



IHA's Anticoagulant ADE Webinar Series: Pharmacist's Role in Anticoagulation

October 23, 2013



Webinar Agenda

- Overview & Introductions – *Betsy Lee*
- Pharmacist's Role in Anticoagulation – Drs. John Hertig & Zach Weber
 - Outline benefits of a pharmacist run anticoagulation program
 - Identify strategies used to implement an anticoagulation program
 - Evaluate the potential cost savings to an institution with a pharmacist run anticoagulation program
- Wrap-up – *Betsy Lee*

IHA's Anticoagulant ADE Webinar #3

Medication Reconciliation with Anticoagulation (Oct. 29 from 10 - 11 a.m. ET)

- Identify key factors to consider when performing medication reconciliation for a patient on anticoagulation (i.e. drug interactions, social history, etc.)
- Identify common barriers to medication reconciliation
- Define health literacy and identify strategies to improve health literacy for those patients on anticoagulation therapy

Evaluation

- Webinar funded by CMS through the *Partnership for Patients*
- CMS reviews results and wants 80% of participants to evaluate educational sessions
- Please complete the simple three question evaluation by Oct. 30, 2013:
<https://www.surveymonkey.com/s/ADEWebinarSession2>



Center for Medication Safety Advancement

ACPE CE

https://purdue.qualtrics.com/SE/?SID=SV_033iiOjswYwfUID

Any CPE questions should be directed to Dawn Sinclair at (765)494-5457 or sinclair@purdue.edu

CE Information for the IHA Anticoagulation Bootcamp CE offerings

Anticoagulation Boot Camp – Pharmacist Role in Anticoagulation

Audience – This activity is designed for pharmacists.

Learning Objectives:

1. Outline benefits of a pharmacist run anticoagulation program
2. Identify strategies used to implement an anticoagulation program
3. Evaluate the potential cost savings to an institution with a pharmacist run anticoagulation program



Pharmacist Accreditation Statement - Purdue University College of Pharmacy is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education. This is a knowledge based, continuing education activity of Purdue University, an equal access/equal opportunity institution. Universal Activity Number (UAN): **0018-0000-13-143-L01-P, 1.0** contact hours (.1 CEU).
Release Date: **10/23/2013** Expiration Date: **10/24/2013**

Required for Completion – To receive credit for this **FREE**, live, activity, you must attend and participate in the CPE session. At the end of the session you will receive a URL to the evaluation and request for credit site. You must complete the requested information. Your credits will be uploaded to CPE Monitor within 4 weeks.

Faculty Disclosure Statement – All faculty AND staff involved in the planning or presentation of continuing education activities sponsored/provided by Purdue University College of Pharmacy are required to disclose to the audience any real or apparent commercial financial affiliations related to the content of the presentation or enduring material. Full disclosure of all commercial relationships must be made in writing to the audience prior to the activity. All additional planning committee members and Purdue University College of Pharmacy staff have no relationships to disclose.

Zach Weber, PharmD, BCPS, BCACP, CDE – Purdue University – has nothing to disclose

Any CPE questions should be directed to Dawn Sinclair at (765)494-5457 or sinclaird@purdue.edu



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Anticoagulation ADE Boot Camp: Pharmacist's Role in Anticoagulation

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Objectives

1. Outline benefits of a pharmacist run anticoagulation program
2. Identify strategies used to implement an anticoagulation program
3. Evaluate the potential cost savings to an institution with a pharmacist run anticoagulation program

Disclosure

- Nothing to disclose

First Things First

- What practice types do you represent?
 - A) Pharmacist
 - B) Nurse
 - C) Physician
 - D) Safety or quality leader
 - E) Other



Expanding Pharmacy Practice

- Pharmaceutical Care/Collaborative Practice Concept
 - “Pharmaceutical care involves the process through which a pharmacist cooperates with patients and other professionals in designing, implementing, and monitoring a therapeutic plan that will produce specific therapeutic outcomes for the patient”

Expanding Pharmacy Practice

- Medication Therapy Management Services (MTMS)
 - “A distinct service or group of services that optimize therapeutic outcomes for individual patients. MTMS are independent of, but can occur in conjunction with the provision of a medication product”
- Clinical Pharmacy Services
 - Discipline of clinical pharmacy – providing specialized, optimized direct patient care
 - Clinical pharmacist
 - Roles of clinical pharmacists in health care – unique set of knowledge and skills

<http://www.pharmacist.com/mtm>. Accessed September 20, 2013.
<http://www.accp.com/docs/positions/commentaries/Clinpharmdefnfinal.pdf>. Accessed September 27, 2013.

Outpatient Clinical Pharmacy Services

- Diseases managed
 - Anticoagulation
 - Lipid clinics
 - Asthma
 - Diabetes
 - Osteoporosis
 - Hypertension
 - Immunizations
 - Pharmacotherapy
 - Infectious disease
- Service settings
 - Hospital-based outpatient clinics
 - Physician clinics
 - Community pharmacies
 - Independent clinics
 - Nursing homes
 - Indian Health Service
 - Self-insured employers
 - Managed Care Organizations

Anticoagulation Clinic Rationale

“Anticoagulation is a high risk treatment, which commonly leads to adverse drug events due to the complexity of dosing these medications, monitoring their effects, and ensuring patient compliance with outpatient therapy.”

Joint Commission National Patient Safety Goal Requirement 3E, 2008

Anticoagulation Risks

Table 2. National Estimates of Emergency Hospitalizations for Adverse Drug Events in Older U.S. Adults, According to Therapeutic Category, 2007–2009.*

Therapeutic Category	Annual National Estimate of Hospitalizations (N= 99,628)		Proportion of Emergency Department Visits Resulting in Hospitalization
	no.	% (95% CI)	%
Hematologic agents	42,104	42.3 (35.5–49.0)	44.6
Endocrine agents	22,726	22.8 (16.7–28.9)	42.1
Cardiovascular agents	9,800	9.8 (7.1–12.5)	42.3
Central nervous system agents	9,621	9.7 (7.6–11.8)	32.2
Antiinfective agents	3,759	3.8 (2.6–4.9)	17.4
Antineoplastic agents	2,882†	2.9 (0.9–4.9)†	51.0
Other agents	3,211	3.2 (2.6–3.8)	15.0
Medications not stated or not known	957	1.0 (0.5–1.5)	20.6
Medications in more than one therapeutic category	4,568†	4.6 (2.7–6.5)	41.2

Anticoagulation Risks

Therapeutic Category and Adverse-Event Manifestation†	Annual National Estimate of Hospitalizations % (95% CI)	Proportion of Emergency Department Visits Resulting in Hospitalization %
Hematologic agents		
Intracranial hemorrhage	5.6 (2.1–9.1)‡	99.7
Hemoptysis	2.0 (1.1–2.8)	73.6
Gastrointestinal hemorrhage	40.8 (29.9–51.7)	84.7
Genitourinary hemorrhage	4.7 (3.2–6.2)	42.4
Epistaxis	6.1 (4.3–8.0)	10.6
Skin or wound hemorrhage	6.8 (4.5–9.1)	24.5
Other type of hemorrhage	5.3 (2.7–8.0)	27.5
Elevated INR, abnormal laboratory values, or drug toxicity not otherwise described	23.7 (16.8–30.6)	59.5

Anticoagulation Risks

Medication	Annual National Estimate of Hospitalizations (N = 99,628)		Proportion of Emergency Department Visits Resulting in Hospitalization
	<i>no.</i>	% (95% CI)	%
Most commonly implicated medications†			
Warfarin	33,171	33.3 (28.0–38.5)	46.2
Insulins	13,854	13.9 (9.8–18.0)	40.6
Oral antiplatelet agents	13,263‡	13.3 (7.5–19.1)	41.5
Oral hypoglycemic agents	10,656	10.7 (8.1–13.3)	51.8
Opioid analgesics	4,778	4.8 (3.5–6.1)	32.4

Anticoagulation Considerations

- Warfarin challenges
 - Narrow therapeutic window
 - Considerable inter-subject variability
 - Drug and diet interactions
 - Labs difficult to standardize
 - Good PK/PD understanding by both patient/provider
 - Availability of new oral anticoagulants

Cost Savings

- Reduced hospitalizations
 - Reduced ED visits
 - Increased medication safety/effectiveness
 - Increased physician productivity
 - Reduced adverse drug events
 - Increased productivity/work days
 - Increased quality of life
 - Increased compliance
- Primary cost savings

Question

What range below would be an appropriate expectation for INR time within target range (TTR) for warfarin therapy managed by pharmacists?

- A. 30-40%
- B. 40-50%
- C. 50-60%
- D. 60-70%

Question

What is the potential additional cost savings **per patient per year** associated with reduced hospital admissions when warfarin therapy is managed by a pharmacist vs. a physician?

- A. \$600-\$1000
- B. \$1400-\$1600
- C. \$2000-\$2400
- D. More than \$2500

Anticoagulation Service Comparison

Parameter	Pharmacist Care	MD Care	P-value
TTR*	63.5% ¹	55.2% ¹	< 0.001 ¹
	85.6% ²	64.2% ²	N/A ²
	67.2% ⁴	54.6% ⁴	< 0.0001 ⁴
	83.6% ⁵	57.4% ⁵	< 0.05 ⁵
INR values/patient/year	13.8 ⁴	7.5 ⁴	< 0.0001 ⁴

*TTR= INR time within target range

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5. Pharmacotherapy 2010;30:330-338

1. CHEST 2005;125:1515-1522

3. Pharmacotherapy 1995;15:732-739

6. <http://www.hrsa.gov/publichealth/clinical/patientsafety/clinicalpharmacyservices.pdf>

2. Am J Hosp Pharm 1985;42:304-308

4. Pharmacotherapy 2011 31:686-694

icalpharmacyservices.pdf

Setting Up a Clinic

- Conduct a needs assessment
 - Identify treatment gaps or areas of high cost of healthcare
 - ICD-9-CM codes
 - E codes: identify high-risk drugs for institutions
 - E934.2 – anticoagulants
 - Compliance with regional, state, or national compliance measures
 - HEDIS, The Joint Commission goals, etc.

Setting Up a Clinic

- Outline goals for anticoagulation therapy
- Identify responsibilities of all involved parties
 - Pharmacists
 - Physicians
 - Patient
 - Support staff
 - Learners
- Describe clinic workflow, documentation procedures, and communication
- Review and/or update annually

Setting Up a Clinic

- Building support for services
 - Identify key personnel with responsibilities in an institution
 - Identify designated clinic space
 - Must have own office and/or exam space
 - Not ideal: waiting rooms, counters, front windows, etc.
 - Include computers, printers, point-of-care devices, work space
 - Include room for learners, if needed

Setting Up a Clinic

- Collaborative Practice Agreement
 - Example: “The Pharmacy Practice Act allows pharmacists to practice under a Collaborative Practice Agreement with individual physicians. Pharmacist may participate in the practice of managing and modifying drug therapy according to a written protocol between the specific pharmacist and the individual physician(s) who is/are responsible for the patients care and authorized to prescribe drugs. By signing this document, the named physicians agree that the named pharmacists may enter into a Collaborative Practice for their patients.”

Setting Up a Clinic

- Referral process
 - Identify patients to be managed by the pharmacist
 - Communicate relevant anticoagulation-related information
 - PMH
 - Anticoagulant indication
 - Special considerations
 - Goal: referral is completed for all patients prior to initial visit

Setting Up a Clinic: Referral Process

Which providers can refer

If patients can self-refer

How the referral will be made

- Electronically entered by provider
- Handwritten/faxed order in progress note completed by support staff
- Handwritten/faxed form completed by the provider

Who schedules the patient

Referral Example

Inbox Dashboard

Verbal Quick Order

Save for later

Anticoagulation Clinic

Patient is anticoagulated for * starting on with an expected duration of *. To be followed by * as an outpatient. The goal INR is * Referral requested 27 Sep 2013

Instru

Com

Done Cancel

Building Support for Services

- Physicians
 - Need physician support
 - Can have oversight by NPs or PAs
 - Educate unaware physicians on abilities of pharmacists as drug therapy experts
 - Enlist a few key physicians with knowledge of, or experience with, pharmacy services to garner support from others within the practice
 - Communicate ongoing treatment plans to boost acceptance and understanding of pharmacy services

Building Support for Services

- Nursing staff
 - Nurses assisting physicians
 - Identify patients who may be candidates for pharmacy-managed services
 - Provide information to patients about pharmacy-managed services
 - Nursing support
 - Obtain vital signs, make telephone calls, triage patients, place patients in exam rooms, complete laboratory tests, etc.

Building Support for Services

- Laboratory support
 - Level of support varies
 - Possible increase in number of tests and/or urgent tests due to new pharmacy services (i.e. more acute INR results, etc.)
 - POC devices
 - Will number of tests and/or revenue reduce for lab services?
 - Agreement with lab services
 - Obtain POC test
 - Maintain POC device
 - Order supplies
 - Run control tests
 - Keep logs/records, etc.

Building Support for Services

- Obligation to communicate to patients
 - Role of the clinic team members
 - Role of anticoagulation therapy
 - Their responsibilities in anticoagulation management
 - Patient contract
 - Terms for dismissal from the clinic
- Complete contract at initial clinic visit

I understand that anticoagulation treatment works best when I work with my health care providers. We will be partners, and we each have responsibilities. Warfarin is a medication used to prevent blood clots. My treatment is monitored by a lab test called INR.

What are my health care provider's responsibilities?

- To explain to me about my anticoagulation treatment and how it will help me.
- To schedule lab tests for me.
- To refill my warfarin prescriptions as needed.
- To look at the results of my lab test and tell me what change in the dose of warfarin I will need to make. When I have problems with my treatment, they will help me manage the problems.
- To keep my doctor up-to-date with information about my treatment.

What are my responsibilities?

- To take my warfarin as I am instructed by the Anticoagulation Clinic.
- To have my lab tests done as they are scheduled.
- To call my Anticoagulation Clinic when I am unable to keep my scheduled lab test.
- To follow the directions I receive during the initial education. I will ask questions when I do not understand what my health care provider is telling me.
- To review the patient education materials I receive.
- To be sure to tell my other health care providers that I am taking warfarin.
- To call my Anticoagulation Clinic promptly
 - a. when I am going to have surgery or other procedures no matter how big or small
 - b. when I change my medicines, including over-the-counter medicines, as well as vitamins and natural or herbal supplements
 - c. when there is a change in my health condition, and when I go to the hospital or I am sick.
- To call my Anticoagulation Clinic if I do not hear from them with the results of my lab test (INR results) within 48 hours after I have the lab test.
- To notify my Anticoagulation Clinic to make arrangements to have lab tests when I plan to be out of town for any extended period of time. I will also make sure that I have enough medication for the length of time I plan to be away.
- To visit my responsible anticoagulation physician at least every 12 months.

I understand that it is important that I follow my responsibilities. My medication can be harmful to me when I do not follow through with my responsibilities.

*** Please post this information on your refrigerator for quick reference***

Patient Contract

Patient Education

- Choosing patient education materials and devices
 - Can be time consuming: ask clerical staff or students
 - Patients can ‘check out’ videos or books
 - Consider offering multiple languages
- Electronic files, if able, by disease state, literacy level, and language
- Teaching devices: training syringes, dietary aids, medical alert bracelets, etc.

Building Support for Services

- Billing/reimbursement
 - Specific method depends on the:
 - Payer
 - Medicare, Medicaid, Third Party Payers, First Party Payers (self pay)
 - Setting
 - Hospital-based clinics, Physician clinics, Community pharmacies, Managed Health Care, Other
 - Professional
 - Pharmacists
 - Other methods
 - CLIA waived testing

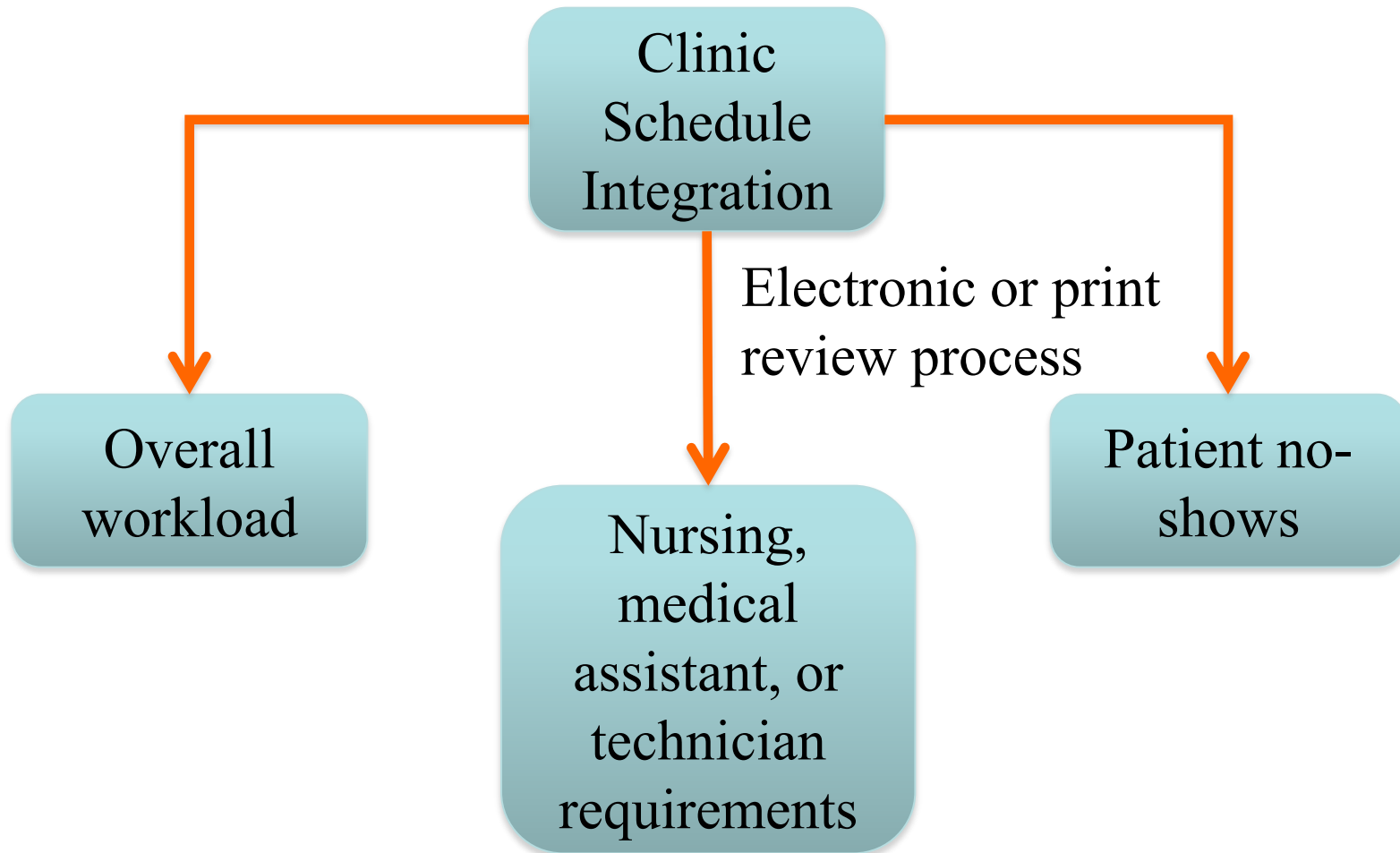
Ancillary Support

- Developing clinic schedule
- Developing documentation templates
 - Provide summary of clinic visit
 - Complete in EMR to share results with physicians
- Scheduling/rescheduling appointments
- Calling patients/appointment reminders
- Answering phone calls
- Collecting insurance payments
- Processing consultations
- Ordering laboratory tests

Building Your Books

- What days in clinic?
- What times available?
- New/return patients per day
 - New patients: 20-30 minutes
 - Return patients: 10-15 minutes
- Visit length for new vs. return patient
 - New warfarin education
 - New hospital discharge
 - Peri-procedural anticoagulation

Considerations: Clinic Scheduling

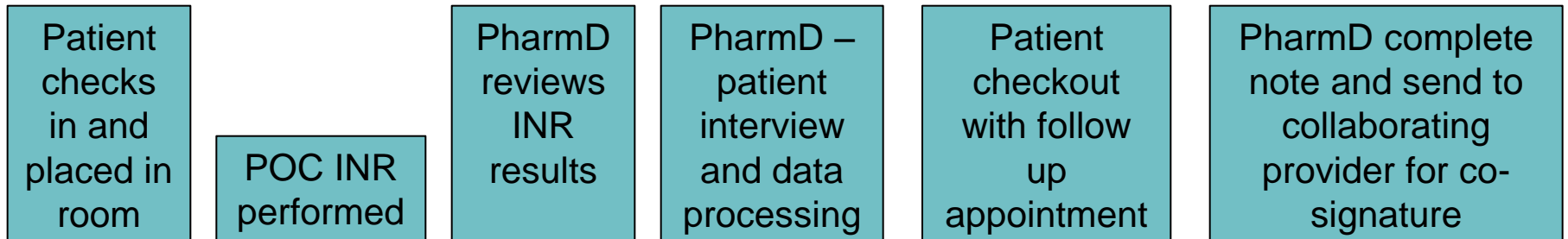


Ancillary Support

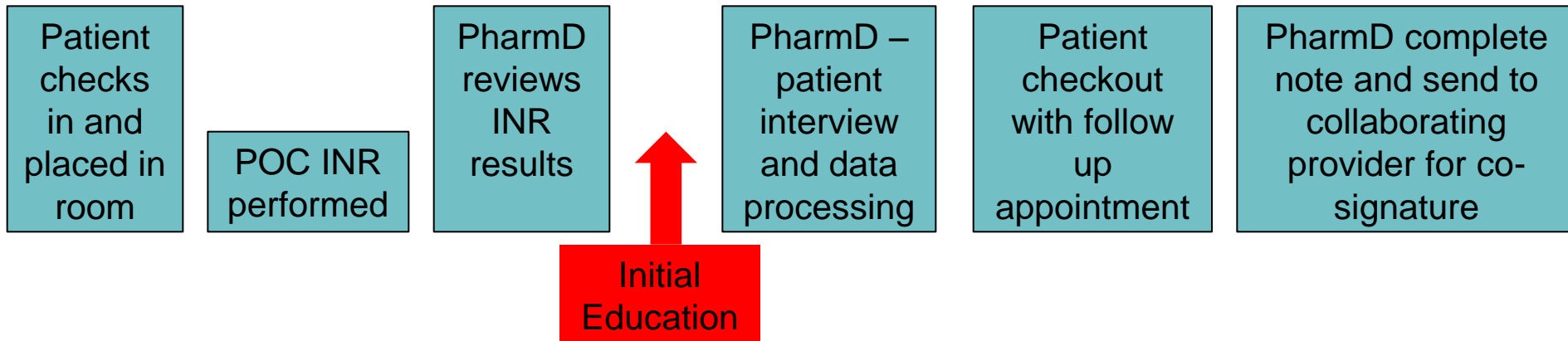
- Patient flow through clinic
 - How does a patient enter the clinic and ultimately get to a room to see the pharmacist?
 - What are all the steps in between?
 - Mirror established processes as much as possible
 - Advantages: higher revenue potential, more efficient use of time, integrated into current practice
 - Disadvantages: less control over scheduling/process, may not view/look up patients ahead of time, potential of overbooking, potential of loss to follow up

Patient Flow Example

Established Patient



New Patient



Additional Services

- Peri-procedural anticoagulation
 - Dosing instructions for warfarin and enoxaparin for procedures

BRIDGING THERAPY EXAMPLE

Current Coumadin dose: Date of last Coumadin dose: Date of last Aspirin dose:					
Date	Day	Coumadin Dose	Lovenox AM	Lovenox PM	Notes
		Procedure			Confirm with the doctor performing the procedure before resuming anticoag.

Patient Care Considerations

- Urgent patient care issues
 - Patient requires physician evaluation immediately, later the same day, or next day
 - Establish protocol...include office managers, clerical, and nursing staff in process
- Pharmacist-initiated referrals
 - Who coordinates referrals made by you and ensures appointments are made?

Documentation

- Requirements vary by state +/- additional rules from state board of pharmacy
 - Type of document (referral, order forms, etc.)
 - Acceptable storage (hard copy or electronic)
 - Duration of storage (i.e. 5 years)
- If no specific state rules, implement standard of practice in neighboring states

Hard Copy Documentation

- Referral binder: provider referrals, orders, and consultations
 - Referral form: patient name, MRN, date, provider signature, and ICD-9 code
 - If billing, choose the same ICD-9 code as referring provider
- Helpful for regulatory audits (especially if EMR is down at time of audit)

Hard Copy Documentation

- Shadow chart
 - Good for portability
 - Limited access to EMRs/EHRs
 - Written medical chart difficult to locate
 - Quick access for learners to review prior information
- Can contain any type of information
- NOT a legal document

Your Progress Note
Other Progress Notes
Procedure Results
Lab Values
Dosing History (i.e warfarin)

Training and Credentialing

- Hospital-based outpatient clinic: credentialing may be required for clinical privileges from hospital credentialing board
 - Required for all recognized providers
- Physician-based or community pharmacy: credentials verified and documented by administrators

Possible Additional Training

- EMR and/or POC devices
- Basic life support
- Clinical Laboratory Improvement Amendments (CLIA) waivers
 - Who will perform quality assurance tests?
- Specific payer (Medicaid), state board of pharmacy, or physician practice group
 - Diabetes, smoking cessation, immunizations, and anticoagulation

Other Considerations

- Obtaining an identification badge
- Getting office keys made
- Ordering a pager and lab coat
- Photocopier pass code
- Business and appointment cards
- Phone, fax, and voice mail
- Ordering a copier, fax, and scanner

Tips for Success

- Preparation before starting clinic
 - Ensure processes and flow of service...practice runs
- Outstanding record keeping
 - Medical/legal liability
 - Documentation of benefit
 - Open communication between pharmacist and other support personal
 - Helping patients understand clinic benefit and structure
- Focus on clinical responsibilities



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