

AEMP Business Plan Guide

Overview

This guide is meant to provide guidance and resources for initiating or expanding EM pharmacy services at your institution

Summary

Getting Started	Begin drafting the business plan well in advance of implementing a new service • Six months in advance is a general rule¹
	Eight steps in the planning process ² • Define the purpose of the organization or service and assess the feasibility of implementation • Analyze the current situation ○ Internal and external environment ○ SWOT analysis • Establish future goals • Identify strategies to reach those goals ○ Practical issues ○ Resources • Establish interim objectives that ensure progress towards goals • Define responsibilities and timelines for each objective • Write and communicate the plan • Monitor progress towards meeting goals and objectives ○ What to monitor and how often
Building the Business Plan	Elements to consider for a pharmacy business plan ³ • Executive summary • Background • Proposal • Benefits • Summary • Appendices
Considerations for Expansion	Tailor modifications and proposal to business needs • Additional services • Extended hours of pharmacy coverage • Recommendation for additional FTEs
Metrics to Consider Collecting for Proposal	General Information • Number of ED visits annually • Number of boarded patients • Peak volume hours • Acuity of patients • Census by time of day

	Other relevant metrics (see table1) • Financial • Quality and safety • Clinical Metrics • Educational
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Table 1. Other Relevant Metrics To Collect	
Financial	• Cost avoidance measures (based on literature) • Order verification/productivity • Measuring throughput ○ Time of arrival ○ Time of disposition ○ AMA, discharge home, observation, full admit ○ Decreased length of stay • Reduction of waste • Inventory/formulary management
Quality and Safety	• Services/Joint commission metrics • Prevention of medication errors • Stroke ○ Reduced door to needle time • Sepsis ○ Appropriateness of antibiotic selection ○ Time to administration ○ Evaluate for sepsis fallouts • Sickle Cell ○ Time to first dose of an analgesic ○ Time to PCA initiation • Medication reconciliation rates
Clinical	• Bedside consultations • Bedside monitoring ○ Code attendance (Combine or list separately? Ex. cardiac arrest, RSI, STEMI, Trauma, Stroke, etc.) ○ Procedural sedation ○ Omnicell/Pyxis medication pulls to optimize time to administration • Outpatient culture review • Interventions ○ List specific key interventions here?
Educational	• Research • Training and Development ○ Residents, students, interdisciplinary, staff • Protocol development

References:

1. McDonough R. Writing a business plan for a new service. In: *The Dynamics of Pharmaceutical Care: Enriching Patients' Health*. Monograph 23. Washington, DC: American Pharmacists Association; 2007.
2. Schumock G, Stubbings J. How to develop a business plan for pharmacy services. Lanexa, KS: American College of Clinical Pharmacists; 2018.
3. Erstad B, Mann H, Weber RJ. Developing a business plan for critical care pharmacy services. *Hosp Pharm*: 2016; 51(10):856-862.

Additional Resources

Sample Business Plans Provided in AEMP Career Development Folder	
• University of Arkansas for Medical Sciences (UAMS) - Second FTE proposal • Geisinger EM pharmacy expansion presentation - Expand coverage to 24/7 and additional FTE requirements • Yale YNHH EM pharmacy expansion - Addition of pharmacist FTEs • Riverside RPMC EM pharmacy program – sample business proposal	

Data Collection Tools	
Data Input Software	Excel REDCap
EPIC EHR	SlicerDicer Tableau Clarity reports
Cerner	
Meditech	

Supportive literature for emergency medicine pharmacist services:

*****Plan is to download PDF version for document library*****

Aldridge VE, et al. Implementing a comprehensive, 24-hour emergency department pharmacy program. *Am J Health Syst Pharm.* 2009;66(21):1943-1947.

American College of Emergency Physicians. Clinical pharmacist services in the emergency department. *Ann Emerg Med.* 2021;77.

Barone JA, Lavin S. Pharmacy services in an emergency department. *U.S. Pharmacist.* 1992;17,H8,H10-H13,H15-H16.

Denny KJ, Gartside JG, Alcorn K, et al. Appropriateness of antibiotic prescribing in the emergency department. *J Antimicrob Chemother.* 2019;74(2):515-20.

DeWitt KM, Weiss SJ, Rankin S, et al. Impact of an emergency medicine pharmacist on antibiotic dosing adjustment. *Am J Emerg Med.* 2016;34(6):980-4.

Draper HM, Eppert JA. Association of pharmacist presence on compliance with advanced cardiac life support guidelines during in-hospital cardiac arrest. *Ann Pharmacother.* 2008;42(4):469-74.

Farmer BM, Hayes BD, Rao R, Farrell N, Nelson L. The Role of Clinical Pharmacists in the Emergency Department. *J Med Toxicol.* 2018 Mar;14(1):114-116. doi: 10.1007/s13181-017-0634-4. Epub 2017 Oct 26. PMID: 29075954; PMCID: PMC6013729.

Fleming-Dutra KE, Hersh AL, Shapiro DJ, et al. Prevalence of inappropriate antibiotic prescriptions among US ambulatory care visits, 2010–2011. *JAMA.* 2016;315(17):1864-73.

Gill AW, High JL, Silvernale DJ. Clinical pharmacy in an emergency medicine setting. *Contemp Pharm Pract.* 1981;4:227-230.

Grill J, et al. A study of time saved by emergency medicine physicians through working with clinical pharmacists in the emergency department. *Am J Emerg Med.* 2019;37(9):1720-1722.

Hafner JW, et al. Adverse drug events in emergency department patients. *Ann Emerg Med.* 1995;39(3):258-267.

Jacoby JS, Draper HM, Dumkow LE, et al. Emergency medicine pharmacist impact on door-to-needle time in patients with acute ischemic stroke. *Neurohospitalist.* 2018;8(2):60-5.

Kerestes J, Flaherty S. Emergency Department Pharmacist Improving Alteplase Administration. Geisinger Medication Safety Conference; 2016.

Kuster SP, et al. Correlation between case mix index and antibiotic use in hospitals. *J Antimicrob Chemother.* 2008;62(4):837-842.

Lada P, Delgado G. Documentation of pharmacists' interventions in an emergency department and associated cost avoidance. *Am J Health Syst Pharm.* 2007 Jan 1;64(1):63-68.

Levy DB. Documentation of clinical and cost saving pharmacy interventions in the emergency room. *Hosp Pharm.* 1993;28:624-627,630-634,653.

McAllister MW, Chestnutt JG. "Improved outcomes and cost savings associated with pharmacist presence in the emergency department" *Hospital Pharmacy* 2017; 52: 433-437.

McEvoy MD, Field LC, Moore HE, et al. The effect of adherence to ACLS protocols on survival of event in the setting of in-hospital cardiac arrest. *Resuscitation.* 2014;85(1):82-7.

Morgan SR, Rahman S, et al. Clinical pharmacy services in the emergency department. *Am J Emerg Med*. 2018;36(10):1727-1732.

Moussavi K, Nikitenko V. Pharmacist impact on time to antibiotic administration in patients with sepsis in an ED. *Am J Emerg Med*. 2016;34(11):2117-21.

Ortmann MJ, Johnson EG, Jarrell DH, et al. ASHP Guidelines on emergency medicine pharmacist services. *Am J Health Syst Pharm*. 2021;78:261-275.

Patanwala AE, Sanders AB, Thomas MC, et al. A prospective, multicenter study of pharmacist activities resulting in medication error interception in the emergency department. *Ann Emerg Med*. 2012;59(5):369-73.

Porter BA, et al. Pharmacist involvement in trauma resuscitation across the United States: A 10-year follow-up survey. *Am J Health Syst Pharm*. 2019;76:1226-1230.

Rech MA, et al. PHarmacist Avoidance or Reductions in Medical Costs in Patients Presenting the EMergency Department: PHARM-EM Study. *Crit. care explor*. 2021;3(4):1-10.

Roman CB. Roles of the emergency medicine pharmacist: A systematic review. *Am J Health Syst Pharm*. 2018;75:796-806.

Rothschild JM, Churchill W, Erickson A, et al. Medication errors recovered by emergency department pharmacists. *Ann Emerg Med*. 2010;55(6):513-21.

Schaube JL. Comprehensive emergency pharmacy services. *Top Hosp Pharm Manage*. 1998;8:20-28.

Shapiro DJ, Hicks LA, Pavia AT, Hersh AL. Antibiotic prescribing for adults in ambulatory care in the USA, 2007–09. *J Antimicrob Chemother*. 2014;69(1):234-40.

Sin B, Yee L, Claudio-Saez M, Halim Q, Marshall L, Hayes-Quinn M. Implementation of a 24-hour pharmacy service with prospective medication review in the emergency department. *Hosp Pharm*. 2015 Feb;50(2):134-138. doi: 10.1310/hpj5002-134. PMID: 25717209; PMCID: PMC4336016.

Society of Critical Care Medicine and the American College of Clinical Pharmacy. Position Paper on Critical Care Pharmacy Services, Pharmacotherapy. 2000;20(11):1400-1406.

Stevens et al. Pharmacists in the Emergency Department: Feasibility and Cost. *Fed Pract*. 2014 September;31(9): 18-24.

Sultana J, et al. Clinical and economic burden of adverse drug reactions. *J Pharmacol Pharmacother*. 2013;4(Suppl1).

Tafreshi MJ, Melby MJ, Kaback KR, Nord TC. Medication related visits to the emergency department: a prospective study. *Ann Pharmacother*. 1999;33:1252-1257.

Weant KA, Acquisto NM, Doyno CR, Gregory H, Rech MA, Schlobohm CJ, Smith AP, Won KJ. Development of an emergency medicine pharmacy intensity score tool. *Am J Health Syst Pharm*. 2023 Feb 15;80(4):215-221. doi: 10.1093/ajhp/zxac328. PMID: 36322132.

Whalen FJ. Cost justification of decentralized pharmaceutical services for the emergency room. *Am J Hosp Pharm*. 1981;38:684-687.