation if duplicately listed individuals are not removed or if one or more of the additional sources are themselves biased.

Outdated Juror Addresses

Second, "minorities are less likely to own a home and tend to be employed in occupations that require greater mobility." According to 2000 U.S. census data, in Pennsylvania, 65.8% of whites, non-Hispanics over the age of 5 years were still living in the same house in 2000 as they

²⁷⁰ Screckhise & Sheldon, s*upra* note 177, at 98.

Lists of registered voters are permitted to be the source of prospective jurors unless the lists reflect discriminatory practices or are discriminatorily used. Commonwealth v. Edwards, 426 A.2d 550, 553 (Pa.1981). "It is not rendered impermissible by the fact that voter registration of members of an identifiable group is proportionally smaller than that of the general population." *Id.* at 553-54.

²⁷² Schreckhise & Sheldon, *supra* note 177, at 101.

However, this number drops to 55.9% for African were in 1995. Americans and 40.0% for Hispanics. 273 Since individuals who move more frequently are more likely to have their juror qualification questionnaires returned as "undeliverable" by the post office, minorities may be more likely than whites to be overlooked for jury duty simply because the county does not have a current address for the individual.

This issue is especially true for counties that use lists in which the addresses are not often updated. One solution to this problem would be to purchase a list of changes of addresses from the U.S. Postal Service. However, unless a county has a large number of "undeliverable" mailings returned, this might not be a very cost effective solution. Another solution would be to use a list in which the addresses are updated more regularly. For example, per capita tax lists may be updated more frequently than other lists because the taxing authority has a stronger monetary incentive to track down individuals who move than do other groups who maintain other lists. The disadvantage of using lists such as per-capita tax rolls is that individual municipalities rather than a larger governing body such as the county or state usually maintain these lists. To use the list, a summoning jurisdiction would need to collect the lists from each municipality, which would require additional resources to accomplish.

Insufficient Compensation

"[a]Ithough minorities were . . . less likely than their Caucasian counterparts to ask to be excused, their requests were more often made on the basis of undue economic hardship and difficulty in reaching the courthouse."274 Furthermore, according to 2000 U.S. census data, in Pennsylvania, 8.2% of all white, non-Hispanics lived below the poverty line in 1999. That figure increases sharply to 26.8% for African Americans and 31.4% for Hispanics or Latinos.²⁷⁵

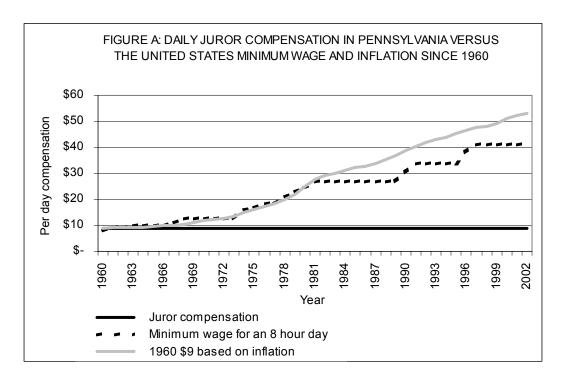
Currently, jurors in Pennsylvania are reimbursed \$9 a day for the first three days of service and \$25 per day for any days beyond three days. Although counties vary in reimbursement for travel expenses, most counties still pay the state minimum of \$0.17 per mile.

274 Schreckhise & Sheldon, *supra* note 177, at 101. ²⁷⁵ Census 2000 Summary File 3, *supra* note 273, at 54.

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²⁷³ Census 2000 Summary File 3 [machine-readable data file]/prepared by Bureau of the Census, U.S. Dep't of Comm., 2002; Profile prepared by the Pa. State Data Ctr. http://pasdc.hg.psu.edu/census 2000 sf3 Paprofile.pdf, at 50 (last visited Mar. 31,

Overall, compensation for jurors is outdated and severely insufficient. In fact, the last time the Pennsylvania's General Assembly adjusted the compensation of jurors was 1980. The rate of \$9 daily was first enacted in 1959 and took effect in 1960.²⁷⁶ As Figure A shows, juror compensation of \$9 per day has not kept up with inflation or the minimum wage for an eight-hour day. In fact, if the 1960 figure had kept up with inflation, today's daily compensation rate would be over \$53 per day.²⁷⁷ Likewise, if the 1960 figure had kept up with the minimum wage for an eight-hour day, today's daily juror compensation rate would be \$41.20 per day.²⁷⁸



Insufficient compensation can cause those who are economically disadvantaged to try to be excused from jury duty based on their economic hardship. Since more minorities live under the poverty line than whites, presumably more minorities would be excused from jury service for economic reasons. An obvious solution to this problem is to increase

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²⁷⁶ Act of Oct. 15, 1959 (P. L. 1322, No. 446).

Data on inflation was found at the U.S. Bureau of Labor Statistics website at http://www.bls.gov/cpi/ on Feb. 10, 2003. The Consumer Price Index (CPI) used in the inflation calculation was the U.S. Dep't of Labor's CPI for all Northeast Urban Wage Earners & Clerical Workers (All Items, 1982-84=100).

278 U.S. Dep't of Labor, http://www.dol.gov/esa/minwage/chart.htm (last visited Apr. 8,

²⁷⁸ U.S. Dep't of Labor, *http://www.dol.gov/esa/minwage/chart.htm* (last visited Apr. 8, 2003). Pennsylvania's minimum wage is the same amount set forth under the Fair Labor Standards Act. Act of January 17, 1968 (P.L.11, No.5). § 4(a.1); 43 P.S. § 333.104(a.1).

compensation for jurors. Unless the compensation is substantially increased, those who are economically disadvantaged will still have a valid reason for excusal from jury service.

Criminal Conviction

Individuals who have been convicted of a crime punishable by imprisonment for more than one year are ineligible for jury service. As of the release of this report, Commission staff has not been able to find the racial percentages of individuals, who have been convicted of a crime punishable by imprisonment for more than one year. However, out of every 100,000 white, non-Hispanics, 119 are currently serving prison time in one of Pennsylvania's state prisons. This same figure increases sharply to 1,662 for African Americans and 944 for Hispanics. Therefore, it can be assumed that being convicted of a crime punishable by imprisonment for more than one year would probably disqualify a larger percentage of African Americans and Hispanics than whites. Since the exact figures could not be found, it is impossible to tell how much this disqualification impacts the overall representation of minorities on juries. Any solution to this issue would require a change in the statute that may or may not be desirable.

English Proficiency

Being able to speak English is another possible area were minorities are being eliminated from jury pools at a larger rate than whites. This is particularly true in the Hispanic population. According to 2000 U.S. census data, 19.8% of Pennsylvania's 18 years of age and older Hispanic population stated that they speak English "not well" or "not at all." For white, non-Hispanics and African Americans, this number drops to 0.6% and 0.7%, respectively.²⁸¹ One solution to this problem would be for counties to hire translators for jurors. However, this is rather expensive and would require additional resources. Therefore, it would likely be too impractical to relax the statutory qualification of fluency in English.

²⁸⁰ Pa. Dep't of Corrections, Annual Statistical Rep.,

http://www.cor.state.pa.us/Annual%20Report%202000.pdf (last visited Mar. 31, 2003); Bureau of the Census, U.S. Dep't of Comm. Census 2000 Redistricting Data (Public Law 94-171). Summary File, Matrices PL1 and PL2,

http://factfinder.census.gov/servlet/BasicFactsTable?_lang=en&_vt_name=DEC_2000_P L_U_GCTPL_ST2&_geo_id=04000US42 (last visited Mar. 31, 2003).

Census 2000 Summary File 3, supra note 273, at 47.

²⁷⁹ 42 Pa. C.S. § 4502(a).

Relatives of Victims of Homicide

One additional excusal for jury service in our Commonwealth was added in October 2002.²⁸² This excusal allows "[s]pouses, children, siblings, parents, grandparents and grandchildren of victims of criminal homicide" to be excused from jury duty. 283 Although this law would have had no affect on the jury array lists that were analyzed in this report, it could possibly effect the racial composition of jury array lists in the future. According to the FBI's Uniform Crime Reports, between 1976 and 2000, 17,237 homicides took place in Pennsylvania.²⁸⁴ Of those homicides. 56.3% of the victims were African-American, 42.6% were white, and 1.1% were another race.²⁸⁵ Using 2000 homicide figures and census data, approximately 2.1 per 100,000 white Pennsylvanians were victims of homicide 2000, while 30.5 per 100,000 African-American in Pennsylvanians were victims of homicide in the same vear. 286 Presumably, the majority of homicide victims' families are of the same racial composition as the victim. If so, the percentage of African-American individuals will be greater than the white individuals who will qualify to be excused from jury duty because a family member was a victim of a homicide: however, the extent that potential jurors will use this excusal is unknown.

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²⁸² Act of October 17, 2002 (P.L.886, No.128).

²⁸³ 42 Pa. C.S. § 4503(a)(4).

²⁸⁴ Bureau of Just. Statistics, U.S. Dep't of Just., *State Level Homicide Trends and Characteristics*, http://149.101.40/dataonline/search/Homicide/state/StateHomicide.cfm (last visited Apr. 1, 2003).
²⁸⁵ *Id.*

Bureau of Just. Statistics, U.S. Dep't of Just., State Level Homicide Trends and Characteristics, http://149.101.40/dataonline/search/Homicide/state/StateHomicide.cfm, (last visited Apr. 1, 2003) & Bureau of the Census, U.S. Dep't of Comm. Census 2000 Redistricting Data (Public Law 94-171) Summary File, Matrices PL1 and PL2, http://factfinder.census.gov/servlet/BasicFactsTable?_lang=en&_vt_name=DEC_2000_P L_U_GCTPL_ST2&_geo_id=04000US42 (last visited Mar. 31, 2003). The 2000 homicide figures used were 215 white victims and 374 African-American victims of homicide in Pennsylvania. The census figures used were 10,484,203 whites and 1,224,612 African Americans in Pennsylvania in 2000.

CONCLUSIONS AND RECOMMENDATIONS

The following recommendations were formed after collecting and analyzing the data supplied by the counties, considering the practices across our country, examining constitutional and statutory requirements, reading relevant academic and professional literature and conferring with numerous court administrators. Most of these recommendations are up to the initiative of the judiciary, but one or more might require a statutory response. Regardless of whether one branch may unilaterally consider and implement a desirable recommendation, the public might best be served by a coordinated governmental effort to assure that the most practical and most promising recommendations are effectively implemented and adequately supported.

- 1. From the data gathered for the report, it is unlikely that any county excludes large, distinctive groups from the jury pool in proportions that violate the constitution. Even so some counties could stand to improve their representation of minorities on juries.
- 2. The judicial system should voluntarily, routinely monitor itself to determine if it is fulfilling its constitutional obligation to draw jurors from a cross section of the community. This might require court administrators to record how many individuals from which distinctive groups are summoned for jury service. As the constitutional obligation to draw jurors from a representative cross section of the community is an essential component of a right to a jury trial, it would seem that the judicial system itself could and should make it easier for parties to learn relevant numerical information specifying demographic data about whom courts summon rather than leave it up to aggrieved individuals or classes to try to calculate information the court could easily collect.
- 3. To change unfavorable public attitudes about jury service, the judicial system should more effectively inform the citizenry of its obligation to comply with summonses to serve, how to defer or seek excusal from service, and what to expect while serving. It is difficult to know what to specifically recommend to accomplish this; however, it is likely that a sustained and varied effort will be required to obtain more favorable attitudes about jury service.

- 4. Judicial districts should reconsider more vigorously enforcing summonses. No tolerance for disregard of summonses would obviously curtail this disobedience; however, a functioning judicial system requires some practical efficiency and it is unlikely that no tolerance for disregard of summonses can realistically be efficiently enforced. Since a common reason for nonresponse to a summons is nonreceipt of it, the problem of disregard of summonses may often really be nonreceipt of summonses so that the level of enforcement thereof is not something that easily lends itself to simple advice.
- 5. State of Florida allows parents who are not employed full time and have custody of a child under age six to excuse themselves from jury States of Georgia, Illinois, Oregon, South Carolina, service. Tennessee, Texas, Virginia and Wyoming have similar statutorily authorized exemptions and excusals so that prospective jurors caring for their young children will not be compelled to serve. Commonwealth does not expressly statutorily authorize excusal for this reason, but it allows prospective jurors to be excused for undue hardship and extreme inconvenience. Presumably, responsibility for childcare could cause a prospective juror hardship and inconvenience if compelled to serve; in fact, many counties accept childcare reasons to excuse prospective jurors.²⁸⁷ Only one county in our Commonwealth has a courthouse provided childcare facility, but another has a childcare program and another reimburses jurors therefor.²⁸⁸ Childcare facilities provided by courthouses in our Commonwealth are statutorily authorized and operationally funded by additional fees charged and collected in association with legal proceedings.²⁸⁹ If more counties opened these facilities, it could reduce excusals, especially for women. The additional fees that are authorized to operationally fund these facilities is statutorily limited to \$5 for initiated civil actions and criminal convictions;²⁹⁰ this amount might not be enough to generate adequate revenue to operate these facilities in numerous counties. Counties should explore whether these facilities are viable and provide them if so. If numerous counties consider these facilities to be desirable but economically unviable, the judiciary should consult our General Assembly to determine if these facilities can be feasibly provided across our Commonwealth.

²⁸⁷ Pa. Sup. Ct. Comm. on Racial & Gender Bias in the Just. Sys., *supra* note 130, at 111.

²⁸⁸ *Id.* at 111, 116.

²⁸⁹ 42 Pa. C.S. § 3721(c).

²⁹⁰ Id

- 6. Given the varying experiences of courts, it is difficult to conclude that specific or multiple sources be statutorily prescribed. This report summarizes two recent studies that revealed opposite outcomes when similar measures were taken in attempts to make jury pools more representative. By adding a source, one court managed to obtain the desired result while another court exacerbated the disproportional representativeness of the pool of jurors. At least one county in our Commonwealth likewise experienced the perverse result of decreased proportionality after it switched sources to obtain an increased number of names. When multiple sources are used, duplicate entries need to be removed before randomly selecting therefrom. Identifying duplicate entries from two or more sources can be costly and impractical. Somewhat similarly, if a source unfairly represents a cross section of the community, adding another unfairly representative source may not make the cumulative sources fairly representative of a cross section of the community. There are examples of counties within our Commonwealth that use single sources and multiple sources from which to draw jurors. For both examples, some counties are more successful and others are less successful in achieving a jury pool representative of a cross section of the community regardless of whether they draw from one or more sources.
- 7. The compensation for jurors is outdated and severely insufficient. The amount of compensation for jurors during their first three days of service in a calendar year is \$9 per day and has remained at this amount for literally scores of years. Jury pay in our Commonwealth was statutorily increased four times from 1933 to 1959 and only once since then. That was to increase the amount to \$25 per day for each day of service beyond the first three days of service in a calendar year, and even this amount has remained static for more than a score of years.

A system that randomly and relatively infrequently selects any individual to temporarily serve as a juror does not generate a cohesive mass of individuals interested enough to exert sustained, coordinated efforts to petition the government for better compensation for jurors. These citizens who are legally compelled to serve society should not continue to be disregarded or ignored by allowing the status quo for compensation to persist. One automatic way to correct this persistent neglect is to annually adjust the compensation of jurors to reflect the

changes in cost of living.²⁹¹ If adjusted for inflation, the \$9 per day would be over \$53 per day.

Another automatic way to correct this persistent neglect is to pay jurors the state minimum hourly wage. New Mexico pays its jurors the highest prevailing state minimum wage; Oregon pays its jurors in circuit courts the state minimum wage up to \$50 for the third and each successive day of service. It would seem self-evident that jurors would have to be better compensated to enable the judicial system to draw jurors from a fair cross section of the community. If minority populations disproportionately earn low wages, they would predictably seek and receive excusals from service based upon undue hardship because they cannot afford to work three days for \$27 under the status quo. If paid the minimum wage, jurors would receive \$41.20 per eighthour day.

A less automatic increase in compensation of jurors could be achieved by moving from the current two-tiered compensation schedule to a three-tiered schedule. Jury service is a compulsory public service that our judicial system relies upon to constitutionally protect individual rights. Citizens are obliged to serve so that their rights would likewise be protected were they to be accused of a crime. In other words, it is a responsibility shared between particular individuals and society at large. States of California and Delaware do not reimburse jurors during their first day of service. In exchange, these jurisdictions significantly increase compensation for service starting on the second day thereof. Our Commonwealth could likewise decrease the compensation from \$9 to nothing for the first day. In exchange, it could double compensation for the remainder of the days of service so that jurors are paid \$18 for day two, \$18 for day three and \$50 per day for each day in excess of three served in any calendar year. This could occur under the present reimbursement arrangement. It would encourage the counties to make jury service more efficient. because the more efficient the service, the lower the cost to the county. If a county needed a jury for three days under this proposal, it would have to pay each juror \$36 for those three days rather than the current \$27. Conversely, if it needed a juror only one day, it would pay nothing to each juror instead of the current \$9. If such a three-tiered system were to be adopted, it should probably assure that the actual cost of parking is reimbursed to jurors, at least for their day of uncompensated service.

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²⁹¹ Evan R. Seamone, *A Refreshing Jury Cola: Fulfilling the Duty to Compensate Jurors Adequately*, 5 N.Y.U. Legis. & Pub. Pol'y 289, 300 (2002).

The reimbursement for mileage should also be increased to an administratively set level. The current reimbursement has not been increased in more than a score of years. A practical, fair and persistently automatic solution might be to statutorily designate the mileage reimbursement to whatever amount is regulated for the Commonwealth's employees on Commonwealth business.

Instead of relying upon general revenue to pay for increased juror compensation, the funding for this could be raised similar to the funding for unemployment compensation. Income of all individuals could be specifically taxed so that the relatively few individuals who must serve as jurors do not continue to bear such a severely disproportionate financial burden as they do now.

- 8. Several states statutorily require employers to pay employees their usual compensation while serving as a juror. Some states statutorily require employers to pay employees their regular wages while serving as a juror but limit the dollar amount owed and the number of days this is required. For example, Colorado requires employers to pay regular wages up to \$50 per day for the first three days of service, and then the state pays the jurors for their fourth and successive days. Florida does not statutorily require employers to pay regular wages to their employees while serving on jury duty, but the state does not compensate jurors during their first three days of service if they receive Alabama, Nebraska and their regular wages for those days. Tennessee statutorily require employers to pay their employees while serving as jurors, but these employers may offset the pay of a juror by the amount he received as jury fees. Clearly, employers should be encouraged to compensate their employees while serving as jurors, but it would be inequitable to mandate that they do so. compensating jurors would achieve a societal goal that should be borne by society at large rather than a segment of society that varies Not all employers experience the same financial widely itself. pressures simultaneously. During some periods, some employers might be able to afford to compensate their employees while on jury duty yet cannot afford to compensate their employees while on jury duty during other periods. If our Commonwealth wants to create and retain jobs, it should not place a new and arguably unfair burden upon employers.
- 9. Jury service is a compulsory public service that our judicial system relies upon to constitutionally protect individual rights. Citizens are

²⁹² *Id.* at 331.

obliged to serve so that their rights would likewise be protected were they accused of a crime. In other words, it is a responsibility shared between particular individuals and society at large. Ultimately, it is up to individuals to fulfill this obligation. Our Commonwealth should consider the preceding recommendations to help individuals meet this responsibility. In turn, individuals should willingly sacrifice a day or a few days for public service when called upon. Over the centuries, many Americans have sacrificed more than a day or two to preserve and maintain a constitutional system of government that protects this and other rights of individuals.

APPENDICES

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Appendix A

PRIOR PRINTER'S NO. 2223

PRINTER'S NO. 2300

THE GENERAL ASSEMBLY OF PENNSYLVANIA

SENATE RESOLUTION

No. 268

Session of 2002

INTRODUCED BY ORIE, KITCHEN, COSTA, TARTAGLIONE, HELFRICK, LEMMOND, SCHWARTZ, C. WILLIAMS, MURPHY, BODACK, GREENLEAF, A. WILLIAMS AND CONTI, SEPTEMBER 20, 2002

AMENDED, OCTOBER 8, 2002

A RESOLUTION

1 2 3 4 5	minorities are systematically underrepresented in juries for THE LEVEL OF REPRESENTATION OF MINORITIES IN COMPARISON TO THE GENERAL POPULATION OF THE RESPECTIVE COUNTIES IN THE JURY POOLING PROCESS FOR criminal proceedings across this	<—
6 7 8	Commonwealth, including the reasons therefor, AND THE AMOUNT OF COMPENSATION FOR JURORS, and to report its findings AND MAKE AMELIORATIVE RECOMMENDATIONS to the General Assembly.	<— <—
9	WHEREAS, There is a constitutional guarantee for a defendant	<
10	in a criminal proceeding to be given a fair trial by an	
11	impartial jury in this Commonwealth; and	
12	WHEREAS, THE JURY POOLING PROCESS RELIES UPON OUTDATED JURY	<
13	POOLING INFORMATIONAL RESOURCES AND COMPENSATION SCHEDULE; AND	
14	WHEREAS, A JURY POOL IS TO REPRESENT A CROSS SECTION OF THE	
15	COMMUNITY AND THE EXISTING PROCESS MAY INTERFERE WITH THE	
16	ASSEMBLY OF PEERS FOR THE JURY POOL; AND	
17	WHEREAS, Recent evidence finds that the system which selects	<
18	people for jury duty in a portion of this Commonwealth	
19	consistently overlooks blacks and favors whites; and	
20	WHEREAS RECENT EVIDENCE HAS COME TO LIGHT INDICATING THAT	<

- 1 THE JURY POOL SELECTION SYSTEM IN CERTAIN COUNTIES IS
- 2 ANTIQUATED, INCONSISTENT AND LIKELY TO RESULT IN MINORITY
- 3 CITIZENS BEING OVERLOOKED; AND
- 4 WHEREAS, According to a recent investigation by the
- 5 Pittsburgh Tribune-Review, people living in white neighborhoods
- 6 in Allegheny County are more than twice as likely to be called
- 7 for jury duty as residents of black communities; and
- 8 WHEREAS, An analysis of a five-month survey of persons who
- 9 reported for jury duty in Allegheny County revealed that the
- 10 county's criminal jury rooms are typically less than 5% black,
- 11 while blacks comprise 11% of the county's adult population; and
- 12 WHEREAS, This imbalance casts reasonable doubt on the
- 13 guarantee to a fair trial in this Commonwealth; therefore be it
- 14 WHEREAS, COMPENSATION FOR PERSONS SERVING AS JURORS IN THIS <
- 15 COMMONWEALTH MAY BE AS A RESULT OF INFLATION NO LONGER ADEQUATE;
- 16 THEREFORE BE IT
- 17 RESOLVED, That the Senate direct the Joint State Government
- 18 Commission to study whether minorities are systematically
- 19 underrepresented THE LEVEL OF REPRESENTATION OF MINORITIES IN
- 20 COMPARISON TO THE GENERAL POPULATION OF THE RESPECTIVE COUNTIES
- 21 in juries for criminal proceedings across this Commonwealth,
- 22 including the reasons therefor, and to report its findings to
- 23 the General Assembly within 120 days of passage. AND IF
- 24 NECESSARY TO DETERMINE METHODS TO IMPROVE THE JURY POOLING
- 25 PROCESS TO ENSURE THAT THE LEVEL OF MINORITY REPRESENTATION
- 26 GENERALLY REFLECTS THE PERCENTAGE OF MINORITIES IN THE
- 27 RESPECTIVE COUNTIES, INCLUDING, BUT NOT LIMITED TO, INCREASING
- 28 THE SOURCES OF NAMES FOR JUROR ROLLS BY USING TAX RECORDS,
- 29 SCHOOL CENSUS RECORDS, UPDATED ELECTION REGISTRATION LISTS,
- 30 WELFARE ENROLLMENT LISTS AND OTHER SOURCES; AND BE IT FURTHER
 20020S0268R2300 2 -

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- 1 RESOLVED, THAT THE JOINT STATE GOVERNMENT COMMISSION ALSO
- 2 STUDY THE AMOUNT OF COMPENSATION GIVEN TO JURORS, THE IMPACT OF
- 3 INFLATION ON THE ACTUAL LEVEL OF COMPENSATION SINCE IT WAS LAST
- 4 ESTABLISHED BY THE GENERAL ASSEMBLY AND THE EFFECT OF INADEQUATE
- 5 COMPENSATION, AND REPORT ALL OF ITS FINDINGS TO THE GENERAL
- 6 ASSEMBLY WITHIN 120 DAYS OF PASSAGE OF THIS RESOLUTION.

Appendix B

COUNTY JURY ARRAY GEOCODED DETAIL

	Jury array	Geocoded	Addresses not	Addresses with rural	Percentage of geocoded	Percentage no Due to typos, misspellings, multiple spellings, and other		Typed or	
County	total	addresses	geocoded	boxes	addresses	reasons	boxes	Electronic	Year
Adams	1,184	1,032	152	130	87.2%	1.9%	11.0%	Т	2002
Allegheny	47,356	46,069	1,287	81	97.3	2.5	0.2	E	2000
Armstrong	2,183	761	1,422	1,377	34.9	2.1	63.1	Т	2001
Beaver	1,737	1,594	143	52	91.8	5.2	3.0	Т	2001
Bedford	1,385	970	415	137	70.0	20.1	9.9	Т	2000
Berks	19,444	16,939	2,505	725	87.1	9.2	3.7	E	2001
Blair	12,000	8,074	3,926	3,423	67.3	4.2	28.5	E	2000
Bradford	974	276	698	651	28.3	4.8	66.8	Т	2001
Bucks ¹	48,803	45,535	3,268	883	93.3	4.9	1.8	E	2001
Butler	2,574	2,292	282	149	89.0	5.2	5.8	Т	2000
Cambria	963	880	83	67	91.4	1.7	7.0	Т	2001
Cameron	72	7	65	63	9.7	2.8	87.5	Т	2001
Carbon	3,618	2,800	818	512	77.4	8.5	14.2	E	2000
Centre	970	711	259	212	73.3	4.8	21.9	Т	2000
Chester	23,651	22,662	989	70	95.8	3.9	0.3	E	2001
Clarion	654	103	551	404	15.7	22.5	61.8	E	2000
Clearfield	1,260	394	866	826	31.3	3.2	65.6	Т	2001
Clinton	440	182	258	198	41.4	13.6	45.0	Т	2000
Columbia	1,275	638	637	316	50.0	25.2	24.8	Т	2000
Crawford	1,704	1,384	320	90	81.2	13.5	5.3	Т	2001
Cumberland	860	817	43	3	95.0	4.7	0.3	Т	2000
Dauphin	2,694	2,614	80	21	97.0	2.2	0.8	E	2001
Delaware	31,401	30,380	1,021	137	96.7	2.8	0.4	E	2000
Elk	750	535	215	185	71.3	4.0	24.7	Т	2001
Erie	19,481	18,549	932	301	95.2	3.2	1.5	E	2000
Fayette	3,000	1,885	1,115	827	62.8	9.6	27.6	E	2000
Forest	400	2	398	398	0.5	0.0	99.5	Т	2000
Franklin	1,900	1,646	254	105	86.6	7.8	5.5	E	2001
Fulton	531	47	484	236	8.9	46.7	44.4	Т	2000
Greene	1,492	347	1,145	1,041	23.3	7.0	69.8	Т	2000
Huntingdon	513	111	402	366	21.6	7.0	71.3	Т	2001
Indiana	1,045	638	407	244	61.1	15.6	23.3	Т	2000
Jefferson ¹	2,500	1,009	1,491	1,424	40.4	2.7	57.0	Т	2000
Juniata	359	49	310	303	13.6	1.9	84.4	Т	2001
Lackawanna	19,767	15,785	3,982	3,026	79.9	4.8	15.3	Е	2000
Lancaster	4,796	4,593	203	131	95.8	1.5	2.7	E	2000
Lawrence	2,849	1,795	1,054	903	63.0	5.3	31.7	T	2002
Lebanon	1,535	1,282	253	98	83.5	10.1	6.4	Т	2001

COUNTY JURY ARRAY GEOCODED DETAIL (CONTINUED)

						Percentage not	geocoded		
				A.1.1		Due to typos,			
				Addresses with rural	Percentage of	misspellings, multiple spellings,	Due to rural		
	Jury array	Geocoded	Addresses not	route or P.O.	geocoded	and other	route or P.O.	Typed or	
County	total	addresses	geocoded	boxes	addresses	reasons	boxes	Electronic	Year
Labiah	5.000	F 007	005	40	05.0	0.0	0.0	_	0004
Lehigh	5,662	5,397	265 1.093	49	95.3	3.8	0.9	E	2001
Luzerne	5,570	4,477	,	776	80.4	5.7	13.9	E	2001
Lycoming	6,218	4,844	1,374	451	77.9	14.8	7.3	E	2000
McKean	1,801	802	999	965	44.5	1.9	53.6	T	2000
Mercer	3,845	3,711	134	10	96.5	3.2	0.3	T	2000
Mifflin	291	199	92	33	68.4	20.3	11.3	Т	1999
Monroe ¹	2,782	1,101	1,681	1,327	39.6	12.7	47.7	Т	2000
Montgomery	14,876	14,260	616	75	95.9	3.6	0.5	Е	2001
Montour	586	388	198	125	66.2	12.5	21.3	Т	2000
Northampton ²	19,273	17,433	1,840	821	90.5	5.3	4.3	Т	2000
Northumberland	2,047	1,179	868	774	57.6	4.6	37.8	Т	2001
Perry	509	231	278	204	45.4	14.5	40.1	Т	2001
Philadelphia	90,137	89,346	791	370	99.1	0.5	0.4	Е	2001
Pike	1,814	374	1,440	1,046	20.6	21.7	57.7	Т	2000
Potter	492	191	301	88	38.8	43.3	17.9	Т	2002
Schuylkill	9,391	6,244	3,147	2,030	66.5	11.9	21.6	E	2000
Snyder	251	89	162	158	35.5	1.6	62.9	Т	2000
Somerset	1,525	1,272	253	153	83.4	6.6	10.0	Т	2001
Sullivan	282	1	281	281	0.4	0.0	99.6	Т	2001
Susquehanna	287	47	240	238	16.4	0.7	82.9	Т	2000
Tioga	2,203	572	1,631	1,543	26.0	4.0	70.0	Т	2000
Union	267	110	157	146	41.2	4.1	54.7	Т	2000
Venango	1,399	654	745	724	46.7	1.5	51.8	Т	2001
Warren	604	326	278	253	54.0	4.1	41.9	Т	2000
Washington	4,263	3,396	867	342	79.7	12.3	8.0	Е	2000
Wayne	1,920	450	1,470	1,229	23.4	12.6	64.0	Е	2002
Westmoreland	24,199	17,727	6,472	5,210	73.3	5.2	21.5	Е	2000
Wyoming	309	105	204	170	34.0	11.0	55.0	Т	2000
York	3,063	2,486	577	220	81.2	11.7	7.2	E	2001
Total	473,986	412,799	61,187	39,926	87.1	4.5	8.4		

The only list available includes deferred, excused and undeliverable.
 The list includes duplicate jurors.

Appendix C

CALCULATION OF SIGNIFICANCE TEST

The calculations used in determining if minority groups where under-represented on a jury array list as compared to the population of a county were as follows:²⁹³

- First, the null and alternative hypotheses were stated: Test the null hypothesis, P_{pop} = P_{Jury}, against the alternative hypothesis, P_{pop} > P_{Jury}, of the probability of success for a binomial distribution, large sample (>120) where P_{pop} is the percentage of the census population in a county of a particular minority group and P_{Jury} is the percentage of the total jury array list composed of that same minority group.
- Second, the critical value z_{α} such that $\phi(z_{\alpha}) = 1 \alpha$, where $\phi(z)$ is the standard normal distribution function, was determined. At an α level of 0.05, z_{α} is approximately 1.645.
- Third, the test statistic z was calculated in the following way:

$$z = \frac{p_{pop} - p_{jury}}{\sqrt{\frac{p_{pop}(1 - p_{pop})}{n} + \frac{p_{jury}(1 - p_{jury})}{m}}}$$

where n is the total number of people in the census population and m is the number of jury array address that were geocoded.

• Fourth, if $z > z_{\alpha}$, then the null hypothesis was rejected in favor of the alternative hypothesis. If $z \le z_{\alpha}$, then the null hypothesis was not rejected.

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 $^{^{293}}$ Daniel Zwillinger, CRC Standard Mathematical Tables and Formulae: $30^{\, \rm th}$ Edition (1996).

Appendix D

QUALIFICATIONS OF JURORS BY STATE

	Sources for master list May include all registered voters, drivers' licenses & registered motor	Min. age	Time since prior jury service	Are convicted felons disqualified? Yes, if lost right to vote by conviction of offense	Required residency In county for > 12 months	Literacy and linguistic standard Read, speak, understand, follow	Disability Physically & mentally able to satisfactorily serve & not unfit due to
§ 12-10-00 (1995)	vehicles, & other lists, such as utility customers & property ad valorem tax; updated @ least every 4 yrs. ¹			involving moral turpitude.	> 12 months	instructions in English	permanent disease or physical weakness. Must be generally reputed to be honest & intelligent & esteemed in community for integrity, good character & sound judgment.
§ 09.20.010 (LexisNexis 2002)	fund income under AS 43.23 w/AK address, and volunteers; updated annually ²		Not w/in 1 yr. ³	Yes, unless unconditionally discharged	State	Read or speak English	Sound mind w/natural faculties; ct. provided interpreter or reader for impaired hearing or sight
	Registered voters, drivers' licenses & other lists determined by supreme court; updated @ least every 6 mos. ⁴	18		Yes, unless civil rights are restored	Summoning jurisdiction		Can't serve if adjudicated mentally incompetent or insane
Arkansas Ark. Code Ann. § 16-31-101 (Michie 1999)	Registered voters; updated annually ⁵		2 yrs.; can't be required to report for > 24 days in 6 mo. period unless expiration occurs during trial ⁶	Yes, unless pardoned ⁷	County in which summoned		Must have good character or approved integrity, sound judgment or reasonable information, good behavior; must be physically & mentally able to satisfactorily serve; can't be intemperate; no disqualification solely on loss of hearing or sight ⁹
Proc. Code § 203	May include other lists, source or sources including rep. cross section of pop. served by ct. & any customer mailing lists, telephonic directories, utility customers, registered voters, drivers' licenses & residential identification cards; compiled semiann'ly ¹⁰	18		Yes, unless civil rights are restored (also disqualifies those for malfeasance in office)	Juris. where summoned	Sufficient knowledge of English	Not incompetent solely because of impaired communication or mobility or loss of sight or hearing
Colorado Colo. Rev. Stat. § 13-71- 105 (2002)	Registered voters, drivers' licenses & other lists of residents as necessary & desirable; updated annually ¹¹		Unless emergency, only have to serve once w/in calendar yr.; one can also claim disqualification if served 5 or more days within preceding 12 mos.		Resides in county or lives in county > 50% of time	Read, speak & understand English	Must be physically & mentally able to satisfactorily serve; if not regularly employed outside home, one responsible to solely, daily care for permanently disabled housemate may claim disqualification if juror service would substantially risk disabled person's health

Jurisdiction & statutory qualification	Sources for master list Registered voters, drivers' licenses &	Min. age	Time since prior jury service	Are convicted felons disqualified? Yes, if convicted w/in last 7	Required residency	Literacy and linguistic standard Speak & understand	Disability No disqualification for deafness or
	permanent residents who filed a personal income return & recipients of unemployment compensation; updated annually ¹²		if w/in 3 yrs. of prior jury service ¹³	yrs, also can't serve if	permanent residents of state	English	impaired hearing; must be physically & mentally able to satisfactorily serve
Delaware Del. Code Ann. tit. 10, § 4509 (1999)	Registered voters, may supplement w/other sources ¹⁴	18		Yes, unless civil rights are restored	County	Read, speak & understand English	Must be physically & mentally able to satisfactorily serve
District of Columbia D.C. Code Ann. § 11- 1906 (2001)	Voters & other appropriate sources & lists 15			Yes, unless > 1 yr. from completing punishment; also can't serve w/pending charge	District	Read, speak & understand English	Must be physically & mentally able to satisfactorily serve; no disqualification for blindness if able to satisfactorily serve
Florida Fla. Stat. Ann. § 40.01 (West 1998)	Drivers' licenses, residential identification cards & affiants volunteering to serve; updated @ least quarterly ¹⁷	18	1 yr. ¹⁸	Yes, unless civil rights are restored; also can't serve w/pending charge ¹⁹	County		Unless judge says otherwise deafness or impaired hearing can be qualified if they want to serve. ²⁰ Adjudicated incompetent ²¹
Georgia Ga. Code Ann. § 15-12-60 (2001)	Licensed drivers, personal identification card holders, registered voters, any other appropriate list; updated bienially ²²	18		civil rights are restored	In county for @ least 6 mos. ²⁴		Incompetent if mentally incompetent or mentally retarded; also can't serve as grand juror if held elective office within last 2 yrs.
Hawaii Haw. Rev. Stat. Ann. § 612-4 (Michie 2002)	Registered voters supplement w/other lists of residents such as taxpayers & drivers' licenses; compiled annually ²⁵	18	1 yr. ²⁶	Yes, unless pardoned	Circuit	Read, speak & understand English	Must be physically & mentally able to satisfactorily serve
Idaho Idaho Code § 2-209 (Michie Supp. 2002)	Registered voters supplement w/other lists of residents such as utility customers, property taxpayers, registered motor vehicles & drivers' licenses as designated by supreme court ²⁷	18	Service Itd. to 10 days in a 2-5 yr. period unless limitation occurs during a case ²⁸	Yes, unless right to vote has been reinstated	County	Read, speak & understand English	Can't be too disabled to satisfactorily serve
Illinois 705 III. Comp. Stat. Ann. 305/2 (West 1999)	Registered voters, drivers' licenses & residential & disabled identification cards; list created @ least annually ²⁹	18	Don't have to serve > once w/in a yr. ³⁰	Must be free from all legal exception	County	Understand English	Must have fair character, approved integrity, be of sound judgment & well informed

Jurisdiction & statutory qualification	Sources for master list Registered voters & tax schedule,	Min. age	Time since prior jury service Can't serve > once a	disqualified? Yes, unless rights have	Required residency	Literacy and linguistic standard Read, speak &	Disability Can't be too physically or mentally
(Michie 1998)	may supplement w/lists of residents such as utility customers, personal income tax, registered motor vehicles, city directory, telephonic directories & drivers' licenses ³¹		yr. in same county	been restored		understand English well enough to complete qualifying form	disabled to serve satisfactorily; can't serve if mental incapacity w/appt'd guardian
1996)	Registered voters & drivers' licenses, may supplement w/any other current comprehensive lists of county residents including but unltd. to utility customers; ³² master list is drawn up every two yrs. ³³		In any 2 yr. period, can't serve > 3 mos. unless limitation occurs during a case; also ltd. to 1 grand jury & can't be both grand & petit juror during period ³⁴		County ³⁵	Understand written, spoken, or manually signed English	Must be able to receive & evaluate info well enough to satisfactorily serve; may be disqualified if requested to be placed on list to serve
Ann. § 43-156	County's registered voters & drivers' licenses or census, may supplement w/residential identification cards ³⁶	Same qualifi- cation as that of elector	·	Yes, if w/in 10 yrs. of conviction ³⁸	County ³⁹	Understand English well enough to respond to qualifying form ⁴⁰	Can't serve if adjudicated incompetent; ⁴¹ can't be too physically or mentally infirm as to be unequal to jury duty ⁴²
Stat. Ann. § 29A.080 (Michie Supp. 2002)	County's registered voters, personal income return & drivers' licenses; updated annually ⁴³		30 days unless limitation occurs during a case; also Itd. to 1 grand jury & don't have to be both grand & petit juror during period ⁴⁴	Yes, unless pardoned or civil rights are restored; can't be under indictment	County	Sufficient knowledge of English	Not disqualified solely for disability
	Registered voters & may use other sources legally available ⁴⁵	18	2 or 4 yrs. ⁴⁶	Yes, unless pardoned; can't be under indictment	Parish for @ least 1 yr.	Read, write & speak w/sufficient knowledge of English	Must be physically & mentally able to serve; not incompetent solely for impaired hearing

Stat. Ann. tit. 14, § 1211 (West 2003)	Sources for master list Drivers' licenses, residential identification cards & volunteers, may supplement w/other lists specified by supreme court ⁴⁷	Min. age 18	Time since prior jury service In any 5 yr. period, don't have to serve > 15 days as traverse juror unless limitation occurs during a case;	Are convicted felons disqualified?	Required residency County	Literacy and linguistic standard Read, speak & understand English	Disability
			also ltd. to 1 grand jury & don't have to be both grand & traverse juror during period; grand jury service is max. of 12 mos. ⁴⁸				
Ann., Cts. & Jud.	Registered voters, drivers' licenses, residential identification cards & permitted other sources ⁴⁹		In any 3 yr. period, don't have to serve > 1 term of court unless limitation occurs during a case or service as petit juror was < 5 days then period is reduced to 1 yr.; also ltd. to 1 grand jury & don't have to be both grand & petit juror during 3 yr. period ⁵⁰		Constit'nally qualified to vote in county of court	understand English	Must be physically & mentally able to serve; ct. of appeals can prescribe any objective test to disqualify jurors
Laws Ann. ch. 234A, § 4 (West 2000) ⁵¹	Numbered resident list; prepared annually, ⁵² Inhabitants of good moral character, sound judgment & free from all legal exceptions ⁵³	18	3 calendar yrs; in 2 counties once every 2 yrs. ⁵⁴	If w/in last 7 yrs, yes. Also can't serve w/felony pending or if in custody.	Judicial district > 50% of time ⁵⁵	Speak & understand English	Must be physically & mentally able to satisfactorily serve
Michigan Mich. Comp. Laws Serv. §	Drivers' licenses & residential identification cards; updated annually ⁵⁶	18	1 yr.	Yes, if under sentence	County, district & municipality where selected	Conversant in English	Must be physically & mentally able to function as juror
Practice-Dist. Cts. 808	Registered voters; ⁵⁷ list must be prepared & maintained to be current drivers' licenses & may be supplemented; list is reviewed every 4 yrs. for representativeness & inclusiveness ⁵⁸	18	4 yrs.	Yes, unless civil rights are restored	County		Must be physically & mentally able to satisfactorily serve

Jurisdiction & statutory qualification Mississippi Miss. Code Ann. § 13-5-1 (West 1999)	Sources for master list Registered voters; compiled annually ⁵⁹	Min. age 21	Time since prior jury service 2 yrs. ⁶⁰	disqualified? Can't serve if convicted of infamous crime, or unlawful sale of intoxicating liquors within 5 yrs, or if a common	resident	Literacy and linguistic standard Read & write	Disability
Missouri Mo. Ann. Stat. § 494.425 (West 1996)	1 or > public records; updated periodically; ⁶¹ licensed drivers ⁶²		May be excused if w/in 1 yr. ⁶³		County or city served by summoning ct.		Must be physically & mentally able to perform as juror
Montana Mont. Code Ann.§ 3-15- 301 (2001)	Registered voters ⁶⁴			Yes, ⁶⁵ also disqualified if convicted of malfeasance in office or other high crime	Registered elector		May be permanently excused for chronic incapacity due to illness or injury ⁶⁶
Nebraska Neb. Rev. Stat. § 25-1601 (1995)	Registered electors, licensed drivers ⁶⁷	19		Disqualified if convicted of a criminal offense punishable by imprisonment in a Dep't of Correctional Servs. adult correctional facility, unless pardoned		Read, speak & understand English	Must be physically & mentally able to satisfactorily serve
Nevada Nev. Rev. Stat. Ann. § 6.010 (Michie 1998)	Qualified electors, even if unregistered		If selected & actually served, excused the following yr. unless there aren't enough other suitable jurors ⁶⁸	Yes, also disqualified if convicted of treason or other infamous crime	County	Sufficient knowledge of English	Must be physically & mentally capable
New Hampshire N.H. Rev. Stat. Ann. § 500-A:7-a (Supp. 2002)	Registered voters, drivers' licenses & residential identification cards, ⁶⁹ prepared annually ⁷⁰	18	@ least 3 yrs. if actually attended ct. as juror ⁷¹	Yes, if unannulled or ineligible for annulment	County	Read, speak & understand English	Must be physically & mentally able to effectively serve
New Jersey N.J. Stat. Ann. § 2B:20-1 (West 2003)	Registered voters, licensed drivers & state gross income tax filers; ct. may expand sources; compiled @ least annually ⁷²	18	3 yrs. ⁷³	Yes, if offense was indictable	Summoning county	Read & understand English	Must be mentally & physically able to properly serve

Jurisdiction & statutory qualification	Sources for master list	Min. age	Time since prior jury service	Are convicted felons disqualified?	Required residency	Literacy and linguistic standard	Disability
Stat. Ann. § 38-5-1 (Michie 1978)	Registered voters & drivers' licenses; both lists updated monthly ⁷⁴		if w/in 36 mos. ⁷⁵	Yes	County		Must be physically & mentally capable to serve
Law § 16-510 (Consol. 2002)	Registered voters & avail. other lists of county residents specified by ct. admin'r such as utility customers, drivers' licenses, registered motor vehicles, taxpayers, welfare, recipients of unemployment compensation & volunteers ⁷⁶		4 yrs. subject to modification ⁷⁷	Yes	County	Understand & communicate in English	Must be mentally & physically capable of performing ⁷⁸
Gen. Stat. § 9-3 (2001).	Registered voters, drivers' licenses; prepared every year or other year ⁷⁹	18		Yes		Hear & understand English	Must be physically & mentally competent
Cent. Code § 27- 09.1-08 (Supp. 2001)	Actual voters supplement w/other sources of county residents designated by supreme court such as utility customers, property ad valorem tax, registered motor vehicles, drivers' licenses ⁸⁰		In any 2 yr. period, don't have to serve > 10 days unless limitation occurs during a case; ltd. to 1 grand jury & don't have to be both grand & petit juror during period ⁸¹	Yes, if lost the right to vote because of imprisonment or law dictates		Understand & communicate in English w/reason. accomm.	Must be physically & mentally able to satisfactorily serve w/reasonable accomm.
	listed annually;82 ct. may order supplement83	18 ⁸⁴	W/in the same jury year if in county of > 100,000 ⁸⁵				
	Drivers' licenses & residential identification cards; listed annually ⁸⁶	18 ⁸⁷	2 calendar yrs.	Yes, unless civil rights are restored	State who are qualified to be electors		Must have sound mind & discretion, good moral character
Stat. § 10.030 (1999)	Most recent electors, drivers' licenses, residential identification cards & other sources approved by supreme court; prepared @ least annually ⁸⁸	18	W/in 2 yrs. unless needed	Yes	County in which summoned		Blindness, impaired speech, impaired hearing or physical disability doesn't solely disqualify

Jurisdiction & statutory qualification Pa. 42 Pa.C.S. § 4502	Sources for master list Registered voters or other lists that will provide ≥ names, examples that may be used to supplement: telephonic directories, city directory, taxpayers, govt'l program participants, school census & volunteers; prepared @ least annually ⁸⁹	age to vote	Time since prior jury service W/in 3 yrs. unless service was < 3 days in any 1 yr. which shortens exemption to 1 yr. ⁹⁰	disqualified? Can't serve if convicted of crime punishable by > 1 yr. in jail unless pardoned or	Required residency County	Literacy and linguistic standard Read, write, speak & understand English	Disability Must be physically & mentally capable to efficiently serve
Rhode Island R.I. Gen. Laws § 9-9-1.1 (Supp. 2002)	Registered voters, drivers' licenses & residential identification cards ⁹¹	18	W/in 3 yrs. ⁹²	Yes, unless sentence was fully served or suspended	State	Able to understand & participate in ct. proceeding	Physically & mentally capable to reasonably perform duties; forbidden to serve if adjudged non compos mentis; disability won't solely create ineligibility
South Carolina S.C. Code Ann. § 14- 7-810 (West Supp. 2002)	Registered voters, drivers' licenses & residential identification cards; lists are furnished annually ⁹³		& serve > once every	crime punishable by > 1 yr. in jail unless civil rights are	County ⁹⁶	Read, write, speak or understand English	Must be physically & mentally able to efficiently serve; legal blindness alone doesn't disqualify; must have @ least elementary education
South Dakota S.D. Codified Laws § 16- 13-10 (LexisNexis Supp. 2002)	Registered voters & drivers' licenses; ⁹⁷ compiled annually ⁹⁸	18	W/in 2 yrs. ⁹⁹	Yes, unless civil rights are restored	County or jury district where selected	Read, write & understand English	Must have sound mind; no exclusion for impaired hearing or impaired sight
Tennessee Tenn. Code Ann. § 22-1- 101 (1994).	Tax schedule & drivers' licenses or avail. & reliable other sources, but registered voters can't be sole or primary source; 100 listed every 2 yrs.		None, if regularly drawn ¹⁰¹	Convictions for certain offenses disqualify ¹⁰²	County for 12 mos. preceding summons		Must have sound mind; can't be habitually drunk; if hearing & sight aren't full, will be excluded if can't adequately serve. 103 Must be upright & intelligent; known for integrity, fair character & sound judgment 104
Texas Tex. Gov't Code Ann. § 62.102 (Vernon 1998)	Registered voters, drivers' licenses, residential identification cards; 105 list is furnished annually by secretary of state		6 mos. in district ct. or 3 mos. if served as petit juror for 6 days during last 3 mos. in county ct.; in some counties period can be up to three yrs. 106	Yes, also can't serve while indicted	County & qualified to vote	Read & write	Must have sound mind & good moral character; not disqualified solely due to legal blindness or impaired hearing 107

Jurisdiction & statutory qualification United States 28 U.S.C.A. § 1865 (West 1994 & West Supp. 2002)	Sources for master list For most districts: registered voters or actual voters & other sources where necessary to obtain fair cross section of community 108		Time since prior jury service In any 2 yr. period, don't have to serve > 30 days as petit juror unless limitation occurs during a case; Itd. to 1 grand jury & don't have to be both grand & petit juror during period ¹⁰⁹	disqualified?	Required residency 1 yr. in judicial dist.	Literacy and linguistic standard Read, write & understand English well enough to satisfactorily fill out qualifying form; speak English	Disability Must be physically & mentally capable to satisfactorily serve
Utah Utah Code Ann. § 78-46-7 (2002)	One or more regularly maintained lists designated by judicial council; updated every 6 mos. 110	18	2 yrs. ¹¹¹	Yes, if unexpunged	County	Read, speak & understand English	
Vermont Vt. Stat. Ann. tit. 4, § 962 (1999)	May use census, city directory, election records and any general other sources; ¹¹² listed annually ¹¹³		No > three times any 2 yrs. 114	Yes, if imprisoned	W/in juris. of summoning ct.	Read, write, understand & speak English	Must be physically & mentally capable to satisfactorily serve
Virginia Va. Code Ann. § 8.01-337 (Michie 2000).	Registered voters &, where feasible, drivers' licenses, city directory, telephonic directories, personal property tax rolls & other sources designated by the chief judge of the circuit; submitted annually ¹¹⁵	18	3 yrs. ¹¹⁶	Yes	6 mos. in summoning county; 1 yr. in state		Nobody disqualified solely for blindness or partial blindness; disqualified if incapacitated, drug addict or alcoholic 117
Washington Wash. Rev. Code Ann. § 2.36.070 (West Supp. 2003)	Registered voters, drivers' licenses & residential identification cards; compiled annually ¹¹⁸		May be excused if served @ least 2 wks during last 12 mos. ¹¹⁹	Yes, unless civil rights are restored	County in which summoned to serve	Communicate in English	Excused for physical or mental defect ¹²⁰
_	From at least two of these: state personal income tax, registered voters, drivers' licenses; list used for two yrs. unless chief judge sets another period ¹²¹	18	2 yrs.	Yes, if lost the right to vote or convicted of infamous crime	County	Read speak & understand English or sign language	Must be physically & mentally capable to satisfactorily serve

Jurisdiction & statutory qualification	Sources for master list	Min. age	Time since prior jury service	Are convicted felons disqualified?	Required residency	Literacy and linguistic standard	Disability
Stat. Ann. § 756.02 (West 2001)	Drivers' licenses, residential identification cards & may use registered voters, telephonic & city directories, property ad valorem tax, high school graduates, utility customers, welfare recipients; compiled annually 122		Service may be ltd. to 1 day in 2-4 yrs. or 5 days in 4 yr. period unless limitation occurs during a case ¹²³	Yes, unless civil rights are restored		Understand English	
, ,	Registered voters, may be expanded; ¹²⁴ listed annually.		May be excused for remainder of year post discharge ¹²⁵	Yes, unless conviction is rev'd, annulled, pardoned or rights are restored ¹²⁶	County for 90 days	of English	Must have natural faculties, ordinary intelligence, & be physically & mentally able to satisfactorily serve

- 1. Ala. Code § 12-16-57 (1995).
- 2. Alaska Stat. § 09.20.050 (LexisNexis 2002).
- 3. Id. at § 09.20.020.
- 4. Ariz. Rev. Stat. Ann. § 21-301 (West 2002).
- 5. Ark. Code Ann. § 16-32-103 (Michie 1999).
- 6. Id. at § 16-31-104.
- 7. Id. at § 16-31-102.
- 8. Id.
- 9. Id.
- 10. Cal. Civ. Proc. Code § 197 (West Supp. 2003).
- 11. Colo. Rev. Stat. § 13-71-107 (2002).
- 12. Conn. Gen. Stat. Ann. § 51-222a (West Supp. 2002).
- 13. Id. at § 51-217a.
- 14. Del. Code Ann. tit. 10, § 4507 (1999).
- 15. D.C. Code Ann. § 11-1905 (2001).
- 16. Id. at § 11-1911.
- 17. Fla. Stat. Ann. § 40.011 (West Supp. 2003).
- 18. Id. at § 40.013 (West 1998).
- 19. *ld*.
- 20. Id.
- 21. Id. at § 40.022 (West Supp. 2003).
- 22. Ga. Code Ann. § 15-12-40 (Supp. 2002).
- 23. Id. at § 15-12-3 (2001).
- 24. For a trial jury: upright & intelligent citizens of the county; for grand jury; most experienced, upright & intelligent citizens of the county. Id. at § 15-12-40 (Supp. 2002).
- 25. Haw. Rev. Stat. Ann. § 612-11 (Michie 2002).
- 26. Id. at §§ 612-6, -22 (Michie Ann. 2002).
- 27. Idaho Code § 2-206 (Michie 1998).
- 28. Id. at § 2-216 (Michie Supp. 2002).
- 29. 705 III. Comp. Stat. Ann. 305/1 (West 1999).
- 30. Id. at 305/5, 305/14.
- 31. Ind. Code Ann. §§ 33-4-5-2, 33-4-5.5-7 (Michie 1998).
- 32. lowa Code Ann. § 607A.22 (West 1996).
- 33. Id. at § 607A.10 (West Supp. 2002).
- 34. Id. at § 607A.29 (West 1996).
- 35. Id. at § 607A.3 (West Supp. 2002).

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36. Kan. Stat. Ann. § 43-162 (1993).
37. Id. at § 43-159.
38. Id. at § 43-158 (Supp. 1999).
39. Id. at § 43-162 (1993).
40. Id. at § 43-158 (Supp. 1999).
41. Id.
42. Id. at § 43-159 (1993).
43. Ky. Rev. Stat. Ann. § 29A.040 (Michie Supp 2002).
44. Id. at § 29A.130.
45. La. Code Crim. Proc. Ann. art. 408.1 (West Supp. 2003).
46. La. Sup. Ct. R. XXV.
47. Me. Rev. Stat. Ann. tit. 14, § 1252-A (West 2003).
48. Id. at § 1216.
49. Md. Code Ann., Cts. & Jud. Proc. § 8-104 (2002).
50. Id. at § 8-209.
51. For counties designated to participate by supreme judicial court.
52. Mass. Gen. Laws Ann. ch. 234A, § 10 (West 2000).
53. Id. at ch. 234, § 4.
54. Id. at § 2.
55. Id. at § 3.
56. Mich. Comp. Laws Serv. §§ 600.1304, 600.1375 (LexisNexis 2001).
57. Minn. Stat. Ann. § 201.091 (West 1992).
58. Minn. R. Practice-Dist. Cts. 806.
59. Miss. Code Ann. § 13-5-8 (West 1999).
60. Id. at § 13-5-25.
61. Mo. Ann. Stat. § 494.410 (West 1996).
62. Id. at § 494.442.
63. Id. at § 494.430.
64. Mont. Code Ann. § 3-15-402 (2001).
65. Id. at § 3-15-303.
66. Id. at § 3-15-313.
67. Neb. Rev. Stat. § 25-1628 (1995).
68. Nev. Rev. Stat. Ann. § 6.070 (Michie 1998).
69. N.H. Rev. Stat. Ann. § 500-A:1 (Supp 2002).
70. Id. at § 500-A:2.
71. Id. at § 500-A:16 (1997).
72. N.J. Stat. Ann. § 2B:20-2 (West 2003).
73. Id. at § 2B:20-10.
74. N.M. Stat. Ann. § 38-5-3 (Michie 1978).
75. Id. at § 38-5-2.
76. N.Y. Jud. Law § 16-506 (Consol. 2002).
77. Id. at § 16-524.
78. Id. at § 16-517(c).
79. N.C. Gen. Stat. § 9-2 (2001).
80. N.D. Cent. Code § 27-09.1-05 (1991).
81. Id. at § 27-09.1-15.
82. Ohio Rev. Code Ann. § 2313.08 (West 1994).
83. Id. at § 2313.09.
84. Id. at § 2313.06.
85. Id. at §§ 2313.16(E), 2313.34(C) (West Supp. 2002).
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126. Id. at § 1-11-102.

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86. Okla. Stat. Ann. tit. 38, § 18 (West Supp. 2003).
87. Id.
88. Or. Rev. Stat. § 10.215 (1999).
89. 42 Pa.C.S. § 4521(a).
90. Id. at § 4503(a).
91. R.I. Gen. Laws § 9-9-1 (1997).
92. Id. at § 9-10-7 (Supp. 2002).
93. S.C. Code Ann. § 14-7-130 (West Supp. 2002).
94. Id.
95. Id. at § 14-7-850.
96. Id. at § 14-7-130.
97. S.D. Codified Laws §§ 16-13-4.1, -13-9.1 (Michie 1995 & LexisNexis Supp. 2002).
98. Id. at § 16-13-1 (Michie 1995).
99. Id. at § 16-13-15 (LexisNexis Supp. 2002).
100. Tenn. Code Ann. § 22-2-302 (1994).
101. Id. at § 22-2-308.
102. Id. at § 22-1-102.
103. Id.
104. Id. at § 22-2-302.
105. Tex. Gov't Code Ann. § 62.001 (Vernon Supp. 2003).
106. Id. at § 62.106.
107. Id. at §§ 62.104, 62.1041 (Vernon 1998).
108. 28 U.S.C.A. § 1863 (West 1994).
109. Id. at § 1866(e).
110. Utah Code Ann. § 78-46-10 (2002).
111. Id. at § 78-46-19.
112. Vt. Stat. Ann. tit. 4, § 953 (1999).
113. Id. at § 954.
114. Id. at § 963.
115. Va. Code Ann. § 8.01-345 (Michie 2000).
116. Id. at § 8.01-342.
117. Id. at § 8.01-338.
118. Wash. Rev. Code Ann. § 2.36.055 (West Supp. 2003).
119. Id. at § 2.36.100(3).
120. Id. at § 2.36.110.
121. W.V. Code Ann. § 52-1-5 (Michie 2000).
122. Wis. Stat. Ann. § 756.04 (West 2001).
123. Id. at § 756.28.
124. Wyo. Stat. Ann. § 1-11-106 (LexisNexis 2001).
125. Id. at § 1-11-122.
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Appendix E

EXEMPTIONS, EXCUSALS, EMPLOYER LIABILITY AND FEES OF JURORS BY STATE

Jurisdiction Alabama	Exemptions None ¹	Excusal Undue hardship, extreme inconvenience or public necessity ²	Employer's obligation to pay employee while serving as juror Any full-time employee shall be entitled to his usual compensation received from such employment less the fee or compensation he received for serving as such juror ³	\$10 daily ⁴
Alaska	If health, the health or proper care of the person's family, a permanent physical or mental disability, or other substantial hardship expected to last > 2 years makes it necessary for the person to be excused, or if the person is a judicial officer. ⁵		None ⁶	\$25 daily ⁷
Arizona	None	If absence from his regular place of employment would tend materially & adversely to affect the public safety, health, welfare or interest; undue hardship ⁸	None ⁹	County pays \$12 daily + mileage at an amount = to that paid to state officers & employees under § 38-623. A juror who is excused from further attendance upon the first day of this appearance in obedience to a summons receives a mileage allowance only; 10 state grand jurors also get a reasonable per diem established by sup. ct. 11
Arkansas	None	When his or his family's health reasonably requires his absence or when his own interests or those of the public will be materially injured by his attendance 12	None	When the person attends but is excused from serving, a minimum of \$15 & when the person has been sworn & accepted as qualified, a minimum \$35 per diem. 13 Immunized from over time parking penalties if occurred while serving. 14 At least for unaccepted jurors, mileage from & to home is @ a rate not to exceed that prescribed for state employees. 15 County & probate courts tax jurors' compensation & mileage as costs to be paid by the unsuccessful party. 16 In addition to mileage, tolls are also allowed. 17
California	None	Undue hardship ¹⁸	None	After the first day, \$15 daily & 34¢ per mile actually traveled in attending court in going only. 19 Each party demanding a jury trial must deposit a sum = to fees & mileage in advance. 20

Jurisdiction	Exemptions	Excusal	Employer's obligation to pay employee while serving as juror	
Colorado	None	Grand juror: hardship or inconvenience; trial juror: extreme hardship. ²¹ A trial juror has the right to one postponement. ²²	All regularly employed trial or grand jurors shall be paid regular wages up to \$50 per day unless > by mutual agreement for the 1st 3 days of juror service ²³ If too financially hard for employer to pay this, the state pays. ²⁴	The state pays each trial or grand juror who serves > 3 days for the 4th & successive days \$50 per day w/no additional reimbursement for travel or other expenses. ²⁵ Based upon unusual circumstances, ct.'s are authorized to specially compensate and reimburse jurors. ²⁶ Unemployed jurors may apply for reimbursement of expenses incurred during 1st 3 days. ²⁷ Free public transp. ²⁸
Connecticut	Some public officials; if 70 or older, person may disqualify himself ²⁹	Extreme hardship ³⁰	Each full-time employed juror shall be paid regular wages by his employer for the 1st 5 days. ³¹	Each juror not full-time employed shall be reimbursed by the state for necessary out-of-pocket expenses incurred during that day of juror service, if w/in the 1st 5 days of juror service. Necessary out-of-pocket expenses include 20¢ for each mile of travel to & from ct. & exclude food. Reimbursement for each day of service shall not be < \$20 nor > \$50. Each juror who serves > 5 days shall be paid by the state for the 6th day & each day thereafter \$50 per day of service & no additional reimbursement. ³²
Delaware	None	Undue hardship, extreme inconvenience or public necessity ³³	None	Per diem rate of \$20 to reimburse travel, parking & other out-of-pocket expenses. Jurors whose term of service is 1 day or 1 trial shall not be reimbursed for the 1st day of service. ³⁴
District of Columbia	None ³⁵	Service may be deferred upon a showing of undue hardship, extreme inconvenience, public necessity, or temporary physical or mental disability ³⁶	None	Rates of fees & expenses are established by Bd. of Judges of Super. Ct. & may not exceed the respective rates paid to such jurors in the fed. sys.; gov'tl employees who continue to receive regular compensation during the period of jury service may not be compensated for jury service but may be reimbursed for expenses to the extent provided in the jury system plan. ³⁷ Recipients of employment security benefits don't lose those benefits on account of juror service.

Jurisdiction Florida	Exemptions Some elected & public officials; if full-time law enforcement, may excuse himself; any expectant mother & parent who is not employed full time & has custody of a child under 6 may excuse herself; if 70 or older, a person may excuse himself; any person caring for someone mentally or physically incapable of caring for oneself may excuse herself	Excusal A practicing attorney; a practicing physician; physical infirmity; a person showing hardship, extreme inconvenience, or public necessity ³⁹	Employer's obligation to pay employee while serving as juror None, but jurors who are regularly employed & continue to receive regular wages while serving are not compensated by the state for the 1st 3 days of service.	Fee & mileage Jurors who are not regularly employed or do not continue to receive regular wages while serving are entitled to receive \$15 per day for the 1st 3 days of service. Each juror who serves > 3 days is paid by the state for the 4th day & each day thereafter \$30 per day. Jurors are not additionally reimbursed by the state for travel or other expenses. 41 Jurors may donate their fee to a local charitable guardian ad litem program or domestic violence shelter that is specified by the clerk of court.
Georgia	If 70 or older, a person may excuse himself 42	May excuse any person who shows that he will be engaged in work necessary to the public health, safety, or good order; other good cause. Shall excuse any full-time student; primary caregiver actively caring for a child under 4 if the caregiver has no reasonably available alternative child care; shall excuse legislator attending general assembly	None	Expense allowance for jurors is \$5-50 per diem 45
Hawaii	Attorney at law; head of an executive department, an elected official, or a judge; minister; practicing physician or dentist; member of armed forces on active service or active member of police or fire department; person who has served as a juror within past year 46	Serious personal hardship or other good cause ⁴⁷	None	\$30 for each day of actual attendance; 33¢ for each mile actually & necessarily traveled to and from ct.; immunized for parking violations. ⁴⁸ May be reimbursed for other actual expenses.
Idaho	None ⁴⁹	A person who is 70 or older may be excused; service may be postponed for those showing undue hardship, extreme inconvenience, public necessity, or for a mother breastfeeding her child ⁵⁰	None	Mileage @ the same rate per mile as established by county comm'rs for county employees where the juror resides & paid from the county treasury: (1) \$5 for each 1/2 day, or portion thereof, unless the juror travels more than 30 miles from his residence, then \$10 for each 1/2day or portion thereof; (2) \$10 for each day's required attendance when > 1/2 day

Jurisdiction Illinois	Exemptions None	Excusal Undue hardship on account of	Employer's obligation to pay employee while serving as juror None ⁵³	Fee & mileage \$4 a day in counties of 1st class, \$5 a day in counties
illinois	None	occupation, business affairs, physical health, family situation, active duty in National Guard or Naval Militia, or other personal affairs ⁵²	inone "	of 2nd class, \$10 a day in counties of 3rd class, or > if county bd. fixes higher amt. County bd. determines travel expense but must be @ least 10¢ per mile counties of 1st & 2nd class. Counties pay fees, tranps. & daycare. 54
Indiana	Over 65 years old; member in active service of U. S. armed forces; elected or appointed gov'tl official actively engaged in official duties; honorary military staff officer appointed by governor; officer or enlisted person of guard reserve forces; veterinarian; dentist; member of police or fire dep't; if criminal trial & the person is employed by dep't of correction & in contact w/inmates; or spouse or child of a correctional employee in contact w/inmates ⁵⁵		None	Same mileage rate paid to state officers to & from ct., \$15 a day until impaneled & \$40 a day post impaneling; county may supplement fee; city & town ct. jurors get \$15 a day & same mileage rate paid to state officers to & from ct.; city & town may supplement fee. 57
lowa	None	Mandatory for: A person solely responsible for the daily care of & living w/a person w/a permanent disability living if juror service would cause substantial risk of injury to the disabled person's health; or a breastfeeding mother if she isn't regularly employed outside her home & is responsible to daily care for the child; ⁵⁸ Discretionary for: deferring service for hardship, inconvenience, or public necessity; may be excused from grand juror service to avoid jeopardizing the person's economic, physical, or emotional well-being, or the well-being of a dependent, or other similar extreme hardship ⁵⁹	None	\$10 for each day + reimbursement @ a judicially established rate for mileage from & to their residences & actual expenses of parking ⁶⁰

Jurisdiction Kansas	Exemptions None	Excusal Compelling personal hardship; if	Employer's obligation to pay employee while serving as juror	Fee & mileage Out of county general fund, \$10 per day + legally
Ransas	None	service would be contrary to the public welfare, health, or safety ⁶¹	None	prescribed rate for mileage to & from ct. ⁶²
Kentucky	None ⁶³	Undue hardship, extreme inconvenience, public necessity ⁶⁴	None	\$5 per day for service & \$7.50 per day to reimburse incurred expenses. ⁶⁵ The unsuccessful party in a civil trial is assessed a jury fee. ⁶⁶
Louisiana	If 70 or older, person may exempt himself; by rule, sup. ct. can exempt others. ⁶⁷	Undue hardship or extreme inconvenience ⁶⁸	None	Allowance for mileage to & from ct. fixed by jud. dist. & approved by county gov'g authority; has to be @ least 16¢ per mile but not more than the rate for state officials; Compensation is \$12-25 for each day; civil juries are paid by a party & get \$12 a day & 16¢ a mile. 69
Maine	The Governor, judges, physicians & dentists actively caring for patients; sheriffs, attorneys-at-law & every member of state military forces while going to, attending or returning from active service ⁷⁰	Undue hardship, extreme inconvenience, public necessity or inability to satisfactorily serve because of disability ⁷¹	None	15¢ per mile from & to the juror's residence & \$10 for each day of required attendance 72
Maryland	A certified member of the organized militia; a person who is 70 or older & requests exemption 73	Undue hardship, extreme inconvenience, or public necessity, but only for the period deemed necessary ⁷⁴	None	State per diem of \$15 for each day attending court & may be supplemented by each county and City of Baltimore ⁷⁵

Jurisdiction	Exemptions	Excusal	Employer's obligation to pay employee while serving as juror	Fee & mileage
Massachusetts	attorneys at law; ministers; officers of colleges; preceptors & teachers of inc'd academies; registered practicing physicians & surgeons; some employed in or about a state hospital, psychiatric hospital, jail, house of correction, state industrial school or state prison; teachers in public schools; members of the fire department of Boston, & of other cities & towns in which such exemption has been made by vote of the city council or the inhabitants of the town; Christian Science practitioners; trained nurses; assistants in hospitals; attendant nurses; members of	public necessity; ⁷⁷ a person who isn't regularly employed outside of home & solely responsible to care daily for a permanently disabled person living w/the caregiver can claim disqualification if juror service would cause a substantial risk of injury to the disabled person's health ⁷⁸ A trial juror has the right to 1 postponement ltd. by the necessity to maintain a demographic cross-section in the	by his employer for the 1st 3 days of service. 80 If an employer is excused from this obligation for extreme financial hardship, the court shall award reasonable compensation in lieu of wages to the juror to be paid by the commw. for the 1st 3 days of service. Such award may not exceed \$50 per day. 81	An employee of a city or town who serves shall receive from such city or town the difference between his salary & the compensation received for such jury service, exclusive of any travel or other allowance. Between the property of the performance of juror into the same financial position as such juror would have been were it not for the performance of juror service. Between the performance of juror service. All Each unemployed juror shall be reimbursed by the commw. For reasonable travel, child-care & other necessary out-of-pocket expenses, except food, incurred during the 1st 3 days of service. This award may not exceed \$50 per day. A juror receiving employment security benefits does not lose those benefits on account of his 1st 3 days jury service. All Each trial juror who serves > 3 days shall be paid by the commw. For the 4th & each day thereafter the terate of \$50 per day but no additional reimbursement for travel or other expenses. Each grand juror may receive up to \$50 per day by the commw. For the 4th & subsequent days of service. For each day of serv., a grand juror may recumulatively from his employer and the commw., an amount = to the greater of the following 2 rates: \$50 per day or an amount not in excess of the regular daily wages plus daily travel expenses in excess of those ordinarily incurred by the juror, but the contribution by the commw. to this amount may not exceed \$50 per day. The ct. is authorized to specially award compensation & reimbursement to any juror or any other person on behalf of a juror based on unusual circumstances.

Jurisdiction Michigan	Exemptions A person > 70 may exempt himself 88	Excusal If it appears that interests of the public or the individual juror will be materially injured by his attendance, or the health of the juror or that of a member of his family requires his absence from ct. 89 Full-time high school students get serv. postponed until end of school yr.	Employer's obligation to pay employee while serving as juror None	Fee & mileage A juror shall be reimbursed for traveling expenses @ a rate, determined by the county bd. of comm'rs, that is not < 10¢ per mile from & to his residence. A juror also shall be compensated @ a rate, determined by the county bd. of comm'rs, as follows: (a) Until Oct. 1, 2003, not < \$15 per day and \$7.50 per 1/2 day of actual attendance at the ct. (b) Beginning Oct. 1, 2003, a rate determined as follows: (i) For the 1st day of actual attendance, not < \$25 per day and \$12.50 per 1/2 day. (ii) For each subsequent day or 1/2 day of actual attendance, not < \$40 per day and \$20 per 1/2 day. 90
Minnesota	Judge; a person 70 or older may exempt himself. ⁹¹	Continuing hardship to oneself of the public; legislative member or employee while in session; candidates for elected office get deferred until post election ⁹²	None	A juror shall be reimbursed for travel from & to his residence & compensated for attendance & may be reimbursed for additional day care expenses incurred @ rates determined by the sup. ct A juror may request reimbursement for additional parking expenses incurred, in which case the reimbursement shall be paid & the juror's compensation for required attendance shall be reduced by the amount of the parking reimbursement. Except in the 8th jud. dist. where the state shall pay directly, the compensation & reimbursement shall be reimbursed by sup. ct. to the county treasurer. 93
Mississippi	Every citizen over 65 may exempt himself 94	Juror's illness or serious illness in the juror's family requiring his presence @ home; if juror's attendance would cause a serious financial loss to him or his business; a fairly equivalent emergency 95	None	Jurors in the chancery, county, circuit and special eminent domain courts shall be paid an amount to be set by the bd. of supervisors, not to be < \$25 per day and not to > \$40 per day, + mileage authorized in § 25-3-41 (relating to reimbursement of expenses; state employees). Jurors making inquisitions of idiocy, lunacy or of unsound mind & jurors on coroner's inquest shall be paid \$5 per day + mileage. Jurors in the justice courts shall be paid an amount not < \$10 per day and not > \$15 per day, to be established by the bd. of supervisors. Any juror may return his compensation to the county that paid it & earmark it for his selected particular purpose such as a pub. library. ⁹⁶

Jurisdiction Missouri	Exemptions Any person on active duty in U. S. armed forces or militia under order of the governor; any licensed attorney @ law; any judge ⁹⁷	Excusal Any person actually performing duties of a clergyman; any person whose absence from his regular place of employment would tend materially & adversely to affect the public safety, health, welfare or interest; extreme hardship; any person licensed & actively engaged in the practice of medicine, osteopathy, chiropractic, dentistry or pharmacy; 98 some police officers 99	Employer's obligation to pay employee while serving as juror None	Fee & mileage \$6 per day & 7¢ for every mile from residence to courthouse & returning to be paid from funds of the county or a city not w/in a county. Each county or a city not w/in a county. Each county or a city not w/in a county may add daily compensation & mileage allowance. Authorization of additional compensation terminates if sup. ct. directs the state to pay any additional compensation even if it was formally approved or authorized by the governing body of a county or a city not w/in a county. Even if a county or a city not w/in a county adds daily compensation payable from county or city funds for jurors in the amount of @ least \$6 per day, a person shall receive an additional \$6 per day to be reimbursed by the state so that the total compensation payable shall be @ least \$18 + mileage for each day. In any county of the 1st class. sans charter form of gov't & w/@ least 200,000 inhabitants, no juror shall receive compensation for the 1st 2 days but shall receive \$50 per day for the 3d & each subsequent day & 7¢ for every mile traveled going from & to his residence to be paid from funds of the county.
Montana	None	Undue hardship for the person or the public served by him 101	None	Unless excused from attendance upon his own motion on the 1st day of appearance, a jury panel member shall receive \$12 per day for attendance & mileage allowance = to that allowed by U.S. internal revenue serv. for the current year for the 1st 1,000 miles & 3¢ less per mile for additional miles traveled w/in a given calendar month each way between his residence & the county seat. If using their own airplanes, jurors may collect mileage for the nautical air miles actually traveled @ a rate of twice the mileage allotment for motor vehicle travel and no more unless specifically provided by law. Jurors selected from the panel for a case receive an additional \$13 a day. ¹⁰² In civil actions, the jurors' fees must be paid by the party demanding the jury & taxed as costs v. the losing party. ¹⁰³

Jurisdiction Nebraska	Exemptions Judges, clerks of courts, sheriffs, jailers, persons or the spouse of any such person who are parties to suits pending in the dist. ct. of the county of his residence; any person 65 or older may exempt himself ¹⁰⁴	necessity ¹⁰⁵	of an employee by an amt. = to any compensation, other than expenses, paid by the ct. for jury duty. ¹⁰⁶	\$35 a day paid by the county & mileage limited to the actual cost of travel @ the rates established by dep't of administrative services or the cost of commercial transp., whichever is less 107
	In a county whose population is 400,000 or >, a person who lives 65 miles or > from court may exempt himself; 108 fed. or state officer; judge, justice of the peace or attorney @ law; any county clerk, recorder, assessor, sheriff, deputy sheriff, constable or police officer; locomotive engineer, locomotive fireman, conductor, brakeman, switchman or engine foreman; officer or correctional officer employed by the dep't of corrections; employee of the leg. or the legis. counsel bureau while the leg. is in sess.; physician, optometrist or dentist licensed to practice in this state; victim of domestic violence or sexual assault who has a fictitious address; persons 70 or over may exempt themselves; a person who is 65 or over who lives 65 miles or > from the court may exempt himself 109	physical disability; serious illness or death of a member of immediate family; undue hardship or extreme inconvenience; public necessity. 110 Can be permanently excused for permanent disability.	None	\$9 for each day in attendance; if sworn & serving, \$15 a day, or \$30 a day after 5 days; a bd. of county comm'rs may add a per diem allowance = to the allowance for meals provided for state officers & employees while away from the office and w/in this state; 20¢ a mile for travel, but a bd. of county comm'rs may provide an amount = to the standard mileage reimbursement rate for which a deduction is allowed for fed. income tax that is in effect at the time the annual rate is established; there is no allowance for < a mile; If the juror lives 60 miles or more from the place of attendance & he needs to show up > than 1 day, he is entitled to allowance for lodging at the rate provided state employees, in addition to his daily compensation. In civil cases, any fee, per diem allowance or other compensation due each juror must be paid by the party who has demanded the jury. If the party paying this money is the prevailing party, the money is recoverable as costs from the losing party. 111
New Hampshire	,	For the time deemed necessary by the ct., a person may be excused for undue hardship, extreme inconvenience, public necessity or for any other cause deemed appropriate 113	None	Fees of \$10 for each ½day's attendance & mileage @ the rate of 20¢ per mile shall be paid by the state when the juror is required to leave the town or city in which he resides. If the juror is required to travel > 50 miles one way, travel time may be counted in determining attendance. 114 Every juror shall be allowed free parking. 115

Jurisdiction	Exemptions	Excusal	Employer's obligation to pay employee while serving as juror	Fee & mileage
New Jersey	None	Age 75 or older, severe hardship unlikely to change w/in 1 yr.; volunteer fire fighter; volunteer EMT; 116 health care worker directly caring for handicapped person; during school yr., full time instructor @ primary/secondary sch. sans reasonable replacement; serv. will cause severe financial hardship to oneself or one's dependents; obligated to personally care for another & no alternative care is available sans severe financial hardship		\$5 for each day's attendance + \$35 for each consecutive day of attendance in excess of 3 days if not employed by state or political subdivision.
New Mexico	None	Satisfactory evidence ¹¹⁹	None	Travel from residence to the courthouse @ the rate allowed public officers and employees per mile; compensation for their time in travel, attendance & service @ the highest prevailing state minimum wage rate 120
New York	None	Undue hardship or extreme inconvenience to the applicant seeking excusal, a person under his care or supervision, or the public 121	of an employee while the employee serves as a juror, but an employer who employs > 10 employees may not withhold the 1st \$40 of such juror's daily wages during the 1st 3 days of jury service. 122	\$40 per day for each & every day of physical attendance, except no person who is employed may receive this allowance if his employer is prohibited from withholding the 1st \$40 of wages of such person during such period & such person's daily wages = or exceed \$40. If such person's daily wages are < \$40 he shall receive an allowance = to the difference between \$40 & the amount of his wages. Such fees & expenses incurred feeding & lodging jurors shall be a state charge. No employee may receive the per diem allowance for any regularly scheduled workday on which jury service is rendered if, on such day, his wages are not withheld on account of such service. An additional allowance of \$6 per day for each & every day of attendance > 30 is authorized as a state charge. 124

	Exemptions Age 65 or older ¹²⁵	Excusal Compelling personal hardship or because requiring service would be contrary to the public welfare, health, or safety ¹²⁶	Employer's obligation to pay employee while serving as juror None	\$12 per day, but if serves > 5 days in any 24 mos., \$30 per day for each excessive day; grand jurors get \$12 a day. 127
North Dakota	None ¹²⁸	Undue hardship, extreme inconvenience or public necessity ¹²⁹	None	Mileage is paid @ the rate it is paid for state employees + \$25 for the 1st day & \$50 for each subsequent day; the rate is \$10 daily for coroner's inquest; the county pays the coroner's inquest, but the state pays the others compensation & mileage ¹³⁰
Ohio	None ¹³¹	May excuse a juror from service for not > 3 days at a time, where the exigencies of his business require his temporary excuse; 132 may excuse if juror is necessarily absent from county & won't return in time to serve, interests of the public or of the juror will be materially injured by the juror's attendance, juror is physically unable to serve, the juror's spouse or a near relative of the juror or the juror's spouse has recently died or is dangerously ill, juror is a cloistered member of a religious organization 133		County pays from its treasury an amt. fixed by its bd. of county comm'rs up to \$40 for each day. After 10 days of actual service, each add'l day is paid = the greater of \$15 or 1 1/2 times the amt. fixed for the 1st 10 days. The bd. may limit this amt. to twice the amount paid for each of the 1st 10 days. Residents of townships that are entirely islands are reimbursed for add'l transp. costs. ¹³⁵ Unless payment of the fees by a party against whom they are proposed to be taxed would cause significant financial hardship to that party or would not be in the interest of justice, a court of common pleas in any civil action in which a jury is sworn, shall order that the fees be paid as costs for each day that a sworn juror serves up to 4 days. ¹³⁶ Juror fees are included as costs of prosecution that is imposed as part of criminal sentences. ¹³⁷
	Persons over 70 aren't compelled to serve; justices, judges; sheriffs or deputy sheriffs; jailers or law enforcement having custody of prisoners; licensed attorneys practicing law; legislators during session or involved in state business 138	Substantial hardship ¹³⁹	to pay an employee wages for the time the employee is absent from employment for jury duty unless the employee uses paid leave for that purpose. It shall be the	\$20 for each day + mileage to & from service in accordance w/State Travel Reimbursement Act but paid from the local ct. fund. Parking may be provided or reimbursed. Those excused from jury service are neither paid nor reimbursed. ¹⁴¹ Jurors may donate their fees to agencies established to prevent child abuse. ¹⁴²

Jurisdiction	Exemptions	Excusal	Employer's obligation to pay employee while serving as juror	Fee & mileage
Oregon	Persons who are 70 or older & women who are breast-feeding may exempt themselves 143	inconvenience to the person, his family, his employer or the public served by him; persons who solely care for a child or other dependent	the juror's employer for the days that the juror is attending court, but a juror may claim mileage reimbursement. 145	\$10 for each day in courts other than circuit courts, but cities & counties may add to this fee + reimbursements; in circuit court, \$10 for each of the 1st 2 days & the lesser of \$50 or an amount = to the number of hours served multiplied by the minimum hourly wage (currently \$6½) for the 3d & each subsequent day. For the 3d & each subsequent day, the minimum credit is 4 hours & any time > 4 hours is to be paid as 8 hours but subject to the \$50 limitation. \frac{146}{19} In a court other than a circuit court, mileage is paid @ the rate of 8¢ a mile; in a circuit court, a juror who is required to travel more than 10 miles each way from his usual abode to serve is paid mileage on actual costs of travel or on the rate established by Dep't of Administrative Services for reimbursement for use of a privately owned motor vehicle on official business. A juror may be reimbursed for travel via public transportation. A juror may also be paid for lodging, dependent care & other reasonable expenses. \frac{147}{19} In circuit ct., per diem fees, mileage & expenses are paid by the state. \frac{148}{190} Jurors may donate their per diem & mileage expenses to the jud. dep't.
Pennsylvania	Those in active service of the armed forces; relatives of victims of criminal homicide under 18 Pa.C.S. § 2501 ¹⁴⁹	Undue hardship or extreme inconvenience 150	None ¹⁵¹	\$9 a day for 1st 3 days in calendar year & \$25 a day thereafter; except for the 1st judicial dist., travel allowance is 17¢ a mile circular. Commonwealth reimburses counties 80% for compensation & travel allowance paid beyond the 1st 3 days of service. 152
Rhode Island	Legislators, state & legislative officers, jury commissioner & judicial personnel, practicing attorneys-at-law, law enforcement personnel, paid fire departmental personnel & members of the armed services on active duty ¹⁵³	Mental or physical disability; illness or the serious illness of some member of his immediate family; economic or domestic hardship; other good cause ¹⁵⁴	None. Absent a contract to the contrary, an employer need not pay an employee for the period of the employee's jury duty. 155	Any serving juror shall be allowed the free use of the regularly scheduled services of the Rhode Island public transit authority & the Pawtucket-Providence commuter ferry shuttle service & passage upon the C. Pell Bridge on each day of service. 156 For each day in superior court, \$15 paid by the state. 157

courthouse; ¹⁵⁸ those aged 65 & older ¹⁵⁹	Excusal Good & sufficient cause; any woman having legal custody & a duty to care for a child under 7 if the woman is unable to provide adequate care for the child while performing jury duty; a person who performs essential services for a business, commercial, or agricultural enterprise causing it to cease operations or close if the person is required serve as a juror ¹⁶⁰	Employer's obligation to pay employee while serving as juror None	Fee & mileage The mileage rate ranges from 5¢ per mile to the rate authorized for a state employee; the per diem ranges from \$2-12½ 161
If jury service conflicts with religious belief, any member of the clergy ¹⁶²		None, but must grant temporary leave of absence. ¹⁶³	\$50 for each day & mileage at such rate as may be established pursuant to § 3-9-1; any juror called but not impaneled receives \$10 & mileage @ such rate as may be established pursuant to § 3-9-1. For each juror's expenses & fees for cases involving violations of municipal charter, ordinance, or bylaw are paid by the city treasurer; 164 otherwise, jurors' fees are paid by the county treasurer. 165
accountants, clergy & physicians; acting professors & teachers; members of fire co.'s & law enforcement officers; persons over 65, disabled by bodily infirmity; registered	Person's own health or his family's health; person's own or public interest will be materially injured by his attendance; undue hardship; care for a ward or child; age 70 or older ¹⁶⁷	or >, must pay the employee @ least his usual compensation	At least \$10 for each day; county w/metropolitan form of government or home rule may increase amount; 169 tolls & 10¢ per mile to and from ct. or a flat rate of \$11 per day which may be increased by county w/metropolitan form of government; board & lodging is allowed @ \$27 a day; 170 jurors may donate their reimbursement to the state to compensate criminal injuries 171
10 years old & the person's service on the jury	Any reasonable sworn excuse; an economic reason requires approval from each party; ¹⁷⁴ religious holy day ¹⁷⁵	None	Reimbursement by county for travel & other expenses is @ least \$6 but no > \$50 for each day, but a county may reduce or eliminate the daily reimbursement for persons who attend court for only 1 day or less; ¹⁷⁶ jurors' reimbursement may be donated to victims of crime, the child welfare board of the county, any program selected by the comm'rs court that is operated by a nonprofit org. & provides shelter & services to victims of family violence or any other program approved by the comm'rs ct. of the county. 177

Jurisdiction	Exemptions	Excusal	Employer's obligation to pay employee while serving as juror	-
United States	Members on active service w/armed forces; members of fire & police dep'ts; gov'tl officers actively engaged in official duties; voluntary safety personnel can exempt themselves 178	Temporary excuse for undue hardship or extreme inconvenience 179	caused by jury duty; however, the employer may offset any amounts	\$40 per day of actual attendance; for each day in a petit jury over 30, up to \$10 can be added per day; for each day in a grand jury over 45, up to \$10 can be added; travel allowance is up to the maximum rate per mile set by admin. office of courts; tolls are fully paid; reasonable parking fee may be paid; full cost of public transp. may be paid ¹⁸¹
Utah	None ¹⁸²	Undue hardship, extreme inconvenience, public necessity, or the person is incapable of jury service 183		The state pays all fees & expenses for jurors in the courts of record; in the justice courts, the fees, mileage & other expenses for jurors are paid by the municipality or county depending upon which prosecutes. 184 Every juror is entitled to \$18.50 for the 1st day & \$49 per day for each subsequent day of attendance; & if traveling > 50 miles, \$1 for each 4 miles in excess of 50 miles actually and necessarily traveled in going only. 185 Jurors may be provided a reasonable food allowance. 186 The ct. may assess the entire cost of 1 day's juror fees v. either party or their counsel or divide the cost & assess them against both if a jury demand & is w/drawn within 48 hours preceding commencement of the trial or the case is settled or continued w/in 48 hours of trial sans just cause for not having previously settled or continued the case. 187
Vermont	None	Undue hardship on the prospective juror or the employer ¹⁸⁸	None	Unless otherwise compensated by employer, \$30 a day; if hardship is shown, travel to and from ct. is reimbursed @ rate allowed to state employees 189

Jurisdiction	Exemptions	Excusal	Employer's obligation to pay employee while serving as juror	Fee & mileage
Virginia	Some elected officials; licensed practicing attorneys; judges, members of the State Corp. Comm'n, members of the Va. Workers' Compensation Comm'n; law enforcement personnel; penitentiary personnel. 190 The following can exempt themselves: mariner actually employed in maritime service; a person w/legal custody of & is necessarily & personally responsible for a child or children 16 or younger requiring continuous care by her during normal ct. hours; a person who is necessarily & personally responsible for a person having a physical or mental impairment requiring continuous care by her during normal ct. hours; any person over 70; any person whose spouse is summoned to serve on the same jury panel; any person who is the only person performing services for a business, commercial or agricultural enterprise & whose services are so essential to the operations of the business, commercial or agricultural enterprise that such enterprise must close or cease to function if such person is required to perform jury duty. 191		None	\$30 for each day; ¹⁹³ unless prosecuted for local crim'l law, commw. pays for jurors in crim'l cases; political subdivision pays for jurors in civil cases. Juror may donate fee to ct. or local gov'tl service unit. ¹⁹⁴
Washington	None	Undue hardship, extreme inconvenience, public necessity, or any reason deemed sufficient ¹⁹⁵	None	Mileage @ a rate established for state employees by the director of financial management & \$10-25 for each day determined by the county legislative authority & uniformly applied w/in the county ¹⁹⁶
West Virginia	Person 65 or older may exempt himself. 197 No other exemptions 198	Undue hardship, extreme inconvenience, public necessity 199	None	State pays mileage to & from ct. at a rate set for state employees & an amt. between \$15 & \$40 for each day as set by chief judge of cir. ct.; Jury cost is assessed v. parties, but magistrate may forego this assessment. ²⁰⁰

Jurisdiction Wisconsin	Exemptions None	Excusal Excused if can't fulfill the responsibilities of a juror, serv. is deferred for undue hardship or extreme inconvenience ²⁰¹	Employer's obligation to pay employee while serving as juror None	Fee & mileage Every juror shall receive an amount fixed by the county bd. of @ least \$16 for each day of attendance & an amount = to the mileage rate set by the secretary of employment relations for travel by state employees day in going & returning by the most usual route. The county bd. may pay jurors by the ½day, which shall be for 50% of the daily pay & may not affect the payment for mileage. If the judges in any circuit have established a sys. in which jurors are summoned to serve for only 1 day or 1 trial, the county bd. may determine the amount to be paid jurors for the 1st day of attendance & the amount to be paid jurors for traveling to and from the ct. for the 1st day of attendance.
	For any compelling reasons or if a person is a salaried & active member of an organized fire dep't or an active member of a police dep't of a city, town or law enforcement agency of the county or state; or an elected public official. ²⁰³ A person over 72 may exempt himself. ²⁰⁴	Only when material injury or destruction to his property or property entrusted to him is threatened, or when his health or the sickness or death of a member of his family requires his absence; when the care of a person's young children requires his absence. ²⁰⁵		For each mile going to & returning from the place of trial, mileage @ a rate not to exceed the maximum nontaxable rates allowed by the internal revenue serv. when the distance traveled exceeds 5 miles. 206 Jurors receive \$30 for each day; for > 5 consecutive days, the ct. may allow an additional \$20 per day. 207

- 1. Ala. Code § 12-16-62 (1995).
- 2. Id. at § 12-16-63.
- 3. *Id.* at § 12-16-8.
- 4. Evan R. Seamone, A Refreshing Jury Cola: Fulfilling the Duty Compensate Jurors Adequately, 5 N.Y.U. Legis. & Pub. Pol'y 289, 385 (2002).
- 5. Alaska Stat. § 09.20.030 (LexisNexis 2002).
- 6. Id. at § 09.20.037.
- 7. Seamone, supra note 4, at 385.
- 8. Ariz. Rev. Stat. Ann. § 21-202 (West 2002).
- 9. Id. at § 21-236.
- 10. *Id.* at § 21-221. "In setting the rates the department of administration shall consider amounts established by the United States internal revenue service as acceptable for income tax purposes without further documentation." *Id.* at § 38-623 (West 2001).
- 11. Id. at § 21-428 (West 2002).
- 12. Ark. Code Ann. § 16-31-103 (Michie 1999).
- 13. *Id.* at § 16-34-103.
- 14. *Id.* at § 16-31-105.
- 15. Id. at § 16-34-104.
- 16. Id. at § 16-34-102.
- 17. Id.
- 18. Cal. Civ. Proc. Code § 204(b) (West Supp. 2003).

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19. Id. at § 215.
20. Id. at § 631.
21. Colo. Rev. Stat. § 13-71-119 (2002).
22. Id. at § 13-71-116.
23. Id. at § 13-71-126.
24. Id. at § 13-71-127.
25. Id. at § 13-71-129.
26. Id. at § 13-71-131.
27. Id. at § 13-71-128.
28. Id. at § 13-71-129.5.
29. Conn. Gen. Stat. Ann. § 51-217 (West Supp. 2002).
30. Id. at §§ 51-217, -217a(b).
31. Id. at § 51-247.
32. Id.
33. Del. Code Ann. tit. 10, § 4511 (1999).
34. Id. at § 4514(b).
35. D.C. Code Ann. § 11-1908 (2001).
36. Id. at § 11-1909.
37. Id. at § 11-1912.
38. Fla. Stat. Ann. § 40.013 (West 1998).
39. Id.
40. Id. at § 40.24.
41. Id.
42. Ga. Code Ann. § 15-12-1 (2001).
43. Id.
44. Id. at § 15-12-2.
45. Id. at § 15-12-7.
46. Haw. Rev. Stat. Ann. § 612-6 (Michie 2002).
47. Id. at § 612-7.
48. Id. at § 612-8.
49. Idaho Code § 2-211 (Michie Supp. 2002).
50. Id. at § 2-212.
51. Id. at § 2-215. (Michie 1998).
52. 705 III. Comp. Stat. Ann. 305/10.2 (West Supp. 2002).
53. Id. at 305/4.1(g), 310/10.1(g).
54. 55 III. Comp. Stat. Ann. 5/4-11001 (West Supp. 2002).
55. Ind. Code Ann. § 33-4-5-7(a) (Michie 1998).
56. Id. at § 33-4-5-15.
57. Ind. Code Ann. § 33-19-2-3 (West Supp. 2002).
58. Iowa Code Ann. § 607A.5 (West Supp. 2002).
59. Id. at § 607A.6 (West 1996).
60. Id. at § 607A.8 (West Supp. 2002).
61. Kan. Stat. Ann. § 43-155 (1993).
62. Id. at § 43-171.
63. Ky. Rev. Stat. Ann. § 29A.090 (Michie 1998).
64. Id. at § 29A.100 (Michie Supp. 2002).
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65. Id. at § 29A.170 (Michie 1998). 66. Id. at § 29A.330 (Michie Supp. 2002). 67. La. Const. art. 5, § 33(b). 68. La. Code Crim. Proc. Ann. art. 783 (West 1998). 69. La. Rev. Stat. Ann. § 13.3049 (West Supp. 2003). 70. Me. Rev. Stat. Ann. tit. 14, § 1211 (West 2003). 71. Id. at § 1213. 72. Id. at § 1215. 73. Md. Code Ann., Cts. & Jud. Proc. § 8-209 (2003). 74. Id. at § 8-210. 75. Id. at § 8-106. 76. Mass. Gen. Laws Ann. ch. 234, § 1; ch. 234A, § 4 (West 2000). 77. Id. at ch. 234, § 1A; ch. 234A, §§ 39, 40. 78. Id. at ch. 234A, § 4. 79. Id. at ch. 234A, § 34. 80. Id. at ch. 234A, § 48. 81. Id. at ch. 234A, § 49. 82. Id. at ch. 234, § 1B. 83. Id. at ch. 234A, § 47. 84. Id. at ch. 234A, § 50. 85. Id. at ch. 234A, § 51. 86. Id. at ch. 234A, § 53. 87. Id. at ch. 234A, § 56. 88. Mich. Comp. Laws Serv. § 600.1307a(2) (LexisNexis 2001). 89. Id. at § 600.1335. 90. Id. at § 600.1344. 91. Minn. R. Practice-Dist. Cts. 808. 92. Id. at 810. 93. Minn. Stat. Ann. § 593.48 (West 2000). 94. Miss. Code Ann. § 13-5-25 (West 1999). 95. Id. at § 13-5-23. 96. Id. at § 25-7-61. 97. Mo. Ann. Stat. § 494.425 (West 1996). 98. Id. at § 494.430. 99. Id. at § 494.431. 100. Id. at § 494.455 (West Supp. 2003). 101. Mont. Code Ann. § 3-15-313 (2001). 102. Id. at § 3-15-201. 103. Id. at § 3-15-203(2). 104. Neb. Rev. Stat. § 25-1601 (1995). 105. Id. 106. Id. at § 25-1640. 107. Id. at § 33-138. 108. Nev. Rev. Stat. Ann. § 67.050 (Michie 2002). 109. Id. at § 6.020 (Michie Supp. 2001).

110. Id. at § 6.030 (Michie 1998).

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112. N.H. Rev. Stat. Ann. § 500-A:9 (Supp. 2002).
113. Id. at § 500-A:11 (1997).
114. Id. at § 500-A:15.
115. Id. at § 500-A:17.
116. N.J. Stat. Ann. § 2B:20-10 (West 2003).
117. Id. at § 2B:20-16.
118. Id. at § 22A:1-1.1 (West Supp. 2002).
119. N.M. Stat. Ann. § 38-5-2 (Michie 1978).
120. Id. at § 38-5-15.
121. N.Y. Jud. Law § 16-517 (Consol. 2002).
122. Id. at § 16-519.
123. Id. at § 16-521.
124. Id. at § 16-521-a.
125. N.C. Gen. Stat. § 9-6.1 (2001).
126. Id. at § 9-6.
127. Id. at § 7A-312.
128. N.D. Cent. Code § 27-09.1-10 (1991).
129. Id. at § 27-09.1-11.
130. Id. at § 27-09.1-14 (Supp. 2001).
131. Ohio Rev. Code Ann. § 2313.34 (West Supp. 2003).
132. Id. § 2313.13 (West 1994).
133. Id. at § 2313.16 (West Supp. 2003).
134. Id. at § 3313.211 (West 1999).
135. Id. at § 2313.34 (West Supp. 2003).
136. Id. at § 2335.28 (West 1994).
137. Id. at § 2947.23 (West Supp. 2003).
138. Okla. Stat. Ann. tit. 38, § 28 (West 1999).
139. Id.
140. Id. at §§ 34, 35 (West Supp. 2003).
141. Id. at tit. 28, § 86.
142. Id. at § 86.1 (West 1997).
143. Or. Rev. Stat. § 10.050 (1999).
144. Id.
145. Id. at § 10.061.
146. Id.
147. Id. at § 10.065.
148. Id. at § 10.075.
149. 42 Pa.C.S. § 4503.
150. Id.
151. Id. at § 4563 (a).
152. Id. at § 4561. Multicounty investigating grand jurors receive $40 a day and travel allowance at a rate equal to that of employees of Office of Attorney General. Id. at § 4553. They are
paid $10 for lunch per diem; if they reside too far away to commute, they also receive $6 for breakfast and $25 for dinner per diem. Id. The commonwealth bears the expenses of any
multicounty investigating grand jury as well as costs and expenses from any trial of a person against whom a presentment has been issued by a multicounty investigating grand jury. Id.
153. R.I. Gen. Laws § 9-9-3 (1997).
154. Id. at § 9-10-9.
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111. Id. at § 6.150 (Michie Supp. 2001). Jurors may forfeit their money in favor of an agency that serves child welfare in the county. Id. at § 6.155.

198. *Id.* at § 52-1-10. 199. *Id.* at § 52-1-11.

200. Id. at § 52-1-17 (Michie Supp. 2002).

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155. Id. at § 9-9-28.
156. Id. at § 9-9-29 (Supp. 2002).
157. Id. at § 9-29-5 (1997).
158. S.C. Code Ann. § 14-7-820 (West Supp. 2002).
159. Id. at § 14-7-840.
160. Id. at § 14-7-860. Except for the woman w/a young child and those excused for permanent physical disability, excuses are supposed to simply defer service. Id. at § 14-7-870.
161. Id. at § 14-7-1370 (Law. Co-op. 1997 & West Supp. 2002).
162. S.D. Codified Laws § 16-13-10 (LexisNexis Supp. 2002).
163. Id. at § 16-13-41.2 (Michie 1995).
164. Id. at § 16-13-47.
165. Id. at § 16-13-46 (Id. at LexisNexis Supp. 2002).
166. Tenn. Code Ann. § 22-1-103 (Supp. 2002). Complete exemption is for sole proprietors; otherwise, an exemption only defers service. Id.
167. Id. at § 22-1-104 (1994).
168. Id. at § 22-4-108.
169. Id. at § 22-4-101.
170. Id. at § 22-4-102 (Supp. 2002).
171. Id. at § 22-4-109.
172. Tex. Gov't Code Ann. § 62.106 (Vernon Supp. 2003).
173. Id. at § 62.109 (Vernon 1998).
174. Id. at § 62.110.
175. Id. at § 62.112.
176. Id. at § 61.001 (Vernon Supp. 2003).
177. Id. at § 61.003.
178. 28 U.S.C.A. § 1863(b)(5) (West 1994).
179. Id. at § 1866(c).
180. 29 C.F.R. § 541.118(a)(4) ( ).
181. 28 U.S.C.A. at § 1871 (West 1994).
182. Utah Code Ann. § 78-46-14 (2002).
183. Id. at § 78-46-15.
184. Id. at § 78-46-25.
185. Id. at § 78-46-28.
186. Id. at § 78-46-29.
187. Id. at § 78-46-37.
188. Vt. Stat. Ann. tit. 4, § 962(b) (1999).
189. Id. at tit. 32 § 1511 (1994).
190. Va. Code Ann. § 8.01-341 (Michie 2000).
191. Id. at § 8.01-341.1.
192. Id. at § 8.01-341.2.
193. Id. at § 17.1-618.
194. Id. at § 17.1-619.
195. Wash. Rev. Code Ann. § 2.36.100 (West Supp. 2003).
196. Id. at § 2.36.150 (West 1988).
197. W.V. Code Ann. § 52-1-8 (Michie 2000).
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201. Wis. Stat. Ann. § 756.03 (West 2001). 202. Id. at § 756.25.
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203. Wyo. Stat. Ann. § 1-11-103 (LexisNexis 2001). 204. *Id.* at § 1-11-104. 205. *Id.*

206. *Id.* at § 1-11-302. 207. *Id.* at § 1-11-303.

Appendix F

ABSOLUTE AND COMPARATIVE DISPARITY CASES THAT HAVE BEEN JUDICIALLY ALLOWED

Opinion	Group allegedly under- represented	Absolute disparity	Comparative disparity	Disposition & reason
United States v. Weaver, 267 F.3d 231 (3d Cir. 2001)	African Americans & Hispanics	% of group in relevant population v. its % on wheel: African Americans = 1.23%; Hispanics = .71%	African Americans = 40.01%; Hispanics = 72.98%	Affirmed conviction: Groups are such a small % of population so that the comparative disparity is of questionable probative value. The absolute disparity %'s are well below %'s previously found insufficient to establish unfair & unreasonable representation. Alternative statistics were too weak & nothing demonstrated that groups were persistently, systematically excluded.
Alexander v. Smith , No. 99-17375 (9 th Cir. Apr. 18, 2001)	Minority jurors	% of juror eligible Hispanic population v. on his venire = 3.6%		Affirmed denial of habeas corpus petition: Disparity is insufficient.
United States v. Chanthadara, 230 F.3d 1237 (10 th Cir. 2000)	Blacks & Hispanics	Over 17 Black population v. Black representation in jury wheel = 3.23%; Over 17 Hispanic population v. Hispanic representation in jury wheel = 1.6%;	Blacks = 40.89%; Hispanics = 58.39%	Affirmed convictions: These proportions don't establish a prima facie violation of amend. VI.
United States v. Joyner , 201 F.3d 61 (2d Cir. 2000)	Peers	The venire contained 1 Black out of 500 prospective jurors.		Affirmed this part: Defendant-appellant showed neither that African Americans were systematically excluded nor that use of registered voters & motor vehicle lists resulted in unfair under-representation.
United States v. Lara, 181 F.3d 183 (1 st Cir. 1999)	Hispanic			Affirmed denial of pretrial motion to dismiss: Affidavit didn't show that representation was unfair, unreasonable or disproportionate nor systematic exclusion when it attested to legislative history & purpose of Nat'l Voter Registration Act along w/genesis of consent decree wherein state conceded incomplete compliance therewith in a dist. deriving its jury wheel from registered voters.
United States v. Royal, 174 F.3d 1 (1 st Cir. 1999)	Blacks	Blacks in total population of all persons 18 and older in division v. Blacks on master jury wheel = 2.97%	60.9%	Affirmed denial of new trial: absolute disparity is insufficient

Opinion	Group allegedly under- represented	Absolute disparity	Comparative disparity	Disposition & reason
Thomas v. Borg, 159 F.3d 1147 (9th Cir. 1998)	Blacks	County's general Black population v. jury panel = 5%	100%	Affirmed denial of writ: petitioner-appellant provided insufficient statistical evidence to determine substantial under-representation & would've been unlikely to establish systematic exclusion anyhow because jury selection criteria is neutral
United States v. Sanchez, 156 F.3d 875 (8th Cir. 1998)	Various racial & ethnic groups	Hispanics in NE's population v. in jury pools = 1.148 %	58.3%	Affirmed denial of motion to suppress conditional guilty plea: when jury pools are selected from registered voters, statistics alone can't prove an amend. VI violation
United States v. Shinault, 147 F.3d 1266 (10th Cir. 1998)	Asians, Blacks & Hispanics	% of voting age population v. qualified veniremen: Asian = .76%; Black = 2.56%; Hispanic = 1.42%	Asian = 59.84 %; Black = 50.09 %; Hispanic = 48.63 %	Affirmed denial of motion to dismiss indictment: figures computed under either method don't demonstrate the type of marked or gross disparities necessary to establish unfair & unreasonable representation
United States v. Lopez, 147 F.3d 1 (1st Cir. 1998)	Defendant-appellant's ethnic group			Affirmed convictions: no basis to challenge when based only on visual observation & an examination of the venire's names
United States v. Gault, 141 F.3d 1399 (10th Cir. 1998)	Hispanics, Native & African Americans	% of group in relevant qualified juror wheels v. that group in the general population = a range of .28-7%	15.14-35.68%	Affirmed convictions: disparities aren't so gross or marked as to establish amend. V substantial under-representation or amend. VI unfair & unreasonable representation
United States v. Nelson, 137 F.3d 1094 (9th Cir. 1998)	Hispanics	Proportion of Hispanics in the community v. the proportion in the jury pool = 3.9 %		Affirmed this part: absolute disparity is insufficient
Thomas v. Hill , No. 96-16506 (9 th Cir. Sept. 4, 1997)	Blacks	Original jury venire v. county @ large =2%		Under-representation was denied: jury venire was overrepresented & petitioner- appellant failed to substantiate claim that Blacks were systematically under-counted in county
United States v. McPhaden , No. 96-30272 (9 th Cir. Aug. 14, 1997)	African Americans	Population in the division v. the division's master jury wheel = 1.8%	50%	Affirmed conviction: this under- representation in master jury wheel would result in under-representation of < 1 African American juror in an average venire & is insubstantial
United States v. Rioux, 97 F.3d 648 (2d Cir. 1996)	Blacks & Hispanics	Qualified jury wheel over time v. 18 & older subset of population = (Black) 1.58% for petit juries & 2.08% for grand juries & (Hispanic) = 2.14% for petit & grand juries		Affirmed conviction: amend. VI – to be representative, 2 Blacks & 2 or 3 Hispanics would have to be added to a pool to compensate petit juries; 2 or 3 Blacks & 2 or 3 Hispanics would have to be added to a pool to compensate grand juries: such meager numbers aren't infirm & if they would be, systematic exclusion wasn't established. Amend. V – no evidence of discriminatory intent

Opinion	Group allegedly under- represented	Absolute disparity	Comparative disparity	Disposition & reason
United States v. Joost, No. 95-2031 (1 st Cir. Aug. 7, 1996)	Citizens of Providence ¹	Registered voters v. master jury wheel = .79%; master v. qualified jury wheel = 4.87%; population 18 & older in Providence v. same population in the rest of state on qualified jury wheel = 7.13%		Dismissed challenge: Non-whites & low income persons are distinctive, but Providence isn't a permissible surrogate for both; even if it were a permissible surrogate, absolute disparities up to 10% are widely conceded to be permissible
Johnson v. McCaughtry , 92 F.3d 585 (7 th Cir. 1996)	Persons under the age of 25	9%	33%	Denied petition: rejected a claim based upon age noting every cir. to consider claims based upon age have done likewise; disparity wasn't large enough anyhow
United States v. Jones , No. 94- 10584 (9 th Cir. July 12, 1996)	Hispanics	Jury-eligible Hispanic population v. master wheel: 1992-93 = 10.6 %; 1993-94 = 11.3 %		Affirmed denial of motion: % of disparity is only small increase from that previously allowed & looking @ people rather than %, grand jury only needed 2.4 or 2.6 more Hispanics to be representative.
United States v. Noel , No.95-30146 (9 th Cir. June 10, 1996)	African Americans	Whole population v. jury venire = 3.6%		Affirmed conviction: representation was shown from a single jury & underrep'n has to be established from > 1 venire; absolute disparities below 7.7% are insubstantial & have previously been permitted
United States v. Esquivel, 88 F.3d 722 (9 th Cir. 1996)	Hispanics	Population of Hispanic citizens in district over 18 v. jury pool on master wheel = 4.9 %		Affirmed denial of motion to dismiss: amend. VI – absolute disparity is unsubstantial & permissible; amend. XIV = protection – no discriminatory intent shown
United States v. Rogers, 73 F.3d 774 (8 th Cir. 1996)	African Americans	General population of the district's division v. the petit jury pool from March 1997-March 1992 = .579 %	30.96%	Affirm convictions: reluctantly followed precedent establishing that the jury selection process doesn't systematically exclude African Americans
United States v. Grisham, 63 F.3d 1074 (11 th Cir. 1995)	African Americans	District's population eligible for jury service v. distinctive group on qualified jury wheel = 2.41% for grand jury qualified jury wheel & 4.72% of petit jury qualified jury wheel		Affirmed denial of motion to dismiss: amend. VI – the cir. doesn't invalidate absolute disparities of 10% or less; amend. V – "absolute 'cross-community' disparities" of 13% & 15.5% are insufficient to infer discriminatory purpose of plans
United States v. Cannady, 54 F.3d 544 (9 th Cir. 1995)	Ethnic minorities	master jury wheel v. eligible in community: African Americans = 1.1% with a range of .3-1%; Asians = a range of72%; Hispanics = a range of 2.2-3.1%		Affirm judgments of convictions: statistical under- representation wasn't shown for amend. VI nor V (and the latter also requires discriminatory intent to be shown)

Opinion	Group allegedly under- represented	Absolute disparity	Comparative disparity	Disposition & reason
United States v. Ashley, 54 F.3d 311 (7 th Cir. 1995), vacated on other grounds, 266 F.3d. 671 (2001)	Blacks	Blacks in voting age population of the district v. venire = 3%		Affirmed convictions: discrepancy of < 10% alone doesn't demonstrate unfair or unreasonable representation; alleged under-representatin is statistical coincidence & there is no allegation of systematic exclusion
United States v. Quinones, No. 93- 10751 (9th Cir. Jan. 25, 1995)	Hispanics	Voting age Hispanics in division v. 1992 jury wheel from which his petit jury was drawn = 10.05%	47%	Affirmed conviction: amend. VI - absolute disparity wasn't high enough; amend V - statistics are only for one year, which isn't a significant amount of time & there was no argument that the selection was susceptible to abuse or not racially neutral
United States v. Pion, 25 F.3d 18 (1st Cir. 1994)	Hispanic	Hispanics in relevant general population v. persons appearing for juror orientation = 3.4%	81%	Affirmed conviction: appellant identified no systematic defect or operational deficiency & didn't assert intentional exclusion; w/randomly drawn names, there is no reasonable inference of systematic exclusion
Floyd v. Garrison, 996 F.2d 947 (8th Cir. 1993)	Blacks	On jury pools v. in the general population = < 4%		Affirmed denial of motions: fair-cross-section—disparity is too insubstantial & failed to show under-representation of Blacks was inherent in selection process that solely used registered voters as source; protection—disparity is too insignificant & solely using registered voters as source wasn't shown to be purposefully discriminatory
United States v. Garcia, 991 F.2d 489 (8th Cir. 1993)	African Americans & Hispanics	Numerous calculations of groups in general population v. in grand & petit jury pools & qualified jury pool = < 1%		Affirmed denial of motion challenging jury empanelment process: unconvinced that either group was substantially or continually underrepresented & numerical disparity alone doesn't violate rights & support challenge
Ramseur v. Beyer, 983 F.2d 1215 (3d Cir. 1992)	African Americans	% of population group eligible for jury duty v. its % in the venire = 14.1 %	39.3%	Affirmed denial of writ of habeas corpus: = protection—disparities are at the margin of previously acceptable ranges but 28.9 standard deviations represents that under-representation wasn't random. Still, figures were insufficient to support presumed discrimination. "When we combine multiple, facially neutral selection lists with studies indicating non-random under[-]representation that cover only two years duration, we find that the 'substantial under[-]representation' requirement is unfulfilled."; amend. VI — evidence is insufficient to establish that the selection system is unfair & unreasonable

Opinion	Group allegedly under- represented	Absolute disparity	Comparative disparity	Disposition & reason
Cunninghamv. Zant , 928 F.2d 1006 (11th Cir. 1991)	Women & African Americans	Above the age of 18 in general population v. on the venire: Women = 17%; African Americans = 14%		Affirmed denial this claim: amend. VI – cross- appellant did not show under-represented groups were systematically excluded; amend. XIV- cross-appellant did not show selection by a practice providing opportunity for discrimination
United States v. Maldonado-Rivera, 922 F.2d 934 (2d Cir. 1990)	Hispanics & Puerto Ricans			Affirmed denial of claim: used absolute impact approach – under-representation of Puerto Ricans was @ most 1¼ in a venire of 60 & this is insignificant discrepancy
United States v. Biaggi, 909 F.2d 662 (2d Cir. 1990)	Blacks and Hispanics	% in the population of the Southern Dist. v. % in the Master Jury Wheel for the Manhattan seat of court: Blacks = 3.6%; Hispanics = 4.7%		Rejected challenges: amend. V - use of the voter registration list as the sole source of prospective jurors wasn't shown to deprive the Jury Plan of racial neutrality or render it susceptible to abuse; amend. VI - 2 Blacks & 2-3 Hispanics would have to be added to a venire of typical size to eliminate under-representation. These figures press the "absolute numbers" approach to its limit, & amend. VI issue would be extremely close if the under-representations had resulted from any circumstance less benign than use of voter registration lists.
United States v. Young, No. 88- 3242 (9th Cir. Aug. 15, 1989)	Native Americans			Affirmed conviction: defendant-appellant didn't attempt to show unfair & unreasonable representation or that they were systematically excluded
United States v. Sanchez-Lopez, 879 F.2d 541 (9th Cir. 1989)	Hispanics	In total population v. on wheel: master jury = 2.05%; southern div. = 2.8%;	Master jury = 52.9 %; southern div. = 50 %;	Affirmed refusal to dismiss: defendants-appellants conceded under-representation is insubstantial under absolute disparity; cir. consistently favors that analysis & rejects comparative analysis
Ford v. Seabold, 841 F.2d 677 (6th Cir. 1988)	Women, young adults, nonwhites & university students	Women in the county population over 18 v. in the jury pool: 1980 = 21.7%; 1981 = 18.7%		Affirmed denial of writ of habeas corpus: amend. VI- young adults & college students are indistinct; no evidence was presented to show under-representation of women resulted from systematic exclusion; amend. XIV- @ that time, one couldn't raise = protection claim on behalf of groups in which one isn't in so that claim failed for women, young adults & college students; petitioner-appellant's expert didn't find race to be statistically significant using statistical decision theory
Tucker v. Kemp , 819 F.2d 978 (11th Cir. 1987)	Blacks	% in county v. presence in traverse jury pool = 14.62%		Denied application: petitioner abused writ of habeas corpus by waiting until eve of execution to raise claim & proffer supportive evidence

Opinion	Group allegedly under- represented	Absolute disparity	Comparative disparity	Disposition & reason
Dobbs v. Kemp, 809 F.2d 750 (11th Cir. 1987), rev'd on other grounds sub nom. Dobbs v. Zant, 506 U.S. 357 (1993)	Women			Denied petition for rehearing: amend. XIV - absolute disparity was unproven; when persons were randomly selected from list w/virtually no possibility for biased selection, no prima facie violation for underrepresentation is established by some undetermined amount from a single grand jury list
United States v. Rodriguez, 776 F.2d 1509 (11th Cir. 1985)	Blacks & Hispanics	Proportion eligible for jury service in div. v. % on qualified wheel: Blacks = 6.674 %; Hispanics = 5.52 %		Affirmed denial of motion to dismiss: absolute disparity is well w/in limits set by cir.
United States v. Pepe, 747 F.2d 632 (11th Cir. 1984) United States v. Esle, 743 F.2d 1465 (11th Cir. 1984)	Blacks Hispanics	Proportion eligible for jury service in div. v. % on master wheel = 7.6% Hispanics in qualified wheel population v. eligible population = range from 11.3-13.7% depending upon source	67.3%	On this claim, affirmed convictions: proper comparison is w/qualified wheel, but disparity is @ least as great here yet well w/in limits set by cir. Affirmed convictions: appellants submitted statistics for only 1 yr.; under-representation must be proved over a significant period
United States v. Lewis, 743 F.2d 859 (11th Cir. 1984)	Blacks	of data		Affirmed denial of motion to dismiss: amend. V – statistics submitted compared representation of white w/non-white people; non-white persons aren't distinctive group singled out for special treatment under law
United States v. Tuttle, 729 F.2d 1325 (11th Cir. 1984)	Blacks	Presence in general population v. presence on master wheel = 6.33%		Affirmed convictions: appellants showed insufficiently stark absolute disparity; difference is < 1 juror out of 12
United States v. Hafen, 726 F.2d 21 (1st Cir. 1984)	Blacks	Eligible Blacks in population v. % of Blacks on master wheel = 2.02%	54.2%	Affirmed conviction: absolute disparity is insufficient to show under-representation
Bryant v. Wainright, 686 F.2d 1373 (11th Cir. 1982)	Blacks	% in general population of county v. % of grand jurors = avg. variance of 7.4 % from 1974-78		Affirmed denial of petition: amend. XIV - figures are similar to previously permitted % & selection method was essentially neutral w/little opportunity to discriminate
Hirst v. Gertzen, 676 F.2d 1252 (9th Cir. 1982)	Native Americans	% in relevant geographical area v. % remaining on jury venire post granted excuses = 3.86%	60%	Affirmed denial of motion to dismiss for intentional racial discrimination in juror selection: amend. V – susceptibility of abuse in selection procedure even if group is substantially under-represented on single venire doesn't establish prima facie case of intentional discrimination

Opinion	Group allegedly under- represented	Absolute disparity	Comparative disparity	Disposition & reason
United States v. Apodaca, 666 F.2d 89 (5th Cir. 1982)	Hispanic surnamed individuals; young people	Gross general population of county w/Spanish surname & language v. sample taken from qualified jury wheel = 17.8%; general population of county of persons v. sample drawn from jury list: age 18-35 = 18.6%; age 18-30 = 16.9%; age 18-25 = 11.7%		Affirmed conviction: record is totally devoid of any evidence that would tend to establish % in either class who are eligible to serve as jurors
United States v. Yazzie, 660 F.2d 422 (10th Cir. 1981)	Indians	% of Indians in general population over age 18 v. those returning questionnaires: Grand jury = 2.94 %; Petit jury = 4.29 %	Grand jury = 45.2%; Petit jury = 46.3%	Affirmed denial of motion to dismiss: statistics didn't show prima facie case under either amend. V or VI; absolute disparity should have compared w/those returning questionnaires found qualified but the difference is too slight to invalidate comparison; disparate impact in persons: panel for grand jury = 1.5; panel for petit jury = 2.1; grand jury = .7; petit jury = .51
Newberry v. Willis , 642 F.2d 890 (5th Cir. 1981)	Blacks & females	Number of eligible to serve v. number on grand & petit jury lists: Blacks = 6.5 %; females = 0 %	Blacks = 10.07 %; females = 0 %	Affirmed dismissal of action: 6.5% disparity is negligible; appellants didn't question the standards to achieve 0 disparity for females & same standards were used to achieve remaining 6.5% disparity for Blacks
United States v. Clifford, 640 F.2d 150 (8th Cir. 1981)	American Indians	% of Indians on list of persons eligible for petit jury v. % of Indians in general population = 7.2%	46%	Affirmed convictions: absolute disparity isn't substantial under-representation; representation doesn't have to be precisely proportional
United States v. Butler , 611 F.2d 1066 (5th Cir. 1980)	Non-white, service workers & youth	Presence on jury wheel v. presence in population: non- white = 8.69%; service workers = 5.71%; youth = 9.14%		Affirmed convictions: didn't decide these to be distinctive groups because defendants-appellants failed to show an impermissible disparity
United States v. Maskeny, 609 F.2d 183 (5th Cir. 1980)	Various groups responding to jury service questionnaire being placed on the qualified wheel	% of each group in the community v. each group returning questionnaires or ending up on the qualified wheel = < 10%		Affirmed convictions: didn't decide whether the groups are distinctive because the shown absolute disparities don't violate amend. VI
United States v. Test, 550 F.2d 577 (10th Cir. 1976)	Chicanos, Blacks & persons under 40	% of Blacks & Chicanos in voting age community v. on master jury rolls = approximately a maximum of 4%; % of age group in jury wheels v. in population: 21-29 = 11.8%; 30-39 = .38%; 40 & over = -12.29%		Affirmed rejection of challenges: prima facie case of systematic exclusion based entirely upon statistical disparity properly failed w/this low disparity for Blacks & Chicanos (disparity of < 1 person in petit or grand jury or 2 persons on a jury panel aren't gross or marked); there is no evidence that persons age 21-39 are distinctive

over = -12.29%

1. Discrimination was asserted against non-whites, poor and certain minorities, but the figures represent the disparity between Providence's representation among registered voters and the jury wheels.

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Appendix G

ABSOLUTE AND COMPARATIVE DISPARITY CASES THAT HAVE BEEN JUDICIALLY INVALIDATED

Opinion	Group allegedly under- represented	Absolute disparity	Comparative disparity	Disposition & reason
United States v. Jackman, 46 F.3d 1240 (2d Cir. 1995)	Residents of Hartford & New Britain	Residents of Hartford & New Britain on venire v. those residents in the relevant population = 8.5%		Reversed conviction & ordered new trial: all residents of the 2 cities were excluded from the jury pool & these cities contain 62.93% of voting age Blacks & 68.09% voting age Hispanics in the division. Before the problem was permanently corrected, the clerk picked names from the old pool excluding these 2 cities & supplemented those names w/a # of names needed that were picked from a new pool that included these cities. Using 2 lists instead of 1 pool resulted in systematic exclusion of Blacks & Hispanics.
Machetti v. Linahan, 679 F.2d 236 (11th Cir. 1982)	Women	County adult female population v. jury list: grand = 42%; traverse = 36%		Reversed & remanded w/directions to issue writ: proof sufficiently established under-representation resulting from systematic exclusion under procedure that allowed women to exempt themselves
Berry v. Cooper , 577 F.2d 322 (5th Cir. 1978)	Black & female residents of Peach County (the appeal only dealt w/racial discrimination)	Blacks in voting age population v. traverse lists = 17.34%; Blacks in voting age population v. grand jury lists = 8.8%	Traverse lists = 31.28%; grand jury lists = 17.6%	Reversed & remanded to adequately remedy discrimination: dist. ct. measured the adequacy of the remedial lists under an erroneous legal std.; probably will have to compile entirely new list.
Birt v. Montgomery, 709 F.2d 690 (11th Cir. 1983)	Blacks & women	County population v. traverse jury pool: Blacks = 32.9% women = 17.6% (disparities were higher in previous years)		Vacated denial of petition & remanded for further proceedings to determine if right to counsel of choice was denied & if appointed counsel was ineffective actually & substantially detrimental to defense: statistics appear to establish prima facie case under amend. VI, XIV
Alston v. Manson, 791 F.2d 255 (2d Cir. 1986)	Blacks	1.58%		Affirmed habeas corpus petition granting relief: amend. XIV – Blacks were substantially under- represented using statistical decision theory; state failed to rebut presumed discrimination

Appendix H

APPELLATE RULINGS MENTIONING STANDARD DEVIATION

Opinion	Group allegedly under- represented	Number of standard deviations from expected number	Disposition & reason
McGinnis v. Johnson , 181 F.3d 686 (5 th Cir. 1999)	African Americans	1.02	Affirmed denial of habeas corpus relief: amend. XIV – statistical evidence is insufficient to infer purposeful discrimination in excusing jurors when excusal provision is racially neutral & there was no evidence that judge treated venirepersons differently based upon race. Amend. VI – excusal of three African Americans from one jury venire doesn't demonstrate systematic exclusion.
Jefferson v. Morgan , 962 F.2d 1185 (6 th Cir. 1992)	Blacks	6	Affirmed habeas corpus relief to quash indictment & vacate conviction: amend. XIV –state didn't rebut prima facie case; process used at the time to select grand jurors was key man system.
United States v. LaChance, 788 F.2d 856 (2d Cir. 1986)	Blacks, women & younger adults	Blacks: on venires = 8.46; on qualified wheels = 3.69 - Females on qualified wheels = 3.77	Affirmed convictions: comparative disparity: Blacks = 49.57% on venires & 30.8% on qualified wheels; females = 8.01% on qualified wheels. Didn't decide to analyze via standard deviation because appellants didn't segregate under-representation by year making standard deviation for combined years meaningless. Dist. ct. didn't abuse discretion in finding age groups indistinct.
Boykins v. Maggio , 715 F.2d 995 (5 th Cir. 1983)	Blacks	1.56 for veniremen & 2 for jurors	Affirmed denial of habeas corpus relief: amend. XIV – Neither of these deviations is suspect.
Moultre v. Martin , 690 F.2d 1078 (4 th Cir. 1982)	Blacks	2 averaged over six years	Affirmed denial of habeas corpus relief: amend. XIV - rejected average absolute disparity of 22% to analyze via standard deviation, which doesn't exceed an allowable standard.
United States v. Diggs , 522 F.2d 1310 (D.C. Cir. 1975)	Young people		Affirmed this part: Dist. ct. didn't err denying dismissal of indictment or not striking the jury panel based upon refusal to recognize young people as a group.
Castaneda v. Partida , 430 U.S. 482 (1977)	Mexican Americans	29	Affirmed holding of denial of equal protection: Absolute disparity: Mexican Americans in population of county v. summoned for grand jury service = 40%. Statistical disparity was adequate to establish prima facie case & state failed to rebut it.