AGENDA ITEM 5

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The following are attached for review:

- AOTA Position Paper: Continuing Professional Development in Occupational Therapy
- *Draft* AOTA Position Paper: Occupational Therapy's Role in Medication Management
- PowerPoint of Presentation to be Provided

POSITION PAPER: Continuing Professional Development in Occupational Therapy

The American Occupational Therapy Association (AOTA) asserts that a structured plan for each occupational therapy practitioner's continuing professional development (CPD) is necessary for the advancement of the profession and practitioners themselves, as well as important to the clients they serve. CPD is vital to the profession and facilitates the growth and availability of evidence-based, relevant, and best practice within traditional and emerging practice areas in order to achieve the goals of high quality and safe occupational therapy services.

As the standard-setting body for the profession, AOTA defines the practice of occupational therapy (AOTA, 2014) and is uniquely qualified to describe CPD relative to occupational therapy through its representative structure of experts in both education and practice. AOTA monitors environmental trends to ensure that the profession is moving in the direction of future practice while facilitating the ability of practitioners to meet current responsibilities. AOTA considers the needs, opinions, and ideas of both internal and external stakeholders as they influence practice and affect CPD (AOTA, 2003, 2015). This position paper will support AOTA's advocacy efforts at the state level as legislatures and regulatory boards seek to modernize existing continuing education and/or continuing competence requirements. In addition, this position paper can serve as a guide to internal and external audiences, including employers and state regulatory boards, as they work to implement CPD programs.

Definition, Plan, and Goal

AOTA defines *CPD* as a self-directed, reflective process of lifelong learning aimed at maintaining practitioner competence, ensuring client safety and quality outcomes, enhancing or expanding professional practice, and reaching career goals. Each occupational therapy practitioner develops a CPD plan using a systematic self-assessment that includes reflection and an understanding of current and future professional needs (AOTA, 2003). Each CPD plan outlines the trajectory for engagement in authentic educational activities (Figure 1). Educational activities must develop knowledge and skills to support and advance practitioners in their current professional roles and those that they seek (Dik, Sargent, & Steger, 2008; Haywood, Pain, Ryan, & Adams,

2012; McMahon, Forde & Dickson, 2015). Professional development activities should be diverse to meet the needs of the practitioner and can be completed using formal and informal learning methods. The goal of CPD is applying new learning and skills to enhance occupational therapy outcomes (Fitzgerald, Moores, Coleman, & Fleming, 2015; Haywood et al, 2012). CPD is influenced by a variety of factors, including but not limited to (1) current roles; (2) anticipated roles; (3) regulatory and reimbursement changes; (4) changes in best practice; and (5) emerging practice within health, education, service systems, and the profession of occupational therapy.

Value of CPD

CPD planning strengthens the occupational therapy profession by supporting practitioners as they provide efficient, relevant, and evidence-based services within an increasingly inter-professional environment (Institute of Medicine, 2011, 2015). CPD also fosters active participation in professional activities that lead to innovations in practice, leadership, education, and research. AOTA supports the need for all practitioners to be the primary driving force in the development of their professional trajectory, to practice with relevant evidence, and to use outcome data to guide the area of practice in which they work (Fitzgerald et al., 2015; Institute of Medicine, 2010).

CPD positively influences the practice of occupational therapy and supports delivery of services within a variety of environments to diverse people and populations that are relevant and achieve desired outcomes. Further, CPD encompasses topics related to changing health, education, and other service systems that may appear to be beyond the confines of traditional occupational therapy service delivery. Specific examples of such topics include case management, administration, interprofessional team-based care, informatics, and evidence-based practice (Roessger, 2015).

Methods and Approaches

CPD can be met through a variety of methods and approaches. Traditional learning methods, such as continuing education courses, may be supplemented with additional activities such as engaging in a mentoring relationship,

completing a residency program, obtaining post-graduate training, or completing a systematic review of current literature on a selected topic.

Conclusion

CPD is a necessity of the 21st century health care environment that impacts all stakeholders, including the health care system, the profession, individual practitioners, and those they serve. CPD is a complex process of learning that involves exploring new ideas, creating a plan for developing measurable skills, and most importantly, including a reflective element where practitioners are challenged in their thinking as they integrate new evidence-based and outcomes-focused concepts into their base of knowledge. CPD facilitates the safe and effective delivery of occupational therapy services that lead to expected quality outcomes.

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Figure 1.

FRAMEWORK FOR CONTINUING PROFESSIONAL DEVELOPMENT

ENGAGE IN REFLECTION

A. Identify triggers.
   1. Achievement of or need to alter previous CPD plan
   2. Anticipated advancements or changes in practice
   3. Changes in practice area
   4. Changes in reimbursement
   5. Employer mandates
   6. Intrinsic motivation and personal goals
   7. Licensure and regulatory requirements
   8. Voluntary certification requirements (e.g., AOTA Specialty Certification)

B. Examine requirements needed to respond to triggers.

PERFORM ASSESSMENT OF PRACTICE

A. Identify professional development needs in light of the Standards for Continuing Competence (AOTA, 2015): Knowledge, critical reasoning, interpersonal skills, performance skills, and ethical practice.
B. Identify own knowledge, skills, and abilities for meeting triggers (Fitzgerald et al., 2015).
C. Incorporate objective information and performance assessments from other sources (e.g., self-assessment tools, performance objectives, consumer ratings, peer review).

DEVELOP CPD PLAN

A. Prioritize needs relative to their immediate or future application to practice.
B. Establish goals—Identify goals that represent your own professional development, not the development of others (e.g., students, other staff).
C. Identify measures for goals (i.e., success criteria, outcomes).
D. Identify strategies for meeting goals—Consider learning style, resources, time frame, and so forth (Haywood et al., 2012).
E. Establish a target date for goal completion.
F. Modify goals and objectives as needed.

IMPLEMENT CPD PLAN

A. Engage in identified strategies to meet goals (e.g., formal learning, mentorship, advocacy, program development, publications, independent learning).
B. Document changes in performance using methods that best reflect change (e.g., certification, reflective portfolio, exam, performance review).

DOCUMENT EFFECTIVENESS OF CPD PLAN

A. In relationship to client or consumer outcomes
B. In relationship to job performance or external expectations
C. In relationship to personal satisfaction.

REFERENCES

American Occupational Therapy Association. (2003). *Professional development tool.* Retrieved from http://www1.aota.org/pdt/index.asp

American Occupational Therapy Association. (2014). Occupational therapy practice framework: Domain and process (3rd ed.). *American Journal of Occupational Therapy, 68*, S1–S48. http://dx.doi.org/10.5014/ajot.2014.682006

American Occupational Therapy Association. (2015). Standards for continuing competence. *American Journal of Occupational Therapy, 69*(Suppl. 3), 6913410055. http://dx.doi.org/10.5014/ajot.2015.696S16

Dik, B. J., Sargent, A. M., & Steger, M. F. (2008). Career development strivings: Assessing goals and motivation in career decision-making and planning. *Journal of Career Development, 35*(1), 23–41.

Fitzgerald, C., Moores, A., Coleman, A., & Fleming, J. (2015). Supporting new graduate professional development: A clinical learning framework. *Australian Occupational Therapy Journal, 62*, 13–20.

Haywood, H., Pain, H., Ryan, S., & Adams, J. (2012). Engagement with continuing professional development. *Journal of Allied Health, 41,* 83–89.

Institute of Medicine. (2010). *Redesigning continuing education in the health professions.* Washington, DC: The National Academies Press.

Institute of Medicine. (2011). *Allied health workforce and services: Workshop summary.* Washington, DC: National Academies Press.

Institute of Medicine. (2015). *Measuring the impact of interprofessional education on collaborative practice and patient outcomes.* Washington, DC: National Academies Press.

McMahon, M., Forde, C., & Dickson, B. (2015). Reshaping teacher education through the professional continuum, *Educational Review, 67,* 158–178. http://dx.doi.org/10.1080/00131911.2013.846298

Roessger, K. M. (2015). But does it work? Reflective activities, learning outcomes and instrumental learning in continuing professional development. *Journal of Education and Work, 28*, 83–105. http://dx.doi.org/10.1080/13639080.2013.805186

Occupational Therapy's Role in Medication Management

The American Occupational Therapy Association (AOTA) asserts that occupational therapy practitioners[1] are well prepared to contribute to improving medication adherence by addressing medication management. The purposes of this position paper are to define medication management, describe the significance of medication management in health and wellness, and establish occupational therapy's distinct role in interprofessional efforts to address medication management.

Definitions

Medication management refers to the regular systems and processes of taking medications as prescribed (AOTA, 2013; Sanders & Van Oss, 2012). Medication management is a complex activity with many components, including negotiating with the provider for a prescription, filling the prescription at the pharmacy, interpreting complicated health information, taking the medication as prescribed, and maintaining an adequate supply of medication for ongoing use.

Medication adherence is "the extent to which a person's behavior— taking medication . . . corresponds with the agreed recommendations from a healthcare provider" (World Health Organization [WHO], 2003, p. 2). Medication adherence is often described as a percentage, indicating the ratio of pills consumed over those prescribed. An adherence rate of 100% indicates perfect adherence, with higher numbers indicating overdosing, and lower numbers indicating underdosing.

Importance of Medication Management

Medications are a critical component in managing chronic conditions. Although dietary, behavioral, and other strategies play a role in reducing risk factors and managing many conditions, medications are a significant factor in reducing mortality and increasing lifespan.

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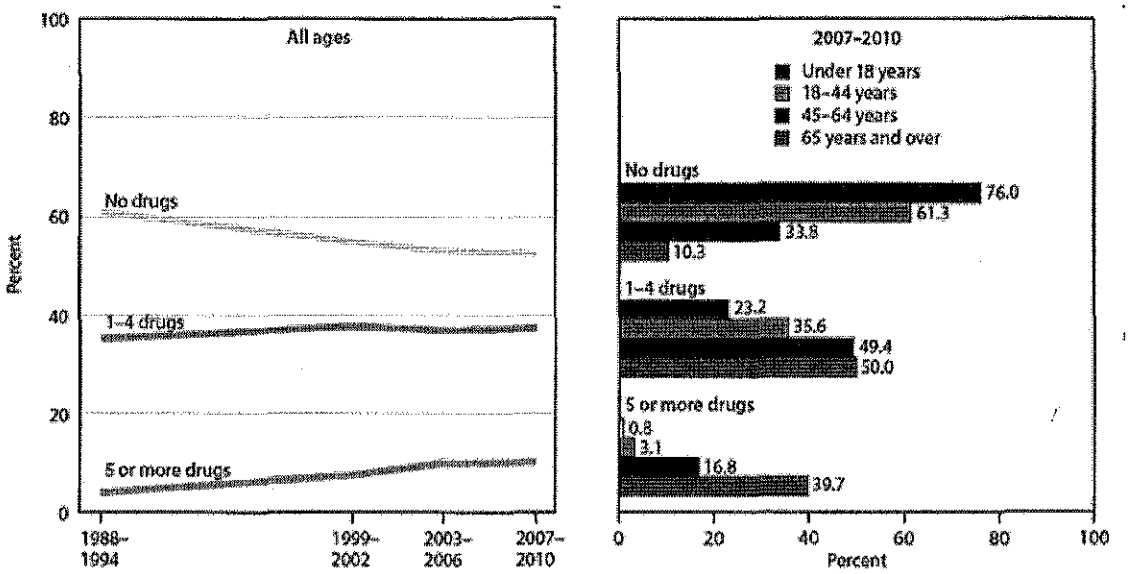
[1] When the term *occupational therapy practitioner* is used in this document, it refers to both occupational therapists and occupational therapy assistants (AOTA, 2015b). Occupational therapists are responsible for all aspects of occupational therapy service delivery and are accountable for the safety and effectiveness of the occupational therapy service delivery process. Occupational therapy assistants deliver occupational therapy services under the supervision of and in partnership with an occupational therapist (AOTA, 2014b).

People who fail to take their medications as prescribed demonstrate increased morbidity and mortality when compared with their adherent peers (Currie et al., 2012; Fitzgerald et al., 2011; Osterberg & Blaschke, 2005). For persons with mental illness, nonadherence results in negative consequences, including more frequent and intense relapses, increased risk of medication dependence, and rebound effects (Velligan et al., 2009; WHO, 2003).

Managing medication has become an essential daily activity for half of all Americans (Gu, Dillon, & Burt, 2010). As seen in Figure 1, approximately 70% of adults (age 45–64 years) and 90% of older adults (age 65 years or older) in the United States take at least one prescription medication (National Center for Health Statistics [NCHS]; 2014). Although medication management is commonly associated with older adulthood, 25% of children require prescription medication, often for chronic conditions that persist into adulthood (NCHS, 2014). Further, the data demonstrate that the trend toward more complex medications regimens is increasing. Individuals with multiple chronic conditions may be prescribed medications from several prescribers, often resulting in complex dosing schedules. Americans ages 65–69 years average nearly 14 prescriptions per year, while those ages 80–84 years take an average of 18 prescriptions per year (American Society of Consulting Pharmacists, 2015). As the number of medications increases and dosing becomes more complex, problems with managing medication multiply (Ingersoll & Cohen, 2008).

Figure 1. Prescription drug use in the past 30 days, by number of drugs taken and age, United States, selected timespans.



Note. *Reprinted from.* National Center for Health Statistics, 2014, p. 21.

Finally, there are a significant social and economic cost of medication nonadherence: adverse health outcomes, increased health care costs, and even death (Institute of Medicine, 2010). Effective medication management is thus a critically important instrumental activity of daily living.

Role of Occupational Therapy in Medication Management

Occupational therapists analyze, assess, and address discrete activities that comprise medication management and contribute to medication adherence. They develop client-centered, evidence-based interventions to improve medication management and subsequent adherence. Occupational therapy has a role in screening, evaluation, and intervention.

Occupational therapists review the client's chart to understand the prescribed medication regimen. Then occupational therapists evaluate clients' ability to engage in their daily living activities, including taking medication as prescribed. Occupational therapy practitioners apprise the medical team of how new medications affect clients' performance of daily activities. Occupational therapy practitioners also compare performance deficits to known medication side-effects and alert the team to the presence of potential negative effects and their implications (e.g., dizziness, falls).

Approximately half of people fail to take their medications as prescribed (Nieuwlaat et al., 2014; WHO, 2003). Occupational therapists screen clients to identify those who may be at risk

for poor adherence (Byerly, Nakonezny, & Rush, 2008; Kripalani, Risser, Gatti, & Jacobson, 2009; Morisky, Ang, Krousel-Wood, & Ward, 2008; Thompson, Kulkarni, & Sergejew, 2000; Unni & Farris, 2015). Once identified, occupational therapy practitioners can address deficits within the profession's scope (e.g., hand strength, dexterity, vision, cognition) and work with the medical team. Practitioners can inform the medical team of clients' risk for nonadherence, refer clients for additional services, and advocate for medication regimens compatible with clients' skills and routines.

Occupational therapists evaluate clients' ability to manage their medications using a combination of interviewing, skilled observation, and assessment of selected aspects of performance. Interviewing is used to obtain information about existing medication routines and the context of medication management (Law, Baptiste, McColl, & Polatajko, 2014). Occupational therapists then analyze specific aspects of medication management performance. Performance-based assessments may be used to identify the aspects of medication management causing dysfunction (Anderson, Jue, & Madaras-Kelly, 2009; Baum et al., 2008; Burns, Mortimer, & Merchak, 1994; Cairns, Hill, Dark, McPhail, & Gray, 2013; Carlson, Fried, Xue, Tekwe, & Brandt, 2005; Robnett, Dionne, Jacques, LaChance, & Mailhot, 2007; Zartman, Hilsabeck, Guarnaccia, & Houtz, 2013). Skills such as hand dexterity, vision, cognition, health literacy, and numeracy may be assessed (Cole, 2011; Rogers, Bai, Lavin, & Anderson, 2016). Knowledge and beliefs about medication may also be assessed (Horne, Weinman, & Hankins, 1999; Okuyan, Sancar, & Izzettin, 2012).

With information from the evaluation, occupational therapists develop client-centered, evidence-based interventions to improve medication management performance and subsequent adherence. Occupational therapy practitioners may use occupation and activity, preparatory methods and tasks, education and training, advocacy, and group-based methods to enhance clients' abilities to take their medications as prescribed (AOTA, 2014b). Through these interventions, practitioners help clients to establish "specific, individualized, concrete plans for integrating medication into daily routines" (Sanders & Van Oss, 2012, p. 97). Practitioners weigh clients' skills and abilities with the barriers and supports of the environment to customize strategies for managing medications.

Appendix 1 discusses task analysis of medication management. Appendix 2 features case examples of occupational therapy screening, evaluation, and intervention.

Evidence

Occupational therapy's role in medication management is supported by best evidence. Current evidence indicates that people generally desire to take their medications but fail to adequately manage this complex activity (Gadkari & McHorney, 2012; Vlasnik, Aliotta, & DeLor, 2005; WHO, 2003).Based on evidence, Radomski (2011) developed The Ecological Model for Adherence in Rehabilitation. This theory suggests that occupational therapy practitioner- client teams can help people improve self-management and subsequent adherence by modifying person factors, provider factors, intervention factors, the environment, self-determination, and knowledge to improve adherence (Radomski, 2011).

A variety of assessments are available to help practitioners screen and evaluate clients at risk for poor medications adherence (Appendix 3). For many client populations, a variety of assessment tools are available that have good reliability and validity (Elliott & Marriott, 2009; Hawkshead & Krousel-Wood, 2007).

Although additional research is needed, a recent Cochrane Review reported that effective interventions exist to promote medication adherence (Nieuwlaat et al., 2014). Nieuwlaat and colleagues (2014) suggest that the most effective interventions address multiple components of medication adherence, are client centered, and are delivered by allied health professionals. Intervention approaches including education, motivational interviewing, cognitive–behavioral therapy, and caregiver assistance are associated with improved adherence in randomized controlled trials in a range of populations (Ellis et al., 2012; Haynes et al., 1976; Lester et al., 2010; Morgado, Rolo, & Castelo-Branco, 2011; Wu et al., 2008) An occupational therapy intervention study consisting of motivational interviewing, goal setting, problem solving, assistive technology, education, advocacy, and self-monitoring was shown to improve the medication adherence and medication management of some individuals with chronic health conditions (Schwartz & Smith, 2016; Schwartz et al., in press). Appendix 4 shows a list of intervention strategies.

Interprofessional Responsibilities

The social and economic costs associated with medication nonadherence have prompted policy initiatives encouraging or requiring health care providers, including occupational therapist, to routinely monitor medications and implement efforts to promote medication adherence (Centers for Medicare and Medicaid,2016a, 2016b).

Responsibilities associated with these initiatives include medication reconciliation and drug regimen reviews. *Medication reconciliation* is "process of making sense of patient medications and resolving conflicts between different sources of information to minimize harm and maximize therapeutic effects." (American Medical Association, cited in Revisions to Requirements for Discharge Planning for Hospitals, Critical Access Hospitals, and Home Health Agencies, 2015, p. 68134). *Drug regimen review* is "a review of all medications the patient is currently using in order to identify any potential adverse effects and drug reactions, including ineffective drug therapy, significant side-effects, significant drug interactions, duplicate drug therapy, and noncompliance with drug therapy" (Home Health Services, Conditions of Participation: Comprehensive Assessment of Patients, 1999).Occupational therapists participate in medication reconciliation and drug regimen review by eliciting client reports, comparing client reports to medical records, consulting with other professional team members, and using software and other technologies designed for these specific tasks. Occupational therapy practitioners do not prescribe or dispense medication, nor do they alter medical advice from a physician or pharmacist.

Occupational therapy practitioners also contribute to organizational efforts to promote medication adherence. In addition to direct evaluation and intervention to address medication management, occupational therapy practitioners contribute to performance improvement, discharge planning, and patient education efforts.

Ethical Considerations

It is the professional and ethical responsibility of occupational therapy practitioners to provide services only within each practitioner's level of competence and scope of practice. The *Occupational Therapy Code of Ethics (2015)* (AOTA, 2015a) establishes principles that guide safe and competent occupational therapy practice and that must be applied when addressing

medication management. Practitioners should refer to the relevant principles from the Code and comply with state and federal regulatory requirements.

Some settings have established interprofessional team competencies to ensure effective medication therapy and promote medication adherence. This is most common in settings where clients are responsible for medication management or are preparing to take responsibility for medication management. Occupational therapy practitioners should consult with their administrators, relevant policies regarding medication management, and procedures related to promoting and monitoring medication adherence to ensure that such competencies are consistent with relevant regulations and statutes governing occupational therapy practice and practitioners.

Summary

Medication adherence depends on effective medication management. Occupational therapists analyze and formulate tailored solutions to problems associated with the performance of medication management activities. Occupational therapy practitioners implement interventions that reduce barriers and promote routine, effective medication management. Occupational therapy practitioners make a distinct contribution to interprofessional efforts to support medication management at the level of individual client performance and in setting- or facility-wide efforts to promote adherence.

References

American Medical Association. (2007). The physician's role in medication reconciliation: Issues, strategies and safety principles. Retrieved from https://bcpsqc.ca/.../09/AMA-The-physician's-role-in-Medication-Reconciliation.pdf

American Occupational Therapy Association. (2013). *Occupational therapy's role in home health* [Fact Sheet]. Retrieved from http://www.aota.org/about-occupational-therapy/professionals/pa/facts/home-health.aspx

American Occupational Therapy Association. (2014a). Guidelines for supervision, roles, and responsibilities during the delivery of occupational therapy services. *American Journal of Occupational Therapy*, 68(Suppl. 3), S16–S22. http://dx.doi.org/https://doi.org/10.5014/ajot.2014.686S03

American Occupational Therapy Association. (2014b). Occupational therapy practice framework: Domain and process (3rd ed.). *American Journal of Occupational Therapy*, 68(Suppl. 1), S1–S48. http://dx.doi.org/10.5014/ajot.2014.682006

American Occupational Therapy Association. (2015a). Occupational therapy code of ethics (2015). *American Journal of Occupational Therapy*, 69(Suppl. 3), 696S03. https://doi.org/10.5014/ajot.2015.696S03

American Occupational Therapy Association. (2015b). Standards of practice for occupational therapy. *American Journal of Occupational Therapy*, 69(Suppl. 3), 696S06. https://doi.org/10.5014/ajot.2015.696S06

American Society of Consulting Pharmacists. (2015). ASCP fact sheet. Retrieved from https://www.ascp.com/articles/about-ascp/ascp-fact-sheet

Anderson, K., Jue, S. G., & Madaras-Kelly, K. J. (2009). Identifying patients at risk for medication mismanagement: Using cognitive screens to predict a patient's accuracy in filling a pillbox. *Consultant Pharmacist*, 23, 459–472. https://doi.org/10.4140/TCP.n.2008.459

Bailey, S. C., Oramasionwu, C. U., & Wolf, M. S. (2013). Rethinking adherence: A health literacy-informed model of medication self-management. *Journal of Health Communication*, 18(Suppl.1), 20–30. http://doi.org/10.1080/10810730.2013.825672

Baroletti, S., & Dell'Orfano, H. (2010). Medication adherence in cardiovascular disease. *Circulation,* 121, 1455–1458. https://doi.org/10.1161/CIRCULATIONAHA.109.904003

Baum, C. M., Connor, L. T., Morrison, T., Hahn, M., Dromerick, A. W., & Edwards, D. F. (2008). Reliability, validity, and clinical utility of the Executive Function Performance Test: A measure of executive function in a sample of people with stroke. *American Journal of Occupational Therapy*, 62, 446–455. https://doi.org/10.5014/ajot.62.4.446

Beals, K. P., Wight, R. G., Aneshensel, C. S., Murphy, D. A., & Miller-Martinez, D. (2006). The role of family caregivers in HIV medication adherence. *AIDS Care*, 18, 589–596. https://doi.org/10.1080/09540120500275627

Beckman, A. G. K., Parker, M. G., & Thorslund, M. (2005). Can elderly people take their medicine. *Patient Education and Counseling*, 59, 186–191. https://doi.org/10.1016/j.pec.2004.11.005

Buetow, S., Henshaw, J., Bryant, L., & O'Sullivan, D. (2010). Medication timing errors for Parkinson's disease: Perspectives held by caregivers and people with Parkinson's in new zealand. Parkinson's Disease, 2010, 1-6 https://doi.org/10.4061/2010/432983

Burns, T., Mortimer, J. A., & Merchak, P. (1994). Cognitive Performance Test: A new approach to functional assessment in Alzheimer's disease. *Journal of Geriatric Psychiatry and Neurology*, 7, 46–54.

Byerly, M. J., Nakonezny, P. A., & Rush, A. J. (2008). The Brief Adherence Rating Scale (BARS) validated against electronic monitoring in assessing the antipsychotic medication adherence of outpatients with schizophrenia and schizoaffective disorder. *Schizophrenia Research*, 100, 60–69. https://doi.org/10.1016/j.schres.2007.12.470

Cairns, A., Hill, C., Dark, F., McPhail, S., & Gray, M. (2013). The Large Allen Cognitive Level Screen as an indicator for medication adherence among adults accessing community mental health services. *British Journal of Occupational Therapy*, 76, 137–143. https://doi.org/10.4276/030802213X13627524435180

Carlson, M. C., Fried, L. P., Xue, Q.-L., Tekwe, C., & Brandt, J. (2005). Validation of the Hopkins Medication Schedule to identify difficulties in taking medications. *Journals of Gerontology, Series A: Biological Sciences and Medical Sciences*, 60, 217–223. https://doi.org/10.1093/gerona/60.2.217

Centers for Medicare and Medicaid Services. (2016a). *Measures codes. Physician Quality Reporting System.* Retrieved from https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/MeasuresCodes.html

Centers for Medicare and Medicaid Services. (2016b). *Quality measures. Home health quality improvement.* Retrieved from https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HomeHealthQualityInits/HHQIQualityMeasures.html

Cole, J. (2011). Extending the role of the occupational therapist in the promotion of collaborative medication management to facilitate occupation. *British Journal of Occupational Therapy*, 74, 540–542. https://doi.org/10.4276/030802211X13204135680983

Connor, J., Rafter, N., & Rodgers, A. (2004). Do fixed-dose combination pills or unit-of-use packaging improve adherence? A systematic review. *Bulletin of the World Health Organization*, 82, 935–939.

Currie, C. J., Peyrot, M., Morgan, C. L., Poole, C. D., Jenkins-Jones, S., Rubin, R. R.,…, Evans, M. (2012). The impact of treatment noncompliance on mortality in people with type 2 diabetes. *Diabetes Care*, 35, 1279–1284. https://doi.org/10.2337/dc11-1277

Curtin, R. B., Walters, B. A. J., Schatell, D., Pennell, P., Wise, M., & Klicko, K. (2008). Self-efficacy and self-management behaviors in patients with chronic kidney disease. *Advances in Chronic Kidney Disease*, 15(2), 191–205.

de Jong, M. R., Van der Elst, M., & Hartholt, K. A. (2013). Drug-related falls in older patients: implicated drugs, consequences, and possible prevention strategies. *Therapeutic Advances in Drug Safety*, 4, 147–154. https://doi.org/10.1177/2042098613486829

Elliott, R. A., & Marriott, J. L. (2009). Standardised assessment of patients' capacity to manage medications: A systematic review of published instruments. *BMC Geriatrics*, 9, 27. https://doi.org/10.1186/1471-2318-9-27

Ellis, D. A., Naar-King, S., Chen, X., Moltz, K., Cunningham, P. B., & Idalski-Carcone, A. (2012). Multisystemic therapy compared to telephone support for youth with poorly controlled diabetes: Findings from a randomized controlled trial. *Annals of Behavioral Medicine*, 44, 207–215. https://doi.org/10.1007/s12160-012-9378-1

Fitzgerald, A. A., Powers, J. D., Ho, P. M., Maddox, T. M., Peterson, P. N., Allen, L. A.,…, Havranek, E. P. (2011). Impact of medication nonadherence on hospitalizations and mortality in heart failure. *Journal of Cardiac Failure*, 17, 664–669. https://doi.org/10.1016/j.cardfail.2011.04.011

Gadkari, A. S., & McHorney, C. A. (2012). Unintentional non-adherence to chronic prescription medications: How unintentional is it really. *BMC Health Services Research*, 12, 1–12.https://doi.org/10.1186/1472-6963-12-98

Gu, Q., Dillon, C. F., & Burt, V. L. (2010). *Prescription drug use continues to increase increase: U.S. prescription drug data for 2007–2008* (NCHS Data Brief No 4). Hyattsville, MD: National Center for Health Statistics.

Haltiwanger, E. P. (2012). Effect of a group adherence intervention for Mexican-American older adults with type 2 diabetes. *American Journal of Occupational Therapy*, 66, 447–454. https://doi.org/10.5014/ajot.2012.004457

Hawkshead, J., & Krousel-Wood, M. A. (2007). Techniques for measuring medication adherence in hypertensive patients in outpatient settings. *Disease Management & Health Outcomes*, 15, 109–118. https://doi.org/10.2165/00115677-200715020-00006

Haynes, R. B., Sackett, D. L., Gibson, E. S., Taylor, D. W., Hackett, B. C., Roberts, R. S., & Johnson, A. L. (1976). Improvement of medication compliance in uncontrolled hypertension. *Lancet*, 307, 1265–1268. https://doi.org/10.1016/S0140-6736(76)91737-2

Home Health Services, Condition of Participation: Comprehensive Assessment of Patients, 42 C.F.R. §484.55 (1999).

Horne, R., Weinman, J., & Hankins, M. (1999). The Beliefs About Medicines Questionnaire: The development and evaluation of a new method for assessing the cognitive representation of medication. *Psychology and Health*, 14(1), 1-24. https://doi.org/10.1080/08870449908407311

Huizinga, M. M., Elasy, T. A., Wallston, K. A., Cavanaugh, K., Davis, D., Gregory, R. P.,…, Rothman, R. L. (2008). Development and validation of the Diabetes Numeracy Test (DNT). *BMC Health Services Research*, 8, 96–103. https://doi.org/10.1186/1472-6963-8-96

Ingersoll, K. S., & Cohen, J. (2008). The impact of medication regimen factors on adherence to chronic treatment: A review of literature. *Journal of Behavioral Medicine*, 31, 213–224. https://doi.org/10.1007/s10865-007-9147-y

Institute for Safe Medication Practices. (2015). *Medication Safety Alert--Delayed administration and contraindicated drugs place hospitalized Parkinson's disease patients at risk.* Retrieved from https://www.ismp.org/newsletters/acutecare/showarticle.aspx?id=103

Institute of Medicine. (2010*). The Safe Use Initiative and Health Literacy: Workshop Summary.* Washington, DC: National Academies Press.

Kaushik, P., Intille, S. S., & Larson, K. (2008). Observations from a case study on user adaptive reminders for medication adherence. *In Pervasive Computing Technologies for Healthcare,*

2008 (IEEE Conference Proceedings, pp. 250–253). https://doi.org/10.1109/PCTHEALTH.2008.4571082

Koster, E. S., Philbert, D., de Vries, T. W., van Dijk, L., & Bouvy, M. L. (2015). "I just forget to take it": Asthma self-management needs and preferences in adolescents. *Journal of Asthma*, 52, 831–837. https://doi.org/10.3109/02770903.2015.1020388

Kripalani, S., Risser, J., Gatti, M. E., & Jacobson, T. A. (2009). Development and evaluation of the Adherence to Refills and Medications Scale (ARMS) among low-literacy patients with chronic disease. *Value in Health*, 12, 118–123. https://doi.org/10.1111/j.1524-4733.2008.00400.x

Lam, A. Y., Anderson, K., Borson, S., & Smith, F. L. (2011). A pilot study to assess cognition and pillbox fill accuracy by community-dwelling older adults. *Consultant Pharmacist*, 26, 256–263. https://doi.org/10.4140/TCP.n.2011.256

Law, M., Baptiste, S. A., Carswell, A.., McColl, M. A., Polatajko, H. J., & Pollock, N. (2014). Canadian Occupational Performance Measure (5th ed.). Ottawa: Canadian Association of Occupational Therapists.

Lee, J. K., Grace, K. A., & Taylor, A. J. (2006). Effect of a pharmacy care program on medication adherence and persistence, blood pressure, and low-density lipoprotein cholesterol: A randomized controlled trial. *JAMA*, 296, 2563–2571. https://doi.org/10.1001/jama.296.21.joc60162

Lester, R. T., Ritvo, P., Mills, E. J., Kariri, A., Karanja, S., Chung, M. H.,…, Plummer, F. A. (2010). Effects of a mobile phone short message service on antiretroviral treatment adherence in Kenya (WelTel Kenya1): A randomised trial. *Lancet*, 376, 1838–1845. https://doi.org/10.1016/S0140-6736(10)61997-6

Morgado, M., Rolo, S., & Castelo-Branco, M. (2011). Pharmacist intervention program to enhance hypertension control: A randomised controlled trial. *International Journal of Clinical Pharmacy*, 33, 132–140. https://doi.org/10.1007/s11096-010-9474-x

Morisky, D. E., Ang, A., Krousel-Wood, M., & Ward, H. J. (2008). Predictive validity of a medication adherence measure in an outpatient setting. *Journal of Clinical Hypertension*, 10, 348–354. https://doi.org/10.1111/j.1751-7176.2008.07572.x

National Center for Health Statistics. (2014). *Health, United States, 2013: With special feature on prescription drugs*. Hyattsville, MD: Author.

Nieuwlaat, R., Wilczynski, N., Navarro, T., Hobson, N., Jeffery, R., & Keepanasseril, A. … Haynes, R. B. (2014). Interventions for enhancing medication adherence. *Cochrane Database of Systematic Reviews*, 1–730. 10.1002/14651858.CD000011.pub4

Okuyan, B., Sancar, M., & Izzettin, F. V. (2012). Assessment of medication knowledge and adherence among patients under oral chronic medication treatment in community pharmacy settings. *Pharmacoepidemiology and Drug Safety*, 22, 209–214. https://doi.org/10.1002/pds.3275

Ownby, R. L. (2006). Medication adherence and cognition: Medical, personal and economic factors influence level of adherence in older adults. *Geriatrics*, 61, 30–35.

Osterberg, L., & Blaschke, T. (2005). Adherence to medication. *New England Journal of Medicine*, 353, 487–497. https://doi.org/10.1056/NEJMra050100

Palen, L., & Aaløkke, S. (2006). Of pill boxes and piano benches: Home-made methods for managing medication. *In Proceedings of the 2006 20th anniversary conference on computer-supported cooperative work* Association for Computing Machinery (ACM) Conference Proceedings, pp. 79–88). https://doi.org/10.1145/1180875.1180888

Parsons, J. T., Golub, S. A., Rosof, E., & Holder, C. (2007). Motivational interviewing and cognitive–behavioral intervention to improve HIV medication adherence among hazardous drinkers: A randomized controlled trial. *Journal of Acquired Immune Deficiency Syndromes*, 46(4), 443–450. https://doi.org/10.1097/QAI.0b013e318158a461

Petersen, M. L., Wang, Y., van der Laan, M. J., Guzman, D., Riley, E., & Bangsberg, D. R. (2007). Pillbox organizers are associated with improved adherence to HIV antiretroviral therapy and viral suppression: A marginal structural model analysis. *Clinical Infectious Diseases*, 45, 908–915. https://doi.org/10.1086/521250

Radomski, M. V. (2011). More than good intentions: Advancing adherence to therapy recommendations. *American Journal of Occupational Therapy*, 65, 471–477. https://doi.org/10.5014/ajot.2011.000885

Ratzon, N., Futeran, R., & Isakov, E. (2010). Identifying predictors of function in people with diabetes living in the community. British Journal of Occupational Therapy, 73, 277–283. https://doi.org/10.4276/030802210X12759925469023

Revisions to Requirements for Discharge Planning for Hospitals, Critical Access Hospitals, and Home Health Agencies, Proposed Rule, 80 Fed. Reg. 68126 to be codified at 42 C.F.R. Parts 482, 484, 485 (2015).

Robnett, R. H., Dionne, C., Jacques, R., LaChance, A., & Mailhot, M. (2008). The ManageMed Screening: An interdisciplinary tool for quickly assessing medication management skills. *Clinical Gerontologist*, 30 (4), 1–23. https://doi.org/10.1300/J018v30n04_01

Rogers, A. T., Bai, G., Lavin, R. A., & Anderson, G. F. (2016). Higher hospital spending on occupational therapy is associated with lower readmission rates. *Medical Care Research and Review*, [epub ahead of print]. https://doi.org/10.1177/1077558716666981

Sanders, M. J., & Van Oss, T. (2012). Using daily routines to promote medication adherence in older adults. *American Journal of Occupational Therapy*, 67, 91–99. https://doi.org/10.5014/ajot.2013.005033

Schroeder, K., Fahey, T., Hollinghurst, S., & Peters, T. J. (2005). Nurse-led adherence support in hypertension: A randomized controlled trial. *Family Practice*, 22, 144–151. https://doi.org/10.1093/fampra/cmh717

Schwartz, J. K., Grogan, K., Mutch, M., Nowicki, E., Seidel, E., Woelfel, S. & Smith, R. O. (in press). Intervention promoting medication adherence: A phase-one qualitative randomized trial. *American Journal of Occupational Therapy*.

Schwartz, J. K., & Smith, R. O. (2016). Intervention promoting medication adherence: A randomized, phase I, small-n study. *American Journal of Occupational Therapy*, 70, 1–11. https://doi.org/10.5014/ajot.2016.021006

Thompson, K., Kulkarni, J., & Sergejew, A. A. (2000). Reliability and validity of a new Medication Adherence Rating Scale (MARS) for the psychoses. *Schizophrenia Research*, 42, 241–247. https://doi.org/10.1016/S0920-9964(99)00130-9

Unni, E. J., & Farris, K. B. (2015). Development of a new scale to measure self-reported medication nonadherence. *Research in Social & Administrative Pharmacy*, 11, e133–e143. https://doi.org/10.1016/j.sapharm.2009.06.005

Vlasnik, J. J., Aliotta, S. L., & DeLor, B. (2005). Medication adherence: Factors influencing compliance with prescribed medication plans. *Case Manager*, 16, 47–51. https://doi.org/10.1016/j.casemgr.2005.01.009

Weiss, B. D., Mays, M. Z., Martz, W., Castro, K. M., DeWalt, D. A., Pignone, M. P.,... Hale, F. A. (2005). Quick assessment of literacy in primary care: the newest vital sign. *Annals of Family Medicine,* 3, 514–522. https://doi.org/10.1370/afm.405

World Health Organization. (2003). *Adherence to long-term therapies: Evidence for action.* Geneva: Author.

Velligan, D. I., Diamond, P. M., Mintz, J., Maples, N., Li, X., Zeber, J.,... Miller, A. L. (2007). The use of individually tailored environmental supports to improve medication adherence and outcomes in schizophrenia. *Schizophrenia Bulletin*, 34, 483–493. https://doi.org/10.1093/schbul/sbm111

Velligan, D. I., Weiden, P. J., Sajatovic, M., Scott, J., Carpenter, D., Ross, R., & Docherty, J. P.; (2009a). Adherence problems in patients with serious and persistent mental illness. *Journal of Clinical Psychiatry*, 70(Suppl. 4), 1–48 https://doi.org/https://doi.org/10.4088/JCP.7090su1cj

Wu, J.-R., Moser, D. K., Chung, M. L., & Lennie, T. A. (2008). Predictors of medication adherence using a multidimensional adherence model in patients with heart failure. *Journal of Cardiac Failure,* 14, 603–614. https://doi.org/10.1016/j.cardfail.2008.02.011

Wu, J.-R., Moser, D. K., Lennie, T. A., & Burkhart, P. V. (2008). Medication adherence in patients who have heart failure: a review of the literature. *Nursing Clinics of North America*, 43, 133–153., vii–viii. https://doi.org/10.1016/j.cnur.2007.10.006

Zartman, A. L., Hilsabeck, R. C., Guarnaccia, C. A., & Houtz, A. (2013). The Pillbox Test: An ecological measure of executive functioning and estimate of medication management abilities. *Archives of Clinical Neuropsychology*, 28, 307–319. https://doi.org/10.1093/arclin/act014

Appendix 1. Activity Analysis of Medication Management

Component	Description
Fill	• Communicate with prescriber. • Understand need for medication. • Travel to and from pharmacy. • Communicate with pharmacist. • Retrieve medications.
Understand	• Read medication label. • Understand how to take medication. • Understand potential medication side-effects. • Understand implications for medication consumption (e.g., refraining from driving).
Take	• Manipulate medication containers. • Consume medication as directed. • Store medication safely. • Sort medication into pillbox (if used).
Monitor	• Remember consumed and missed medications. • Understand appropriate actions to take for negative side-effects.
Sustain	• Continue medications for the appropriate amount of time.
Refill & repeat	• Monitor need for refill. • Request refill. • Repeat process as necessary.

Note. Adapted from Bailey, Oramasionwu, & Wolf (2013).

Appendix 2. Case Examples Highlighting Occupational Therapy Practitioners' Contribution to Medication Management

Case Description	Considerations for Medication Management	Selected Examples of Occupational Therapy Intervention (in collaboration with the client, family, and other team members)	Research Evidence and Related Resources Guiding Practice
A 67-year-old man with congestive heart failure was admitted to an acute care hospital after a decompensation. The client was referred to occupational therapy services after a fall on the	The intervention should address both the client and the team. With the client, intervention focuses on education, advocacy, and developing adaptive habits. For the team, intervention focuses on educating the	• The OT screens the client and finds poor medication adherence prior to his admission. The OT alerts the team to the client's risk for poor adherence and subsequent readmission risk. • The OT takes blood pressure readings in supine, sitting, and standing to find that the client has orthostatic hypotension, which likely affected his fall on the unit. The OT educates the client on getting up slowly to manage orthostatic	Baroletti & Dell'Orfano (2010); Lee, Grace, & Taylor (2006); Sanders & Van Oss, (2012); Schroeder, Fahey, Hollinghurst, & Peters (2005); Wu, Moser, Chung, & Lennie (2008); Wu, Moser, Lennie, & Burkhart (2008)

Case Description	Considerations for Medication Management	Selected Examples of Occupational Therapy Intervention (in collaboration with the client, family, and other team members)	Research Evidence and Related Resources Guiding Practice
unit. The client is minimal assist for all ADLs. He becomes short of breath with activity and dizzy with position changes. The client would like to discharge to his ranch-style home with his wife.	team about the client's adherence and how medications affect function.	hypotension. The OT informs the physician, who then adjusts the client's blood pressure medication. • The client reports that he does not take his diuretic at home because he "spends all day in the bathroom." The OT and client work together to find a way to incorporate the diuretic into the client's daily schedule to minimize disruption. • The OT educates the client on the importance of his medications in relation to his goals and priorities.The OT engages in an advocacy intervention to help the client describe his needs to their medical team.	
A 45-year-old man with schizophrenia and heart disease attends a day program for people with serious and persistent mental illness. The client lives with his aging parents. The client began demonstrating increased paranoid behavior and hallucinations.	The intervention focuses on compensatory approaches by increasing cues to take medication and developing adaptive routines around taking medication.	• The OT screens the client and caregivers with the Medication Adherence Rating Scale and finds poor medication adherence (Thompson et al., 2000). The OT alerts the team. • The OT administers the Executive Function Performance Test, which reveals that the client needs verbal direct instruction to complete the task (Baum et al., 2008).The OT works with the client and family to create a medication schedule so that the client takes his medications at the same time every day. • The OT works with the family to implement adaptive strategies (e.g., leaving medications in a visible place, setting automatic reminders on the client's cell phone, implementing a checklist for the morning routine). • The OT educates the client and family on how to read a medication label to ensure that all medications are taken accurately.	Kaushik, Intille, & Larson (2008); Ownby & Neugroschi, (2006); Velligan et al. (2007, 2009a, 2009b)
A 65-year-old woman with diabetes is referred to home health to address medication adherence. The nurse suspects that fine motor impairment and possibly cognitive impairment are affecting	The intervention focuses on identifying the person factors contributing to the client's difficulties administering medication. The OT then recommends task modifications to demands that exceed the	• The OT administers the Pillbox Test (Zartman et al., 2013). The client exhibits great difficulty with fine motor aspects of the task and reading the instructions on the pill bottles. If the instructions are read to her, she can accurately report the placement and number of all pills in the pillbox. • The OT assesses grip and pinch strength and determines both are significantly below age norms in both hands. The client also has decreased sensation in all fingertips.	Bailey, Oramasionwu, & Wolf (2013; Huizinga et al. (2008); Ratzon, Futeran, & Isakov (2010); Zartman, Hilsabeck, Guarnaccia, & Houtz (2013)

Case Description	Considerations for Medication Management	Selected Examples of Occupational Therapy Intervention (in collaboration with the client, family, and other team members)	Research Evidence and Related Resources Guiding Practice
medication management. The nurse obtains an order for occupational therapy to evaluate the client.	client's capacities. The OT follows up to ensure that the task modifications are effective. For the home health team, the intervention must be tailored to balance the complexity of self-management tasks with the capacities of the client.	• The OT directly observes the client monitoring blood glucose and drawing up insulin. The OT determines that the client does not prepare the dose of insulin that corresponds with the glucometer reading (i.e., sliding scale), stating that she "always" takes the same dose. • The OT administers the Diabetes Numeracy Test (Huizinga et al., 2008).The OT reports back to the nurse and the ordering physician that the client has fine motor, literacy, and health literacy limitations affecting medication management. • The OT recommends use of pre-poured blister packaging of oral medications to reduce fine motor demands of accessing and grasping pills and follow-up occupational therapy after medications are delivered to verify that the client can administer oral medications effectively. • The OT recommends consideration of an alternative insulin regimen to reduce the literacy and numeracy demands associated with sliding-scale insulin dosing.	
A 19-year-old college sophomore is seen at the university student health center after an asthma attack that required transport to an emergency department. The student acknowledges she has not been consistently taking her medications or using her inhalers and is struggling adjust to living on campus and managing her health after previously attending community college and living at home . She is referred to the OT based in the student health	Intervention focuses on establishment of new medication routines compatible with a change in temporal and physical environment. Intervention also focuses on the tools and strategies to habituate the new routines and make them sustainable.	• The OT screens the client and determines that she has not routinely taken her medications since arriving on campus 1 month earlier. Her asthma has otherwise been well-controlled for years. The client reports that at home her parents continually monitored and reminded her to take her medications, including sending text reminders. Her mother continues to send text reminders at least once per day, but if she is in class or with friends, she ignores the text. • Together, the OT and the client review the administration schedule for all the client's medications. They also review the client's class and work–study schedule. • The OT works with the client on adaptive strategies to identify administration times that are more compatible with the client's new routines. • The OT introduces the student to phone apps that serve as a medication list, alert or reminder system, and tracking system. The client agrees to trial this system for 2 weeks. • After 2 weeks, the client reports that the altered schedule	Koster, Philbert, de Vries, van Dijk, L., & Bouvy (2015); Sanders & Van Oss (2013)

Case Description	Considerations for Medication Management	Selected Examples of Occupational Therapy Intervention (in collaboration with the client, family, and other team members)	Research Evidence and Related Resources Guiding Practice
center.		and app have worked well. She has missed only 2 administration times in 2 weeks. • After 4 weeks, the client reports that she is taking her medication routinely. She has adjusted her medication schedule slightly to accommodate a change in her work schedule and reset the alert in the app to help her make the adjustment. • The OT engages in advocacy intervention to help the client communicate to her mother that the text reminders are no longer necessary.	
A 75-year-old woman with Parkinson's disease recently moved into an assisted living facility. The facility has raised concerns because she needs far more hands-on assistance with ADLs than had been reported by the client and her husband. The facility requests an occupational therapy evaluation from the onsite rehabilitation agency.	The intervention focuses on establishing an optimal relationship between ADL routines and the timing of Parkinson's medication administration.	• The OT screens the client and her husband and finds that they had carefully timed medication administration when they were living in their own home. The client's husband reports that the client's morning medications were taken while she was still in bed. • The OT conducts a direct assessment of morning ADL performance, noting rigidity and tremors limiting the extent and quality of movement and necessitating maximum assistance with dressing and moderate assist with feeding. The OT notes that the client's medication was dispensed by staff near the end of breakfast. • The OT conducts a second assessment, arranging for the client to eat and get dressed in her room after she received her morning medications. The OT observes that the client is able to self-feed and able to dress, needing assistance solely to manage fasteners. • The OT determines that the client's hands-on assistance needs vary and are related to the timing of her medication. The OT recommends that the client's activity schedule be coordinated with her medication schedule. The OT further recommends that the medication schedule be adjusted in collaboration with the client, her husband, and the prescribing neurologist. • The OT engages in advocacy intervention to help the client and her husband describe her needs to the facility management.	Buetow, Henshaw, Bryant, & O'Sullivan (2010); Institute for Safe Medication Practices (2015)

Case Description	Considerations for Medication Management	Selected Examples of Occupational Therapy Intervention (in collaboration with the client, family, and other team members)	Research Evidence and Related Resources Guiding Practice
A 62-year-old woman with chronic pain, depression, anxiety, asthma, and hypothyroidism presents to her primary care provider complaining of recent falls. Her medical record indicates she takes 14 oral and inhaled medications,, 4 of which she cannot confirm she is currently taking. She reports her pain specialist has prescribed several other medications that are not in her medical - Her primary care provider refers her to the onsite OT.	Fall risks may be exacerbated by pain medication. Her extensive medication regimen may exceed her skills to manage the regimen effectively. More specific evaluation is needed.	• During initial interview with the OT, the woman reports that she often runs out of medication and has to rely on family members to retrieve her prescription refills because she has no reliable transportation. She is unable to list all of her medications or provide accurate dosing information. She is open to using a medication organizer. • Administration of the Medi-Cog (Anderson, et al., 2009) indicates cognitive skills adequate to use a medication organizer. At a follow-up appointment with the OT the client brings all of her medications. While performing medication reconciliation, the OT observes that some vials were filled more than 4 months earlier. Other more recently filled vials have residual quantities inconsistent with the fill date and dosing instruction. There are duplicate medications ordered by both the primary care provider and the pain specialist, including 2 medications associated with increased fall risk. During this encounter, the OT provides a medication organizer and monitors as the client fills the organizer from the pill bottles. The OT notes that the client requires prompting to refer to the label instructions and does not recognize or correct other errors until they are identified by the therapist. The OT introduces the option of receiving medications in pre-poured dose packs to simplify medication administration. The OT also introduces the option of mail order or other delivery options that eliminate having to retrieve medications from the pharmacy. The client is open to dose packs and delivery if they can be arranged without additional cost. • The OT notifies the primary care provider of the assessment findings, makes recommendations for simplifying both obtaining and dispensing medications, and advocates for coordination with the pain specialist. The primary care provider concurs with the OT and implements the recommendations. At a 6-week return appointment, the	Anderson, Jue, & Madaras-Kelly (2009); de Jong, Van der Elst, & Hartholt (2013); Lam, Anderson, Borson, & Smith (2011)

Case Description	Considerations for Medication Management	Selected Examples of Occupational Therapy Intervention (in collaboration with the client, family, and other team members)	Research Evidence and Related Resources Guiding Practice
		client produces all medications in a weekly pre-poured blister pack. She reports she occasionally misses doses, but the packaging and delivery have made medications more manageable. She reports no falls since her last encounter.	

Note. ADLs = activities of daily living; app = application; OT = occupational therapist.

Appendix 3. Tools for Assessing Medication Adherence and Medication Management

Assessment Name	Reference	Population	Type of Assessment
Adherence to Refills and Medications Scale	(Kripalani et al., 2009)	Adults with low literacy	Self-report questionnaire
Brief Adherence Rating Scale	(Byerly et al., 2008)	Generic	Self-report questionnaire
Cognitive Performance Test (Medication Subtest)	(Burns et al., 1994)	Dementia	Performance based
Diabetes Numeracy Test–15	(Huizinga et al., 2008)	Generic	Performance-based pen and paper assessment
Executive Function Performance Test	(Baum et al., 2008)	Cognitive impairment	Performance-based
Hopkins Medication Schedule	(Carlson et al., 2005)	Older Adults	Performance-based
Large Allen Cognitive Level Screen	(Cairns et al., 2013)	Mental health	Performance-based
ManageMed Screening	(Robnett et al., 2007)	Older adults	Performance-based and questionnaire
Medication Adherence Rating Scale	(Thompson et al., 2000)	Mental health	Self-report questionnaire
Medication Adherence Reasons Scale	(Unni & Farris, 2015)	Generic	Self-report questionnaire
Medi-Cog	(Anderson, et al., 2009)	Adults	Performance-based pen-and-paper assessment
Morisky Medication Adherence Scale	(Morisky et al., 2008)	Generic	Self-report questionnaire
Newest Vital Sign	(Weiss, et al., 2005)	Generic	Performance-based pen-and-paper assessment

Pillbox Test	(Zartman et al., 2013)	Generic	Performance based

Appendix 4. Occupational Therapy Interventions for Medication Management

	Intervention Approach	References
Occupation and activity	• Incorporate medication into daily routines • Incorporate requesting refills into monthly routines • Practice sorting medications into pillbox	Palen & Aaløkke, 2006;.Sanders & Van Oss, 2013
Preparatory methods and tasks	• Increase hand strength needed to open containers • Adapt medication containers • Prescribe assistive technology • Motivational interviewing	Beckman, Parker, & Thorslund, 2005; Connor, Rafter, & Rodgers, 2004; Parsons, Golub, Rosof, & Holder, 2007; Petersen et al., 2007
Education and training	• Educate client about importance of medications • Educate client about health condition • Educate client on reliable resources for learning about health condition and medication • Train caregivers on administering medications	Beals, Wight, Aneshensel, Murphy, & Miller-Martinez, 2006
Advocacy	• Train client on advocating for self with medical team • Train client on describing medication side-effects • Describe medication adherence to team • Describe to medical team on how medication impacts daily function • Advocate to hospital systems for policies that promote medications adherence	Curtin et al., 2008
Group	• Use group process to help clients problem solve solutions to problems	Haltiwanger, 2012

AOTA Updates

California Board of Occupational Therapy
Board Meeting
December 8, 2016

About AOTA

AOTA® The American Occupational Therapy Association, Inc.

The American Occupational Therapy Association (AOTA) is the national professional association established in 1917 to represent the interests and concerns of occupational therapy practitioners and students of occupational therapy and to improve the quality of occupational therapy services.

Current AOTA membership is approximately 60,000, including occupational therapists, occupational therapy assistants, and occupational therapy students. Members reside in all 50 states, the District of Columbia, Puerto Rico, and internationally.

AOTA represents 213,000 occupational therapy practitioners and students in the United States.

AOTA's major programs and activities are directed toward assuring the quality of occupational therapy services; improving consumer access to health care services, and promoting the professional development of members.

AOTA educates the public and advances the profession by providing resources, setting standards, and serving as an advocate to improve health care. AOTA is based in Bethesda, MD.

Updates

- AOTA Annual Conference & Centennial Celebration
  - Licensure Portability Stakeholder Meeting
- AOTA Official Documents
  - Continuing Professional Development (final)
  - Occupational Therapy's Role in Medication Management (draft)
- Information from ACOTE
  - Highlights from information provided at ALC Meeting

AOTA Conference

Pennsylvania Convention Center

1101 Arch Street

Philadelphia, PA 19107

March 30 – April 2, 2017

http://www.aota.org/Conference-Events/annual-conference.aspx

Housing opened December 7, 2016

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Save the Date!

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We invite all state regulatory board members and administrators to attend.

Licensure Portability Stakeholder Meeting

2–5 p.m. Wednesday, March 29, 2017

Come help shape the future of licensure portability in occupational therapy!

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Participate in AOTA's exclusive event for state regulators! Attend presentations from AOTA and your colleagues about the latest trends in state continuing competence requirements, supervision, telehealth, and more!

AOTA conference registration is NOT required to attend these events.

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For more information regarding AOTA's Annual Conference please go to **www.aota.org.**

For any questions, please contact Chrissy Vogeley, Manager of State Affairs at **cvogeley@aota.org**

Licensure Portability Stakeholder Meeting

- AOTA convening stakeholders: State Regulatory Board members, agency staff, state occupational therapy association leaders, NBCOT representatives, employers and others
- Colmon Elridge III, Director, the National Center for Interstate Compacts, the Council of State Governments will participate
- Goal is to start the discussion about the possibility of licensure portability for the occupational therapy profession

AOTA Official Documents

- Continuing Professional Development (final)
- Occupational Therapy's Role in Medication Management (draft)
- Coming soon:
  - Mental Health Promotion, Prevention, and Intervention in Occupational Therapy Practice
  - Occupational Therapy's Role in Feeding, Eating, and Swallowing Management

ACOTE UPDATES

Program Status	OT Doctoral	OT Master's	OTA	TOTAL
Accredited Programs **NOTE: 11 of the accredited OTM programs are transitioning to the OTD***	14	155*	220	389
Accredited Additional Locations	0	10	11	21
Candidate Programs	13	17	17	47
Developing Additional Locations	0	1	1	2
Applicant Programs	13	12	25	50
Applicant Additional Locations	0	1	0	1
TOTAL	**40**	**196**	**274**	**510**

EDUCATIONAL STANDARDS REVIEW COMMITTEE (ESRC) UPDATES

- The ESRC met for the second time in September to write **Draft I of the new OT (doctoral and master's degree level) and OTA (baccalaureate and associate's degree level) accreditation standards.**

- The first draft incorporated the data and stakeholder feedback from the Call for Comment survey and direction from ACOTE. In addition to completing the first draft of the new standards, **the committee also developed a survey to ascertain feedback on Draft I.**

EDUCATIONAL STANDARDS REVIEW COMMITTEE (ESRC) UPDATES

- **ACOTE will review Draft I** and the survey at its next meeting in **December 2016**, and will host an **Open Hearing regarding the standards at AOTA's Annual Conference and Expo in March 2017.**

- The **ESRC** will hold a conference call in **early spring** and meet again in May 2017 to **review the Draft I survey responses, feedback from the Open Hearing, and any further direction from ACOTE, and will complete Draft II based on this information.**

EDUCATIONAL STANDARDS REVIEW COMMITTEE (ESRC) UPDATES

- The **ESRC anticipates submitting a final draft of the new Standards for ACOTE review and approval by December 2017.**

- **Subject to ACOTE approval**, the **implementation of the new standards** will take place in **mid-2019 or 2020, and all programs will have 18 months to implement the new set of standards**.

- Programs will be able to **submit Letters of Intent to seek accreditation of new baccalaureate-level OTA programs once the new baccalaureate-level OTA standards are adopted by ACOTE**.

POST-PROFESSIONAL GUIDELINES

- The Post-Professional committee has met multiple times to develop the Post-Professional Guidelines.
- Their first Call for **Comment Survey was distributed in October 2016** with a due date of November 14, 2016.
- The committee will take the information gained from the survey to **write the first draft of the Guidelines**.

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DISCUSSION ON AVAILABILITY OF FIELDWORK SITES, POTENTIAL WORKFORCE SHORTAGE AND IMPACT TO APPLICANTS AND CONSUMERS.

A letter from Genesis Rehab Services to colleges/universities regarding fieldwork placements is attached for review.

To our University Partners:

The current healthcare environment has brought many changes and challenges to our industry as a whole. Despite these challenges, Genesis Rehab Services remains committed to supporting the student program and guiding students to understand the new environment that this has created for the older adult population. To balance the importance of meeting the demands of affiliation placements with our need to adapt to new regulatory and reimbursement rules, we plan to institute a nominal stipend per student placement on **September 1, 2017**.

You may or may not know that the new and innovative models of reimbursement are affecting our practice. We have had to deal with many, new regulatory changes in a short amount of time. GRS has chosen to embrace the changes and educate our therapists to understand and practice responsibly. This new practice arena is based on evidence, specific to our unique skills as rehabilitation therapists, and serving as excellent stewards of limited therapy dollars. Practicing responsibly is in line with the "Triple Aim," a framework adopted by Center for Medicare and Medicaid Services (CMS) to optimize health system performance by:

- Improving the patient experience of care
- Improving the health of populations
- Reducing the per capita cost of healthcare

These changes caused us to review our student program to determine if the program was meeting GRS's mission, vision, and goals. We were able to determine the "cost of the program" and analyzed our return on investment. We reaffirmed our convictions that having a student program provides valuable professional development opportunities for our staff and that students in our gyms elevate practice and enhance a culture that facilitates the integration of the best available evidence into everyday practice.

Despite the many positive aspects of our program, we found an imbalance between the cost of the program and our return on investment. We do not always have the need to recruit and hire new graduates in the geographies they are looking to be employed. We have also witnessed the proliferation of new therapy schools in geographies that already have established programs. In addition, we have seen our existing partners continue to grow their class size. In some geographies, we are inundated with multiple student requests for the same discipline during the same time period. While we remain committed to providing a student program for all the reasons mentioned above, we also recognize that with the current reimbursement changes and growing number of academic partners, we need to explore novel solutions in order to be able to continue to provide an effective student program.

Please see the attached Addendum to our current contract with your school. This would become effective **September 1, 2017.** We do understand that you need to take the time to discuss this change, adjust budgets and obtain approvals from your operating boards. Please get back to me at your earliest time frame with your decision to move or not move in this direction.

We look forward to continued collaboration with your school, faculty and students as we all deal with the ever changing healthcare world that we live in. If you would like to talk further about this, do not hesitate to call myself or the Clinical Specialist of Education and Staff Development for your state.

Sincerely,

Diane P. Durham, MS, OTR

Diane P. Durham, MS, OTR
VP, Education and Staff Development
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AMENDMENT

The Agreement for Clinical Affiliation between Genesis ElderCare Rehabilitation Services, LLC DBA Genesis Rehab Services (hereinafter "Genesis Rehab Services") and _____ (hereinafter "School") dated _____ (the "Agreement") is hereby amended effective September 1, 2017 as follows:

Effective as of September 1, 2017, Genesis Rehab Services shall invoice School and School shall pay Genesis Rehab Services a stipend for each student participating in a clinical training program with Genesis Rehab Services as follows:

Student Stipend

	Full Time (>160 hrs.)	Part Time (<160 hours)
Physical Therapy, Occupational Therapy, Speech Therapy	$1,000/student	$500/student
Physical Therapy Assistant, Occupational Therapy Assistant	$500/student	$250/student

Genesis Rehab Services will invoice School within thirty (30) days of each student's start date, and School will remit payment to Genesis Rehab Services within thirty (30) days of the date of the invoice.

Except as amended herein, all other terms and conditions of the Agreement between Genesis Rehab Services and School shall remain unchanged.

For Genesis Rehab Services:

_____

Printed Name: Diane Durham, MS, OTR
Title: VP Education & Staff Development
Date: _____

For School:

_____

Printed Name: _____
Title: _____
Date: _____

IMPORTANT: PROCESS

We hope that you will remain a partner with Genesis Rehab Services after September 1, 2017. If so, here are the following steps that you will need to take:

Step 1- Sign and return the attached Addendum that will accompany your school contract. GRS will sign and return the fully executed original back to you.

Step 2- Identify who will be the contact person to receive the stipend invoice after September 1, 2017.

Institution Name: _____

Contact Person: _____

Address: _____

Email: _____

Step 3- If your current contract has been signed and fully executed longer than 5 years ago, please send an updated version with this Addendum. GRS will sign and fully execute and return to you in a timely manner.

Thank you for your attention to this matter.

RETURN THIS WITH THE AMENDMENT

Why is Genesis Rehab Services charging university partners a stipend?

The current healthcare environment has brought many changes and challenges to our industry as a whole. New and innovative models of reimbursement are affecting our practice. We have had to deal with many new regulatory changes in a short amount of time. GRS has chosen to embrace the changes and educate our therapists to understand and practice responsibly. We closely had to evaluate how we were using our clinical resources and if those resources supported GRS's mission, vision, and goals. This included the student program.

When does the stipend start?

The stipend starts for placements starting September 1st, 2017. So if there is a placement that is scheduled from 8/15/17-10/1/17, this placement would not be affected. If a placement is scheduled from 9/1/17-11/15/17, the school would be required to pay the stipend amount.

Does the stipend guarantee our university a placement?

GRS is requiring all university partners to pay a stipend. We will follow our current system for placing students which follows a set criteria that we consider for each spot. We are unable to guarantee placements. We work very hard to make a commitment to each school and do everything we can not to cancel a placement. In the event that GRS does need to cancel a placement, we would not require a university to pay for a service that was not delivered.

Will GRS place students outside their 6 month timeframe?

Currently we are not considering placing outside our 6 month timeframe. It is difficult for us to predict the stability of a site outside that 6 month window. GRS works very hard to ensure that we provide an optimal clinical experience. Once we commit to a placement, we do everything in our power not to cancel. We think this speaks to our integrity as an organization and our commitment to clinical education.

What is the stipend amount and how did GRS determine those numbers?

GRS reviewed several curricular designs for occupational therapy, occupational therapy assistant, physical therapy, physical therapist assistant, speech-language pathology and respiratory contacts. GRS determined the average length of part-time and full-time experiences.

GRS will charge $1000 for a full-time hands-on therapist placement >160 hours in the clinic; $500 for a part-time hands-on placement <160 hours in the clinic.

Therapist assistant placement >160 hours in the clinic will be $500; therapist assistant placements <160 hours $250.

Respiratory therapy placement >6 visits will be $200; respiratory therapy placements <6 visits will be $100.

In addition to reviewing curricula and cost, GRS has both private and public institutions that pay for student placements. GRS reviewed what universities were already paying and factored that into their decision.

Will this money cover the cost of the student program?

No, this money only covers a portion of the cost that GRS invests in its student program. Costs related to the program include administrative support to run the program, including the Clinical Specialist of Education and administrative staff, student on-boarding costs, lost efficiency of staff completing education to prepare for having a student, and lost efficiency of staff while the student is on-site for placement.

What happens if my student fails their clinical?

GRS invests a lot of time working with individuals that are having difficulty in the clinic. Universities would still be required to pay a stipend even if a clinical was terminated prematurely by GRS and/or the school for student performance issues.

When does the university need to pay the stipend?

Genesis Rehab Services will invoice School within thirty (30) days of each student's start date, and School will remit payment to Genesis Rehab Services within thirty (30) days of the date of the invoice.

Why should my university invest in partnering with GRS?

Genesis Rehab Services has a wealth of resources that have been invested into the student program. **Please see the document entitled *Resources and Expectations for the GRS Student Program.*** In addition to these resources, GRS is a leader in trialing alternative clinical education models, including the collaborative and intraprofessional models of education. Genesis strives to provide students with a quality experience.

RESOURCES AND EXPECTATIONS FOR THE GRS STUDENT PROGRAM

Genesis Rehab Services is dedicated to providing evidenced based, patient centered care for the active aging population in a variety of post-acute settings. Clinical education experiences are designed to foster clinical competency, reasoning skills and professional development of students with the ultimate goal of promoting a successful transition from the role of the student to that of an entry level practitioner. Genesis Rehab Services believes that when students are given the opportunity to participate in a comprehensive, challenging and dynamic clinical education program, they will develop the passion, enthusiasm and understanding to professionally serve our most valued customer. GRS recognizes the importance of clinical education for students, and provides an environment and opportunity to introduce and educate the student to the special needs of the geriatric patient.

GRS Expectations for Clinical Instructors

- Encourage APTA Credentialed Instructor (PT/PTA staff)
- Encourage AOTA Fieldwork Certificate Course (OT/OTA Staff)
- Participate in GRS Clinical Instructor Orientation
- Participate in GRS Clinical Instructor Training & Education
- Review and use the GRS Clinical Instructor Manual
- Review and use Clinical Supervision Scenario Videos
- Remain in "good standing" with the company

GRS Expectations for Students

- Participate in a student orientation call, offered every other week
- Be an active learner for an optimal educational experience
- Complete the *Learning Style Inventory*
- Share current evidence based academic knowledge
- Provide feedback to GRS and clinical instructor on educational experience

GRS Resources for Clinical Instructors

- GRS Clinical Instructor Orientation. Topics include:
  - Program structure and resources
  - Recommended affiliation schedule
  - Roles and responsibilities of the clinical instructor
  - Billing and supervision guidelines
  - Student orientation checklist
- GRS Clinical Instructor Training & Education. Topics include:
  - Principles of learning
  - Providing student feedback
- Clinical Instructor Manual. Topics include:
  - Criteria to be a clinical instructor
  - Structuring the supervisory process
  - How to give feedback
  - Generational differences
  - Supervisory meetings
  - Student learning objectives
  - Student learning assignments and projects
  - Supervising the exceptional student
  - Discipline specific sections for PT, OT, ST, RT
- Clinical Supervision Scenario Videos. Topics include:
  - Structuring the supervisory meeting
  - Providing constructive student feedback
  - Facilitating professional confidence in a student
  - Managing a challenging student

GRS Resources for Students

- GRS Student Workbook. Topics include:
  - GRS mission, vision, core values
  - Roles and responsibilities
  - GRS policies
  - Learning styles questionnaire
  - Listening awareness inventory
  - Recommended affiliation schedule
  - Student learning objectives
  - Student learning assignments and projects
  - Documentation workflow
  - Outcomes training specific to discipline
- GRS Student education:
  - Documentation education
  - Electronic documentation system training (ROX)
  - Reimbursement training (access to 24 pre-recorded modules related to insurance, billing, and coding)
  - Discipline-specific training on assessments evidence-based practice, and practice guidelines
- Access to 18 GRS Clinical Resource Guides
- GRS Discipline-Specific Value-Based Clinical Tools

Genesis Rehab Services employs **Clinical Specialists of Education and Staff Development** to manage and promote the student program in their respective geography. In addition to overseeing the placement and on-boarding of students, an important part of their role is to ensure that clinical instructors and students have the resources they need. University Partners, students, and clinical instructors have direct access to these individuals for any questions and concerns. We also provide students and clinical instructors with a network of clinical experts in the areas of dementia, lymphedema, dysphagia, skin & wound care, driving rehab/CarFit, fall risk management, cognitive communication, seating & positioning, wellness, and standardized assessments.