Guidance for Tech-Check-Tech (TCT) Program Implementation Within the Setting of a Missouri Department of Health and Senior Services (DHSS) Licensed Premises

Missouri Society of Health-System Pharmacists

Revised January, 2020

Background:

Health-system pharmacists are being asked to assume more clinical and patient-centered responsibilities in addition to technical distribution activities[1]. Advancing the role of pharmacy technicians and interns through tech-check-tech (TCT) has been shown to increase pharmacist time for clinical, patient-centered responsibilities. These include interdisciplinary communication, drug therapy monitoring, dosing recommendations, and counseling patients on their medications.

In a TCT program, a technician or intern validates an assembled drug product, so that it may be moved from one area in a health-system to another. According to an ASHP review article from 2011, tech-check-tech programs were being utilized in 15 states. Furthermore, eleven studies have been conducted on the safety of tech-check-tech programs. Pharmacy technician accuracy in tech-check-tech programs was found to be non-inferior to the accuracy of pharmacists (99.6% and 99.3%, respectively) in all eleven studies. However, in six of the studies, pharmacy technicians were reported as having a statistically significantly ($p<0.05$) higher accuracy rate than pharmacists.[1]

The Missouri Society of Health-Systems Pharmacists Public Policy Committee has developed this guidance document to assist health-systems pharmacists in implementing a safe and effective tech-check-tech program. MSHP encourages Missouri health-systems to follow the outlined procedures in this guidance document when implementing tech-check-tech within their health-systems.

TCT Program Overview:

Definition:
A program utilizing specifically trained and qualified pharmacy technicians or pharmacy interns to validate medications selected by another technician or intern for distribution within a Missouri Department of Health and Senior Services (DHSS) licensed premises.

TCT Program:

1. Is limited to Missouri DHSS licensed hospital premises.
2. Is limited to medications that will be administered to the patient by a licensed health care professional.
3. Will utilize trained and qualified pharmacy technicians or interns to check the work of another pharmacy technician or intern when handling medications during product movement.
4. Require a pharmacist to verify the accurate preparation of any compounded or repackaged product prior to being selected and checked under the TCT program.
5. The checking of the product does not replace the process by which the pharmacist would review the medication orders for appropriateness.
6. The Director of Pharmacy or their pharmacist designee is responsible for establishing TCT program requirements.
7. Hospitals must follow all applicable Department of Health and Senior Services (DHSS) and Centers for Medicare and Medicaid Services (CMS) laws and regulations.

Qualifications, Training, and Competency:

Minimum qualifications:
1. Pharmacy technician
    a. Registered with the Missouri Board of Pharmacy (BOP)
    b. Current certification issued by the pharmacy technician certification board (PTCB).
    c. At least 12 months of pharmacy technician work experience performing medication distribution functions at the current hospital OR at least 12 months of prior experience plus at least 6 months of work experience performing medication distribution functions at current hospital.
2. Pharmacy Intern
    a. Licensed by the Missouri BOP

Minimum training:
1. Participating hospitals will develop a formal training process for pharmacy technicians or interns who participate in the TCT program.
2. Training will include a didactic or self-paced study portion and an individualized hands-on practical session.

Minimum competency:
1. Pharmacy technicians and interns will undergo an initial validation of accuracy performed by a pharmacist prior to their participation in the TCT program.
2. Competence evaluation will include an audit performed by a pharmacist checking the accuracy of a medication checked by the pharmacy technician or intern.
3. Pharmacy technicians and interns must demonstrate >99% accuracy checking medications for competence evaluation.
4. Records will be kept to document the successful competence evaluation of a pharmacy technician or intern. Duration of record storage will follow facility policies.

Quality Assurance:

1. A pharmacist or their designee will audit the ongoing accuracy of the qualified pharmacy technicians and interns to ensure patient safety.
2. An ongoing competency assessment and documentation process will be in place for each pharmacy technician or intern.
3. The pharmacy will develop a policy for the quality assurance program, which will include the following:
   a. Minimum passing threshold of >99% accuracy checking medications
   b. Frequency of ongoing competency assessment. At a minimum, an annual competency assessment will be performed.
   c. Record keeping requirements according to facility policy.
   d. Re-training and re-assessment process for pharmacy technicians or interns who fail to meet performance requirements
   e. Review of errors. Any error resulting from TCT will be documented and evaluated via the facility's continuous quality improvement program (CQI) and will require the pharmacy technician or intern responsible for the error to be retrained through the established training program.

FAQ Section:

Q: Can TCT be utilized for crash carts?

> *A: Yes, as long as the process is clearly defined in policy.*

Q: Can TCT be utilized for medications in a multidose container initially administered or used by the patient which are then sent with the patient at discharge?

A: Yes, in compliance with DHSS rule 19 CSR 30-20.100(7).

Q: Can a pharmacy technician or intern check compounded drug preparations?

> *A: No. A pharmacist must verify the accurate preparation of any compounded or repackaged product prior to being selected and checked under the TCT program.*

Q: Can a pharmacy technician or intern check medications that are specifically labeled for an individual patient, such as an individual baggie with a patient label on it, or an inhaler with a patient - specific label?

> *A: Yes, as long as the process is clearly defined in a policy and the medication is administered by a healthcare professional.*

Q: Can repackaged medications be included in the TCT Program?

> *A: Yes, after the pharmacist has verified the accurate preparation and packaging of any compounded or repackaged product, the medication may be included.*

Q: Where can I find examples of TCT training, validation, and quality assurance processes?

> *A: The following articles include detailed examples of training, validation, and quality assurance of TCT:*

> > *Minnesota Society of Health-System Pharmacists. 2003: Section IV*
> > *https://cdn.ymaws.com/www.mnshp.org/resource/resmgr/imported/TCTboardtrainingpacket7_23_03final.pdf*

> > *Norris P, Rho J, Daly K, Davis D, Manukyan C, Miller R, et al. Tech-check-tech programs in inpatient hospitals: An implementation toolkit. California Society of Health-System Pharmacists. 2012:*
> > *https://cdn.ymaws.com/www.cshp.org/resource/resmgr/Files/Practice-Policy/For_Pharmacists/tct_toolkit_.pdf*

> > *Reed M, Thomley S, Ludwig B, Rough S. Experience with a "tech-check-tech" program at an academic medical center. Am J Health-Syst Pharm. 2011;68(19):1820-23.*

> > *Tarver SA, Palacios J, Hall R, Franco-Martinex AC. Implementing a tech-check-tech program at a university health-system. Hosp Pharm. 2017;54(4):280-5.*

> > *Utah Society of Health-System Pharmacists. 2014: Appendix A*
> > *http://www.ushp.org/resources/Documents/TCTPolicy-12-13-14.pdf*

References Section:

1. Adams AJ, Martin SJ, Stolpe SF. "Tech-check-tech": A review of the evidence on its safety and benefits. Am J Health-Syst Pharm. 2011;68:1824-33.
2. Jones GM, Roe NA, Louden L, Tubbs CR. Factors associated with burnout among US hospital clinical pharmacy practitioners: results of a nationwide pilot survey. Hosp Pharm. 2017;52(11):742-751.
3. Dewa CS, Loong BS, Thangh NX, Jacobs P. How does burnout affect physician productivity? A systematic review. BMC Health Serv Res. 2014 Jul 28;14:325.
4. Shanafelt T, Goh J, Sinsky C. The business case for investing in physician well-being. JAMA Intern Med. 2017;177(12):1826-1832.
5. Panagioti M, Geraghty K, Johnson J, Zhou A, Panagopoulou E, et al. Association between physician burnout and patient safety, professionalism, and patient satisfaction. JAMA Intern Med. 2018 Oct; 178(10): 1317–1330.
6. Hall LH, Johnson J, Watt I, Tsipa A, O'Connor DB. Healthcare staff wellbeing, burnout, and patient safety: a systematic review. PLoS One. 2016;11:e0159015. doi: 10.1371/journal.pone.0159015.