

MASSACHUSETTS SUPREME JUDICIAL COURT

Commonwealth v. Richardson, 479 Mass. 344

94 N.E.3d 819 (2018) · No. SJC-12375 · Decided April 17, 2018

SUMMARY

The Massachusetts Supreme Judicial Court considered whether probable cause supported the criminal complaint and search warrant issued after police discovered a medical-marijuana grow operation in the defendant's home. The court addressed jury instructions concerning possession with intent to distribute and lawful medical-marijuana cultivation, including the significance of industry best practices. The court reversed in part and affirmed in part.

CASE DETAILS

COURT	Massachusetts Supreme Judicial Court
WRITING FOR THE COURT	Kafker, J.; Gants, C.J.; Gaziano, J.; Lowy, J.; Cypher, J.
JURISDICTION	Massachusetts
DECIDED	April 17, 2018
DOCKET	SJC-12375
DISPOSITION	other
PROCEDURAL POSTURE	Defendant appealed convictions for unlawful cultivation of marijuana and possession of marijuana with intent to distribute after the trial court denied his motion to dismiss and motion to suppress. The Massachusetts Supreme Judicial Court granted direct appellate review.
STANDARD OF REVIEW	The court reviewed the denial of suppression from the four corners of the search-warrant affidavit, asking whether the magistrate had a substantial basis to conclude that a crime had been committed and that the items sought were related to the criminal activity and probably located at the place to be searched. It reviewed the unpreserved jury-instruction claims for a substantial risk of a miscarriage of justice. It reviewed sufficiency of the evidence by asking whether, viewing the evidence in the light most favorable to the Commonwealth, any rational trier of fact could find guilt beyond a reasonable doubt.
PRECEDENTIAL VALUE	published precedential opinion
PARTIES	Joshua A. Richardson v. Commonwealth

TOPICS

criminal procedure

search and seizure

probable cause

suppression of evidence

statutory interpretation

PRACTICE AREAS

criminal procedure

search and seizure

controlled substances

evidence

statutory interpretation

QUESTIONS PRESENTED

1. Whether the criminal complaint and search-warrant affidavit established probable cause despite Richardson's authorization to cultivate medical marijuana.
2. Whether the jury instructions for possession with intent to distribute and unlawful cultivation properly accounted for the medical-marijuana statutory and regulatory scheme.
3. Whether the evidence was sufficient to prove that Richardson intended to cultivate more than a sixty-day supply of usable marijuana.
4. Whether the evidence was sufficient to prove intent to distribute marijuana.
5. Whether the medical-marijuana law's sixty-day supply limit was unconstitutionally vague as applied.

HOLDINGS

1. A warrant affidavit is insufficient when it merely shows that a person is growing marijuana, but probable cause may exist when the affidavit also indicates sales or intent to distribute or provides a qualified basis to believe that cultivation exceeds the authorized sixty-day supply. Richardson's affidavit established probable cause because it included the affiant's qualified opinion that the grow exceeded the personal-use amount and additional evidence suggesting nonpersonal use and distribution.
2. The motion to dismiss was properly denied because the complaint application, viewed from its four corners, supplied substantially the same factual basis as the sufficient search-warrant affidavit.
3. The trial judge did not err by instructing that possession of marijuana, rather than only possession of usable marijuana, could support possession with intent to distribute. The judge also was not required, on the record presented, to give a best-practices instruction because any omission did not create a substantial risk of a miscarriage of justice.
4. When a defendant produces evidence of a valid hardship cultivation registration, unlawful cultivation may be proved either by intentional cultivation of more than the amount authorized for a sixty-day supply or by cultivation with intent to distribute for nonpersonal use. Under the first theory, the Commonwealth must prove both that the defendant cultivated more than the authorized amount and that the defendant intentionally cultivated more than that amount. The instructions given here were erroneous because they did not require proof of intentional cultivation beyond the authorized amount.
5. The evidence was insufficient to prove beyond a reasonable doubt that Richardson intended to cultivate more than ten ounces of usable marijuana in a sixty-day period.
6. The evidence was sufficient to support Richardson's conviction for possession of marijuana with intent to distribute.

7. The court did not decide whether the medical-marijuana sixty-day supply limit was unconstitutionally vague as applied because reversal of the unlawful-cultivation conviction and the insufficiency of the evidence precluded retrial on that charge.

KEY QUOTATIONS

“A search warrant affidavit that merely sets out facts establishing probable cause to believe a homeowner is growing marijuana on the property to be searched, without more, does not establish probable cause to believe a crime has been committed.” (479 Mass. at 351-352)

“A patient or caregiver's use of industry best practices is not evidence of criminal intent.” (479 Mass. at 359)

“It is not enough that the plants happen to yield more than ten ounces in a sixty-day period; the medical marijuana regulations contemplate a patient's ability to return excess marijuana to a medical dispensary.” (479 Mass. at 360-361)

“Rather, the Commonwealth must show that the defendant was intentionally cultivating more than ten ounces of usable marijuana in a sixty-day period.” (479 Mass. at 361)

“Even construing the evidence in the light most favorable to the Commonwealth, the testimony as to the defendant's yield, based primarily on a single photograph of his plants, is too speculative for a rational fact finder to conclude beyond a reasonable doubt that the defendant intended to cultivate more than ten ounces of usable marijuana in a sixty-day period.” (479 Mass. at 367)

FACTUAL BACKGROUND

Richardson possessed a valid physician's written certification authorizing medical-marijuana cultivation and permitting him to pursue home cultivation while Massachusetts's dispensary and hardship-registration systems were not yet operational. After Richardson reported a home invasion, police entered his home to search for intruders and observed marijuana-growing equipment and marijuana plants. A search warrant resulted in the seizure of twenty-two plants, grow lights, fertilizer, plastic bags, and a scale; police also found \$2,135 on Richardson. The Commonwealth's evidence concerning the plants' expected yield was speculative, but the combination of the grow operation, cash, scale, home-invasion evidence, and Richardson's limited personal use supported the possession-with-intent-to-distribute conviction.

PROCEDURAL HISTORY

A criminal complaint was sworn to in the Framingham Division of the District Court Department. The trial court denied Richardson's motion to dismiss for lack of probable cause and his motion to suppress statements and evidence. Following a jury trial, he was convicted of unlawful cultivation of marijuana and possession with intent to distribute marijuana. The Supreme Judicial Court affirmed the possession-with-intent-to-distribute conviction but reversed the unlawful-cultivation conviction.

DISPOSITION

other

REMAND INSTRUCTIONS

The possession-with-intent-to-distribute conviction remains affirmed. The unlawful-cultivation conviction is reversed; because the evidence was insufficient to support intentional cultivation beyond the sixty-day supply, retrial on that charge is precluded.

CASES CITED

- Commonwealth v. Canning, 471 Mass. 341 (2015)
- Commonwealth v. O'Day, 440 Mass. 296 (2003)
- Commonwealth v. Humberto H., 466 Mass. 562 (2013)
- Commonwealth v. DiBennadetto, 436 Mass. 310 (2002)
- Commonwealth v. Bell, 83 Mass. App. Ct. 61 (2013)
- Commonwealth v. St. Louis, 473 Mass. 350 (2015)
- Commonwealth v. Clermy, 421 Mass. 325 (1995)
- Commonwealth v. Scala, 380 Mass. 500 (1980)
- Commonwealth v. Sendele, 18 Mass. App. Ct. 755 (1984)
- Commonwealth v. Alphas, 430 Mass. 8 (1999)
- Commonwealth v. Horne, 476 Mass. 222 (2017)
- Commonwealth v. Shea, 467 Mass. 788 (2014)
- Commonwealth v. Rogers, 459 Mass. 249, cert. denied, 565 U.S. 1080 (2011)
- Commonwealth v. Palmer, 464 Mass. 773 (2013)
- Commonwealth v. Keefner, 461 Mass. 507 (2012)
- Warner-Lambert Co. v. Execuquest Corp., 427 Mass. 46 (1998)
- Commonwealth v. Peters, 429 Mass. 22 (1999)
- Commonwealth v. Latimore, 378 Mass. 671 (1979)
- Commonwealth v. Brown, 477 Mass. 805 (2017)
- Commonwealth v. Ellis, 356 Mass. 574 (1968)
- Commonwealth v. Holiday, 349 Mass. 126 (1965)
- Commonwealth v. Little, 453 Mass. 766 (2009)
- Commonwealth v. Grissett, 66 Mass. App. Ct. 454 (2006)
- Commonwealth v. Rugaber, 369 Mass. 765 (1976)
- Commonwealth v. Wilson, 441 Mass. 390 (2004)
- Commonwealth v. Clark, 446 Mass. 620 (2006)
- Commonwealth v. Montanez, 410 Mass. 290 (1991)
- Commonwealth v. LaPerle, 19 Mass. App. Ct. 424 (1985)
- Commonwealth v. Sepheus, 468 Mass. 160 (2014)

OPINION

KAFKER, J.

NOTICE: All slip opinions and orders are subject to formal revision and are superseded by the advance sheets and bound volumes of the Official Reports. If you find a typographical error or other formal error, please notify the Reporter of Decisions, Supreme Judicial Court, John Adams Courthouse, 1 Pemberton Square, Suite 2500, Boston, MA, 02108-1750; (617) 557- 1030; SJCReporter@sjc.state.ma.us SJC-12375 COMMONWEALTH vs. JOSHUA A. RICHARDSON.

Middlesex. December 7, 2017. - April 17, 2018. Present: Gants, C.J., Gaziano, Lowy, Cypher, & Kafker, JJ. Marijuana. Medicine. Controlled Substances. Search and Seizure, Affidavit, Probable cause, Warrant. Probable Cause. License. Jury and Jurors. Evidence, Expert opinion, Intent. Intent. Practice, Criminal, Affidavit, Motion to suppress, Warrant, Instructions to jury.

Complaint received and sworn to in the Framingham Division of the District Court Department on September 9, 2013. A motion to dismiss was heard by Douglas W. Stoddart, J.; a pretrial motion to suppress evidence was heard by Martine Carroll, J.; and the case was tried before David W. Cunis, J. The Supreme Judicial Court granted an application for direct appellate review.

Allison Callahan for the defendant. Elizabeth J. May, Assistant District Attorney, for the Commonwealth. KAFKER, J. The defendant, a medical marijuana patient, was arrested when police discovered twenty-two marijuana plants 2 growing in his basement.

After a jury trial, he was convicted of unlawful cultivation of marijuana and possession with intent to distribute marijuana. On appeal, he argues that (1) the criminal complaint and the search warrant lacked probable cause; (2) the jury instructions were in error; (3) the evidence was insufficient to find the defendant guilty beyond a reasonable doubt; and (4) the medical marijuana law's sixty-day supply limit is unconstitutionally vague as applied.

For the reasons stated below, we reverse in part and affirm in part. 1. Background. The defendant, Joshua A. Richardson, was an unemployed tattoo artist living in Framingham at the time of his arrest. On July 2, 2013, he obtained a written certification from a qualifying physician that approved his use of medical marijuana to treat a number of medical conditions.

The certification constituted a valid hardship cultivation registration permitting the defendant to grow up to ten ounces of marijuana every sixty days for his personal, medical use.¹ 1 No medical marijuana dispensaries were operating at this time and the Department of Public Health (department) had not yet begun to process hardship cultivation registration applications.

Commonwealth v. Canning, 471 Mass. 341, 348 & n.10 (2015). Accordingly, every qualifying patient with a written certification was authorized to cultivate medical marijuana. *Id.* at 347-348 & n.8-10, 349. See St. 2012, c. 369, § 2 (N) (defining a written certification as a "document signed by a licensed physician, stating that in the physician's professional opinion, the potential benefits

of medical use of 3 Approximately two months later, on September 7, 2013, the defendant telephoned 911 to report a home invasion at his residence.

The defendant told the 911 operator that three men had entered his home and "started beating the hell out of [him]." Officer Wayne Jordan reported to the defendant's residence within a few minutes of receiving the dispatch.

The defendant told Wayne that three men had broken into his house, one of whom had a gun. Approximately twenty officers arrived on scene, including a number of Framingham police vehicles; State police vehicles and canine units; a State police helicopter; and officers from surrounding towns.

The police established a perimeter around the house to search for the home invaders. Framingham police Sergeant Michael Esposito assembled a team of officers to enter the defendant's home to determine whether the suspects were still inside.

The team did not find anyone inside the house. However, Sergeant Esposito observed a pressure cooker and an autoclave² in the kitchen. In a room on the first floor, Sergeant Esposito noticed "a fan and blower assembly with a hose feeding it air or taking air out." He observed a plastic marijuana would likely outweigh the health risks for the qualifying patient").

2 Sergeant Michael Esposito testified that an autoclave is a device typically found in a medical facility that is used to sterilize equipment. 4 container with aluminum trays with a brown leafy substance in them, which he described at trial as "some type of something growing in those trays."3 He also found a blow torch and numerous plastic bags in the room.

Sergeant Esposito learned from other officers on the team that they had found marijuana growing in the basement. At that point, Esposito ordered everyone out of the house and secured the premises. Once outside, Sergeant Esposito read the defendant the Miranda rights.

The defendant indicated that he would not speak with police without his attorney present, and Esposito stopped asking him questions. However, the defendant then said, unprompted, that the police "only had the right to go in my house and look for... the guys with the gun. I never 3 One of the police reports indicated that police believed this to be a "psilocybin mushroom grow".

When police asked the defendant about the items found in the room on the first floor, the defendant said "he was experimenting on how to grow mushrooms" and that "he was teaching his [five] year old son how to grow things." He stated that "he had also been trying to grow his own mushroom spores and that they were contained in a white Styrofoam box in that room."

The police seized the mushrooms and sent them for laboratory analysis. The police report states that "charges will be filed [for growing psilocybin mushrooms] after analysis" of the mushrooms. At the motion to dismiss hearing, the Commonwealth indicated that it made sense to try the

mushroom and marijuana charges together, but that the Commonwealth did not know the status of the laboratory analysis of the mushrooms.

Ultimately, the Commonwealth never charged the defendant with a crime related to the mushrooms. The record does not indicate whether this is because the laboratory analysis showed that the mushrooms did not contain psilocybin or for some other reason. 5 gave you permission to look for drugs. This is fucked up." He indicated that he had a license to grow marijuana.

At that point, the defendant was placed under arrest and searched. The police found \$2,135 in cash in his pocket. After the defendant was arrested, he was taken to the Framingham police station. He requested to speak with the detectives investigating his case. Detective Robert Lewis of the Framingham police department's narcotics unit brought the defendant into an interview room and read him the Miranda rights again.

The defendant explained to the detective that he had recently been given a medical marijuana card and was growing marijuana under that registration, referring to the doctor's certification issued to him on July 2, 2013.

On the morning of his arrest, he was in the basement pruning his marijuana plants when he heard a noise coming downstairs. He saw two individuals, one with a gun. He ran upstairs to the second-floor bedroom, and noticed a third man coming up the stairs toward him. He escaped the house and telephoned 911, using a cellular telephone borrowed from a passing bystander.

Pursuant to a search warrant, Framingham officers seized twenty-two plants ranging in height from one foot to three feet tall, fertilizer, pots, and soil from the basement. According 6 to Officer Lewis, some of the plants were "in full bloom."4 The plants were all located in the basement, in a tent designed for growing marijuana.

The officers found two large five feet by three feet high intensity lights hanging over the marijuana plants, a ballast system,5 and other boxes of lights in the basement. There was a "fertilizer grow kit" in the basement as well, labeled, "Recipe for Success Starter Kit".

In the room on the first floor that Sergeant Esposito had previously examined, they found a scale and plastic bags.6 In the kitchen, they found fertilizer advertised for growing marijuana. Detective Lewis also testified that they found evidence of a tattoo business in the house, specifically a tattoo gun.

However, he did not find any physical evidence that a home invasion had occurred or that anyone else had been in the house. Lewis further testified that the defendant's account of seeing a third man come up the stairs 4 On cross-examination, Detective Robert Lewis could not identify which plants were flowering from a photograph taken of the grow operation. 5 The Commonwealth's

expert testified that ballasts are used in conjunction with high intensity lights to "provide light to a specific number of plants."

The wattage of the ballasts is important because the brightness of the grow lights affects the growth cycle of marijuana plants. 6 The search warrant return document indicates that the scale was found in the master bedroom, but Detective Lewis testified that the scale was found in the room on the first floor. 7 to the second floor was inconsistent with the layout of the house.

At trial, the defendant's former girl friend, who was dating and living with him at the time of his arrest, testified for the Commonwealth. The couple had known each other for fourteen months and had dated for eleven months when the defendant was arrested. When asked if the defendant was a regular marijuana user at the time of his arrest, she testified, "not that I noticed -- maybe a couple times.

I don't know what he did when I he [sic] was not around." She stated that he was not working at the time. She observed him leave the house from time to time but didn't know where he went. She worked five or six days per week, and when she came home the defendant was often sleeping, hidden in the back room on the first floor, or not home. She acknowledged that the defendant had tattoo equipment at the house, and that she saw him "do a couple of tattoos."

She also testified that he was typically paid in cash by friends for giving them tattoos. In the whole time she dated the defendant, she could recall approximately six times that he said he was going to do work at a tattoo parlor. She did not know whether his tattoo equipment included the pressure cooker or autoclave found in the house.

The defendant was charged with unlawful cultivation of marijuana and possession of marijuana with intent to distribute. 8 Prior to trial, he moved to dismiss the complaint, arguing that there was no probable cause to believe he had committed the crimes charged.

The motion was denied. The defendant then moved to suppress his statements to police and the evidence seized, arguing that he did not give police permission to enter his house in the first instance, and that there was no probable cause to believe that he had committed the crimes charged.

The motion to suppress also was denied. After a jury trial, the defendant was convicted on both counts. The defendant appealed, and we granted his application for direct appellate review. 2. Discussion. General Laws c. 94C, § 32C (a), provides: "Any person who knowingly or intentionally manufactures, distributes, dispenses or cultivates, or possesses with intent to manufacture, distribute, dispense or cultivate a controlled substance in Class D of [§ 31] shall be imprisoned in a jail or house of correction for not more than two years or by a fine or not less than [\$500] nor more than [\$5,000], or both such fine and imprisonment."

The applicability of this section was altered by the legalization of medical marijuana in Massachusetts. The Commonwealth's medical marijuana scheme, St. 2012, c. 369 (act), was passed by ballot initiative in 2012.⁷ It provides in part: 7 Upon the execution of the transfer agreement between the department and the Cannabis Control Commission, or on December 31, 2018, whichever occurs first, St. 2012, c. 369, will be codified as G. L. c. 94I.

See St. 2017, c. 55, §§ 44, 82. 9 "A qualifying patient or a personal caregiver shall not be subject to arrest or prosecution, or civil penalty, for the medical use of marijuana provided he or she: "(a) Possesses no more marijuana than is necessary for the patient's personal, medical use, not exceeding the amount necessary for a sixty-day supply; and "(b) Presents his or her registration card to any law enforcement official who questions the patient or caregiver regarding use of marijuana."

St. 2012, c. 369, § 4. However, "[n]othing in [the act] supersedes Massachusetts law prohibiting the possession, cultivation, transport, distribution, or sale of marijuana for nonmedical purposes." St. 2012, c. 369, § 7 (E).

The act went into effect on January 1, 2013, and corresponding regulations became effective May 24, 2013. St. 2012, c. 369, § 16. Under the act, qualifying patients may use marijuana for medicinal purposes, within certain parameters. "[T]he principal source of medical marijuana is intended to be the nonprofit medical marijuana treatment centers, or dispensaries, that are to be registered by [the Department of Public Health]" (department).

Commonwealth v. Canning, 471 Mass. 341, 345-346 (2015). However, the act permits qualifying patients to obtain a "hardship cultivation registration" in certain limited circumstances.⁸ St. 2012, c. 369, § 11. 8 A recreational marijuana scheme, St. 2016, c. 334, was later passed by ballot initiative in 2016. Effective December 15, 2016, an individual may grow up to six marijuana plants, so 10 Patients may qualify for a hardship cultivation registration if their access to a dispensary is "limited by verified financial hardship, a physical incapacity to access reasonable transportation, or the lack of a treatment center within a reasonable distance of the patient's residence."

St. 2012, c. 369, § 11. A hardship cultivation registration allows the qualifying patient or the patient's personal caregiver to "cultivate a limited number of plants, sufficient to maintain a [sixty]-day supply of marijuana." *Id.* A "sixty-day supply" is defined by regulation as presumptively ten ounces, unless a physician certifies that a larger quantity is necessary to provide the patient with a sixty-day supply.

See 105 Code Mass. Regs. §§ 725.004, 725.010(I) (2017). The hardship cultivation registration was envisioned as "an approach of last resort." Memorandum from DPH Medical Marijuana Work

Group to Interim Commissioner of Department of Public Health and Members of Public Health Council, Informational Briefing on Proposed Regulations at 105 CMR 725.000, at 6 (Apr.

10, 2013). Recognizing the possible "diversion and security complications" that accompany home cultivation, the department promulgated medical marijuana regulations with an intent to "minimize hardship cultivation by optimizing access through a long as no more than twelve plants are grown per household. See G. L. c. 94G, § 7 (a) (2); St. 2016, c. 334, § 12.

11 variety of [other] approaches." *Id.* at 8. However, at the time of the defendant's arrest, there were no medical marijuana dispensaries open in Massachusetts, and the department had not yet begun to process hardship cultivation registration applications. See *Canning*, 471 Mass. at 347-348 & n.10.

Thus, as a qualifying medical marijuana patient, the defendant was permitted to pursue home cultivation under the act. See *id.* at 349 ("when the search at issue here took place, the act was not fully implemented; no marijuana treatment centers were operating; and therefore,... every person who was certified as a qualifying patient... was authorized to cultivate a sufficient quantity of marijuana to produce a sixty-day supply" [emphasis in original]).

Accordingly, the defendant was protected from prosecution for cultivating marijuana for his personal, medical use, provided he did not possess marijuana in excess of the amount necessary for a sixty-day supply. See St. 2012, c. 369, § 4. a. Probable cause.

The defendant argues that the motion to dismiss and the motion to suppress were each improperly denied. On appeal, he provides the same rationale in support of both contentions -- that there was insufficient probable cause. i. Motion to suppress.

In determining whether the motion to suppress was properly denied, we are limited to examining the four corners of the search warrant affidavit. *Canning*, 471 12 Mass. at 348. We must decide whether "the magistrate had a substantial basis to conclude that a crime had been committed,... and that the items described in the warrant were related to the criminal activity and probably in the place to be searched."

Id., quoting *Commonwealth v. O'Day*, 440 Mass. 296, 297-298 (2003). A search warrant affidavit that merely sets out facts establishing probable cause to believe a homeowner is growing marijuana on the property to be searched, without more, does not establish probable cause to believe a crime has been committed. *Canning*, 471 Mass. at 352-353.9 Where the target of the warrant has a valid hardship cultivation registration, facts indicating that the person is selling the marijuana or that "in the opinion of a properly qualified affiant, the number of plants exceeded the quantity necessary to grow a sixty-day supply of ten ounces" can supply probable cause.

Id. at 352 n.15. The search warrant at issue here established both. The affidavit that Detective Lewis submitted in support of the search warrant stated explicitly that based on the number of 9 Our opinion in Canning goes on to say that facts indicating that the person does not have a valid hardship cultivation registration can supply probable cause. Canning, 471 Mass. at 352.

We note, however, that Canning was decided before recreational marijuana was legalized, which permits individuals to grow a limited number of marijuana plants without a hardship cultivation registration. See G. L. c. 94G, § 7 (a) (2). See also note 8, *supra*. 13 plants found, the conditions under which they were growing, and his own experience with the narcotics unit, he believed that the "marijuana grow" was in excess of the amount necessary for personal medical use.

Moreover, the affidavit indicated that a suspected "psilocybin mushroom grow" was found in the house; the defendant's long-term girl friend did not know why he was growing marijuana given that he did not smoke marijuana on a regular basis; and the defendant had said that two men came directly into his basement, the exact location of his marijuana grow, and that one had brandished a gun.

This was sufficient to establish probable cause.¹⁰ ¹⁰However, we note that the affiant's assertion that "by and large it is not worth it for users to invest the necessary time and money to create a successful marijuana grow when they can simply buy marijuana from somebody else," is not itself a proper basis for establishing probable cause.

The act contemplates that users with valid hardship cultivation registrations will cultivate marijuana. It would defeat the public's purpose in voting for the medical marijuana scheme to treat evidence consistent with lawful cultivation as evidence of unlawful cultivation or intent to distribute. Cf. Canning, 471 Mass. at 352 ("The act's medical marijuana program is structured as a licensing or registration system, and expressly contemplates the lawful possession, cultivation, and distribution of marijuana for medical purposes by a number of different individuals [and certain nonprofit entities], as long as they are registered to do so.

In light of the statutory and regulatory framework created by the act, a search warrant affidavit setting out facts that simply establish probable cause to believe the owner is growing marijuana on the property in question, without more, is insufficient to establish probable cause to believe that the suspected cultivation is a crime"); Commonwealth v. Humberto H., 466 Mass. 562, 570 (2013) ("Where [intent to distribute] is not [supported by probable cause], 14 The defendant argues that the police were required to investigate how much marijuana constituted a sixty-day supply under his registration, because "[n]either the statute nor the [regulations] provide[s] a presumptive limit on how much marijuana a person may legally prescribe."

The defendant misstates the law. Although there is no absolute limit on how much medical marijuana can be prescribed, the presumptive limit is indeed ten ounces in a sixty-day period. See

note 14, *infra*. Accordingly, there was sufficient probable cause for the search warrant. ii. Motion to dismiss. A motion to dismiss for lack of probable cause is evaluated from the four corners of the application for a complaint.

See *Commonwealth v. DiBennadetto*, 436 Mass. 310, 313 (2002); *Commonwealth v. Bell*, 83 Mass. App. Ct. 61, 62 (2013). Here, the application included police reports from Sergeant Esposito and Detective Lewis, which laid out substantially the same factual basis as the search warrant affidavit.

Accordingly, for the reasons explained above, the motion to dismiss also was properly denied. criminal prosecution defeats the public's purpose in voting for decriminalization because it not only treats simple possession of one ounce or less of marijuana as if it were 'a serious infraction worthy of criminal sanction,'... but it also treats a drug user as a drug dealer" [citation omitted]).

15 b. Jury instructions. The defendant argues for the first time on appeal that the jury instructions were in error. Because he did not object to the instructions at trial, we review for a substantial risk of a miscarriage of justice. See *Commonwealth v. St. Louis*, 473 Mass. 350, 359 (2015). i. Instruction on possession with intent to distribute.

The judge explained that the Commonwealth was required to prove beyond a reasonable doubt that (1) the substance in question was a class D substance; (2) the defendant possessed some perceptible amount of that substance with the intent to distribute it to another person; and (3) the defendant did so knowingly or intentionally. See G. L. c. 94C, § 32C; Instruction 7.800 of the Criminal Model Jury Instructions for Use in the District Court (2009).

The defendant argues that possession with intent to distribute requires possession of usable marijuana,¹¹ not simply marijuana, and that the judge erred in failing to make this distinction. The defendant is incorrect. General laws c. 94C, § 32C, prohibits possessing a class D substance with intent to distribute. "Marihuana" is listed as a 11Usable marijuana is defined by regulation as "the fresh or dried leaves and flowers of the female marijuana plant and any mixture or preparation thereof, including [marijuana-infused products], but does not include the seedlings, seeds, stalks, or roots of the plant, or [marijuana waste product]."

105 Code Mass. Regs. § 725.004 (2017). 16 class D substance, and is defined to include "all parts of the plant [c]annabis sativa L., whether growing or not." See G. L. c. 94C, §§ 1, 31. The medical marijuana act adopted the meaning of "marihuana" as defined in G. L. c. 94C, § 1. See St. 2012, c. 369, § 2 (G).

Although the medical marijuana regulations contain a definition for "usable marijuana," the term is only used to explain certain regulatory requirements and in no way alters the meaning of "marihuana" under G. L. c. 94C, § 1.

Accordingly, the judge did not err in instructing the jury that the defendant need only possess marijuana, not usable marijuana, for the purposes of possession with intent to distribute. The defendant also argues that the instructions were improper for failing to clarify what evidence the jury may consider where the defendant has a valid home cultivation registration.

The judge instructed: "Among the factors you may consider in [evaluating intent to distribute] are how large a quantity of drugs were possessed, how pure in quality the drugs were, what the street value of the drugs were, what the defendant's financial resources were, how the drugs were packaged, whether there were other items that were found along with the drugs which might suggest drug sales, such as cutting agents or packaging materials, scale[s] or large amounts of cash."

This instruction is primarily derived from our case law prior to the enactment of the medical marijuana scheme. See, e.g., *Commonwealth v. Clermy*, 421 Mass. 325, 331 (1995) (packaging of drugs in many small packets and possession of telephone pager); 17 *Commonwealth v. Scala*, 380 Mass. 500, 511 (1980) (quantity possessed); *Commonwealth v. Sendele*, 18 Mass. App.

Ct. 755, 758- 759 (1984) (quantity, purity, packaging, and amount of cash possessed). Here, the defendant asserts that the judge was required to include an instruction clarifying that lawful home cultivation of medical marijuana requires adhering to "industry best practices," pursuant to 105 Code Mass. Regs. § 725.035(I) (2017).

The defendant argues that because the jury were unaware of the best practices requirement, and because the Commonwealth relied heavily on testimony about his equipment, the jury may have improperly discerned an intent to distribute from his lawful use of grow equipment contemplated by the regulatory scheme.

Although the regulations do not define the "industry best practices" to which patients must adhere, elsewhere in the regulations medical marijuana dispensaries are required to "use best practices to limit contamination, including but not limited to mold, fungus, bacterial diseases, rot, pests, pesticides not approved by the [d]epartment, mildew, and any other contaminant identified as posing potential harm."

105 Code Mass. Regs. § 725.105(B)(1)(f) (2017). As indicated by the expert testimony at trial, to limit contamination, growers use particularized equipment, such as high efficiency particulate air filters, ozone generators, and hydrometers. 18 "An error creates a substantial risk of a miscarriage of justice unless we are persuaded that it did not 'materially influence[]' the guilty verdict" (citation omitted).

Commonwealth v. Alphas, 430 Mass. 8, 13 (1999). "In applying this standard, we analyze the potential impact of the error on the verdict,... and review the record to determine the strength of

the Commonwealth's case, absent the improper evidence" (citations omitted). *Commonwealth v. Horne*, 476 Mass. 222, 228 (2017).

Although we agree that juries should be informed of the "industry best practices" requirement when such an instruction is requested,¹² here we cannot conclude that its absence materially influenced the verdict on possession with intent to distribute. Sophisticated grow equipment designed to increase the yield of usable marijuana, in combination with a large number of plants, may properly be considered when evaluating ¹²In cases involving a defendant with a valid hardship cultivation registration, the jury should be instructed that the medical marijuana regulations require medical marijuana patients and caregivers to adhere to industry best practices in the cultivation of marijuana plants and storage of usable marijuana.

105 Code Mass. Regs. § 725.035(I) (2017). "Industry best practices" is not defined in the regulation, but may be understood as those industry practices commonly used to limit contamination. See 105 Code Mass. Regs. § 725.105(B)(1)(f) (2017). A patient or caregiver's use of industry best practices is not evidence of criminal intent. ¹⁹ intent to distribute.¹³ The testimony at trial indicated that the actual equipment and methods used for the defendant's grow operation were primarily associated with increasing yield.

However, there was no testimony indicating that such equipment was associated with limiting contamination. To the contrary, the expert testimony indicated that the defendant lacked equipment necessary to limit contamination. More importantly, in addition to the grow equipment, the jury also heard evidence of an armed home invasion, a large amount of cash, numerous plastic baggies, a digital pocket scale, and the defendant's sparing drug use.

Under these circumstances, the failure to give a best practices instruction, even if in error, did not create a substantial risk of a miscarriage of justice. ii. Unlawful cultivation instruction. The model jury instruction for unlawful cultivation, and the one given in this case, albeit with supplementation, is that unlawful cultivation consists of three elements: (1) the substance in question was a class D substance; (2) the defendant cultivated some perceptible amount of that substance; and (3) the defendant did so knowingly ¹³We recognize that there may be overlap between equipment designed to increase yield and equipment designed to limit contamination.

If fewer plants succumb to contamination, the total crop yield of usable marijuana will presumably be higher. However, we discern a distinction between equipment whose primary purpose is to limit contamination, and equipment whose primary purpose is to increase yield, irrespective of contamination. ²⁰ or intentionally. See G. L. c. 94C, § 32C; Instruction 7.800 of the Criminal Model Jury Instructions for Use in the District Court.

Under this definition, any medical marijuana patient who cultivates his or her own supply of medical marijuana, a class D substance, pursuant to a hardship cultivation registration would be

guilty of unlawful cultivation.

However, "[u]nder the [medical marijuana] act, cultivation of marijuana is expressly permitted if a person... is properly registered to do so, and the cultivation does not exceed the amount necessary to yield a sixty-day supply of medical marijuana" for the patient's personal, medical use. *Canning*, 471 Mass. at 349; St. 2012, c. 369, §§ 4, 7.

The act creates two theories of unlawful cultivation of medical marijuana where the defendant produces evidence of a valid hardship cultivation registration: (1) unlawful cultivation of more than a sixty-day supply, and (2) unlawful cultivation for nonpersonal use. See St. 2012, c. 369, § 4.

Under a theory of unlawful cultivation of more than a sixty-day supply, the jury must be instructed as to the three elements of unlawful cultivation mentioned above, as well as two additional elements: (a) the defendant cultivated more than the amount necessary to provide a sixty-day supply of medical marijuana to the patient; and (b) the defendant did so intentionally.

See 21 *Canning*, 471 Mass. at 349; St. 2012, c. 369, § 4. It is not enough that the plants happen to yield more than ten ounces in a sixty-day period; the medical marijuana regulations contemplate a patient's ability to return excess marijuana to a medical dispensary. See 105 Code Mass. Regs. § 725.105(J)(4) (2017). Rather, the Commonwealth must show that the defendant was intentionally cultivating more than the amount necessary to provide ten ounces of usable marijuana in a sixty-day period.¹⁴ By contrast, under a theory of unlawful cultivation for nonpersonal use, the jury must instead be instructed as to the following additional element: the defendant cultivated marijuana with the intent to distribute.¹⁵ See St. 2012, c. 369, §§ 4, 7 (E).¹⁶ ¹⁴The regulations contemplate that a sixty-day supply may exceed ten ounces for a particular patient.

St. 2012, c. 369, § 8; 105 Code Mass. Regs. § 725.010(I) (2017). In such instances, the certifying physician must "document the amount [that constitutes a sixty-day supply] and the rationale in the medical record and in the written certification." 105 Code Mass. Regs. § 725.010(I).

For defendants who produce evidence establishing that they were validly permitted to grow more than ten ounces every sixty days, the Commonwealth must prove that they intended to cultivate more than their registration permitted them to grow in a sixty-day period. ¹⁵The regulations permit home cultivation by a personal caregiver on behalf of the patient the caregiver serves.

See 105 Code Mass. Regs. § 725.020(E) (2017). In cases where a personal caregiver is being tried for unlawful cultivation for nonpersonal use, the relevant inquiry is whether the defendant cultivated marijuana with the intent to distribute it to someone other than the patient for whom the defendant served as a ²² To determine whether the unlawful cultivation instruction was erroneous such that it created a substantial risk of a miscarriage of justice, we must examine the jury instructions as a whole.

See *Commonwealth v. Shea*, 467 Mass. 788, 796 (2014). "Isolated misstatements included in a comprehensive charge to the jury do not constitute reversible error when there is little likelihood that the jury would have misunderstood the correct import of the entire charge." *Commonwealth v. Rogers*, 459 Mass. 249, 262, cert. denied, 565 U.S. 1080 (2011).

Although the judge did not use the language set out above, he told the jury that the defendant had a valid hardship cultivation registration and that it was the Commonwealth's burden to prove the defendant "had so many marijuana plants that the plant yield was certain to exceed [ten] ounces of usable marijuana every [sixty] days or that he intended to sell or distribute any of his usable marijuana."

This instruction failed to explain that the Commonwealth must show that the defendant was intentionally cultivating more than ten ounces of usable marijuana in a sixty-day period. Without such a directive, the judge's instructions could have led the jury to personal caregiver. See St. 2012, c. 369, § 4 (personal caregivers included in provision protecting personal, medical use from prosecution).

16 Model jury instructions for unlawful cultivation of marijuana is set forth in the Appendix. 23 convict the defendant even if he was unintentionally cultivating more plants than were necessary to yield ten ounces in sixty days.

Thus, the jury instructions on unlawful cultivation were erroneous. We conclude that this error created a substantial risk of a miscarriage of justice.¹⁷ As will be explained in more detail in our discussion of the sufficiency of the evidence, there was limited expert testimony about how much the defendant's plants would yield.

The jury were also tasked with determining whether the defendant was a novice or an experienced grower as the two experts had contradictory testimony on this point. In these circumstances, whether the defendant was intentionally cultivating more than ten ounces was a difficult jury question.

We are not persuaded that the absence of this jury instruction ¹⁷ At oral argument, the Commonwealth insisted that even if the jury instructions for unlawful cultivation were erroneous, the defendant's conviction should be upheld under a theory of unlawful cultivation for nonpersonal use.

The Commonwealth reasoned that because the jury found the defendant guilty of possession with intent to distribute, he would be guilty of unlawful cultivation irrespective of whether he grew more than a sixty-day supply. Without better briefing on the subtle distinction between unlawful cultivation for nonpersonal use and possession with intent to distribute in these circumstances, we decline to consider this theory where it is first raised at oral argument.

See *Commonwealth v. Palmer*, 464 Mass. 773, 777 (2013); *Commonwealth v. Keefner*, 461 Mass. 507, 511 (2012); *Warner–Lambert Co. v. Execuquest Corp.*, 427 Mass. 46, 50 n.7 (1998); Mass. R. A. P. 16 (a) (4), as amended, 367 Mass. 921 (1975). 24 did not materially influence the outcome. See *Alphas*, 430 Mass. at 13.18 c. Sufficiency of the evidence. Next, the defendant argues that the evidence was insufficient as to both unlawful cultivation and possession with intent to distribute.

In reviewing the sufficiency of the evidence, we must determine whether, viewing the evidence in the light most favorable to the Commonwealth, any rational trier of fact could have found the defendant guilty beyond a reasonable doubt. *Commonwealth v. Latimore*, 378 Mass. 671, 677-678 (1979). "Under this standard of review, we resolve issues of witness credibility in favor of the Commonwealth....

In determining whether a reasonable jury could find each element of the crime charged, we also do not weigh the supporting evidence against conflicting evidence" (citation omitted). *Commonwealth v. Brown*, 477 Mass. 805, 812 (2017). 18The defendant also argues that his trial counsel was ineffective for helping to write the jury instructions he contends are erroneous.

We need not address the defendant's claim of ineffective assistance as to the unlawful cultivation conviction, as we have already determined that the instruction was erroneous and created a substantial risk of a miscarriage of justice.

However, for essentially the same reasons that led us to conclude that the jury instructions on possession with intent to distribute did not create a substantial risk of a miscarriage of justice, we also conclude that those instructions did not prejudice the defendant. See *Commonwealth v. Peters*, 429 Mass. 22, 31 n.12 (1999).

The only error in those instructions related to best practices, an issue of marginal relevance in the instant case. 25 i. Evidence of yield in excess of sixty-day supply. As discussed, the jury were not properly instructed as to the standard for evaluating whether a defendant exceeded the home cultivation limit.

We also conclude that the evidence was insufficient to support such a finding. As the Commonwealth's expert testified, an individual marijuana plant's yield depends on a number of factors, including the strain, growing conditions, fertilization, watering, temperature, ventilation, amount of light, location, and humidity. Yet the Commonwealth's expert never personally observed the defendant's marijuana grow.

His testimony was instead based on reading the police report, search warrant affidavit, and transcript of prior testimony, and on viewing a single photograph of the defendant's marijuana plants. Much of the ambiguity in the expert testimony in this case arose out of the dependence of both experts on this single photograph.

The jury heard testimony from both experts that the defendant's plant yield would depend particularly on the gender of the plants grown. Although female plants produce usable marijuana, male plants do not. Moreover, male plants produce a pollen that will "stress the female plants out and take away the [tetrahydrocannabinol] factor, if not completely ruin the 26 crop."¹⁹ When asked about the gender of the defendant's marijuana plants, the Commonwealth's expert initially testified that the plants "would definitely be female."

However, when later asked whether he could specifically identify the gender of the plants found in the defendant's basement, he said "it would be tough to identify" the smaller plants based on the photograph. He said that, from the photograph, the bigger plants "look female and [he] would be shocked to see if any of them were male." He reasoned that "you would never have a male plant with a female plant under any circumstances."

When asked about an inexperienced grower who might cluster male and female plants together, he opined that such a grower "would never have... a gram to smoke if that were the case." The defense expert's testimony did not resolve the ambiguity. He testified that generally fifty per cent of marijuana seeds develop into female plants, but that the gender ratio can vary by up to fifteen per cent.

For example, a cold floor could yield a sixty-five per cent male plant population.²⁰ Tetrahydrocannabinol is the active ingredient in marijuana that would make the marijuana usable for the treatment of the defendant's medical condition. ²⁰The testimony also was unclear on whether the defendant was using seeds to grow his plants or if he was cloning them. Had the defendant cloned his plants, they may have been only female, but the testimony was ambiguous on this point.

²⁷ Perhaps unsurprisingly, the most definitive statement the Commonwealth could provide as to projected yield was that in a "hypothetical situation" with twenty-two marijuana plants in a basement grow operation with four lights and the setup found in the defendant's house, the plants "would yield over [ten] ounces of marijuana, under the proper conditions."

Even construing the evidence in the light most favorable to the Commonwealth, the testimony as to the defendant's yield, based primarily on a single photograph of his plants, is too speculative for a rational fact finder to conclude beyond a reasonable doubt that the defendant intended to cultivate more than ten ounces of usable marijuana in a sixty-day period. ii.

Evidence of intent to distribute. We next examine whether there was sufficient evidence of the defendant's intent to distribute. "A person's... intent... is a matter of fact, which may not be susceptible of proof by direct evidence." *Commonwealth v. Ellis*, 356 Mass. 574, 578-579 (1970), quoting *Commonwealth v. Holiday*, 349 Mass. 126, 128 (1965).

However, distinguishing between drug possession for personal use and drug possession for distribution "is not a matter within the common experience of jurors," and is made all the more difficult by the legalization of medical, and now recreational, marijuana. *Commonwealth v. Little*, 453 Mass. 766, 769 (2009), quoting *Commonwealth v. Grissett*, 66 Mass. App. Ct.

454, 457 (2006). 28 Typically, "[i]ntent to distribute a drug may be inferred from possession of large quantities of that drug." *Commonwealth v. Rugaber*, 369 Mass. 765, 770 (1976). However, the legal limit on home cultivation, and uncertainties as to its determination complicate this inference.

The defendant had twenty-two plants. Unfortunately, the regulations do not contain a plant-based limit for home cultivation. Moreover, even in the light most favorable to the Commonwealth, the testimony regarding the number of ounces the defendant's plants would actually yield was contradictory and speculative, as discussed above.

The Commonwealth's expert testified, however, that twenty-two plants growing in a setup like the one found in the defendant's house could yield over ten ounces under the right conditions. Although not of much use by itself in determining whether the marijuana grow was for personal use or distribution, this testimony could properly be considered along with other evidence relevant to the issue of intent to distribute.

As discussed, use of grow equipment designed to increase the yield of usable marijuana, in combination with a large number of plants, can properly be considered when evaluating intent to distribute. Traditionally, drug possession in the absence of drug paraphernalia also is probative of intent. See *Commonwealth v. Wilson*, 441 Mass. 390, 401-402 (2004).

In the context of medical marijuana, this evidence must be analyzed carefully to 29 avoid conflating lawful activity with unlawful activity. Cf. *Canning*, 471 Mass. at 352. The Commonwealth's expert testified that marijuana users "commonly use rolling papers... or pipes [or] bongs," but, in reviewing the evidence, he did not see any indication that the defendant possessed these items.²¹ More specifically probative is the former girl friend's testimony that she did not know the defendant to be a regular marijuana user, and had only seen him use marijuana "a couple times."

Although there was limited testimony as to whether the defendant could have cultivated any usable marijuana from his plants by the time of his arrest, his former girl friend's testimony establishes that he had some supply of marijuana, but rarely used it, despite his medical conditions.

Thus, her testimony supports a reasonable inference that the defendant did not cultivate the marijuana for personal use. Numerous plastic bags and a digital pocket scale²² were also located

in the defendant's house, but outside of the kitchen, where such bags and scale would more ordinarily be found.

The 21 We note that not all medical marijuana users smoke the marijuana they consume. In fact, the Commonwealth's expert stated on direct examination that, "we're beginning to see more edible forms" of marijuana, as well as vaporizing. 22 Although neither Esposito nor Lewis testified that the scale was a digital pocket scale, this fact came out on cross-examination of the Commonwealth's expert.

30 plastic bags were, however, found on a separate floor from the marijuana grow, and no evidence was presented connecting them to the marijuana plants, making this evidence of marginal value. Contrast *Commonwealth v. Clark*, 446 Mass. 620, 624 (2006) (uniform packaging is evidence of intent to distribute); *Commonwealth v. Montanez*, 410 Mass. 290, 305-306 (1991) (cutting powder and drugs packaged in paper folders); *Commonwealth v. LaPerle*, 19 Mass. App.

Ct. 424, 427-428 (1985) (cutting powder, wrapping paper, and scale with cocaine residue on pan). Although there is similarly no evidence connecting the scale to the marijuana grow, the Commonwealth's expert testified that drug dealers often possess such types of scales.²³ More significant than the bags and scale are the initial home invasion and the large sum of money found in the defendant's pocket when he was arrested.

His former girl friend testified that he was unemployed, and that she had seen him do very few tattoos in the span of their relationship. Thus, finding \$2,135 on his person at the time of his arrest supported an inference of intent to distribute. See *Sendele*, 18 Mass. App. Ct. at 758-759 ("Very indicative is the large miscellany of money carried in specie by the defendant, who was otherwise 23 We also recognize that medical marijuana patients may need use of a scale to weigh the marijuana they grow, so as to ensure they do not exceed ten ounces.

However, no testimony to that effect was admitted at trial. 31 confessedly without any resources and unemployed to boot"). Contrast *Commonwealth v. Sepheus*, 468 Mass. 160, 166 (2014) (intent to distribute could not be drawn from defendant carrying \$312, where "[t]here was no evidence that the defendant was unemployed and thus unlikely legitimately to have that amount of cash").

Moreover, the defendant told police that two men, one brandishing a gun, came down into his basement, the very area where he was growing his marijuana. In combination with the Commonwealth's expert testimony that violence and theft are often associated with drug dealing, the defendant's account of the home invasion supports an inference that others had knowledge that he was a drug dealer, and intended to rob him.

Taken together, the home invasion, large amount of cash found on the defendant, digital pocket scale, number of plants, and testimony that the defendant sparingly used marijuana were sufficient

for a rational juror to find him guilty of possession with intent to distribute beyond a reasonable doubt. d. Constitutionality.

Finally, the defendant asserts that the sixty-day supply limit established by the medical marijuana laws and corresponding regulations is unconstitutionally vague as applied. Because we conclude that the erroneous jury instructions for unlawful cultivation created a substantial risk of a miscarriage of justice, and there was insufficient evidence of intentional cultivation of more than a sixty-day supply, 32 precluding retrial as to unlawful cultivation, we need not address this argument.

However, we note that of the fifteen States that currently permit home cultivation as part of their medical marijuana scheme, Massachusetts is the only State that defines its limit solely in terms of supply per period. All other such States use plant-based limits.²⁴ The only other State to create a home cultivation limit based on supply period, Washington, changed to a plant-based limit after widespread criticism that the prior rule created uncertainty.

See State Rule Clarifies 60-Day Supply of Medical Marijuana, *Seattle Times*, Oct. 3, 2008. Moreover, even Massachusetts's own recreational marijuana scheme has a plant-based limit. G. L. 24See Colo. Const. art. XVIII, § 14(4)(a)(II) (six-plant limit, with no more than three mature, flowering plants producing usable marijuana). See also Alaska Stat. § 17.37.040(a)(4) (six-plant limit, with no more than three mature, flowering plants producing usable marijuana); Ariz. Rev. Stat. Ann. § 36-2801(a)(ii) (twelve-plant limit); Cal. Health & Safety Code § 11362.77(a), (b) (limit of six mature or twelve immature plants, although patient may grow more with doctor's recommendation); Haw.

Rev. Stat. § 329-121 (ten-plant limit); Me. Rev. Stat. tit. 22, § 2423-A(1)(B) (limit of six mature plants); Mich. Comp. Laws § 333.26424(a) (twelve-plant limit); Mont. Code Ann. § 50-46-319(1) (b)(i) (limit of four mature plants and four seedlings); Nev. Rev. Stat. § 453A.200(3)(b) (twelve-plant limit); Or. Rev. Stat. § 475B.831(1)(a) (limit of six mature plants and twelve immature plants); R.I.

Gen. Laws § 21-28.6-4(a) (limit of twelve mature plants); Vt. Stat. Ann. § 4472(14) (limit of two mature plants and seven immature plants); Wash. Rev. Code § 69.51A.210(1) (six plant limit). Finally, see N.M. Code R. § 7.34.4.8(A)(1) (limit of four mature plants and twelve seedlings). 33 c. 94G, § 7 (a) (2) (individuals limited to six plants, households limited to twelve plants).

As is evident from the expert testimony at trial, the amount of usable marijuana yielded by a plant depends on a large number of variables, including the skill of the grower. The ten-ounce rule provides some additional flexibility for patients who may be inept growers, unable to yield much even from a large number of plants but, by the same token, it makes enforcement of the cultivation limit all the more difficult.

Although the law may not be vague in many cases, such as when a defendant grows an acre of marijuana, without a plant-based limit, start-up home cultivation operations like this one may pose a vagueness problem. Although we need not resolve this issue in the instant case, we emphasize that statutory and regulatory clarification would be most beneficial in this regard.

3. Conclusion. The conviction of possession of marijuana with intent to distribute is affirmed. The conviction of unlawful cultivation marijuana is reversed. So ordered. Appendix. Model Jury Instruction Regarding Unlawful Cultivation with Medical Marijuana Hardship Cultivation Registration: Sixty-Day Supply Under Massachusetts's medical marijuana act, cultivation of medical marijuana is expressly permitted if a person is properly registered to do so, and the cultivation does not exceed a certain amount.

Here, the defendant had a valid hardship cultivation registration allowing him or her to cultivate up to ten ounces of marijuana every sixty days. It is the Commonwealth's burden to prove beyond a reasonable doubt that the defendant was cultivating more marijuana than was permitted by his or her hardship cultivation registration. If the Commonwealth fails to prove beyond a reasonable doubt that the defendant was cultivating more marijuana than was permitted by his or her hardship cultivation registration, then you must find the defendant not guilty.

In order to prove the defendant guilty of this offense, the Commonwealth must prove four elements beyond a reasonable doubt: First: That the substance in question is marijuana; Second: That the defendant knowingly cultivated the substance; Third: That the defendant cultivated more than the amount necessary to provide a sixty-day supply of usable marijuana to the patient; and Fourth: That the defendant intended to cultivate more than the amount necessary to provide a sixty-day supply of usable marijuana to the patient.

As to the first element, the Commonwealth is required to prove that the substance in question is in fact marijuana. Marijuana is defined to include all parts of the plant *cannabis sativa* L., whether growing or not; the seeds thereof; and resin extracted from any part of the plant; and every compound, manufacture, salt, derivative, mixture, or preparation of the plant, its seeds, or resin.

It does not include the mature stalks of the plant, industrial hemp, fiber produced from the stalks, oil, or cake made from the seeds of the plant, any other compound, manufacture, salt, derivative, mixture, or preparation of the mature stalks, except the resin extracted therefrom, fiber, oil, or cake or the sterilized seed of the plant which is incapable of germination.¹ You may consider all the relevant evidence in the case, including the testimony of any witness who may have testified either to support or to dispute the allegation that the substance in question was marijuana.

As to the second element, the term "cultivate" means to grow a plant or crop, namely marijuana. As to the third element, you must determine whether or not the defendant was cultivating more than a medical supply of marijuana.

Under the medical marijuana act, an individual is permitted to produce a sixty-day supply of medical marijuana. A "sixty-day supply" is presumptively ten ounces of usable marijuana. Usable marijuana is defined as "the fresh or dried leaves and flowers of the female marijuana plant and any mixture or preparation thereof, including marijuana-infused products, but does not include the seedlings, seeds, stalks, or roots of the plant."

A sixty-day supply may be greater than ten ounces, if the defendant's certifying physician has documented (1) the greater amount that constitutes a sixty-day supply and (2) the rationale for the defendant's sixty-day supply exceeding ten ounces. This documentation must be in the defendant's medical record and in the defendant's written certification.

In determining whether the defendant was cultivating more than necessary to produce ten ounces of usable marijuana in a sixty-day period, you may consider the number of plants being cultivated, the defendant's skill at cultivation, and the conditions under which the plants were growing.

As to the fourth element, the Commonwealth must prove that the defendant not only cultivated more than necessary for a sixty-day supply, but that the defendant intended to cultivate more than necessary for a sixty-day supply. You may find that the defendant acted intentionally if he or she did so consciously, voluntarily, and purposely, and not because of ignorance, mistake, or accident.

It is not enough that the defendant's marijuana plants happen to be capable of yielding more than ten ounces in a sixty-day period. The Commonwealth must prove that the defendant intended to cultivate more than ten ounces of usable marijuana in a sixty-day period. 1 Please note that this is the amended definition of "marihuana" in G. L. c. 94C, § 1, effective July 28, 2017.

3 Model Jury Instruction Regarding Unlawful Cultivation with Medical Marijuana Hardship Cultivation Registration: Nonpersonal Use Under Massachusetts's medical marijuana act, cultivation of medical marijuana is expressly permitted if a person is properly registered to do so, and the cultivation is for the patient's personal use.

Here, the defendant had a valid hardship cultivation registration allowing him or her to cultivate marijuana for personal medical use. It is the Commonwealth's burden to prove beyond a reasonable doubt that the defendant cultivated marijuana in violation of his or her hardship cultivation registration by cultivating marijuana with the intent to distribute rather than solely for his or her personal use.

If the Commonwealth fails to prove beyond a reasonable doubt that the defendant was cultivating marijuana with the intent to distribute, then you must find the defendant not guilty. In order to prove the defendant guilty of this offense, the Commonwealth must prove three elements beyond a reasonable doubt: First: That the substance in question is marijuana; Second: That the defendant knowingly cultivated the substance; and Third: That the defendant cultivated the substance with the intent to distribute.

As to the first element, the Commonwealth is required to prove that the substance in question is in fact marijuana. Marijuana is defined to include all parts of the plant *cannabis sativa* L., whether growing or not; the seeds thereof; and resin extracted from any part of the plant; and every compound, manufacture, salt, derivative, mixture, or preparation of the plant, its seeds, or resin.

It does not include the mature stalks of the plant, industrial hemp, fiber produced from the stalks, oil, or cake made from the seeds of the plant, any other compound, manufacture, salt, derivative, mixture, or preparation of the mature stalks, except the resin extracted therefrom, fiber, oil, or cake or the sterilized seed of the plant which is incapable of germination.² You may consider all the relevant evidence in the case, including the testimony of any witness who may have testified either to support or to dispute the allegation that the substance in question was marijuana.

As to the second element, the term "cultivate" means to grow a plant or crop, namely marijuana. As to the third element, if it has been proved that the defendant did knowingly cultivate marijuana, you will have to determine whether the defendant cultivated the marijuana solely for his or her own use, or whether the defendant intended the marijuana for distribution to others.

If the defendant is a personal caregiver under the medical marijuana law, you may find the defendant guilty only if he or she intended to distribute marijuana to someone other than the patient for whom the defendant served as a personal caregiver. ² Please note that this is the amended definition of "marihuana" in G. L. c. 94C, § 1, effective July 28, 2017.