

# C P S M M S

## J. A. . . . .

Since 1996, 33 U.S. states, the District of Columbia, Guam, Puerto Rico, the U.S. Virgin Islands, and all Canadian provinces have passed legislation legalizing the use of marijuana for medical purposes. Another 13 states allow use of low delta-9 tetrahydrocannabinol/high cannabidiol products for medical reasons in some situations or as a legal defense to its use. Yet cannabis remains a Schedule I Controlled Substance, impacting not only the legality of a healthcare provider's 8(i)-10(d5-6(-))TJ 9(e)a,8 sification of cannabis as a Schedule I Controlled Substance therefore directly limits the amount of moderate- to high-quality human evidence regarding the effectiveness of cannabis for certain conditions, dosage, adverse effects, or safety. Regardless of the limited evidence, individuals are using medical cannabis products more frequently, and nurses are left without evidence-based, clinical resources when caring for them. To address this lack of resources, the National Council of State Boards of Nursing Board of Directors appointed members to the Medical Marijuana Nursing Guidelines Committee to develop recommendations to guide nurses' care of patients using medical marijuana. This article presents their recommendations, which were published in July 2018, and various updates since that publication.

☒ ☒

- Explore the regulatory and legislative history of medical marijuana.
- Discuss current legislative and legal approaches to

ations or as a legal defense to its use (National Conference of State Legislatures [NCSL], 2019). All provinces/territories of Canada (Government of Canada, 2016) have passed legislation legalizing the use of cannabis for medical purposes.

With this legalization comes an increasing number of patients who use medical marijuana along with a larger population who use cannabis obtained through other means to self-treat various symptoms. Evidence supporting cannabis use to manage medical conditions is limited by legal restrictions on using cannabis for research purposes; thus, nurses are left without evidence-based, clinical resources when caring for patients who use medical marijuana products.

Statutory authorization of cannabis use for certain conditions is influenced by the limited available research, but more so influenced by advocacy groups and anecdotal evidence. Regardless of existing evidence or lack thereof, individuals are using cannabis and nurses will care for these patients more frequently. To address the lack of guidelines for nurses when caring for individuals using cannabis, the National Council of State Boards of Nursing Board of Directors appointed members to the Medical Marijuana Nursing Guidelines Committee to develop guidelines and recommendations to guide nurses' care of patients using medical marijuana, and those guidelines were published in July 2018 (National Council of State Boards of Nursing, 2018).

This article presents principles of safe and knowledgeable practice guidelines when caring for patients using medical marijuana, as recommended by the committee, including (a) a working knowledge of the current state of legalization of medical cannabis use and their jurisdiction's MMP; (b) current approaches to cannabis availability, dispensing cannabis, and qualifying conditions with and without evidence; (c) an understanding of the endocannabinoid system and its pharmacokinetics; and (d) identifying dosage, methods of administration, adverse reactions, and safety and ethical considerations for patient use of medical marijuana. This article uses several terms related to cannabis, medical marijuana, and their official programs. See Table 1 for a list of definitions for the terms used in this article.

☒ ☒ ☒ **A** ☒ ☒ ☒  
**A** ☒ ☒ ☒ ☒ ☒ ☒ ☒

Over the past few decades, the federal government and individual jurisdictions have instituted varying laws, rules, and regulations regarding the availability and dispensing of cannabis for medical purposes.

### Federal Legislation

The Comprehensive Drug Abuse Prevention and Control Act (1970), was enacted to protect the public, stating “illegal importation, manufacture, distribution, and possession and improper use of controlled substances have a substantial and detrimental effect on the health and general welfare of the American people.”

Specifically, the CSA, Title II of the Comprehensive Drug Abuse Prevention and Control Act of 1970, created the schedules of controlled substances.

Because cannabis is included in Schedule I of the CSA, not only does that imply that cannabis has no accepted medical value and present a high potential for abuse, it also places severe restrictions on cannabis research (Comprehensive Drug Abuse Prevention and Control Act, 1970). Numerous federal bills have been introduced in an effort to amend the CSA by rescheduling cannabis to allow for more research. Various petitions have been filed with the U.S. Drug Enforcement Administration (DEA) to reschedule cannabis, and several lawsuits have challenged the constitutionality of including cannabis in the CSA. No bill, petition, or lawsuit has prevailed in rescheduling cannabis.

Again in 2016, congressional representatives called on the DEA to reschedule cannabis (Bernstein, 2016). Subsequently, the U.S. Food and Drug Administration (FDA) requested a scientific and medical evaluation and scheduling recommendation from the U.S. Department of Health and Human Services (Rosenberg, 2016a). After review, the department concluded that “marijuana has a high potential for abuse, has no accepted medical use in the United States, and lacks an acceptable level of safety for use even under medical supervision” (Denial of Petition to Initiate Proceedings, 2016). Based on this report, the DEA denied the petition to reschedule cannabis as a Schedule II Controlled Substance (Rosenberg, 2016b).

The DEA, however, did recognize the lack of scientific study on cannabis and announced a policy change to expand the number of DEA-registered cannabis manufacturers (Rosenberg, 2016a). This expansion was expected to provide an increased supply of cannabis for FDA-authorized research purposes. Thirty-three entities applied to the DEA to become cannabis manufacturers for research, yet as of July 2019, no applications have been reviewed by the DEA (Scottsdale Research Institute, LLC, 2019). In June 2019, a petition sought to compel the DEA to process the applications, claiming that it has unlawfully failed to act on medical cannabis research applications since 2016 (Scottsdale Research Institute, LLC, 2019). A federal court in July 2019 ordered the DEA to respond within a month (U.S. Court of Appeals, 2019). The DEA responded by publishing a policy statement, “providing notice of pending applications” to register as marijuana manufacturers for researchers and that the “DEA intends to propose new

TABLE 1

☒	☒
<b>Authorize.</b> Any act of certification, attestation, or other method for a practitioner to affirm that a patient may benefit from medical cannabis.	
<b>Cannabidiol (CBD).</b> A major cannabinoid that indirectly antagonizes cannabinoid receptors, which may attenuate the psychoactive effects of tetrahydrocannabinol.	
<b>Cannabinoid.</b> Any chemical compound that acts on cannabinoid receptors. These include endogenous and exogenous cannabinoids.	
<b>Cannabinol (CBN).</b> A cannabinoid more commonly found in aged cannabis as a metabolite of other cannabinoids.	
<b>Cannabis.</b> Any raw preparation of the leaves or flowers from the plant genus <i>Cannabis</i> .	
<b>Certify.</b> For the purpose of this article, to “certify” is the act of	

products for medical reasons in some situations or as a legal defense to its use (NCSL, 2019). However, this type of program is not considered an MMP.

*Procuring Certification for Medical Marijuana*

Since a healthcare provider cannot prescribe cannabis, each MMP includes a list of medical conditions or symptoms, known as qualifying conditions, for which an individual may use medical marijuana (NCSL, 2019). The healthcare provider determines whether the individual has a qualifying condition and completes a certification for the MMP. Generally, MMPs include various provisions regarding the process for procuring a certification for the use of cannabis as well as the amount of cannabis distributed to an individual, and legal protections extend to patients, designated caregivers, and healthcare providers (NCSL, 2019).

Some MMPs require a bona fide healthcare provider–patient relationship to certify a patient as having a qualifying condition. Other MMPs require a preexisting and ongoing relationship with the patient as a treating healthcare provider, and some note the relationship may not be limited to issuing a written certifi-

cation for the patient or a consultation simply for that purpose. Additionally, a few MMPs specify that an advanced practice registered nurse can certify a qualifying condition (NCSL, 2019). Some MMPs require a specific course or training for a provider to participate in certifying an MMP qualifying condition (NCSL, 2019).

Patients with a certification of a qualifying condition must register with their local state MMP. A registered patient can obtain cannabis from a jurisdiction-authorized cannabis dispensary. Procurement and administration of cannabis for medical purposes are limited to the patient and/or the patient’s designated caregiver. The MMP will specify whether designated caregivers are permissible as well as the applicable process for registration as a designated caregiver (NCSL, 2019). In some jurisdictions, the MMP allows an employee of a hospice provider or nursing or medical facility, a visiting nurse, a personal care attendant, or a home health aide to act as a designated caregiver for the administration of medical marijuana (NCSL, 2019).

The laws regarding MMPs are frequently changing. Nurses caring for patients using medical marijuana should review the unique characteristics of a jurisdiction’s MMP that may affect their

practice. The relevant statute can be located through the jurisdiction's department of health and MMP. Useful links are provided through the NCSL (2019).

#### **Reconciling State and Federal Laws**

Many questions arise regarding the conflict between the current federal prohibition and state MMPs. Although the use of marijuana pursuant to authorized MMPs appears to conflict with federal law and regulations, the 10th Amendment gives the state a certain degree of autonomy where Congress cannot commandeer

- Chronic pain (resulting from fibromyalgia) (Skrabek, Galimova, Ethans, & Perry, 2008)
- Neuropathies (resulting from HIV/AIDS, multiple sclerosis, or

2006a; FDA, 2006b). These drugs are synthetic cannabinoids primarily interacting on the CB1 receptor, similar to that of THC. Dronabinol is indicated for anorexia associated with weight loss in patients with AIDS and for nausea and vomiting associated with cancer chemotherapy in patients who have failed to respond adequately to conventional antiemetic treatments. Nabilone is indicated for nausea and vomiting only.

Sativex, another pharmaceutical marijuana product, contains a 1:1 ratio of THC and CBD and is administered as an oral mucosal spray. Sativex is indicated for adults with moderate to severe spasticity due to multiple sclerosis who have not responded adequately to other anti-spasticity medication (GW Pharmaceuticals, n.d.). Although approved for use in over 25 countries, this product is not approved in the United States.

Epidiolex, an oral CBD plant-derived product recently approved by the FDA, is based on four clinical trials in patients aged 2 years or older with either Lennox-Gastaut syndrome or Dravet syndrome (FDA, 2018). Following Epidiolex's approval by the FDA, the DEA reclassified Epidiolex as a Schedule V drug (low potential for addiction or abuse) (DEA, 2018b).

#### **Cannabis Administration Methods**

Synthetic and plant-derived products approved by the FDA have

**Adverse Effects**

Dai and Richter (2019) recently published their study—the first





for patients who use medical cannabis. The principles of essential knowledge regarding legislation and legalization of cannabis, along with an understanding of cannabis pharmacokinetics, administration, safety, and ethical considerations presented in this article, will create a strong foundation for safe and knowledgeable nursing care of patients using medical cannabis.

☒ ☒ ☒ ☒

- Fox, P., Bain, P. G., Glickman, S., Carroll, C., & Zajicek, J. (2004). The effect of cannabis on tremor in patients with multiple sclerosis. *Neurology*, *62*(7), 1105–1109.
- Freeman, T. P., & Winstock, A. R. (2015). Examining the profile of high-potency cannabis and its association with severity of cannabis dependence. *Psychological Medicine*, *45*(15), 3181–3189.
- Gibbs, M., Winsper, C., Marwaha, S., Gilbert, E., Broome, M., & Singh, S. P. (2015). Cannabis use and mania symptoms: A systematic review and meta-analysis. *Journal of Affective Disorders*, *171*, 39–47.
- Glass, M., Faull, R. L. M., & Dragunow, M. (1997). Cannabinoid receptors in the human brain: A detailed anatomical and quantitative autoradiographic study in the fetal, neonatal and adult human brain. *Neuroscience*, *77*(2), 299–318.
- Government of Canada. (2016, August). *Understanding the new access to cannabis for medical purposes regulations*. Retrieved from <https://www.canada.ca/en/health-canada/services/publications/drugs-health-products/understanding-new-access-to-cannabis-for-medical-purposes-regulations.html>
- Greenberg, H. S., Werness, S. A., Pugh, J. E., Andrus, R. O., Anderson, D. J., & Domino, E. F. (1994). Short-term effects of smoking marijuana on balance in patients with multiple sclerosis and normal volunteers. *Clinical Pharmacology and Therapeutics*, *55*(3), 324–328.
- Grotenhermen, F. (2003). Pharmacokinetics and pharmacodynamics of cannabinoids. *Clinical Pharmacokinetics*, *42*(4), 327–360.
- Gunn, J. K. L., Rosales, C. B., Center, K. E., Nunez, A., Gibson, S. J., Christ, C., & Ehiri, J. E. (2016). Prenatal exposure to cannabis and maternal and child health outcomes: A systematic review and meta-analysis. *BMJ Open*, *6*(4), e009986. Retrieved from <http://bmjopen.bmj.com/content/6/4/e009986>
- GW Pharmaceuticals. (n.d.) Information on Obtaining Sativex. Retrieved from <https://www.gwpharm.com/healthcare-professionals/Sativex/prescribing-information>
- GW's Epidiolex Clinical Program. (2018). Retrieved from <https://www.gwpharm.com/epilepsy-patients-caregivers/patients>
- Hall, W., & Solowij, N. (1998). Adverse effects of cannabis. *The Lancet*, *352*(9140), 1611–1616.
- Hallak, J. E., Machado-de-Sousa, J. P., Crippa, J. A. S., Sanches, R. F., Trzesniak, C., Chaves, C., ... Zuardi, A. W. (2010). Performance of schizophrenic patients in the Stroop Color Word Test and electrodermal responsiveness after acute administration of cannabidiol (CBD). *Revista Brasileira de Psiquiatria*, *32*(1), 56–61.
- Halperin, A. (2016, October 29). After the election, marijuana could be legal for recreational or medical use in 29 states. *Los Angeles Times*. Retrieved from <http://www.latimes.com/politics/la-na-pol-marijuana-initiatives-snap-story.html>
- Haney, M., Gunderson, E. W., Rabkin, J., Hart, C. L., Vosburg, S. K., Comer, S. D., & Foltin, R. W. (2007). Dronabinol and marijuana in HIV-positive marijuana smokers: Caloric intake, mood, and sleep. *Journal of Acquired Immune Deficiency Syndromes*, *45*(5), 545–554.
- Haney, M., Rabkin, J., Gunderson, E., & Foltin, R. W. (2005). Dronabinol and marijuana in HIV+ marijuana smokers: Acute effects on caloric intake and mood. *Psychopharmacology*, *181*(1), 170–178.
- Haug, N. A., Kieschnick, D., Sottile, J. E., Babson, K. A., Vandrey, R., & Bonn-Miller, M. O. (2016). Training and practices of cannabis dispensary staff. *Cannabis and Cannabinoid Research*, *1*(1), 244–251.
- Hazekamp, A., Ruhaak, R., Zuurman, L., van Gerven, J., & Verpoorte, R. (2006). Evaluation of a vaporizing device (Volcano) for the pulmonary administration of tetrahydrocannabinol. *Journal of Pharmaceutical Sciences*, *95*(6), 1308–1317.
- Hazekamp, A., Ware, M. A., Muller-Vahl, K. R., Abrams, D., & Grotenhermen, F. (2013). The medicinal use of cannabis and cannabinoids—An international cross-sectional survey on administration forms. *Journal of Psychoactive Drugs*, *45*(3), 199–210.
- Herning, R. I., Hooker, W. D., & Jones, R. T. (1986). Tetrahydrocannabinol content and differences in marijuana smoking behavior. *Psychopharmacology*, *90*(2), 160–162.
- Hesse, M., & Thylstrup, B. (2013). Time-course of the DSM-5 cannabis withdrawal symptoms in poly-substance abusers. *BMC Psychiatry*, *13*(1), 258.
- Ishida, J. H., Peters, M. G., Jin, C., Louie, K., Tan, V., Bacchetti, P., & Terrault, N. A. (2008). Influence of cannabis use on severity of hepatitis C disease. *Clinical Gastroenterology and Hepatology*, *6*(1), 69–75.
- Jaques, S. C., Kingsbury, A., Henschke, P., Chomchai, C., Clews, S., Falconer, J., ... Oei, J. L. (2014)1(9)1( m(n)1(e)1(1.1.)JT)arm 7t.medm 7t.m22m(n



- Thompson, G. R., Tuscano, J. M., Dennis, M., Singapuri, A., Libertini, S., Gaudino, R., ... & Engelthaler, D. M. (2017). A microbiome assessment of medical marijuana. *Clinical Microbiology and Infection*, 23(4), 269-270.
- Tortoriello, G., Morris, C. V., Alpar, A., Fuzik, J., Shirran, S. L., Calvigioni, D., ... Harkany, T. (2014). Miswiring the brain: 9-tetrahydrocannabinol disrupts cortical development by inducing an SCG10/stathmin-2 degradation pathway. *The EMBO Journal*, 33(7), 668-685.
- Turcotte, D., Doupe, M., Torabi, M., Gomori, A., Ethans, K., Esfahani, F., ... Namaka, M. (2015). Nabilone as an adjunctive to gabapentin for multiple sclerosis-induced neuropathic pain: A randomized controlled trial. *Pain Medicine*, 16(1), 149-159.
- U.S. Court of Appeals for the District of Columbia Circuit. (2019, July 29). *Order* [No. 19-1120]. Retrieved from <https://www.fooddruglaw.com/wp-content/uploads/sites/644/2019/08/DC-Circuit-Cannabis-Order.pdf>
- U.S. Department of Health & Human Services, Office of the Surgeon General. (2019, August). U.S. Surgeon General's advisory: Marijuana use and the developing brain. Retrieved from <https://www.hhs.gov/surgeongeneral/reports-and-publications/addiction-and-substance-misuse/advisory-on-marijuana-use-and-developing-brain/index.html>
- U.S. Department of Justice, Office of Public Affairs. (2009, October 19). *Attorney general announces formal medical marijuana guidelines* [Press release]. Retrieved from <https://www.justice.gov/opa/pr/attorney-general-announces-formal-medical-marijuana-guidelines>
- U.S. Drug Enforcement Administration. (2018a, June 1). *Disposal act: General public fact sheet*. Retrieved from [https://www.deadiversion.usdoj.gov/drug\\_disposal/fact\\_sheets/disposal\\_public\\_06222018.pdf](https://www.deadiversion.usdoj.gov/drug_disposal/fact_sheets/disposal_public_06222018.pdf)
- U.S. Drug Enforcement Administration. (2018b, September 27). *FDA-approved drug Epidiolex placed in schedule V of Controlled Substance Act* [Press release]. Retrieved from <https://www.dea.gov/press-releases/2018/09/27/fda-approved-drug-Epidiolex-placed-schedule-v-controlled-substance-act>
- U.S. Drug Enforcement Administration. (2019, August 26). *DEA announces steps necessary to improve access to marijuana research* [Press release]. Retrieved from <https://www.dea.gov/press-releases/2019/08/26/dea-announces-steps-necessary-improve-access-marijuana-research>
- U.S. Food and Drug Administration. (2004, September). Marinol (dronabinol) capsules, for oral use. Retrieved from <https://www.fda.gov/ohrms/dockets/dockets/05n0479/05N-0479-emc0004-04.pdf>
- U.S. Food and Drug Administration. (2006a, May). Cesamet (nabilone) capsules for oral administration. Retrieved from [https://www.accessdata.fda.gov/drugsatfda\\_docs/label/2006/018677s011lbl.pdf](https://www.accessdata.fda.gov/drugsatfda_docs/label/2006/018677s011lbl.pdf)
- U.S. Food and Drug Administration. (2006b, July). Marinol. Retrieved from [https://www.accessdata.fda.gov/drugsatfda\\_docs/label/2006/018651s025s026lbl.pdf](https://www.accessdata.fda.gov/drugsatfda_docs/label/2006/018651s025s026lbl.pdf)
- U.S. Food and Drug Administration. (2017, August). Marinol (dronabinol) capsules, for oral use. Retrieved from [https://www.accessdata.fda.gov/drugsatfda\\_docs/label/2017/018651s029lbl.pdf](https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/018651s029lbl.pdf)
- U.S. Food and Drug Administration. (2018, July 17). Drug trials snapshots: Epidiolex. Retrieved from <https://www.fda.gov/drugs/drug-approvals-and-databases/drug-trials-snapshots-Epidiolex>
- Vandrey, R., Raber, J. C., Raber, M. E., Douglass, B., Miller, C., & Bonn-Miller, M. O. (2015). Cannabinoid dose and label accuracy in edible medical cannabis products. *JAMA*, 313(24), 2491-2493.
- Verweij, K. J., Zietsch, B. P., Lynskey, M. T., Medland, S. E., Neale, M. C., Martin, N. G., ... Vink, J. M. (2010). Genetic and environmental influences on cannabis use initiation and problematic use: A meta-analysis of twin studies. *Addiction*, 105(3), 417-430.
- Volkow, N. D., Baler, R. D., Compton, W. M., & Weiss, S. R. (2014). Adverse health effects of marijuana use. *New England Journal of Medicine*, 370(23), 2219-2227.
- Wallace, M. S., Marcotte, T. D., Umlauf, A., Gouaux, B., & Atkinson, J. H. (2015). Efficacy of inhaled cannabis on painful diabetic neuropathy. *The Journal of Pain*, 16(7), 616-627.
- Walsh, Z., Gonzalez, R., Crosby, K., Thiessen, M. S., Carroll, C., & Bonn-Miller, M. O. (2017). Medical cannabis and mental health: A guided systematic review. *Clinical Psychology Review*, 51, 15-29.
- Ware, M. A., Wang, T., Shapiro, S., & Collet, J.-P. (for the COMPASS study team). (2015). Cannabis for the management of pain: Assessment of safety study (COMPASS). *The Journal of Pain*, 16(12), 1233-1242.
- Weier, M., & Hall, W. (2017). The use of cannabinoids in treating dementia. *Current Neurology and Neuroscience Reports*, 17(8), 56.
- Wilkinson, M. (2014, October 28). *Policy statement regarding marijuana issues in Indian country* [Memorandum]. Retrieved from U.S. Department of Justice, Office of Executive Office for United States Attorneys website: <https://www.justice.gov/sites/default/files/tribal/pages/attachments/2014/12/11/policystatementregardingmarijuanaissuesinindiancountry2.pdf>
- Wilkinson, S. T., Radhakrishnan, R., & D'Souza, D. C. (2014). Impact of cannabis use on the development of psychotic disorders. *Current Addiction Reports*, 1(2), 115-128.
- Yücel, M., Solowij, N., Respondek, C., Whittle, S., Fornito, A., Pantelis, C., & Lubman, D. I. (2008). Regional brain abnormalities associated with long-term heavy cannabis use. *Archives of General Psychiatry*, 65(6), 694-701.

---

**K** ✉️ A. R. S., JD, MN, RN, is an Associate Director, Division of Nursing Regulation, National Council of State Boards of Nursing, Chicago, Illinois.

*Content for this article has been excerpted, adapted, and updated from The NCSBN National Nursing Guidelines for Medical Marijuana (Journal of Nursing Regulation, Volume 9, Issue 2, July 2018 Supplement). Contributors include The NCSBN Medical Marijuana Guidelines Committee: Maureen Cahill, MSN, RN; Olivia Gowen, MA; Rene Cronquist, JD, RN; Valerie Smith, MS, RN, FRE; Cathy Borrish-Hale, MHA, RN; Holly Fischer, JD; Diana Heywood, MN, RN; James (Dusty) Johnston, JD; and Sherri Sutton-Johnson, MSN, RN.*



- 10.**
- Clinical evidence of effectiveness for that condition
  - Based on U.S. Food and Drug Administration standards for safety and efficacy
  - Included in the list of qualifying conditions within an MMP
  - Justified by either preclinical animal or cellular studies

- 11.**
- Suggesting other options and alternatives for managing pain and other symptoms
  - Without judgment regarding the patient's choice of treatment or preferences in managing pain and other distressing symptoms
  - Exclusively, with the patient, without any interference from family, caregivers, or other practitioners involved in the patient's care
  - Using current legislation, social acceptance, and scientific evidence as a guide

- 12.**
- Examine current evidence, which is scientifically rigorous, statistically reportable, and based on patient populations.
  - Use personal judgment when providing patient care to patients using medical marijuana.
  - Create a strong foundation for safe and knowledgeable nursing care of patients using medical cannabis through essential knowledge of legislation and legalization of cannabis.
  - Disregard standards of practice based on professional values and/or a code of ethics.

(   )

**1.** ( / ) 5 ( / / ) 1 ( / )

- Explore the regulatory and legislative history of medical marijuana.
 

1	2	3	4	5
<hr/>				
- Discuss current legislative and legal approaches to cannabis availability and dispensation.
 

1	2	3	4	5
<hr/>				
- Identify principles to guide nurses' care of patients using medical cannabis.
 

1	2	3	4	5
<hr/>				
- Gain an understanding of the ethical and safety considerations regarding a patient's treatment with cannabis.
 

1	2	3	4	5
<hr/>				

**2.** ( / ) 1 ( / ) 5

- The authors were knowledgeable about the subject.
 

1	2	3	4	5
<hr/>				
- The methods of presentation (text, tables, figures, etc.) were effective.
 

1	2	3	4	5
<hr/>				
- The content was relevant to the objectives.
 

1	2	3	4	5
<hr/>				
- The article was useful to me in my work.
 

1	2	3	4	5
<hr/>				

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_