

COMMONWEALTH OF MASSACHUSETTS

SUPREME JUDICIAL COURT

MIDDLESEX COUNTY

NO. SJC-11970

COMMONWEALTH

V.

IMRAN LALTAPRASAD

BRIEF FOR THE COMMITTEE FOR PUBLIC COUNSEL SERVICES,
FAMILIES AGAINST MANDATORY MINIMUMS, AND THIRTY-NINE
OTHERS, AS AMICI CURIAE

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ISSUES PRESENTED

May a Superior Court judge, in the exercise of her sound discretion, impose sentences below the minimum terms prescribed by G.L. c.94C, §32(b), and §32A(d), in order to avoid the constitutional violations that such mandatory minimum drug laws otherwise present, in particular:

1. the extinguishment of the quintessential judicial power to consider any relevant circumstance when imposing sentence, and the de facto vesting of ultimate sentencing authority in the hands of prosecutors, in violation of article 30 of the Declaration of Rights,

2. the imposition of punishment that fails to account for drug offenders' individualized degree of moral culpability, which may be diminished by the substance use disorder afflicting half of our prison population, in violation of the article 26 requirement that punishment be proportionate to both the offender and the offense, and

3. the disproportionate incarceration of people of color, like Imran Laltaprasad, in violation of the equal protection clause of the Fourteenth Amendment and cognate provisions of the Declaration of Rights?

STATEMENT OF INTEREST OF AMICI CURIAE

Amici are a diverse group of forty-one organizations united in their belief that mandatory minimum drug laws have proven to be both ruinous social policy -- especially with respect to poor people of color -- and incompatible with elemental principles of fairness and justice.

The Committee for Public Counsel Services (CPCS) provides counsel to indigent persons entitled to counsel in criminal cases in Massachusetts state courts. CPCS expends millions of public dollars every year carrying out its statutory responsibilities with respect to poor persons brought up on mandatory minimum drug charges, and has witnessed countless lives needlessly ruined as a result of such prosecutions.

Families Against Mandatory Minimums (FAMM) is a nonpartisan nonprofit organization that advocates for the repeal of mandatory minimum sentencing laws at the state and federal level. FAMM's Massachusetts Project has more than 2,000 members, including prisoners and their families, attorneys, legislators, academics, religious leaders, and criminal justice activists.

American Friends Service Committee (AFSC) is a Quaker organization that promotes peace and social

justice. Co-recipient of the Nobel Peace Prize in 1947, AFSC has had sentencing reform and fairness as a core focus of its criminal justice work since 1973 with the enactment of the first Rockefeller drug laws, and has consistently opposed mandatory minimum drug sentences because of the disparate effect they have on urban communities of color and the role they have played in determining the United States' singularly high incarceration rate.

Arise for Social Justice is a low-income, anti-oppression people's political organization in Springfield. Working to educate, organize, and unite poor people to learn about and fight for social justice, Arise is a community leader in criminal justice issues, including the War on Drugs that has had a devastating impact upon the communities it serves.

Black and Pink is an organization whose members include LGBTQ prisoners and that provides direct support and resources to lesbian, gay, bisexual, transgender, and queer people who are court-involved, incarcerated, or recently released from prison. Many of Black and Pink's members have been personally affected by mandatory minimum sentences for drug offenses.

Blackstonian is a newspaper and website created as

a community service to the Black, Latino, Cape Verdean and other peoples of color in Boston and the surrounding area. Reporting on issues of public importance to communities of color, it has published extensively on the impact of mandatory minimum sentences for drug offenses.

Brookline PAX is a liberal and progressive advocacy group founded in 1962 that opposes public policies -- of which mandatory minimum drug sentences are a prime example -- which are unfair, ineffective, and racially discriminatory.

Center for Church and Prison, Inc. is a resource and research center working towards community revitalization through sentencing and prison reform. Its work has focused on addressing the mass incarceration of non-violent drug offenders and the disproportionate impact of the War on Drugs on disadvantaged communities.

Charles Hamilton Houston Institute for Race and Justice at Harvard Law School works to ensure that every member of our society enjoys equal access to the opportunities, responsibilities, and privileges available to all in the United States. The Institute vigorously opposes criminal justice policies, such as mandatory minimum drug sentences, that disproportionately impact communities of color.

Coalition for Effective Public Safety is an organization of advocates, program providers, parolees, formerly incarcerated men and women, friends and relatives of prisoners, and human rights activists who have joined forces to promote and safeguard the human rights of all people across Massachusetts, with a focus on reforming parole, solitary confinement, and the medical release of prisoners. The coalition opposes mandatory minimum sentences for drugs, which are often a precursor to its priority issues.

Coalition for Social Justice is a southeast Massachusetts organization dedicated to building a grassroots movement for progressive social change, rooted in communities that have been excluded from the economic benefits of the current system. The War on Drugs has weighed most heavily on the communities it serves, resulting in high rates of incarceration and limited opportunities for those who have paid their debt to society.

Community Resources for Justice focuses on successful prisoner reentry through its halfway house programs and reforming criminal justice practice in Massachusetts and other states by engaging elected leaders to adopt evidence-based strategies and improved

public policy. It sees first-hand the devastating result of mandatory minimum drug laws and has witnessed the positive results in other states where this outdated approach to sentencing has been discarded.

Criminal Justice Policy Coalition is a member-based, non-profit organization dedicated to the advancement of effective, just, and humane criminal justice policy in Massachusetts. The Coalition believes that drug offenders pay too high a price under our current laws, which fail to promote either individualized justice or safe communities.

Ex-Prisoners and Prisoners Organizing for Community Advancement is a grassroots group of community organizers whose mission is to create resources and opportunities for those who have paid their debt to society. Many of its members have served mandatory minimum sentences for drug offenses.

Families for Justice as Healing is an organization created by formerly incarcerated women. Its mission includes advocacy with respect to drug policies that lead to over-incarceration.

Greater Boston Interfaith Organization (GBIO) is a broad-based organization that works to coalesce, train, and organize the communities of greater Boston across

religious, racial, ethnic, class, and neighborhood lines for the public good. GBIO's primary goal is to develop local leadership and organized power to fight for social justice. Criminal justice reform, including the reform or repeal of mandatory minimum sentences for drug offenses, is one of GBIO's priorities.

Greater Boston Legal Services (GBLS) is a nonprofit organization which provides free legal assistance in civil matters to indigent people in Boston and thirty-one surrounding cities and towns. GBLS created a CORI & Re-entry Project in 2008 to help those who are struggling with the devastating effects of incarceration and criminal records. The outcome of this case will affect countless GBLS clients in their efforts to obtain jobs, housing, and opportunities for full and productive lives.

Jewish Alliance for Law and Social Action is a civil rights organization dedicated to achieving economic and racial justice and the removal of discrimination in all aspects of civil life, through legislative and legal action, education, and grass roots organizing. Proportionality of punishment and the need for judicial discretion are among its concerns in achieving fairness in sentencing for those convicted of drug offenses.

Jobs Not Jails is a coalition of over 125 social justice, religious, minority, labor union, human rights, and ex-offender support organizations united to reform the criminal justice system and reinvest in jobs programs. The coalition has called for the repeal of mandatory minimum drug sentences in bills filed in the Massachusetts Legislature, in testimony before the Joint Committee on the Judiciary, and in testimony before the Massachusetts Sentencing Commission.

Lawyers' Committee for Civil Rights and Economic Justice is a non-profit civil rights law office specializing in law reform litigation, public policy advocacy, and community education to redress race and national origin discrimination. Although it does not handle criminal defense cases, the organization recognizes that mandatory minimum sentences for drug offenses have a disproportionate and negative impact on people of color and the poor.

Massachusetts Association of Criminal Defense Lawyers (MACDL) is an incorporated association representing more than 1,000 experienced trial and appellate lawyers who are members of the Massachusetts Bar and who devote a substantial part of their practices to criminal defense. MACDL devotes much of its

energy to identifying, and attempting to avoid or correct, problems in the criminal justice system. This case raises questions of importance to the administration of justice.

Massachusetts Black Lawyers Association (MBLA), a professional bar association since 1973, provides a valuable network and visible presence for attorneys of color within the Massachusetts legal community. MBLA also sponsors forums on current topics of interest to members of the legal community and seeks collaborations with other bar associations and professional organizations, particularly in the interest of providing services to communities of color.

Massachusetts Conference of the United Church of Christ (MACUCC) inspires and networks its 64,000 members in local churches to work for justice. At its Annual Meeting in 2015, MACUCC delegates from congregations throughout the Commonwealth passed a resolution calling for an end to discriminatory systems of mass incarceration in Massachusetts -- including an end to mandatory minimum sentencing for drug convictions -- and calling on the Minister and President, the Board of Directors, and members and friends of local congregations to take action in this regard.

Massachusetts Institute for a New Commonwealth
(MassINC) works to support the growth and vitality of the middle-class through public policy research. A nonpartisan organization, MassINC has found that mandatory-minimums represent an inefficient use of criminal justice resources and place undue hardship on communities of color.

Massachusetts Law Reform Institute is a statewide non-profit law and poverty center whose mission is to advance economic, social, and racial justice for low-income persons and communities, and whose work includes advocacy in support of criminal justice reform, including the elimination of punitive and counterproductive mandatory minimum sentences for drug crimes.

Massachusetts Organization for Addiction Recovery (MOAR) was founded in 1991 to organize recovering individuals, families, and friends into a collective voice to educate the public about the value of recovery from alcohol and other substances. MOAR opposes mandatory minimum sentencing laws for drug offenses because they prevent the courts from recognizing the role of addiction and ordering treatment instead of incarceration.

NAACP, New England Area Conference, supports democracy, dignity and freedom and stands against all forms of injustice. The NAACP has a long history of opposing mandatory minimum sentences for drug offenses because they are often too harsh, prevent the courts from meting out individualized justice, and cause disproportionate harm to persons of color.

National Association of Social Workers, Massachusetts Chapter is the largest professional organization for social workers in Massachusetts, with over 7,000 members. Its Criminal Justice committee, comprised of social workers in the courts, jails, and community settings, opposes mandatory minimum drug sentences and works for evidence-based addiction treatment and a more compassionate, restorative criminal justice system.

National Lawyers Guild, Massachusetts Chapter is a progressive bar association of lawyers, legal workers, and law students dedicated to overcoming political, social, and economic injustices. It has a long history of opposing mandatory minimum sentences for drug offenses, given their ineffectiveness and the egregious racial disparities that result.

New Start Project is an organization that

advocates for and supports individuals who are returning and have returned home from incarceration, with the goal of successful re-entry into the community. New Start witnesses first-hand the devastating impact that mandatory minimum sentencing has on an individual's life cycle of employment, education, and family.

Out Now is a youth led, adult advised, queer youth organization that works to promote harm reduction, self determination, and community building through anti-oppression organizing. It works to educate the Springfield community about the negative impacts of the prison industrial complex and the War on Drugs on the lives of LGBTQ youth.

Partakers is a faith-based non-sectarian organization that provides mentoring to incarcerated women and men who are enrolled in the Boston University Prison Education Program. The organization typically does not involve itself in litigation but has added its name to this brief due to the impact that mandatory minimum sentences have on those it serves.

Prison Policy Initiative is a Massachusetts-based national non-profit, non-partisan organization that challenges over-criminalization and mass incarceration

through research, advocacy, and organizing. Mandatory minimum sentences for drug offenses are often at the heart of the issues that the organization tackles and it has a strong interest in the challenges to such sentences raised by this case.

Prisoners' Legal Services of Massachusetts is a non-profit organization established to protect and promote the civil and constitutional rights of Massachusetts prisoners and their families. It has long advocated against mandatory minimum sentences for drug offenses, given their impact on prisoners in the Commonwealth.

Real Cost of Prisons Project brings together justice activists, artists, researchers, and people directly experiencing the impact of mass criminalization to end mandatory minimum and other excessively punitive sentences.

Social Workers for Peace and Justice is an organization of master's level social workers serving minority and low income groups that is acutely aware of the damage that poor public policy inflicts on its clients' families and communities. The organization also conducts public education campaigns about pending reform legislation on issues including mandatory

minimum sentences for drug offenses.

South Asian Bar Association of Greater Boston serves as the regional voice for the concerns and opinions of South Asians in the community. The organization provides public education, including its award-winning "Know Your Rights!" program, to help fulfill its commitment to community service. It joins this brief in recognition of the racial disparities that result from mandatory minimum drug sentencing laws.

Span assists people who are or have been in prison to achieve healthy, productive and meaningful lives. The organization helps plan for former offenders' reintegration and provides guidance to successfully negotiate the complex challenges of reintegration from incarceration. Span serves many former prisoners who have served mandatory minimum sentences.

Trinity Chapel is an Episcopal church located in Shirley, Massachusetts, which is committed to social justice and has sponsored many educational forums on issues that affect the community, including criminal justice issues such as mandatory minimum sentencing laws and restorative justice. The church's rector, vestry, and parishioners wish to express their concern

about the unfair sentences that too often result when the trial judge does not exercise his or her discretion, and as a result, individualized justice is not allowed.

Union of Minority Neighborhoods works across Massachusetts to ensure that communities of color can effectively organize around the issues facing them, including the mass incarceration that has resulted from the War on Drugs.

Universalist Unitarian Mass Action is the statewide advocacy network for the 20,000 Unitarian Universalists in Massachusetts. One of the organization's top priorities is to end unnecessary mass incarceration, in particular as it results from mandatory drug sentences.

STATEMENTS OF THE CASE AND FACTS

Amici adopt the statement of the case and statement of facts set forth in the defendant's brief.

SUMMARY OF THE ARGUMENT

The amicus announcement in this case asks whether a Superior Court judge has discretion to impose sentences below the minimum terms specified in G.L. c.94C, §32(b), and §32A(d), pursuant to Chapter 211E

"or otherwise." For the reasons argued by Laltaprasad, amici agree that the plain language of Chapter 211E -- codified only after this Court's decision in Commonwealth v. Russo, 421 Mass. 317 (1995) -- conferred Judge Frison with authority to impose the sentences in question, upon a finding of mitigating circumstances sufficient to justify leniency in Laltaprasad's case. Amici also agree that this reading of Chapter 211E is well supported by the canon of constitutional avoidance,^{1/} the doctrine of severability,^{2/} and the rule of lenity.^{3/}

However, in the event the Court concludes that the statutory authority of judges to "impose a sentence below any mandatory minimum term prescribed by statute,"

^{1/}See, e.g., Commonwealth v. Perry P., 418 Mass. 808, 812 (1994) ("if reasonably possible, statute should be construed to avoid unnecessary decision of serious constitutional question"), citing Beeler v. Downey, 387 Mass. 609, 613-614 (1982).

^{2/}See, e.g., Commonwealth v. Brown, 466 Mass. 676, 680-681 (2013) ("The provisions of any statute shall be deemed severable, and if any part of any statute shall be adjudged unconstitutional or invalid, such judgment shall not affect other valid parts thereof"), quoting G.L. c.4, §6, Eleventh, inserted by St. 1983, c.210.

^{3/}See, e.g., Commonwealth v. Richardson, 469 Mass. 248, 254 (2014) (noting that rule of lenity, which entitles criminal defendants to the benefit of any rational ambiguity as to Legislature's intent, "applies to sentencing as well as substantive provisions"), quoting Commonwealth v. Gagnon, 387 Mass. 567, 569 (1982).

G.L. c.211E, §3(e), lays indefinitely dormant -- i.e., until such time as sentencing guidelines may be "enacted into law," G.L. c.211E, §3(a)(1) -- it is amici's position that this authority inheres within article 30 of the Declaration of Rights, as a function of the "quintessential judicial power . . . to sentence" in criminal cases. Commonwealth v. Rodriguez, 461 Mass. 256, 264 (2012). See also Commonwealth v. Cole, 468 Mass. 294, 304-305 (2014).

Indeed, the imposition of an individualized sentence -- one which "look[s] closely at all relevant facts and circumstances" and "mak[es] a nuanced decision" -- is a "fundamental judicial duty." United States v. Bannister, 786 F. Supp. 2d 617, 689-690 (E.D.N.Y. 2011) (Weinstein, J.). But, by definition, mandatory minimum drug laws foreclose individualized sentencing. The rigidity of the "one size fits all" approach to sentencing for drug offenses makes unfairness in individual cases inevitable, and has led virtually everyone who has thought seriously about the subject to call for reform. See, e.g., Massachusetts Bar Association, *The Failure of the War on Drugs: Charting a New Course for the Commonwealth*, 16-20 (2009).

To be sure, this Court has previously stated that

the legislative branch may require that judges impose mandatory minimum sentences, at least in some circumstances, without running afoul of article 30. See, e.g., Commonwealth v. Jackson, 369 Mass. 904, 920-925 (1976) (involving article 30 and other facial constitutional challenges to the Bartley Fox act, the primordial mandatory minimum). However, after forty years of experience, the time has come to acknowledge that, by stripping judges of "their traditional role of considering all relevant circumstances in an effort to do justice in the individual case," Michelle Alexander, *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*, 90 (2012) (The New Press) (revised paperback edition), and by effectively giving prosecutors unilateral power "to determine the severity of the punishment," United States v. Sidhom, 144 F. Supp. 2d 41, 41 (D. Mass. 2001), mandatory minimum drug laws do unacceptable violence to separation of powers principles enshrined in article 30. (pp. 22-29).

By forcing judges to impose sentences that may be more punitive than justice permits, mandatory minimum drug laws also run afoul of the requirement established by article 26 of the Declaration of Rights that punishment be proportionate not only "with respect to

the offense itself, but [also] with regard to the particular offender." Diatchenko v. District Attorney for the Suffolk Dist., 466 Mass. 655, 669 (2013).

Application of this principle to bar imposition of mandatory minimum sentences on particular drug offenders is not foreclosed by four outdated cases in which this Court and the Appeals Court have rejected article 26 challenges to such sentencing laws. The most recent of these cases was decided a generation ago. Commonwealth v. Alvarez, 412 Mass. 224 (1992).

For article 26 to have substantive meaning, our understanding of the degree of moral culpability to be attributed to an individual drug offender must be responsive to "evolving standards of decency that mark the progress of a maturing society." Commonwealth v. Okoro, 471 Mass. 51, 61 (2015). When this Court last addressed the matter, it was not understood, as it is now, that substance use disorder is a "disease of the brain" requiring treatment. See, e.g., Nora D. Volkow, George F. Koob, & A. Thomas McLellan, Neurobiologic Advances from the Brain Disease Model of Addiction, 374 New England J. Med. 363 (2016). Further, "[p]unishment will not cure the disease of addiction." The Failure of the War on Drugs, supra, at 7. Accordingly, a

sentencing regime that mandates a minimum term of imprisonment even for a repeat drug offender whose criminal behavior stems from an underlying substance use or other biological disorder can no longer be viewed as compatible with the article 26 requirement that punishment be proportionate to individual culpability. (pp. 29-38).

"People of all races use and sell illegal drugs at remarkably similar rates." The New Jim Crow, supra, at 99. Nonetheless, compelling statistical evidence -- much of which can be accessed by clicking on the web site of the Massachusetts Sentencing Commission -- establishes that individuals like Imran Laltaprasad who are members of racial and ethnic minorities are disproportionately punished for drug offenses carrying mandatory minimum sentences. Important research also suggests that decisions to charge certain mandatory minimum drug offenses are impacted by race. See Judith Greene, Kevin Pranis, & Jason Ziedenberg, Justice Policy Institute, Disparity By Design: How Drug-Free Zone Laws Impact Racial Disparity -- and Fail to Protect Youth, 14-20 (March 2006).

Notwithstanding this readily available evidence that Massachusetts' mandatory minimum drug laws are

disproportionately applied against people of color, to amici's knowledge, no prosecutor has ever been required to rebut the inference of racial discrimination which this evidence so blatantly suggests. Under these circumstances, "[j]udicial scrutiny is necessary to protect individuals from prosecution based on arbitrary or otherwise impermissible classification." Commonwealth v. Bernardo B., 453 Mass. 158, 168 (2009). (pp. 38-47)

Amici recognize that the cruel or unusual and equal protection concerns discussed herein were not litigated below. As a result, the existing record may be seen as inadequate for the Court to reach the merits of these concerns. Accordingly, if the Court concludes that Judge Frison's sentences were not permitted by Chapter 211E, and that article 30 is not offended by the mandatory minimum drug laws in question, amici urge the Court to remand the matter to the Superior Court for a hearing and findings with respect to whether imposition of the State prison sentences sought by the Commonwealth will violate any of Laltaprasad's constitutional rights, including those guaranteed by the Eighth and Fourteenth Amendments to the United States Constitution, and articles 1, 10, 12, 26 and 30 of the Declaration of Rights. (pp. 48-50).

ARGUMENT

I.

THE JUDICIAL SENTENCING DISCRETION EXERCISED IN THIS CASE IS CONSISTENT WITH, AND REQUIRED BY, THE SEPARATION OF POWERS ENSHRINED IN ARTICLE THIRTY OF THE DECLARATION OF RIGHTS.

- A. The Declaration of Rights requires the separation of powers among the independent branches of government and forbids the concentration of power in any one branch.

"[T]he concept of a separation of powers is fundamental to our form of government." Opinion of the Justices, 365 Mass. 639, 640 (1974). Article 30 of the Declaration of Rights recognizes this principle "in a most explicit form." Id. at 640. The principle is breached whenever legislation creates "[t]he potential for dangerous concentration of indirect but very real control over all branches of government." Id. at 647. Whether de jure or de facto, such concentration of authority is "[a]ntithetical to the notion of separation of powers." Id. See also Commonwealth v. Cole, 468 Mass. 294, 304-305 (2014) (holding that, because the power to sentence is "at the core of the judicial function," an accumulation of sentencing authority in a parole board within the executive branch violates separation of powers, even though statute labeled parole board's sentencing functions as a form of "parole").

Consistent with these principles, "[t]he judiciary's independence from the other branches of government . . . has been one of the cornerstones of our constitutional democracy." In re Enforcement of a Subpoena, 463 Mass. 162, 169 (2012). "[T]he protection of the independence of the judiciary was the exclusive purpose of the original draft of the Massachusetts separation of powers clause." Opinion of the Justices, 365 Mass. at 645 n.5.^{4/} Thus, "interference" by another branch "with the function of the judiciary . . . [is] a clear violation" of article 30, id. at 645, which "forbids the legislative and executive branches from exercising powers that are entrusted to the judicial branch if that exercise restricts or abolishes a court's inherent powers." Cole, 468 Mass. at 301. See also Ellis v. Dept. of Indus. Accidents, 463 Mass. 541, 548-551 (2012) (holding that statute which "allocates to an agency of the executive branch"

^{4/} As drafted by John Adams and reported by the committee as art. 31 of the draft, the clause read as follows: "The judicial department of the State ought to be separate from, and independent of, the legislative and executive powers." J. of the Convention for Framing a Constitution of Government (Mass. Bay) (1779-1780) 197. See generally 2 Mass. L. Q. (No. 5) 383-393 (1917).

Opinion of the Justices, 365 Mass. at 645 n.5.

any power that is inherently judicial "violates art. 30 and is therefore invalid").

B. The imposition of individualized sentences is a quintessentially judicial function.

"[T]he power to sentence" is "quintessential[ly] judicial" in nature. Commonwealth v. Rodriguez, 461 Mass. 256, 264 (2012). A judge exercises that power in accord with article 30 when she declines to impose sentences which are "more severe than justice permits." Id. See also Cole, 468 Mass. at 301 ("At the core of the judicial function is the power to impose a sentence"). Further, a judge's core powers include "considerable latitude to fashion an appropriate individualized sentence and may take into consideration, inter alia, a defendant's character, behavior, background, and amenability to rehabilitation." Commonwealth v. Mills, 436 Mass. 387, 398 (2002). See United States v. Bannister, 786 F. Supp. 2d 617, 689-690 (E.D.N.Y. 2011) (stating that the imposition of sentence by "looking closely at all relevant facts and circumstances" and "making a nuanced decision" is a "fundamental judicial duty") (Weinstein, J.).

- C. If the judiciary has no power to impose individualized sentences below the mandatory minimum in appropriate cases, the legislative scheme would undermine separation of powers by concentrating the power to dictate sentencing in the executive branch.

This Court has previously ruled that article 30 does not necessarily preclude the Legislature from requiring sentencing judges to impose mandatory minimum sentences, at least in some circumstances. See, e.g., Cole, 468 Mass. at 302; Commonwealth v. Jackson, 369 Mass. at 922, citing Bel v. Chernoff, 390 F. Supp. 1256, 1259 (D. Mass. 1975). This line of authority traces back ninety years to Sheehan v. Superintendent of Concord Reformatory, 254 Mass. 342 (1926), in which the Court held that it did not offend article 30 for the Trustees of the Industrial School for Boys at Shirley to transfer a minor to the Reformatory at Concord. Id. at 346-347. Decades of more recent experience now strongly suggest, however, that any mandatory minimum sentencing scheme which makes no allowance for judges to impose lower sentences based upon findings of specific mitigating circumstances is a grave threat to article 30. See Kieran Riley, Trial by Legislature: Why Statutory Mandatory Minimum Sentences Violate The Separation Of Powers Doctrine, 19 B.U. Pub.

Int. L.J. 285, 302 (2010) (concluding that strict mandatory minimum sentencing schemes "relegate the role of the judiciary to bureaucratic affirmation" of the criminal justice process). This threat has proven particularly dangerous since the start of the "War on Drugs" with its heavy reliance on mandatory minimum sentences and resulting increase in incarceration rates. See, e.g., Massachusetts Bar Association, The Failure of the War on Drugs: Charting a New Course for the Commonwealth, 16 (2009) (noting that, as of January 1, 2008, eighteen percent of offenders in the Department of Correction were serving mandatory drug sentences, and tracing overcrowding crisis to such sentencing practices).^{5/}

Most notably, mandatory minimum sentences improperly aggregate power in the hands of the prosecutors who wield virtually unfettered charging authority. For example, prosecutors -- not the courts or the Legislature -- decide whether to charge enhancement provisions that trigger dramatically different sentences for substantively identical crimes, e.g., second or subsequent drug offenses, or drug offenses

^{5/}Available at <http://www.massbar.org/media/520275/drug%20policy%20task%20force%20final%20report.pdf> (last visited Feb. 16, 2016).

that occur in school zones. Thus, minimum mandatory sentences are mandatory only for judges and defendants, not for prosecutors, to whom such discretion has effectively been "delegat[ed] . . . outside of public forums." Id. As a result, prosecutors wield de facto power to cabin judges' sentencing discretion and to effectively impose sentences without regard for the defendants' individual characteristics. See United States v. Kupa, 976 F. Supp. 2d 417, 431-442 (E.D.N.Y. 2013) (discussing abuse of prosecutorial discretion in bringing mandatory minimum charges to coerce guilty pleas and effectively dictate the sentence). Indeed, because even minor drug offenses are often linked to mandatory minimum sentences that exceed what most judges (and many prosecutors) would deem necessary and appropriate, the mandatory minimum usually is the sentence, meaning that prosecutors have effectively assumed the sentencing function in toto. See Commonwealth v. Lawrence, 69 Mass. App. Ct. 596, 605 (2007) (Brown, J., concurring) (observing that "an enlightened prosecutor should not have sought a conviction for the school zone offense" against "a teenage defendant with no known involvement in drug sales other than this isolated incident, and for whom

there is no indication of drug use other than marijuana"). See also United States v. Sidhom, 144 F. Supp. 2d 41, 41 (D. Mass. 2001) (explaining that, "[i]n the long tradition of the common law, it was the judge, the neutral arbiter, who possessed the authority to impose sentences which he deemed just within broad perimeters established by the legislature" and, further, that any sentencing scheme which effectively transfers "the power to impose sentence" from the judicial branch to the executive branch, "which, as the prosecuting authority, is an interested party to the case[,] results in both "an erosion of judicial power and a breach in the wall of the doctrine of the separation of powers").

Further, mandatory minimums bestow upon prosecutors enormous and disproportionate leverage to pressure defendants to plead guilty, precluding the core judicial function of conducting trials and requiring judges to impose supposedly "agreed" sentences without the exercise of sentencing discretion. See Bridgeman v. District Attorney for the Suffolk Dist. 471 Mass. 465, 492 (2015) (recognizing that "defendants have an incentive to plead guilty for reasons other than actual guilt, including to avoid the imposition of mandatory

minimum sentences. . ."). Consequently, in practice, a "no exceptions" mandatory minimum scheme produces an impermissible concentration of authority within the executive, Opinion of the Justices, 365 Mass. at 647; In re Enforcement of a Subpoena, 463 Mass. at 172 n.5 (recognizing that prosecutors are "uniquely able to exert" pressure on criminal justice system), and any acceptance of such a scheme would bear little relationship to the Court's prior rationale for tolerating mandatory minimum sentencing laws -- deference to considered legislative judgments, see Jackson, 369 Mass. at 922, not unilateral prosecutorial discretion.

II.

BY FORECLOSING THE POSSIBILITY OF LENIENCY OR TREATMENT IN LIEU OF INCARCERATION, THE MANDATORY MINIMUM DRUG STATUTES IN QUESTION VIOLATE THE ARTICLE 26 REQUIREMENT THAT PUNISHMENT BE PROPORTIONATE TO BOTH THE OFFENSE AND THE OFFENDER.

At the core of the prohibition against cruel or unusual punishment is "the concept of proportionality," which flows from "the fundamental 'precept of justice that punishment for crime should be graduated and proportioned' to both the offender and the offense." Diatchenko v. District Attorney for the Suffolk Dist., 466 Mass. 655, 669 (2013), quoting Miller v. Alabama, 567 U.S. ___, 132 S. Ct. 2455, 2463 (2012) (emphasis

supplied). Mandatory minimum drug laws are at war with this "precept of justice" because, by definition, they foreclose the sentencing judge from considering mitigating circumstances unique to the offender in imposing punishment that accounts for both the gravity of the offense and also the degree of the offender's moral culpability for it. Put differently, mandatory minimum drug laws block the sentencer from "seeing" the person behind the crime. See and compare Commonwealth v. Burr, 33 Mass. App. Ct. 637, 639-644 (1992) (holding that sentencing judge may not avoid mandatory minimum by reducing trafficking conviction to lesser included offense on the basis of defendant's "personal characteristics"), with United States v. Bannister, 786 F. Supp. 2d at 669 (discussing in thorough historical, sociological, legal, and factual detail, see id. at 625-669, how mandatory sentences for street-level dealers convicted in federal conspiracy case defied any conceivable test of individualized "proportionality and moral responsibility").

"Mandatory drug sentencing laws strip judges of their traditional role of considering all relevant circumstances in an effort to do justice in the individual case." Michelle Alexander, *The New Jim*

Crow: Mass Incarceration in the Age of Color blindness, 90 (2012) (The New Press) (revised paperback edition). Moreover, it cannot reasonably be denied that enforcement of statutes such as those at issue here "sometimes result in imposition of penalties in individual cases that everyone involved believes to be unjustly severe." Michael Tonry, The Mostly Unintended Effects of Mandatory Penalties: Two Centuries of Consistent Findings, 38 Crime & Just. 65, 101 (2009).

Nevertheless, in four cases decided between 1978 and 1992, this Court and the Appeals Court have rejected "cruel or unusual" challenges to mandatory minimum drug laws.^{6/} These cases do not foreclose the Court from now ruling that imposition of the minimum terms called for by G.L. c.94C, §32(b), and §32A(d),

^{6/}Opinion of the Justices, 378 Mass. 822, 829-833 (1979) (proposed twenty-five year mandatory minimum for trafficking); Commonwealth v. Marcus, 16 Mass. App. Ct. 698, 699-703 (1983) (five-year mandatory minimum for distribution, second or subsequent offense); Commonwealth v. Silva, 21 Mass. App. Ct. 536, 541-545 (1986) (ten-year mandatory minimum for trafficking); Commonwealth v. Alvarez, 412 Mass. 224, 233-236 (1992) (two-year mandatory minimum for school zone violation from and after sentence on underlying drug conviction). See also Commonwealth v. Crowley, 67 Mass. App. Ct. 1116, further app. rev. denied, 448 Mass. 1101 (2006) (unpublished) (ten-year mandatory minimum for trafficking did not "shock[] the conscience" when imposed on seventeen year-old pregnant offender with no prior record caught delivering drugs for her allegedly abusive boyfriend).

would violate Imran Laltaprasad's right to proportionate punishment under article 26 of the Declaration of Rights, for three reasons.

First, the two cases in which this Court (as opposed to the Appeals Court) has been presented with article 26 concerns regarding mandatory minimum drug laws address only the facial validity of such punishments. See Opinion of Justices, 378 Mass. at 825 (explicitly noting Court's facial-only analysis with respect to legislation proposed but not enacted, and leaving open question whether mandatory minimum drug sentences may violate article 26 "in specific cases"); Commonwealth v. Alvarez, 412 Mass. at 233 ("choos[ing] to consider" facial challenge to school zone statute, even though no claim raised below that mandatory minimum violated Alvarez's article 26 rights). For this reason, neither of this Court's opinions in this area touches on the concerns raised by amici, i.e., whether mandatory minimum drug laws violate the article 26 requirement that punishment be proportionate not only "with respect to the offense itself, but [also] with regard to the particular offender." Diatchenko v. District Attorney for the Suffolk Dist., 466 Mass. at 669. See also Doe v. Attorney General, 430 Mass. 155,

168 (1999) (striking down, on due process grounds, sex offender registration regime in the absence of any "individualized" determination of the necessity for registration made "with particularity as to offender and offense").

Second, the two cases in which the Appeals Court has considered "as applied" challenges to mandatory minimum drug laws either fail to address proportionality from the perspective of the offender's individualized degree of moral blameworthiness,^{2/} or reject the claim on the basis of outdated and discredited assumptions and stereotypes about the nature of drug use, addiction, and individuals who suffer from substance use disorder. Thus, in Commonwealth v. Marcus, 16 Mass. App. Ct. 698 (1983), the Appeals Court held that G.L. c.94C, §32(b), did not violate article 26 as applied to the defendant in that case, as follows:

[Marcus] does not challenge the gravity of the offense but urges that he is a ravaged victim of heroin, who ought more to be pitied than to be an object of societal vengeance. He is so out of control, the argument runs, that a long jail sentence serves no purpose. To be sure, a previous conviction of selling heroin and some fifteen to eighteen episodes of hospitalization and of detoxification have

^{2/}See Commonwealth v. Silva, 21 Mass. App. Ct. at 543-545 (holding that mandatory minimum did not violate article 26 as applied to class of offenders with no prior drug record).

not prevented the defendant from relapsing into heroin addiction, but the Legislature could reasonably suppose that a long period of imprisonment for a recidivist seller-addict may be effective in loosening the grip of the habit.

Id. at 700-701 (emphasis supplied).

Even assuming that it was reasonable in 1983, when Marcus was decided, to think that long-term imprisonment for a "recidivist seller-addict may be effective in loosening the grip of the habit," we now know that such beliefs are incorrect. Substance use disorder "is a disease of the brain," Nora D. Volkow, George F. Koob, & A. Thomas McLellan, Neurobiologic Advances from the Brain Disease Model of Addiction, 374 New England J. Med. 363, 363 (2016) (reproduced in Addendum, post, at 57-65), which has been recognized by the American Psychiatric Association. See Am. Psychiatric Ass'n, Diagnostic and Statistical Manual of Mental Disorders 483-485 (5th ed. 2013) (DSM-V). "Research has shown that long-term drug abuse results in changes in the brain that persist long after a person stops using drugs. These drug-induced changes in brain function can have many behavioral consequences, including an inability to exert control over the impulse -- the defining characteristic of addiction." National Institute on Drug Abuse, Principles of Drug Addiction Treatment, 7 (2012). See also DSM-V, supra at 483 ("An

important characteristic of substance use disorders is an underlying change in brain circuits that may persist beyond detoxification, particularly in individuals with severe disorders").

Furthermore, substance use disorder is "treatable." Sarah E. Wakeman & Josiah D. Rich, *Addiction Treatment Within U.S. Correctional Facilities: Bridging the Gap Between Current Practice and Evidence-Based Care*, 34 *J. of Addictive Diseases* 220, 220 (2015). "[A] robust body of evidence supports treatment's efficacy in improving clinical outcomes and reducing crime, recidivism and societal costs." Ibid. See also *Principles of Drug Addiction Treatment*, supra at vi ("Nearly four decades of scientific research and clinical practice have yielded a variety of effective approaches to drug addiction treatment"); DSM-V, supra at 484 (substance use disorder "may benefit from long-term approaches to treatment"). Contrary to Marcus, incarceration does not address the neurobiological etiology of substance use disorder, see Institute for Clinical and Economic Review, *Management of Patients with Opioid Dependence: A Review of Clinical, Delivery System, and Policy Options*, at 3 (July 2014)),^{8/} and,

^{8/} [C]oordinated efforts are needed to improve access to opioid dependence treatment for the large number of individuals in New England
(FOOTNOTE CONTINUED ON NEXT PAGE)

accordingly, is inconsistent with this Court's own standards on substance abuse, which provide that "[e]very court in every Trial Court should make use of existing options for providing access and making referrals to treatment, if appropriate, and ordering treatment in appropriate circumstances." SJC Standards on Substance Abuse, at 11 (1998) (Standard V).^{2/} See also Failure of the War on Drugs, supra, at 7 ("No disease is ever cured by punishing the patient -- and punishment will not cure the disease of addiction").

This leads to the third reason that existing "cruel or unusual" case law does not foreclose the conclusion that mandatory minimum drug laws may be constitutionally disproportionate with respect to

^{2/}(FOOTNOTE CONTINUED FROM PREVIOUS PAGE)

who lack adequate access to high quality care options. An important component of achieving this goal will be to improve access for individuals in the criminal justice system by creating jail diversion programs in which non-violent offenders are assessed for addiction and referred to appropriate treatment in lieu of incarceration and by providing maintenance therapy to individuals who will be in prison for long periods.

Management of Patients with Opioid Dependence, supra, at 3 (available at <http://cepac.icer-review.org/wp-content/uploads/2014/04/CEPAC-Opioid-Dependence-Final-Report-For-Posting-July-211.pdf>) (last visited Feb. 13, 2016).

^{2/}Available at <http://www.mass.gov/courts/docs/209a/sectionb-item7.pdf> (last visited Feb. 16, 2016).

particular drug offenders. Article 26 "draw[s] its meaning from the evolving standards of decency that mark the progress of a maturing society." Commonwealth v. Okoro, 471 Mass. 51, 61 (2015), citing Michaud v. Sheriff of Essex County, 390 Mass. 523, 533-534 (1983). Accordingly, sentencing regimes that passed muster a generation ago may be "constitutionally suspect" today. Diatchenko v. District Attorney for the Suffolk Dist., 466 Mass. at 664. Mandatory minimum sentences for drug offenses are the centerpiece of a failed public policy that has criminalized the disease of addiction and dehumanized those afflicted with it. "Roughly half of U.S. prisoners have an active substance use disorder." Addiction Treatment Within U.S. Correctional Facilities, supra, at 220, citing Christopher J. Mumola & Jennifer C. Karberg, Drug Use and Dependence, State and Federal Prisoners, 2004 (Oct. 2006).^{10/} Yet, "[u]nderstanding that addiction has such a fundamental biological component may help explain the difficulty of achieving and maintaining abstinence without treatment." Principles of Drug Addiction Treatment, supra, at 7.

"After centuries of efforts to reduce addiction and its related costs by punishing addictive behaviors

^{10/}Available at <http://www.bjs.gov/content/pub/pdf/dudsfp04> (last visited Feb. 13, 2016).

failed to produce adequate results, recent basic and clinical research has provided clear evidence that addiction might be better considered and treated as an acquired disease of the brain." Neurobiologic Advances from the Brain Disease Model of Addiction, supra, at 363. Given what we now know about the neurobiology of substance use disorder, and the inefficacy of punishment in lieu of treatment, mandatory minimum sentences for drug offenses are "unacceptable under contemporary moral standards," District Attorney for the Suffolk Dist. v. Watson, 381 Mass. 648, 661 (1980), and should be held, at least in the absence of any judicial determination of individualized moral culpability, to violate art. 26 of the Declaration of Rights.

III.

MANDATORY MINIMUM DRUG LAWS ARE DISPROPORTIONATELY APPLIED AGAINST PEOPLE OF COLOR, SUCH AS IMRAN LALTAPRASAD, GIVING RISE TO A REASONABLE INFERENCE THAT LALTAPRASAD'S PROSECUTION AND SOUGHT-FOR PUNISHMENT IS IN VIOLATION OF STATE AND FEDERAL CONSTITUTIONAL RIGHTS TO EQUAL PROTECTION.

This Court has held repeatedly that the unequal enforcement of an otherwise neutral criminal statute against members of a protected class offends the equal protection principles of the Fourteenth Amendment to the United States Constitution and arts. 1 and 10 of

the Declaration of Rights. See Commonwealth v. Bernardo B., 453 Mass. 158, 167-169 (2009); Commonwealth v. Lora, 451 Mass. 425, 436-438 (2008); Commonwealth v. Franklin Fruit Co., 388 Mass. 228, 229-230 (1983); Commonwealth v. Franklin, 376 Mass. 885, 894-895 (1978); Commonwealth v. King, 374 Mass. 5, 19-22 (1977). See also Yick Wo v. Hopkins, 118 U.S. 356, 373-374 (1886) ("Though the law itself be fair on its face and impartial in appearance, yet, if it is applied and administered by public authority with an evil eye and an unequal hand, so as practically to make unjust and illegal discriminations between persons in similar circumstances, material to their rights, the denial of equal justice is still within the prohibition of the Constitution").

At the same time, the Court has recognized a presumption that "criminal prosecutions are undertaken in good faith, without intent to discriminate." Franklin, 376 Mass. at 894. Accordingly, to demonstrate that the Commonwealth is unconstitutionally applying or enforcing a facially neutral criminal law against a protected class, a defendant bears an initial burden of adducing evidence that "raises at least a reasonable inference of impermissible discrimination."

Ibid. Specifically, a defendant advancing such an equal protection claim must show: (1) "that a broader class of persons than those prosecuted violated the law"; (2) "that failure to prosecute was either consistent or deliberate"; and (3) "that the decision not to prosecute was based on an impermissible classification," such as race. Franklin, 376 Mass. at 894. Once a "prima facie showing" of disparate treatment is made, the burden shifts to the Commonwealth to rebut the inference of unconstitutional discrimination "or suffer dismissal of the underlying complaint." Commonwealth v. Lafaso, 49 Mass. App. Ct. 179, 182 (2000), quoting Franklin, 376 Mass. at 895.

"Statistical evidence may be used to meet a defendant's initial burden of producing sufficient evidence to raise a reasonable inference of impermissible discrimination." Lora, 451 Mass. at 438. See also Commonwealth v. Thomas, 451 Mass. 451, 455 (2008) (noting that "valid statistical evidence" showing disparate enforcement of laws based on race is "relevant and material to demonstrate" that impermissible enforcement occurred in particular case).

The record in this case indicates that Laltaprasad is Black (SRA 147). He is therefore a member of a protected class for purposes of equal protection

analysis. See Commonwealth v. Sanchez, 79 Mass. App. Ct. 189, 193 (2011) (noting that Hispanics and African-Americans "are members of a racial or ethnic group protected under art. 1 of the Declaration of Rights"); Commonwealth v. Fryar, 414 Mass. 732, 736-741 (1993) (holding that removal of sole Black juror violated equal protection). Moreover, there exists ample and compelling data demonstrating that drug laws triggering mandatory minimum sentences are applied disproportionately against people of color, including those who identify as Black. According to the Massachusetts Sentencing Commission, in fiscal year 2013, non-whites -- who constitute about a quarter of Massachusetts' population^{11/} -- comprised 43.7% of those convicted of drug offenses, but 74.7% of those convicted of drug offenses carrying mandatory minimum sentences. Massachusetts Sentencing Commission, Survey of Sentencing Practices FY 2013, at iv, 53 (Dec. 2014).^{12/} This enormous disparity is repeated for the specific subgroup with which the defendant is

^{11/}See United States Census Bureau, State and County QuickFacts: Massachusetts (stating that, in 2014, 74.3% of Massachusetts' population was counted as "White alone, not Hispanic or Latino") (available at <http://quickfacts.census.gov/qfd/states/25000.html>) (last visited Feb. 13, 2016).

^{12/}Available at <http://www.mass.gov/courts/docs/admin/sentcomm/fy2013-survey-sentencing-practices.pdf> (last visited Feb. 12, 2015).

identified: In fiscal year 2013, "Black or African-American[s]" constituted about eight per cent of the population, see n.11, ante, twenty per cent of those convicted of drug offenses, and 33.8% of those convicted of mandatory minimum drug charges. Massachusetts Sentencing Commission, Survey of Sentencing Practices FY 2013, at 54.

Nor was the disparate impact data from fiscal year 2013 anomalous. To the contrary, the disparate application of mandatory minimum drug laws against people of color has persisted over the twelve years covered by the Sentencing Commission's readily-available data. See Massachusetts Sentencing Commission, Survey of Sentencing Practices, Fiscal Year 2002 through Fiscal Year 2013.^{13/} Over this twelve-year span, people of color have consistently comprised about half of those convicted of drug offenses but between seventy and eighty per cent of those saddled with drug convictions triggering mandatory minimum sentences.

The data also show a similar twelve-year pattern of dramatically disproportionate enforcement of mandatory

^{13/}Available at <http://www.mass.gov/courts/court-info/trial-court/sent-commission/survey-of-sentencing-practices-generic.html> (last visited Feb. 13, 2016). Although the Sentencing Commission included racial data in its annual surveys for fiscal years 1998 through 2000, the reports from those years are not available online. No annual survey was published for 2001.

minimum drug laws against Blacks specifically. See Addendum, post, at 55-56 (graphs derived from Massachusetts Sentencing Commission data, fiscal year 2002 through 2012, illustrating disproportionate enforcement of mandatory minimum drug laws against Blacks and other people of color).

To be sure, the Sentencing Commission's data demonstrating that Massachusetts' enforcement of its mandatory minimum drug laws appears to be anything but color blind does not isolate the specific statutes at issue here, i.e., distribution or possession with intent to distribute class A and class B substances, second or subsequent offense. Nor are amici aware of any other study that has so focused the analysis. But there is no reason to think that second or subsequent enhancement provisions constitute an exception to the documented pattern of discriminatory enforcement of mandatory minimum drug laws generally. To the contrary, the evidence strongly suggests that second or subsequent drug prosecutions fall squarely within the overall pattern of Massachusetts' discriminatory enforcement of mandatory minimum drugs laws against people of color.

First, even though illegal drug use is at least as

prevalent among whites as non-whites,^{14/} defendants of color are "more likely to have multiple convictions," because urban communities with high concentrations of minorities "are more heavily policed than predominantly white suburban and rural areas." Charles Hamilton Houston Institute for Race & Justice, Three Strikes, The Wrong Way to Justice: A Report on Massachusetts' Proposed Habitual Offender Legislation, at 20 (2012).^{15/}

Moreover, studies examining the application of one sub-type of mandatory minimum drug distribution offenses -- namely, school zone violations -- reveal a starkly disproportionate enforcement pattern: "Compared to White residents of Massachusetts, Blacks are 26 times as likely to be convicted and receive a mandatory sentencing enhancement [school] zone

^{14/}See Massachusetts Department of Public Health, Alcohol Use, Illicit Drug Use, and Gambling in Massachusetts, 2002, at 35 (July 2005) (finding that "a higher percentage of White respondents (51%) than Black (40%), Hispanic (35%) or Asian (15%) respondents reported lifetime illicit drug use") (available at <http://www.mass.gov/eohhs/docs/dph/behavioral-risk/alcohol-drug-reprt-02.pdf>) (last visited Feb. 13, 2016); Boston Public Health Commission, Substance Abuse in Boston 2011, at 9-13 (2011) (finding "no significant differences" in reported lifetime use of heroin, cocaine, methamphetamine, and alcohol across racial subgroups in Boston) (available at http://www.bphc.org/healthdata/other-reports/Documents/SUBSTANCE_ABUSE_REPORT_24Aug11_FINAL.pdf) (last visited Feb. 13, 2016).

^{15/}Available at <http://www.cjpc.org/2012/3-Strikes-Report.pdf> (last visited on Feb. 13, 2016).

sentence, and Latinos are 30 times as likely." Aleks Kajstura, Peter Wagner and Leah Sakala, Prison Policy Initiative, Coming Up Short: How Large Sentencing Enhancement Zones Miss the Mark (Jan. 27, 2009).^{16/}

Nor can this disproportionate impact be dismissed as simply a function of the geographic concentration of people of color who live within school zones. An important study conducted by researchers at Northeastern University concluded that decisions to charge school zone violations appear to be impacted by race. See Judith Greene, Kevin Pranis, & Jason Ziedenberg, Justice Policy Institute, Disparity By Design: How Drug-Free Zone Laws Impact Racial Disparity - and Fail to Protect Youth, 14-20 (March 2006).^{17/} The researchers' initial examination of court records in the Dorchester District Court showed that "among those eligible for a school zone charge, black and Hispanic suspects were somewhat more likely to be charged -- 75 percent versus 63 percent." Id. at 16. But a review of the underlying police records pertaining to these cases revealed a much more disturbing trend: "While roughly 80 percent of all

^{16/}Available at <http://www.prisonpolicy.org/toofar/report.html> (last visited Feb. 11, 2016).

^{17/}Available at http://www.justicepolicy.org/uploads/justicepolicy/documents/06-03_rep_disparitybydesign_dp-jj-rd.pdf (last visited Feb. 21, 2016).

arrests [in the study] took place within a school zone . . . only 15 percent of whites were charged with an eligible offense (distribution or possession with intent) compared to 52 percent of non-white defendants."

Id.

In an effort to determine why non-white defendants were so much more likely to be charged with more serious offenses, the researchers examined the police records and found them rife with what appeared to be disparate treatment. Two-thirds of nonwhites described as the "driver" of a car involved in a drug transaction were charged with distribution, while three-quarters of whites described as drivers were charged with simple possession. Nonwhites identified as "carriers" were more than twice as likely to be charged with a school-zone eligible offense.

The same pattern of disparity emerged when the researchers considered drug amount and prior record. Among those caught with more than a gram and a half of cocaine, ninety-four percent of minority defendants were charged as dealers compared to just over a quarter of whites. For those caught with less than 1/8 of a gram, the likelihood of being charged with delivery or possession with intent was nearly four times as great for nonwhites as for whites. Finally, defendants with no prior records were four times more likely to be charged with eligible offenses if they were nonwhite.

When researchers interviewed police officers about their charging practices, they were told time and again, "it has to do with whether it's a good kid or a bad kid."

Id. (emphasis supplied).

In short, the research uncovering discriminatory

enforcement of the school zone law strongly suggests that race plays a significant and impermissible role in the decision to charge and prosecute mandatory minimum sentencing laws pertaining to distribution and possession with intent to distribute drug offenses.

All this evidence demonstrating that mandatory minimum drug charges are disproportionately brought against people of color easily establishes the prima facie showing needed to raise "at least a reasonable inference of impermissible discrimination." Franklin, 376 Mass. at 894. Nonetheless, to amici's knowledge, no defendant has used the Sentencing Commission's overwhelming statistical evidence of disparate impact to seek pretrial dismissal of a mandatory minimum drug charge on equal protection grounds. Compare Epps v. Commonwealth, 419 Mass. 97, 99 (1994) (dismissing, as premature, petition seeking pretrial review of motion to dismiss school zone charge based on Commonwealth's allegedly discriminatory plea bargaining decisions in such cases). For this reason, the Commonwealth has never been required to explain the inference of unconstitutional discrimination which the data so plainly, and disturbingly, suggest.

IV.

IF THE COURT DOES NOT ORDER THAT THE COMMONWEALTH'S PETITION BE DISMISSED, THEN THE MATTER SHOULD BE REMANDED FOR A HEARING AND FINDINGS AS TO WHETHER IMPOSITION OF THE SENTENCES REQUESTED BY THE COMMONWEALTH WILL VIOLATE LALTAPRASAD'S CONSTITUTIONAL RIGHTS.

The constitutional issues discussed herein were not raised below, for which reason the existing record could be viewed as inadequate to permit the Court to rest a decision in Laltaprasad's favor on a finding that imposition of the three and one-half year State prison sentences sought by the Commonwealth, see Commonwealth's Brief at 12, would violate any of Laltaprasad's constitutional rights. Accordingly, in the event the Court orders that Judge Frison's sentences be vacated, amici urge that the matter be remanded for a full hearing and findings as to whether imposition of the mandatory minimum sentences prescribed by the statutes in question would be unconstitutional.

With respect to article 26, such a hearing might address, e.g., (1) whether Laltaprasad's culpability for his drug offenses is mitigated as a consequence of his dire medical condition or any substance use disorder that might be diagnosed, (2) whether Laltaprasad's obviously significant health issues can adequately be addressed in prison, and (3) whether, in light of the statistical likelihood that repeat drug

offenders are afflicted with a substance use disorder for which in-prison treatment is not available, mandatory prison sentences for all such offenders are cruel or unusual within the meaning of article 26. See and compare Johnson v. Summers, 411 Mass. 82, 86 (1991) ("deliberate indifference to serious medical needs" of prisoners violates Eighth Amendment), quoting Estelle v. Gamble, 429 U.S. 97, 104 (1976). With respect to equal protection, the Commonwealth should have an opportunity to rebut the inference of racial discrimination raised by the Sentencing Commission data; and Judge Frison should have an opportunity to consider whether any unconstitutional discrimination that is proven can adequately be remedied by sentence relief rather than dismissal. See and compare Lora, 451 Mass. at 438 (concluding that suppression of evidence found after motor vehicle stop is appropriate remedy for selective enforcement of traffic laws based on race). Finally, a hearing would provide the parties with an opportunity to adduce data -- likely available from the Trial Court's MassCourts database -- pertinent to the frequency with which mandatory minimum drug charges are used by the Commonwealth to dictate sentences and coerce guilty pleas, which would shed light (if any more were needed) on the extent to which such laws have concentrated prosecutorial power to the detriment of

defendants' fundamental rights and the judiciary's ability to ensure justice.

CONCLUSION

For the above-stated reasons, the petition for relief should be dismissed, or, alternatively, the matter should be remanded to the Superior Court for a hearing as to whether imposition of the mandatory minimum sentences will violate Laltaprasad's constitutional rights.

Respectfully submitted,



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ADDENDUM

United States Constitution

Eighth Amendment

Excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.

Fourteenth Amendment, Section One

All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.

Massachusetts Declaration of Rights

Article One

All people are born free and equal and have certain natural, essential and unalienable rights; among which may be reckoned the right of enjoying and defending their lives and liberties; that of acquiring, possessing and protecting property; in fine, that of seeking and obtaining their safety and happiness. Equality under the law shall not be denied or abridged because of sex, race, color, creed or national origin.

Article Ten

Each individual of the society has a right to be protected by it in the enjoyment of his life, liberty and property, according to standing laws. He is obliged, consequently, to contribute his share to the expense of this protection; to give his personal service, or an equivalent, when necessary; but no part of the property of an individual can, with justice, be taken from him, or applied to public uses, without his own consent, or that of

the representative body of the people. In fine, the people of this commonwealth are not controllable by any other laws than those to which their constitutional representative body have given their consent. And whenever the public exigencies require that the property of an individual should be appropriated to public uses, he shall receive a reasonable compensation therefor.

The legislature may by special acts for the purpose of laying out, widening or relocating highways or streets, authorize the taking in fee by the commonwealth, or by a county, city or town, of more land and property than are needed for the actual construction of such highway or street: provided, however, that the land and property authorized to be taken are specified in the act and are no more in extent than would be sufficient for suitable building lots on both sides of such highway or street, and after so much of the land or property has been appropriated for such highway or street as is needed therefor, may authorize the sale of the remainder for value with or without suitable restrictions.

Article Twelve

No subject shall be held to answer for any crimes or offence, until the same is fully and plainly, substantially and formally described to him; or be compelled to accuse, or furnish evidence against himself. And every subject shall have a right to produce all proofs, that may be favorable to him; to meet the witnesses against him face to face, and to be fully heard in his defence by himself, or his counsel, at his election. And no subject shall be arrested, imprisoned, despoiled, or deprived of his property, immunities, or privileges, put out of the protection of the law, exiled, or deprived of his life, liberty, or estate, but by the judgment of his peers, or the law of the land.

Article Twenty-six

No magistrate or court of law, shall demand excessive bail or sureties, impose excessive fines, or inflict cruel or unusual punishments. . . .

Article Thirty

In the government of this commonwealth, the legislative department shall never exercise the executive and judicial powers, or either of them: the executive shall never exercise the legislative and judicial powers, or either of them: the judicial shall never exercise the legislative and executive powers, or either of them: to the end it may be a government of laws and not of men.

Massachusetts General Laws

Chapter 94C, Section 32(b).

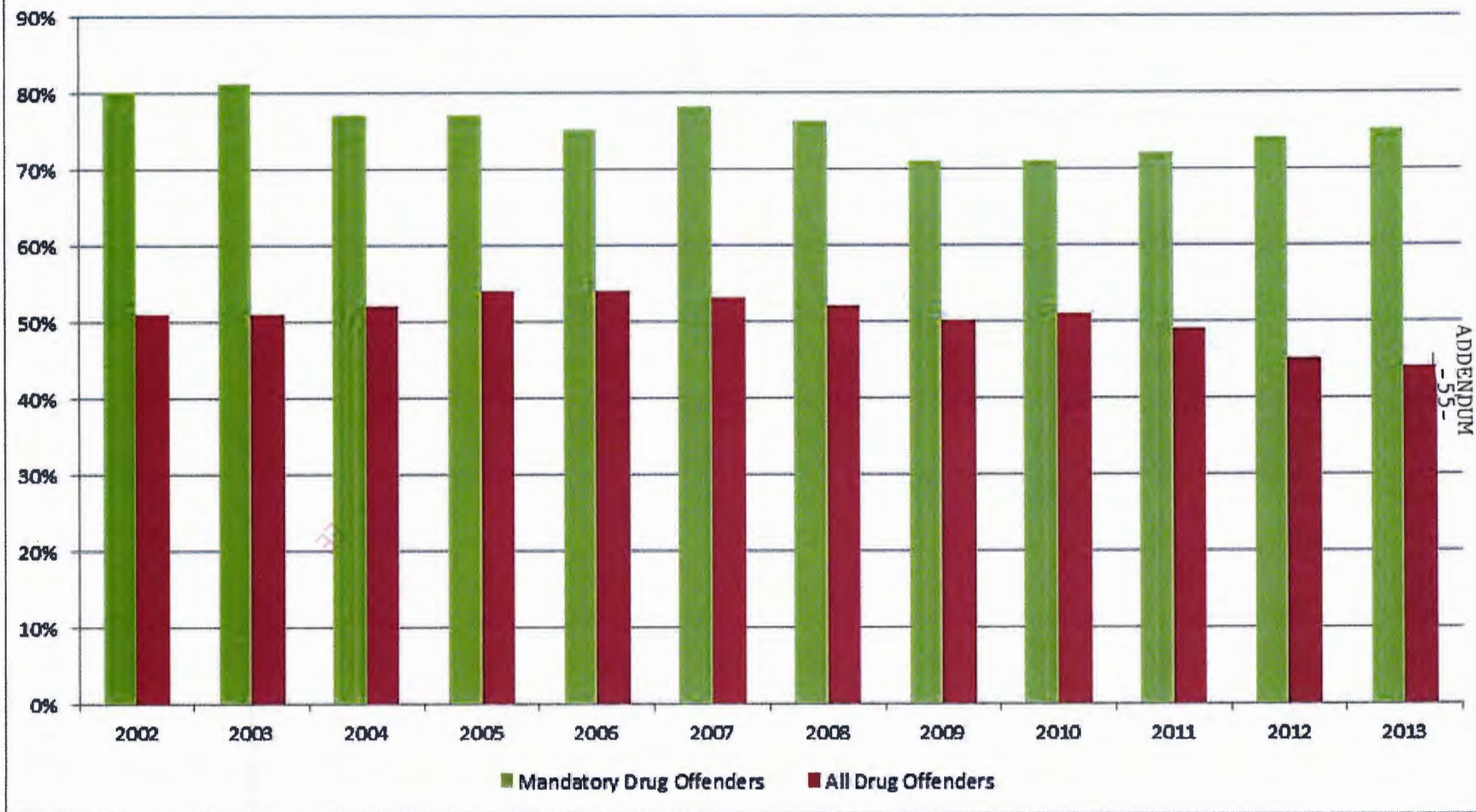
(b) Any person convicted of violating this section after one or more prior convictions of manufacturing, distributing, dispensing or possessing with the intent to manufacture, distribute, or dispense a controlled substance as defined by section thirty-one of this chapter under this or any prior law of this jurisdiction or of any offense of any other jurisdiction, federal, state, or territorial, which is the same as or necessarily includes the elements of said offense shall be punished by a term of imprisonment in the state prison for not less than $3\frac{1}{2}$ nor more than fifteen years. No sentence imposed under the provisions of this section shall be for less than a mandatory minimum term of imprisonment of $3\frac{1}{2}$ years and a fine of not less than two thousand and five hundred nor more than twenty-five thousand dollars may be imposed but not in lieu of the mandatory minimum $3\frac{1}{2}$ year term of imprisonment, as established herein.

Chapter 94C, Section 32A(d).

(d) Any person convicted of violating the provisions of subsection (c) after one or more prior convictions of manufacturing, distributing, dispensing or possessing with the intent to manufacture, distribute, or dispense a controlled substance, as defined in section thirty-one or of any offense of any other jurisdiction, either federal, state or territorial, which is the same as or necessarily includes, the elements of said offense, shall be punished by a term of imprisonment in the state prison for not less than $3\frac{1}{2}$ nor more than fifteen years and a fine of not less

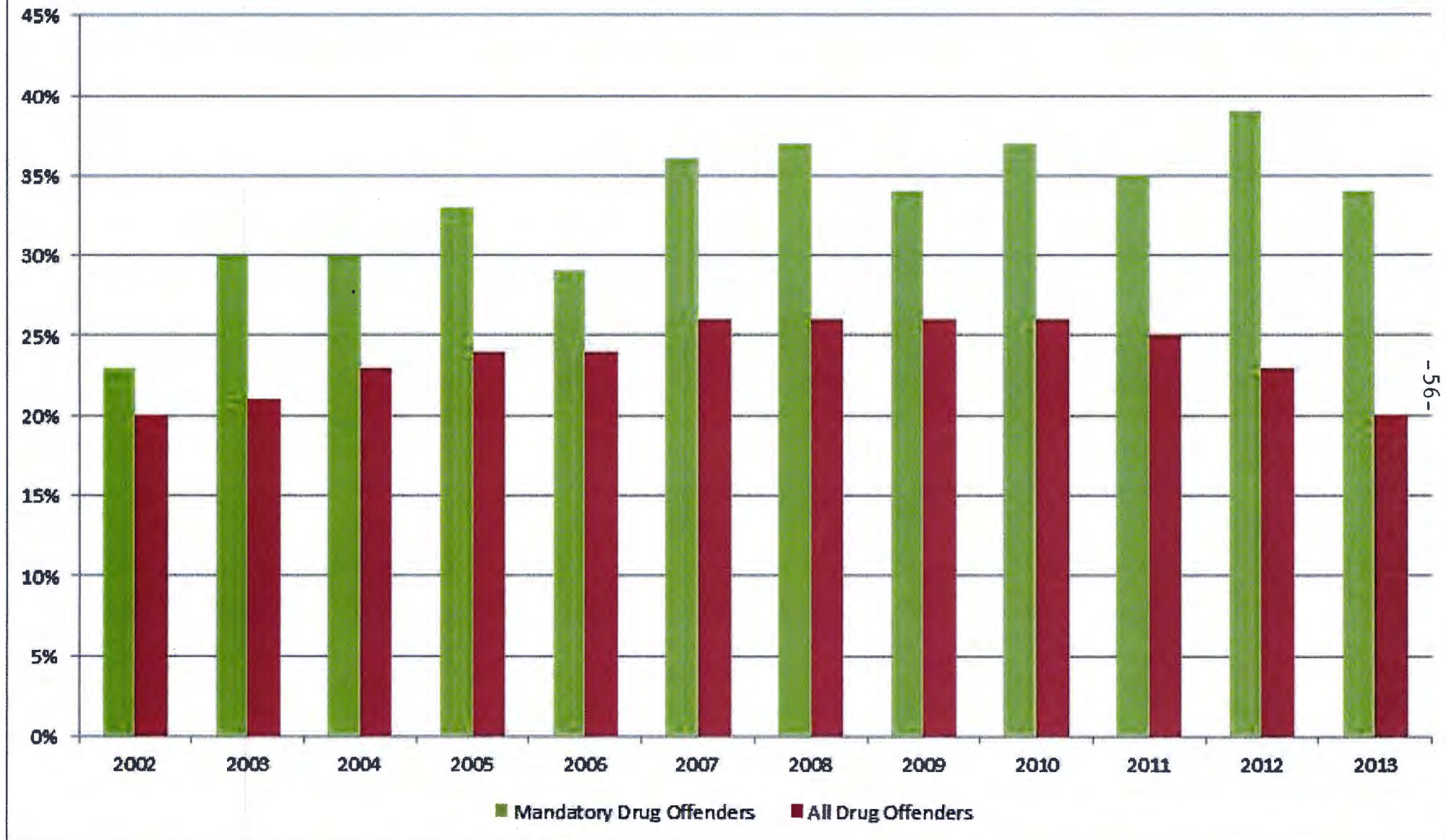
than two thousand five hundred nor more than twenty-five thousand dollars may be imposed but not in lieu of the mandatory minimum term of imprisonment, as established herein.

Percentage of Drug Offenders Who Are Members of Racial or Ethnic Minorities FY2002-FY2013



Source: Massachusetts Sentencing Commission, Survey of Sentencing Practices, FY2002-FY2013. The category "All Drug Offenders" includes mandatory drug offenders. Racial or ethnic minorities included defendants in the categories Black, Hispanic, Asian, Cape Verdean, and Native American.

Percentage of Drug Offenders Who Are Black FY2002-FY2013



Source: Massachusetts Sentencing Commission, Survey of Sentencing Practices, FY2002-FY2013. The category "All Drug Offenders" includes mandatory drug offenders.

REVIEW ARTICLE

Dan L. Longo, M.D., *Editor*

Neurobiologic Advances from the Brain Disease Model of Addiction

Nora D. Volkow, M.D., George F. Koob, Ph.D., and A. Thomas McLellan, Ph.D.

THIS ARTICLE REVIEWS SCIENTIFIC ADVANCES IN THE PREVENTION AND treatment of substance-use disorder and related developments in public policy. In the past two decades, research has increasingly supported the view that addiction is a disease of the brain. Although the brain disease model of addiction has yielded effective preventive measures, treatment interventions, and public health policies to address substance-use disorders, the underlying concept of substance abuse as a brain disease continues to be questioned, perhaps because the aberrant, impulsive, and compulsive behaviors that are characteristic of addiction have not been clearly tied to neurobiology. Here we review recent advances in the neurobiology of addiction to clarify the link between addiction and brain function and to broaden the understanding of addiction as a brain disease. We review findings on the desensitization of reward circuits, which dampens the ability to feel pleasure and the motivation to pursue everyday activities; the increasing strength of conditioned responses and stress reactivity, which results in increased cravings for alcohol and other drugs and negative emotions when these cravings are not sated; and the weakening of the brain regions involved in executive functions such as decision making, inhibitory control, and self-regulation that leads to repeated relapse. We also review the ways in which social environments, developmental stages, and genetics are intimately linked to and influence vulnerability and recovery. We conclude that neuroscience continues to support the brain disease model of addiction. Neuroscience research in this area not only offers new opportunities for the prevention and treatment of substance addictions and related behavioral addictions (e.g., to food, sex, and gambling) but may also improve our understanding of the fundamental biologic processes involved in voluntary behavioral control.

In the United States, 8 to 10% of people 12 years of age or older, or 20 to 22 million people, are addicted to alcohol or other drugs.¹ The abuse of tobacco, alcohol, and illicit drugs in the United States exacts more than \$700 billion annually in costs related to crime, lost work productivity, and health care.²⁻⁴ After centuries of efforts to reduce addiction and its related costs by punishing addictive behaviors failed to produce adequate results, recent basic and clinical research has provided clear evidence that addiction might be better considered and treated as an acquired disease of the brain (see Box 1 for definitions of substance-use disorder and addiction). Research guided by the brain disease model of addiction has led to the development of more effective methods of prevention and treatment and to more informed public health policies. Notable examples include the Mental Health Parity and Addiction Equity Act of 2008, which requires medical insurance plans to provide the same coverage for substance-use disorders and other mental illnesses that is provided for other illnesses,⁵ and the proposed bipartisan Senate legislation that

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Box 1. Definitions.

In this article, the terms apply to the use of alcohol, tobacco and nicotine, prescription drugs, and illegal drugs.

Substance-use disorder: A diagnostic term in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) referring to recurrent use of alcohol or other drugs that causes clinically and functionally significant impairment, such as health problems, disability, and failure to meet major responsibilities at work, school, or home. Depending on the level of severity, this disorder is classified as mild, moderate, or severe.

Addiction: A term used to indicate the most severe, chronic stage of substance-use disorder, in which there is a substantial loss of self-control, as indicated by compulsive drug taking despite the desire to stop taking the drug. In the DSM-5, the term *addiction* is synonymous with the classification of severe substance-use disorder.

would reduce prison sentences for some nonviolent drug offenders,⁶ which is a substantial shift in policy fueled in part by the growing realization among law-enforcement leaders that “reducing incarceration will improve public safety because people who need treatment for drug and alcohol problems or mental health issues will be more likely to improve and reintegrate into society if they receive consistent care.”⁷

Nonetheless, despite the scientific evidence and the resulting advances in treatment and changes in policy, the concept of addiction as a disease of the brain is still being questioned. The concept of addiction as a disease of the brain challenges deeply ingrained values about self-determination and personal responsibility that frame drug use as a voluntary, hedonistic act. In this view, addiction results from the repetition of voluntary behaviors. How, then, can it be the result of a disease process? The concept of addiction as a brain disease has even more disconcerting implications for public attitudes and policies toward the addict. This concept of addiction appears to some to excuse personal irresponsibility and criminal acts instead of punishing harmful and often illegal behaviors. Additional criticisms of the concept of addiction as a brain disease include the failure of this model to identify genetic aberrations or brain abnormalities that consistently apply to persons with addiction and the failure to explain the many instances in which recovery occurs without treatment. (Arguments against the disease model of addiction and counterarguments in favor of it⁸ are presented in Box S1 in the Supplementary Appendix, available with the full text of this article at NEJM.org.)

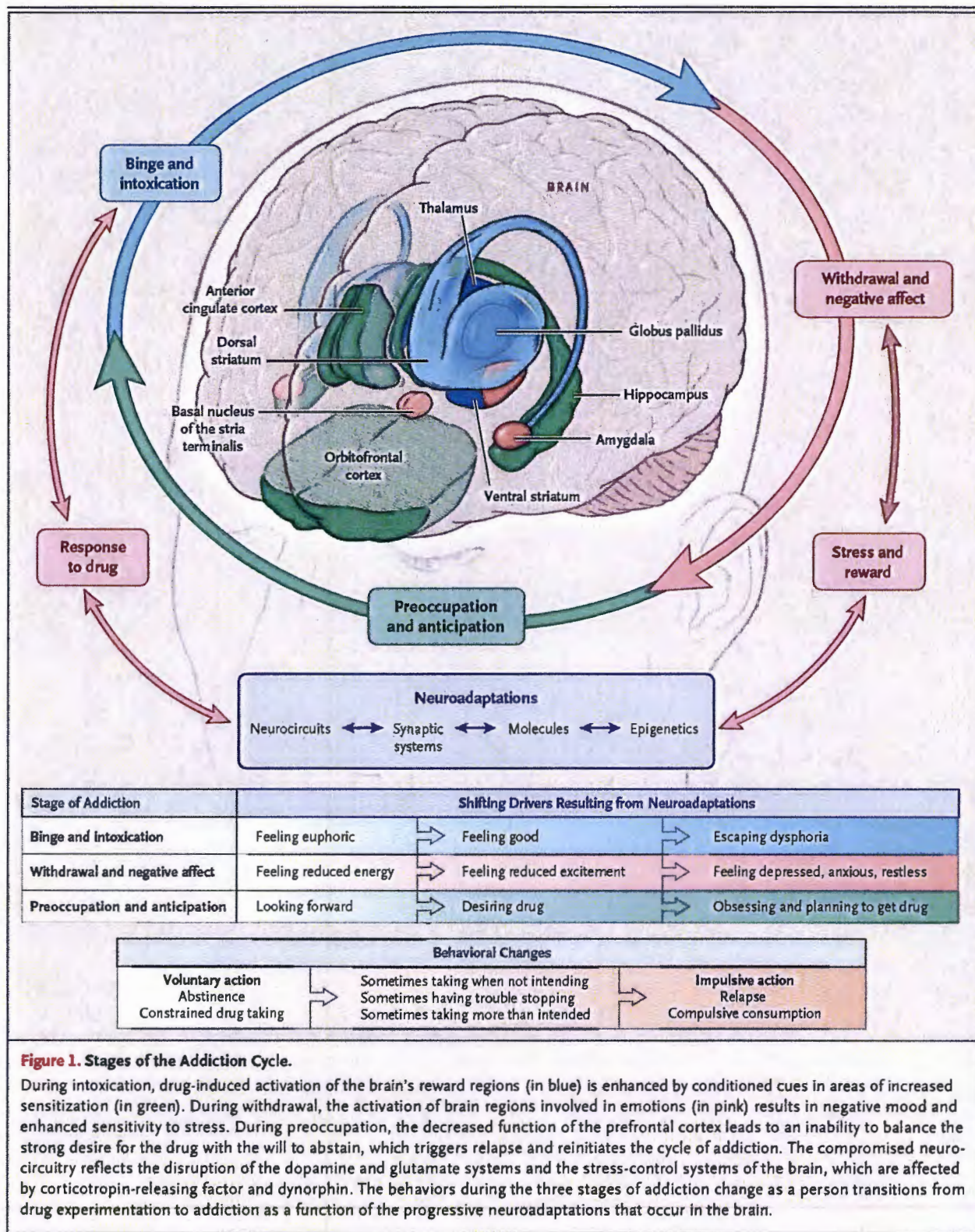
Advances in neurobiology have begun to clarify the mechanisms underlying the profound disruptions in decision-making ability and emotional balance displayed by persons with drug addiction. These advances also provide insight into the ways in which fundamental biologic processes, when disrupted, can alter voluntary behavioral control, not just in drug addiction but also in other, related disorders of self-regulation, such as obesity and pathologic gambling and video-gaming — the so-called behavioral addictions. Although these disorders also manifest as compulsive behaviors, with impaired self-regulation, the concept of behavioral addiction is still controversial, particularly as it relates to obesity. (Behavioral addictions are described in Box S2 in the Supplementary Appendix.⁹) This research has also begun to show how and why early, voluntary drug use can interact with environmental and genetic factors to result in addiction in some persons but not in others.

STAGES OF ADDICTION

For heuristic purposes, we have divided addiction into three recurring stages: binge and intoxication, withdrawal and negative affect, and preoccupation and anticipation (or craving).¹⁰ Each stage is associated with the activation of specific neurobiologic circuits and the consequential clinical and behavioral characteristics (Fig. 1).

BINGE AND INTOXICATION

All known addictive drugs activate reward regions in the brain by causing sharp increases in the release of dopamine.¹¹⁻¹³ At the receptor level, these increases elicit a reward signal that triggers associative learning or conditioning. In this type of Pavlovian learning, repeated experiences of reward become associated with the environmental stimuli that precede them. With repeated exposure to the same reward, dopamine cells stop firing in response to the reward itself and instead fire in an anticipatory response to the conditioned stimuli (referred to as “cues”) that in a sense predict the delivery of the reward.¹⁴ This process involves the same molecular mechanisms that strengthen synaptic connections during learning and memory formation (Box 2).



Box 2. Drug-Induced Neuroplasticity.

The drug-induced release of dopamine triggers neuroplasticity (systematic changes in the synaptic signaling, or communication, between neurons in various reward regions of the brain).^{15,16} These neuroplastic changes are fundamental to learning and memory. Experience-dependent learning (such as that which occurs in repeated episodes of drug use) may invoke both long-term potentiation, in which the transmission of signals between neurons increases, and long-term depression, in which signal transmission decreases.

Synaptic strength is controlled by the insertion or removal of receptors that are stimulated by the excitatory neurotransmitter glutamate (which acts largely through α -amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid [AMPA] and *N*-methyl-D-aspartate [NMDA] receptors) and by changes in the composition of the subunits of these receptors. Specifically, the insertion of a subunit of the AMPA receptor that is highly permeable to calcium, glutamate receptor 2 (GluR2), enhances the efficiency of transmission and has been shown to contribute to long-term potentiation in animal studies of addiction.¹⁷ Changes in long-term potentiation and long-term depression are in turn associated with larger or smaller synapses, respectively, and with differences in the shapes of the dendritic spines in the receptive site of the receiving neuron.¹⁸

The up-regulation of AMPA receptors that are highly permeable to calcium increases the responsiveness of the nucleus accumbens to glutamate, which is released by cortical and limbic terminals when exposed to drugs or drug cues.¹⁷ Neuroplastic changes triggered by drugs have been uncovered not only in the nucleus accumbens (a crucial brain-reward region) but also in the dorsal striatum (a region implicated in the encoding of habits and routines), the amygdala (a region involved in emotions, stress, and desires), the hippocampus (a region involved in memory), and the prefrontal cortex (a region involved in self-regulation and the attribution of salience [the assignment of relative value]). All these regions of the brain participate in the various stages of addiction, including conditioning and craving (see Fig. 1). These regions also regulate the firing of dopamine cells and the release of dopamine.¹⁹

In this way, environmental stimuli that are repeatedly paired with drug use — including environments in which a drug has been taken, persons with whom it has been taken, and the mental state of a person before it was taken — may all come to elicit conditioned, fast surges of dopamine release that trigger craving for the drug²⁰ (see Box 2 for the mechanisms involved), motivate drug-seeking behaviors, and lead to heavy “binge” use of the drug.²¹⁻²³ These conditioned responses become deeply ingrained and can trigger strong cravings for a drug long after use has stopped (e.g., owing to incarceration or treatment) and even in the face of sanctions against its use.

As is true with other types of motivational learning, the greater the motivational attribute associated with a reward (e.g., a drug), the greater the effort a person is willing to exert and the greater the negative consequences he or she will be willing to endure in order to obtain it.^{24,25} However, whereas dopamine cells stop firing after repeated consumption of a “natural reward” (e.g., food or sex) satiating the drive to further pursue it, addictive drugs circumvent

natural satiation and continue to directly increase dopamine levels,^{11,26} a factor that helps to explain why compulsive behaviors are more likely to emerge when people use drugs than when they pursue a natural reward (Box 2).

WITHDRAWAL AND NEGATIVE AFFECT

An important result of the conditioned physiologic processes involved in drug addiction is that ordinary, healthful rewards lose their former motivational power. In a person with addiction, the reward and motivational systems become reoriented through conditioning to focus on the more potent release of dopamine produced by the drug and its cues. The landscape of the person with addiction becomes restricted to one of cues and triggers for drug use. However, this is only one of the ways in which addiction changes motivation and behavior.

For many years it was believed that over time persons with addiction would become more sensitive to the rewarding effects of drugs and that this increased sensitivity would be reflected in higher levels of dopamine in the circuits of their brains that process reward (including the nucleus accumbens and the dorsal striatum) than the levels in persons who never had a drug addiction. Although this theory seemed to make sense, research has shown that it is incorrect. In fact, clinical and preclinical studies have shown that drug consumption triggers much smaller increases in dopamine levels in the presence of addiction (in both animals and humans) than in its absence (i.e., in persons who have never used drugs).^{22,23,27,28} This attenuated release of dopamine renders the brain's reward system much less sensitive to stimulation by both drug-related and non-drug-related rewards.²⁹⁻³¹ As a result, persons with addiction no longer experience the same degree of euphoria from a drug as they did when they first started using it. It is for this same reason that persons with addiction often become less motivated by everyday stimuli (e.g., relationships and activities) that they had previously found to be motivating and rewarding. Again, it is important to note that these changes become deeply ingrained and cannot be immediately reversed through the simple termination of drug use (e.g., detoxification).

In addition to resetting the brain's reward system, repeated exposure to the dopamine-enhanc-

ing effects of most drugs leads to adaptations in the circuitry of the extended amygdala in the basal forebrain; these adaptations result in increases in a person's reactivity to stress and lead to the emergence of negative emotions.^{32,33} This "antireward" system is fueled by the neurotransmitters involved in the stress response, such as corticotropin-releasing factor and dynorphin, which ordinarily help to maintain homeostasis. However, in the addicted brain, the antireward system becomes overactive, giving rise to the highly dysphoric phase of drug addiction that ensues when the direct effects of the drug wear off or the drug is withdrawn³⁴ and to the decreased reactivity of dopamine cells in the brain's reward circuitry.³⁵ Thus, in addition to the direct and conditioned pull toward the "rewards" of drug use, there is a correspondingly intense motivational push to escape the discomfort associated with the aftereffects of use. As a result of these changes, the person with addiction transitions from taking drugs simply to feel pleasure, or to "get high," to taking them to obtain transient relief from dysphoria (Fig. 1).

Persons with addiction frequently cannot understand why they continue to take the drug when it no longer seems pleasurable. Many state that they continue to take the drug to escape the distress they feel when they are not intoxicated. Unfortunately, although the short-acting effects of increased dopamine levels triggered by drug administration temporarily relieve this distress, the result of repeated bingeing is to deepen the dysphoria during withdrawal, thus producing a vicious cycle.

PREOCCUPATION AND ANTICIPATION

The changes that occur in the reward and emotional circuits of the brain are accompanied by changes in the function of the prefrontal cortical regions, which are involved in executive processes. Specifically, the down-regulation of dopamine signaling that dulls the reward circuits' sensitivity to pleasure also occurs in prefrontal brain regions and their associated circuits, seriously impairing executive processes, among which are the capacities for self-regulation, decision making, flexibility in the selection and initiation of action, attribution of salience (the assignment of relative value), and the monitoring of error.³⁶ The modulation of the reward

and emotional circuits of prefrontal regions is further disrupted by neuroplastic changes in glutamatergic signaling.³⁷ In persons with addiction, the impaired signaling of dopamine and glutamate in the prefrontal regions of the brain weakens their ability to resist strong urges or to follow through on decisions to stop taking the drug. These effects explain why persons with addiction can be sincere in their desire and intention to stop using a drug and yet simultaneously impulsive and unable to follow through on their resolve. Thus, altered signaling in prefrontal regulatory circuits, paired with changes in the circuitry involved in reward and emotional response, creates an imbalance that is crucial to both the gradual development of compulsive behavior in the addicted disease state and the associated inability to voluntarily reduce drug-taking behavior, despite the potentially catastrophic consequences.

BIOLOGIC AND SOCIAL FACTORS INVOLVED IN ADDICTION

Only a minority of people who use drugs ultimately become addicted — just as not everyone is equally at risk for the development of other chronic diseases. Susceptibility differs because people differ in their vulnerability to various genetic, environmental, and developmental factors. Many genetic, environmental, and social factors contribute to the determination of a person's unique susceptibility to using drugs initially, sustaining drug use, and undergoing the progressive changes in the brain that characterize addiction.^{38,39} Factors that increase vulnerability to addiction include family history (presumably through heritability and child-rearing practices), early exposure to drug use (adolescence is among the periods of greatest vulnerability to addiction), exposure to high-risk environments (typically, socially stressful environments with poor familial and social supports and restricted behavioral alternatives and environments in which there is easy access to drugs and permissive normative attitudes toward drug taking), and certain mental illnesses (e.g., mood disorders, attention deficit-hyperactivity disorder, psychosis, and anxiety disorders).^{40,41}

It is estimated that the most severe phenotypic characteristics of addiction will develop in

approximately 10% of persons exposed to addictive drugs.⁴² Thus, although long-term exposure to drugs is a necessary condition for the development of addiction, it is by no means sufficient. Yet for those in whom there is progress to addiction, the neurobiologic changes are distinct and profound.

IMPLICATIONS OF THE BRAIN
DISEASE MODEL OF ADDICTION
FOR PREVENTION AND TREATMENT

As is the case in other medical conditions in which voluntary, unhealthful behaviors contribute to disease progression (e.g., heart disease, diabetes, chronic pain, and lung cancer), evidence-based interventions aimed at prevention, along with appropriate public health policies, are the most effective ways of changing outcomes. A more comprehensive understanding of the brain disease model of addiction may help to moderate some of the moral judgment attached to addictive behaviors and foster more scientific and public health-oriented approaches to prevention and treatment.

BEHAVIORAL AND MEDICAL INTERVENTIONS

The findings from neurobiologic research show that addiction is a disease that emerges gradually and that has its onset predominantly during a particular risk period: adolescence. Adolescence is a time when the still-developing brain is particularly sensitive to the effects of drugs, a factor that contributes to adolescents' greater vulnerability to drug experimentation and addiction. Adolescence is also a period of enhanced neuroplasticity during which the underdeveloped neural networks necessary for adult-level judgment (the prefrontal cortical regions) cannot yet properly regulate emotion. Studies have also shown that children and adolescents with evidence of structural or functional changes in frontal cortical regions or with traits of novelty seeking or impulsivity are at greater risk for substance-use disorders.⁴³⁻⁴⁵ Awareness of individual and social risk factors and the identification of early signs of substance-use problems make it possible to tailor prevention strategies to the patient. According to research related to the brain disease model of addiction, preventive in-

terventions should be designed to enhance social skills and improve self-regulation. Also important are early screening and intervention for the prodromal presentation of mental illness and the provision of social opportunities for personal educational and emotional development.⁴⁶⁻⁴⁹

When prevention has failed and there is need for treatment, research based on the brain disease model of addiction has shown that medical treatment can help to restore healthy function in the affected brain circuitry and lead to improvements in behavior. The health care system already has at its disposal several evidence-based treatment interventions that could improve clinical outcomes in patients with substance-use disorders if properly and comprehensively implemented. During treatment, medication can assist in preventing relapse while the brain is healing and normal emotional and decision-making capacities are being restored. For patients with opioid-use disorder, maintenance therapy with agonists or partial agonists such as methadone or buprenorphine can be essential in helping to control symptoms of withdrawal and cravings.⁵⁰ Opioid antagonists such as extended-release naltrexone may be used to prevent opioid intoxication.⁵¹ Naltrexone and acamprosate have been efficacious in the treatment of alcohol-use disorders, and other medications can help in the recovery from nicotine addiction.²⁷

The brain disease model of addiction has also fostered the development of behavioral interventions to help restore balance in brain circuitry that has been affected by drugs.⁵² For example, strategies to enhance the salience of natural, healthy rewards such as social contact or exercise could enable those rewards to compete with the direct and acquired motivating properties of drugs. Strategies to mitigate a person's stress reactivity and negative emotional states could help to manage the strong urges they engender, and strategies to improve executive function and self-regulation could help recovering patients plan ahead in order to avoid situations in which they are particularly vulnerable to taking drugs. Finally, strategies to help patients recovering from addiction to change their circle of friends and to avoid drug-associated environmental cues can reduce the likelihood that conditioned craving will lead to relapse.

PUBLIC HEALTH POLICY

A compelling argument for the translational value of the brain disease model of addiction is the knowledge that the prefrontal and other cortical networks that are so critical for judgment and self-regulation do not fully mature until people reach 21 to 25 years of age.⁵³ As a result, the adolescent brain is much less able to cognitively modulate strong desires and emotions. This observation is particularly relevant to the establishment of 21 years of age as the legal drinking age in the United States, a ruling that is often questioned even though a dramatic reduction in highway deaths followed its institution.⁵⁴ One could legitimately argue that the study of the neurobiology of addiction provides a compelling argument for leaving the drinking age at 21 years and for increasing the legal smoking age to 21 years, by which time the brain networks that underlie the capacity for self-regulation are more fully formed.

The brain disease model of addiction has also informed policies that take advantage of the infrastructure of primary health care to address substance-use disorders and to provide a model for paying for it through the Mental Health Parity and Addiction Equity Act (MHPAEA) and the Affordable Care Act. Although it is still too early to evaluate the effects of these policies on the nation, an initial examination of the MHPAEA in three states showed increased enrollment and care delivery among patients with substance-use disorders and an overall reduction in spending on emergency department visits and hospital stays.⁵⁵

The social and financial effects of these laws are also illustrated in the recent legal action taken by the State of New York against Value Options and two other managed-care organiza-

tions for alleged discrimination against patients who were wrongly denied benefits related to addiction and mental health after patients with diabetes were used as the comparators. The action was taken on the basis of the amount and extent of preauthorization required for the treatment of patients with substance-use disorder versus those with diabetes, the arbitrary and capricious manner in which the insurers stopped treatment, and the lack of treatment alternatives offered or even suggested to patients.⁵⁶ The settlement has not been contested, and the organizations stopped their discriminatory preauthorization procedures. A similar suit has been filed in California.

Similarly, there are early indications that the integration of primary care and specialty behavioral health care can substantially improve the management of substance-use disorders and the treatment of many addiction-related medical conditions, including the human immunodeficiency virus, hepatitis C virus, cancer, cirrhosis, and trauma.^{57,58}

Despite such reports of benefits to the public from practices and policies generated by research based on the brain disease model of addiction, mobilizing support for further research will require the public to become better educated about the genetic, age-related, and environmental susceptibilities to addiction as they relate to structural and functional changes in the brain. If early voluntary drug use goes undetected and unchecked, the resulting changes in the brain can ultimately erode a person's ability to control the impulse to take addictive drugs.

Dr. McLellan reports receiving fees for serving on the board of directors of Indivior Pharmaceuticals. No other potential conflict of interest relevant to this article was reported.

Disclosure forms are available with the full text of this article at NEJM.org.

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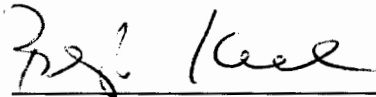
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CERTIFICATE OF COMPLIANCE

I, the undersigned counsel for the Committee for Public Counsel Services as amicus curiae, certify that this brief complies with the rules of court that pertain to the filing of briefs.



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