

# Medication Administration in Nursing Homes: RN Delegation to Unlicensed Assistive Personnel

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Medication administration in nursing homes is a complex process that requires careful oversight by registered nurses (RNs) to minimize risks of errors and adverse effects. However, the declining number of RNs in nursing homes requires RNs to delegate some aspects of medication administration to other nursing staff members, including unlicensed assistive personnel (UAP). Delegating medication administration allows RNs to focus on all aspects of the medication use process, including communicating with physicians about residents' conditions and medication therapy needs as well as assessing and evaluating residents' responses to medication therapy. With a carefully supervised delegation process, UAP should be able to administer medications safely, and RNs can oversee the complex needs of frail, vulnerable nursing home residents.

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## Learning Objectives

- Describe medication administration in the nursing home.
- Recall steps of the delegation process.
- Identify the role of unlicensed assistive personnel in medication administration.
- Discuss how a registered nurse can appropriately delegate medication administration.

The more than 1.6 million residents in our nation's nursing homes are primarily elderly, have multiple chronic conditions, take multiple medications, and are physically dependent for much of their care needs (Agency for Healthcare Research & Quality, 2001). Many residents rely on registered nurses (RNs) to oversee their care and to minimize their risk of harm. Studies by Horn, Buerhaus, Berstrom, and Smout (2005) and Weech-Maldonado, Meret-Hanke, Neff, and Mor (2004) underscore the importance of RNs to nursing home safety; however, in times of nursing shortage and fiscal constraint, nursing homes have limited numbers of RNs to oversee resident care (Rantz et al., 2004; Seblega et al., 2010). Thus, nursing homes must rely on RN delegation to ensure safe, appropriate care.

In nursing homes, RNs frequently delegate medication administration to unlicensed assistive personnel (UAP), such as medication aides and medication technicians (Budden, 2011a, 2011b). Despite some evidence that UAP can administer medications safely (Arizona State Board of Nursing, 2008; Scott-Cawiezell et al., 2007), about one-third of the states do not

allow delegation of medication administration to UAP (Budden, 2011a).

The purposes of this article are to provide an overview of medication errors in nursing homes, an understanding of the challenges nursing homes face in ensuring safe medication processes, and the role delegation can play in safe medication administration. The focus of this article is primarily on RN delegation because in many states licensed practical and vocational nurses (LPNs/VNs) are not legally permitted to delegate to UAP, or the scope of practice for LPNs/VNs lacks definition. Even in states where LPNs/VNs are legally permitted to delegate some tasks, questions exist about whether they can safely delegate the task of medication administration in nursing homes.

## Medication Errors in Nursing Homes

The National Coordinating Council for Medication Error Reporting and Prevention (NCCMERP, 2011) defines *medication error* as any preventable medication-related event that may cause or lead to patient harm. Medication errors can take place at any point from prescribing a drug to monitoring its effects. Often believed to be the fault of individuals, medication errors most commonly result from faulty systems and processes, including nurse staffing, physician-nurse communication, medication procurement from off-site pharmacies, and medication packaging (Pepper & Towsley, 2007).

Frail nursing home residents are at particular risk for harm from medication errors that can lead to adverse drug events (ADEs; Gurwitz et al., 2005; Institute of Medicine [IOM], 2007). Gurwitz and colleagues (2005) project that more than 800,000 ADEs occur annually in nursing homes because of medi-

TABLE 1

**RN Responsibilities in the Nursing Home Medication Use Process**

Medication Use Process	Registered Nurse (RN) Responsibilities
Prescribing	Communicating with physicians about residents' medical condition and medication therapy needs
Transcribing	Ensuring accurate transcription and documentation of multiple medication orders and managing complicated medication orders through complex medication order processes
Dispensing	Communicating with off-site pharmacies and ensuring accurate and timely delivery of medications
Administering	Ensuring safe administration of large volumes of medications within time constraints
Monitoring	Assessing and evaluating residents' responses to medication therapy and monitoring residents for adverse drug events

cation errors. Experts consider this number to be an underestimate (IOM, 2007).

Pepper and Towsley (2007) report the most common nursing home medication errors are prescribing errors, including wrong dose and inappropriate medication use, and medication administration errors, including omitted doses and wrong time. Excluding wrong-time errors, Barker, Flynn, Pepper, Bates, & Mikeal (2002) found more than 10% of doses administered to nursing home residents were in error. Monitoring errors are believed to be common in nursing homes, but they have not been well studied. Medication administration errors may relate in part to the large number of medications nursing home residents receive. On average, residents receive seven to eight medications daily, and about one-third receive nine or more medications (Doshi, Shaffer, & Briesacher, 2005). Moreover, large numbers of medications are often administered multiple times per day, adding complexity to the medication administration process.

## Medication Administration in Nursing Homes

Medication administration in nursing homes is often considered a simple task of "passing medications." However, in reality medication administration is a complex process requiring many interactions of specific decisions and actions (Kaushal et al., 2001). Perhaps the complexity of medication administration can best be understood within nodes (or stages) of the medication use process. These five nodes include prescribing, transcribing,

dispensing, administering, and monitoring (NCCMERP, 2000; United States Pharmacopeia [USP], 2004).

*Prescribing* involves evaluating the patient to establish medication need and selecting the right medication to manage the condition, taking into consideration possible interactions and allergies. *Transcribing* involves documenting the physician's medication order and transmitting the order to the pharmacy. *Dispensing* involves reviewing the order and confirming the transcription accuracy, contacting the prescriber regarding discrepancies, preparing the medication, and dispensing the medication to the health care site. *Administering* involves reviewing the order and confirming transcription accuracy; checking for contraindications, such as allergies and interactions; assessing the patient; and administering the medication. *Monitoring* involves assessing the patient's response to the medication and documenting the results (USP, 2004). Traditionally, physicians are responsible for prescribing medications, pharmacists for dispensing and monitoring medications, and nurses for administering medications.

Despite the traditional view that the nurse's primary responsibility is to administer medications, the nature and complexity of nursing home care require licensed nurses, particularly RNs, to be involved in the entire medication use process. First, physicians are often not on site and must rely on communication from nurses about residents' medical condition and medication therapy needs (Vogelsmeier, Scott-Cawiezell, & Zellmer, 2007). Second, multiple medication orders and complicated medication ordering processes require careful communication to off-site pharmacies (Vogelsmeier et al., 2007). Third, the nursing staff is responsible to ensure the appropriate and timely delivery of medications from off-site pharmacies to the nursing home (Vogelsmeier et al., 2007). Fourth, nursing staff must ensure residents receive multiple medications within tight regulatory time constraints (Vogelsmeier et al., 2007); the average medication pass involves 73 medications and takes an average of 113 minutes (Scott-Cawiezell et al., 2007). Fifth, pharmacists spend limited time in nursing homes monitoring medication effects, making nurses responsible for assessing and evaluating complex residents for therapeutic and adverse responses (Vogelsmeier et al., 2007). (See Table 1.)

While these nursing home realities support the need for RNs to be involved in all aspects of the medication use process, the number of nursing home RNs has declined over the years, resulting in fewer and fewer RNs to oversee and manage care (Seblega et al., 2010). RNs now account for less than 14% of the nurses in nursing homes (Rantz et al., 2004). Thus, the role of the RN must be maximized through appropriate and safe delegation.

## RN Delegation

RN delegation must be grounded in the fundamental principle to protect the health, safety, and welfare of the public. In an effort to support the practice of RN delegation while upholding the

tenet of patient safety, the National Council of State Boards of Nursing (NCSBN) and the American Nurses Association (ANA) joined to define delegation. According to the NCSBN and ANA, *delegation* is defined as an RN and in some states LPNs/VNs (Corazzini et al., 2011) having the authority to direct another individual to perform nursing tasks and activities they would otherwise not be assigned (NCSBN, 2005). Delegation, however, is much more complex than it seems by mere definition; it requires a critical understanding of the steps in the delegation process and appropriate clinical training to delegate safely (NCSBN, 1995). (See Table 2.)

Delegation requires individual nurse accountability and organizational accountability to ensure safe care is delivered (NCSBN, 1995, 2005). A nurse is responsible for carefully considering the competencies of staff members, the condition of the patient, and the degree of supervision required for safe care. The nurse also must ensure adequate two-way communication with staff members when delegating care. Moreover, the nurse must monitor organizational systems to ensure that safe, appropriate delegation can be carried out. Organizations and nurse leaders, on the other hand, must ensure that adequate systems are in place to support safe delegation, including adequate staff resources, clear documentation of staff competencies, and organizational standards developed with nurse input to define safe delegation activities. Both individuals and organizations must adhere to the delegation principles, including the five rights of delegation. (See Table 3.)

### Unlicensed Assistive Personnel

States that allow UAP to administer medications have educational programs to establish competencies; however, these programs vary widely. In a review of medication-aide training programs across the United States, Budden (2011a) found variation in applicant requirements, training, testing, and continuing education hours. For example, some training programs require applicants be certified nursing assistants; others do not. Most require some form of work experience in long-term care. Didactic and clinical training hours averaged 73.97; however, didactic training varied from 4 to 150 hours, and clinical training varied from 0 to 40 hours. The majority of programs require written examination after training, and nearly one-third have a skills-demonstration component. Continuing education requirements vary from no continuing education to formal retraining every 2 years.

Similar to variability in training programs, roles and responsibilities vary among the UAP who administer medications in their workplace. Budden (2011b) conducted a survey of medication aides ( $n = 3,455$ ) to identify relevant workplace issues, such as work role and supervision. Medication administration responsibilities ranged from administering topical and oral medications to regulating I.V. fluids and programming insulin pumps. Medication aides often administered medications, in-

TABLE 2

### Steps in the Delegation Process

Delegation Steps	Description
Assessment and planning	Assess and plan the delegation activity based on the patient's need and available resources, including appropriate staff members.
Communication	Communicate directions to the delegated staff. Include patient requirements and characteristics as well as clear expectations regarding what to do, what to report, and when to ask for assistance.
Surveillance and supervision	Provide surveillance and supervision of the delegation, including the level of supervision needed and the implementation of the supervision. Include follow-up to problems or a changing situation.
Evaluation and feedback	Evaluate and provide feedback to consider the effectiveness of the delegation, including any need to adjust the plan of care.

National Council of State Boards of Nursing, 2005.

cluding as needed (prn) medications, without prior assessment or follow-up monitoring by a licensed nurse. Many medication aides also received medication orders from prescribers and transcribed the medication orders into the record. Supervision and nursing oversight were often limited. Many medication aides had no supervision at all or no contact with a supervisor during a typical shift. These issues identified by Budden reflect the realities in many nursing homes today.

The Arizona State Board of Nursing (BON; 2008) sought to develop a comprehensive standardized statewide medication-technician pilot program that supports safe delegation within nursing homes. The program included course content based on the complex realities of medication administration in nursing homes. For example, the 100-hour curriculum included content on administering large quantities of medications; working within time constraints; crushing medications appropriately; calculating complicated dosage calculations; and working with various dispensing methods, administration methods, and resident medication administration challenges such as resident refusals. Protocols further delineated the conditions under which delegation could and could not safely occur.

In a study by Scott-Cawiezell et al. (2007), no differences were found in medication error rates when observing RNs, LPNs/VNs, and UAP. In fact, when wrong-time errors were excluded, RNs had slightly higher medication-error rates. The authors think the higher error rate is related to the number of interrup-

TABLE 3

**Five Rights of Delegation**

- Right task: Task that is delegable for a specific patient/resident
- Right circumstances: Appropriate patient setting, available resources, and other relevant factors
- Right person: Right person delegating the right task to the right person to be performed on the right person
- Right direction/communication: Clear, concise description of the task, including its objective, limits, and expectations
- Right supervision: Appropriate monitoring, evaluation, intervention, and feedback

National Council of State Boards of Nursing, 2005.

tions and distractions many RNs encounter during medication administration.

**RN and UAP Partnering for Safe Medication**

If medication administration is done by UAP, safe systems must be in place to support this role in practice. Ensuring a competent UAP staff requires the involvement of regulators, nursing home administrators/nurse leaders, and individual licensed nurses (NCSBN, 1995, 2005).

Regulatory involvement includes ensuring that statewide training programs establish UAP competencies and define and teach safe and unsafe medication administration activities. For example, the Arizona State BON's training program not only defines safe parameters for administering medications, it also defines activities that are unsafe for UAP, including administering first doses, inhalant medications, injectable medications, and prn medications; regulating I.V. fluids; and programming insulin pumps (Randolph & Scott-Cawiezell, 2010).

Nursing home administrators and nurse leaders must ensure their UAP meet the state's competence requirements and must have documentation on site for reference by staff RNs. Moreover, nursing home leaders must make sure job descriptions and role responsibilities clearly match the competencies as established through statewide training. When job descriptions and role responsibilities are clearly defined within an organization, all staff RNs, LPNs/VNs, and UAP will know what can and cannot be safely delegated.

With standards in place, RNs have a responsibility to make sure UAP are competent to administer medications, taking into account the complexities of individual resident needs at the time of delegation. Working within defined limits and carefully considering individual resident needs can guide the safe administration of medications by UAP. UAP can then focus on the tasks they are competent to perform, thus freeing RNs to be involved in all aspects of the medication use process.

Because all aspects of the medication use process are subject to medication error (NCCMERF, 2000; Pepper & Towsley, 2007), RNs play a critical role in minimizing errors. RNs must be able to focus on medication assessment, monitoring, and evaluation to ensure residents are meeting their therapeutic goals, while UAP focus on administering routine medications accurately and on time.

**Conclusion**

Medication administration in nursing homes is a complex process that requires a collaborative effort between RNs and UAP to ensure safe medication administration. Delegating medication administration allows RNs to focus on all aspects of the medication use process, including communicating with physicians about residents' conditions and medication therapy needs as well as assessing and evaluating residents' responses to medication therapy. Through a carefully supervised delegation process, UAP can administer medications safely, and RNs can oversee the complex needs of frail, vulnerable nursing home residents.

**References**

- Agency for Healthcare Research & Quality. (2001). *AHRQ Research Report. The Characteristics of Long-Term Care Users*. AHRQ Publication No. 00-0049, January 2001. Rockville, MD: Author. Retrieved from [www.ahrq.gov/research/ltcusers/](http://www.ahrq.gov/research/ltcusers/)
- Arizona State Board of Nursing. (2008). Report to the legislature: Arizona medication technician pilot project. Retrieved from [www.azbn.gov/Documents/misc/FINAL%20REPORT%20TO%20THE%20LEGISLATURE.pdf](http://www.azbn.gov/Documents/misc/FINAL%20REPORT%20TO%20THE%20LEGISLATURE.pdf)
- Barker, K. N., Flynn, E. A., Pepper G. A., Bates, D. W., & Mikeal, R. L. (2002). Medication errors observed in 36 health care facilities. *Archives of Internal Medicine*, 162(16), 1897–1903.
- Budden, J. (2011a). The safety and regulation of medication aides. *Journal of Nursing Regulation*, 2(2), 1–6.
- Budden, J. (2011b). The first national survey of medication aides. *Journal of Nursing Regulation*, 2(3), 4–12.
- Corazzini, K. N., Anderson, R. A., Mueller, C., McConnell, E. S., Landerman, L. R., Thorpe, J. M., et al. (2011). Regulation of LPN scope of practice in long-term care. *Journal of Nursing Regulation*, 2(2), 20–39.
- Doshi, J. A., Shaffer, T., & Briesacher, B. (2005). National estimates of medication use in nursing homes: Findings from the 1997 Medicare current beneficiary survey and the 1996 Medicare expenditure survey. *Journal of the American Geriatric Society*, 53, 438–443.
- Gurwitz, J. H., Field, T. S., Judge, J., Rochon, P., Harrold, L. R., Cadoret, C., et al. (2005). The incidence of adverse drug events in two large academic long-term care facilities. *The American Journal of Medicine*, 118(3), 251–258.
- Horn, S., Buerhaus, P., Berstrom, N., & Smout, R. J. (2005). RN staffing time and outcomes of long-stay nursing home residents. *American Journal of Nursing*, 105, 58–70.
- Institute of Medicine. (2007). *Preventing medication errors*. Washington, DC: National Academies Press.

- Kaushal, R., Bates, D. W., Landrigan, C., McKenna, K. J., Clapp, M. D., Federico, R., et al. (2001). Medication errors and adverse drug events in pediatric inpatients. *Journal of the American Medical Association*, 285(16), 2114–2120.
- National Coordinating Council for Medication Error Reporting and Prevention. (2011). About medication errors. Retrieved from [www.nccmerp.org/medErrorCatIndex.html](http://www.nccmerp.org/medErrorCatIndex.html)
- National Coordinating Council for Medication Error Reporting and Prevention. (2000). Aiming at administering: Practice recommendations to prevent error. *USP Quality Review*, 71, 1–2.
- National Council of State Boards of Nursing. (1995). Concepts and decision-making process. Retrieved from [www.ncsbn.org/323.htm](http://www.ncsbn.org/323.htm)
- National Council of State Boards of Nursing. (2005). Joint statement on delegation. American Nurses Association/National Council of State Boards of Nursing. Retrieved from [www.ncsbn.org/Joint\\_statement.pdf](http://www.ncsbn.org/Joint_statement.pdf)
- Pepper, G. A., & Towsley, G. L. (2007). Medication errors in nursing homes: Incidence and reduction strategies. *Journal of Pharmaceutical Finance, Economics, & Policy*, 16(1), 5–133.
- Randolph, P. K., & Scott-Cawiezell, J. (2010). Developing a statewide medication technician pilot program in nursing homes. *Journal of Gerontological Nursing*, 36(9), 36–44.
- Rantz, M. J., Hicks, L., Grando, V., Petroski, G. F., Madsen, R. W., Mehr, D. R., et al. (2004). Nursing home quality, cost, staffing and staff mix. *The Gerontologist*, 44, 24–38.
- Scott-Cawiezell, J., Pepper, G., Madsen, R., Petroski, G., Vogelsmeier, A., & Zellmer, D. (2007). Nursing home error and level of staff credentials. *Clinical Nursing Research*, 16(1), 72–79.
- Seblega, B. K., Zhang, N. J., Unruh, L. Y., Breen, G. M., Paek, S. C., & Wan, T. H. (2010). Changes in nursing home staffing levels, 1997 to 2007. *Medical Care Research Review*, 67(2), 232–246.
- United States Pharmacopeia. (2004). The medication use process. Retrieved from [www.usp.org/pdf/EN/patientSafety/medication-UseProcess.pdf](http://www.usp.org/pdf/EN/patientSafety/medication-UseProcess.pdf)
- Vogelsmeier, A., Scott-Cawiezell, J., & Zellmer, D. (2007). Barriers to safe medication administration in the nursing home. *Journal of Gerontological Nursing*, 33(4), 5–12.
- Weech-Maldonado, R., Meret-Hanke, L., Neff, M. C., & Mor, V. (2004). Nurse staffing patterns and quality of care in nursing homes. *Health Care Management Review*, 29, 107–116.

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### Learning Objectives

- Describe medication administration in the nursing home.
- Recall steps of the delegation process.
- Identify the role of unlicensed assistive personnel in medication administration.
- Discuss how a registered nurse can appropriately delegate medication administration.



### CE Posttest

#### Medication Administration in Nursing Homes: RN Delegation to Unlicensed Assistive Personnel

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Contact hours: 1.4

Posttest passing score is 75%.

Expiration: October 2014

### Posttest

Please circle the correct answer.

- 1. What is the average number of medications a nursing home resident receives daily?**
  - a. 2 to 4
  - b. 5 to 6
  - c. 7 to 8
  - d. 10 to 12
- 2. Excluding wrong-time errors, the percentage of doses administered to nursing home residents that is wrong is:**
  - a. 2%.
  - b. 5%.
  - c. 10%.
  - d. 12%.
- 3. The stages of the medication use process include:**
  - a. monitoring.
  - b. checking.
  - c. counting.
  - d. reporting.
- 4. Which statement about responsibilities in the medication use process in nursing homes is correct?**
  - a. Unlicensed assistive personnel (UAP) are responsible for ensuring timely administration.
  - b. The physician communicates directly with the pharmacy.
  - c. The on-site pharmacist is responsible for verifying dosages.
  - d. The registered nurse (RN) must evaluate residents' responses to medication therapy.
- 5. The average medication pass in the nursing home involves how many medications?**
  - a. 48
  - b. 52
  - c. 73
  - d. 81
- 6. Which statement about licensed health care professionals and the medication use process in nursing homes is correct?**
  - a. RNs are only responsible for administering medications.
  - b. RNs are involved in the entire process.
  - c. Physicians play a more active role in medication administration.
  - d. Pharmacists closely evaluate residents for adverse effects.
- 7. RNs account for what percentage of nurses in nursing homes?**
  - a. 24%
  - b. 35%
  - c. Less than 9%
  - d. Less than 14%
- 8. What term is defined as "an RN and in some states LPNs [licensed practical nurses] having the authority to direct another individual to perform nursing tasks and activities they would otherwise not be assigned"?**
  - a. Delegation
  - b. Monitoring
  - c. Assigning
  - d. Prescription
- 9. The step in the delegation process that includes follow-up to problems or a changing situation is:**
  - a. evaluation and feedback.
  - b. surveillance and supervision.
  - c. communication.
  - d. assessment and planning.
- 10. The step in the delegation process that includes determining the need to adjust the plan of care is:**
  - a. evaluation and feedback.
  - b. surveillance and supervision.
  - c. communication.
  - d. assessment and planning.
- 11. Which "right" of delegation includes available resources?**
  - a. Task
  - b. Supervision
  - c. Circumstances
  - d. Direction
- 12. Which "right" of delegation includes objectives, limits, and expectations?**
  - a. Task
  - b. Supervision
  - c. Circumstances
  - d. Direction
- 13. Which statement about medication-aide training is correct?**
  - a. Application requirements, training, testing, and continuing education vary widely.
  - b. Application requirements and training vary widely, but testing and continuing education are standardized.
  - c. Retraining is required every 2 years.
  - d. Retraining is required every 4 years.
- 14. According to research, which statement about medication aides' roles and responsibilities is correct?**
  - a. Medication aides are not permitted to administer topical medications.
  - b. Medication aides do not administer as-needed medications without prior assessment.
  - c. Many medication aides have little to no supervision.
  - d. Most medication aides have contact with a supervisor twice a shift.

**15. Which statement about RNs and medication aides is correct?**

- a. RNs should focus on transcribing and dispensing, while medication aides should focus on administering routine medications.
- b. RNs should focus on medication assessment, monitoring, and evaluation, while medication aides should focus on administering routine medications.
- c. RNs should focus on medication assessment, monitoring, and evaluation, while medication aides should focus on administering complicated medication regimens.
- d. RNs should focus on dispensing and calculating, while medication aides should focus on administering oral, intramuscular, and intravenous drugs.

**16. Nursing home administrators should:**

- a. ensure UAP who administer medications meet the state competency requirements.
- b. directly supervise UAP who administer medications to reduce errors.
- c. keep job descriptions and role responsibilities for RNs and UAP who administer medications general in scope.
- d. keep off-site documentation of the competence of UAP who administer medications.

**17. Which statement about the regulatory issues related to UAP administering medications is correct?**

- a. State boards of medicine should assume responsibility for UAP regulation.
- b. State boards of nursing (BONs) should not list what drugs UAP cannot administer.
- c. Each state BON should create a unique training program.
- d. State BONs should define what is needed in training programs.

**Evaluation Form (required)**

**1. Rate your achievement of each objective from 5 (high/excellent) to 1 (low/poor).**

- Describe medication administration in the nursing home.  

1	2	3	4	5
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- Recall steps of the delegation process.  

1	2	3	4	5
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- Identify the role of unlicensed assistive personnel in medication administration.  

1	2	3	4	5
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- Discuss how a registered nurse can appropriately delegate medication administration.  

1	2	3	4	5
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**Rate each of the following items from 5 (very effective) to 1 (ineffective):**

- 2. Were the authors knowledgeable about the subject?  

1	2	3	4	5
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- 3. Were the methods of presentation (text, tables, figures, etc.) effective?  

1	2	3	4	5
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- 4. Was the content relevant to the objectives?  

1	2	3	4	5
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- 5. Was the article useful to you in your work?  

1	2	3	4	5
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- 6. Was there enough time allotted for this activity?  

1	2	3	4	5
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Comments: \_\_\_\_\_  
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