Investigational Pharmacy Service at BMC

"Everything you always wanted to know about IPS but were afraid to ask."

Stephen Zalewski, PharmD, CCRC

Objectives

1. Define the role of the Investigational Pharmacy Service at BMC.
2. Understand how to engage the services offered.
3. Identify general project timelines for drug studies at BU/BMC.

What is the Role of IPS at BMC?

- The Investigational Pharmacy Service is one of the many services offered by the Department of Pharmacy at BMC.
- Provide support for all clinical drug studies conducted at BU/BMC.
- Responsible for the Receipt, Storage, Dispensing and Disposition of all research-related drug products.
- Ensure the investigational products are used appropriately to maximize study participant safety and mitigate any unnecessary risks.
- Ensure compliance with applicable regulatory and protocol requirements regarding the use of investigational products.
- Provide additional support to study teams related to research (randomization, drug accountability and disposition, blinding/unblinding, etc.)

Who staffs the IPS?

Stephen Zalewski, PharmD, CCRC

Husam Dennaoui, PharmD

Michael Camuso, PharmD

Valerie Nguyen, PharmD

Alexandra Cruzado, CPhT

Where is IPS Located?

Boston Medical Center

Investigational Pharmacy Service (ME-B378)

840 Harrison Ave

Boston, MA 02118

Phone: (617) 638-6774

Fax: (617) 638-6748

Email: IPS@BMC.org

What is a Drug?

FDA definition of Drug –

- A substance recognized by an official pharmacopoeia or formulary.
- A substance intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease.
- A substance (other than food) intended to affect the structure or any function of the body.

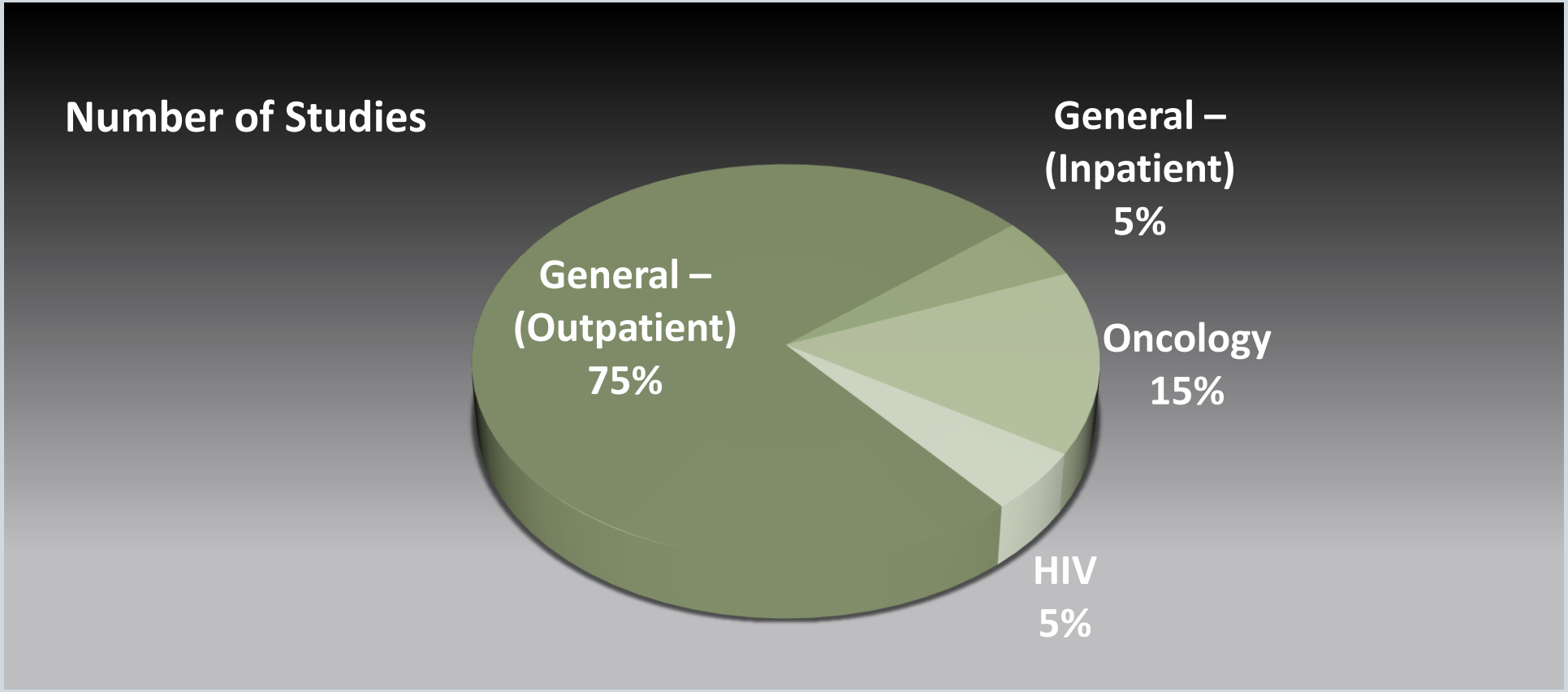
- ✓ Prescription medications
- ✓ Over-the-counter (OTC) drugs
- ✓ Vitamins
- ✓ Nutraceuticals
- ✓ Vaccines
- ✓ Diagnostic
- ✓ Contrast agents
- ✓ Herbal remedies
- ✓ Sample medications

What is an Investigational Drug?

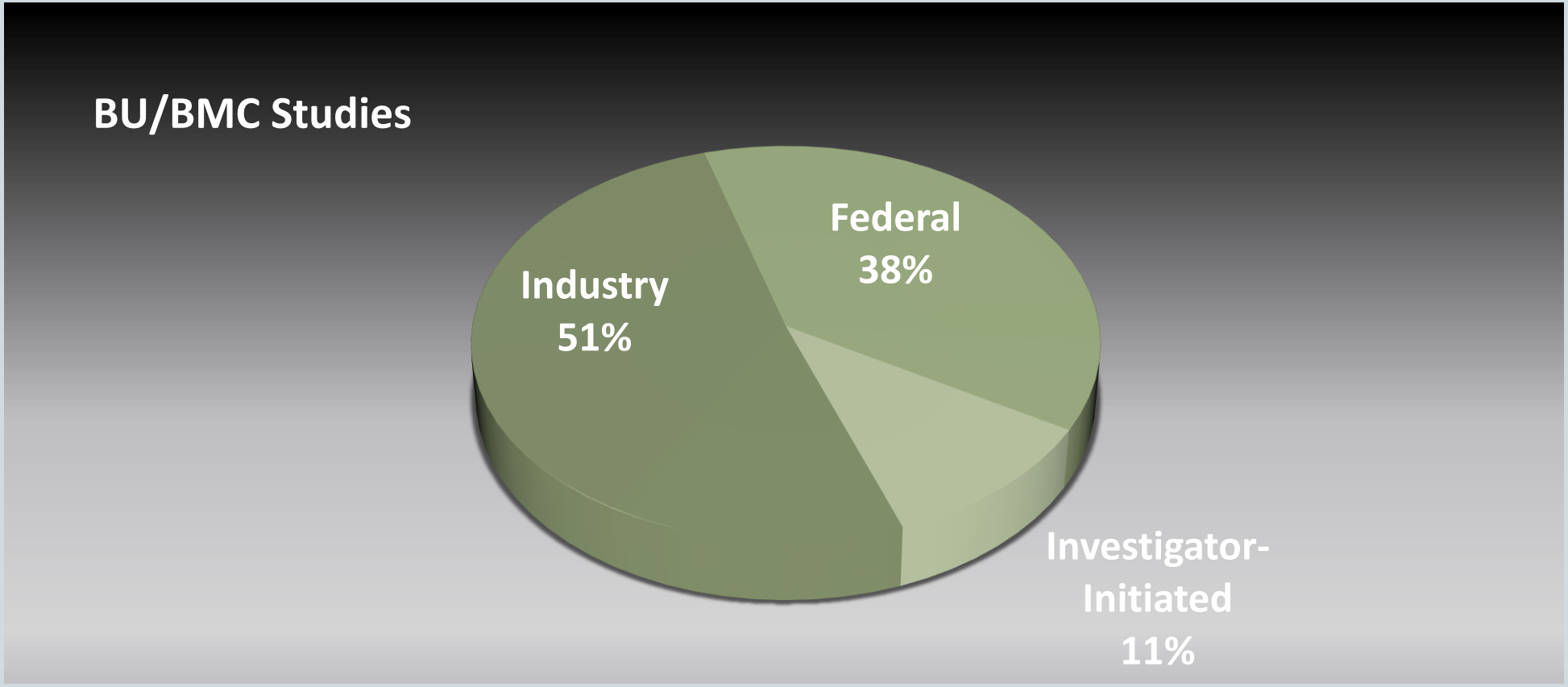
A drug that is being studied and that has not yet received permission from the U.S. Food and Drug Administration to be legally marketed and sold in the United States.

- New drug or already approved
- New strength or combination
- New dosage form
- New manufacturer (new generic version
- New route of administration
- New disease
- New population
- Investigational use of a commercial product

What Type of Studies does IPS Handle?



How are these Studies Funded?



What is the Value of Research?

- **Revenue** - Grants and contracts provide direct and indirect revenues to the institution.
- **Cost Avoidance** - A subject that qualifies to participate in a study may receive study drugs and other services provided by the sponsor, reducing the impact on the healthcare system.
- **Recognition** - Intangible value of being recognized as a leader in research, with access to the latest drugs currently in development.
- **Altruism** - Contributing to generalizable body of knowledge for society.

Why do we do what we do?

How do we do what we do?

Joint Commission on the Accreditation of Healthcare Organizations (JCAHO)

- A private, nonprofit organization whose mission is to continuously improve the safety and quality of care provided to the public; it does this through the provision of health accreditation and related services that support performance improvement in health care organizations.
- Joint Commission MM.06.01.05
  - Standard: The hospital safely manages investigational medications.
  - Element of Performance: The hospital's written process for the use of investigational medications specifies that the pharmacy controls the storage, dispensing, labeling, and distribution of investigational medications.

What FDA Requirements Apply?

§312.6	Labeling of an investigational new drug.
§312.7	Promotion of investigational drugs.
§312.8	Charging for investigational drugs under an IND.
§312.59	Disposition of unused supply of investigational drug.
§312.60	General responsibilities of investigators.
§312.61	Control of the investigational drug.
§312.62	Investigator recordkeeping and record retention.
§312.68	Inspection of investigator's records and reports.
§312.69	Handling of controlled substances.

What Regulations and Guidelines Apply?

- Federal (FDA, NIH, NCI)
- State (DPH) and Local Regulations
- Hospital Policies and Procedures (JCAHO, ASHP)
- USP 797 (sterile), 795 (nonsterile) and 800 (hazardous) guidelines

What International Guidelines Apply?

ICH – International Conference on Harmonisation

GCP – Good Clinical Practice

GDP – Good Documentation Practice

- ALCOA
  - Attributable
  - Legible
  - Contemporaneous
  - Original
  - Accurate

What IPS Policies and Procedures Apply?

13_90_110	Investigational Pharmacy Service Protocol Initiation
13_90_120	Investigational Pharmacy Service Study Close-out
13_90_210	Receipt And Storage Of Investigational Products
13_90_220	Hospital Admissions For Subjects Participating In A Clinical Trial
13_90_230	Authorized Prescribers Of Investigational Products
13_90_310	Accountability Records For Investigational Products
13_90_320	Chain of Custody and Transfer of Investigational Products
13_90_410	Destruction Disposition Of Investigational Products
13_90_510	Investigational Pharmacy Service Quality Assurance
13_90_610	Good Clinical Practice Training
13_90_710	Investigational Pharmacy Service Costs & Fees
13_90_720	Billing Of Investigational Products Used In Clinical Research Studies

What Services Does IPS Offer?

- Protocol Review and Editing
- Study Start-Up/Close-Out
- Institutional Logistics and Operations
- Inventory Control
- Storage – temperature monitoring
- Drug Information
- Assist with database maintenance (Vestigo, EPIC)
- Pharmacy Binders
- Dispensing and Accountability
- Randomization and Treatment Assignments
- Blinding
- Compounding
- Repackaging
- Collaborating with monitors and auditors for site and remote visits.
- Providing tours for site qualification visits
- IRB membership

When should we contact IPS with a new project?

As Early As Possible!

IPS Involvement with a New Project

- Review of protocol/draft to determine feasibility
- Determine the scope of the project
- Inpatient vs Outpatient vs Ambulatory Infusion Center
- Clinic setting vs GCRC
- 24h/7d enrollment
- Nursing/Pharmacy training needs
- IPS cost analysis
- Project timelines

How much does this cost?

I didn’t realize just how much was involved!

Preparing a IPS Budget

- IPS Protocol Planning Worksheet
- IPS Budget Worksheet
- IPS Budget Agreement

IPS Protocol Planning Worksheet

IPS PROTOCOL PLANNING WORKSHEET

Sponsor: _____ Sponsor's Protocol Number: _____

Protocol Title: _____

Investigator: _____ Phone: _____ Pager: _____

Department: _____ Fund Management (BU or BMC) _____

Study Coordinator: _____ Phone: _____ Pager: _____

Items you're submitting:

☐ Protocol ☐ Summary ☐ Other: _____

Information you need from IPS:

☐ Cost Estimate - Timeline: ☐ ASAP ☐ within 2 weeks

☐ Schedule a pre-study visit or planning meeting (Explain): _____

☐ Other: _____

Tell us about the study:

How many subjects are you planning to enroll? _____

Anticipated start date: _____ Treatment duration: _____

Overall study duration: _____

Where will subjects be seen or dosed? _____

Has the study been submitted to IRB? _____ If so, provide #: _____

IF KNOWN, does the sponsor require any specialized training sessions, webinars, etc?

Do any medications or supplies need to be purchased?

What medications/supplies will be provided free through sponsor?

Any special manufacturing/compounding/formulation needed?

Any special packaging requested?

Will IPS be involved with other sites (distribution, coordination, etc)?

Any other important information?

IPS Budget Worksheet

INVESTIGATIONAL PHARMACY SERVICE (IPS) PROTOCOL BUDGET WORKSHEET							
Est. Start Date:				Prescription Complexity:	Level		(see Section A)
Duration:		months		Number of Rx s/Study Visit:		Rx s	
Target Enrollment:		subjects		Number of Visits/Treatment Arm:		visits/Arm	

FIXED FEES– Onetime fee charged at the beginning of the study that includes but is not limited to the following: STUDY INITIATION FEE (~12 hours) • Meeting with study personnel— both in-house and sponsor— prior to the start of the study • IPS Protocol Binder setup • Preparation of pharmacy-specific protocol guidelines • Arranging for shipment of study drug and determining space requirements • Creation of study file(s) and associated drug file(s) in the IPS computer system STUDY CLOSEOUT FEE (~4 hours) • Final accountability logs, • Meeting with study monitor for determination of final disposition of study materials • Computer system maintenance • Document archiving				**16 hour = $xxx.xx (rate $xx/hr)** Fixed fee.
DISPENSING FEES– These fees vary and depend on the type of dispensing:				**Dispensing fee per enrollment** A x rate x B x C **= $ xxx.xx** **Dispensing fee for entire study** A x rate x B x C x D **= $ xxx.xx** Variable fee based on enrollment.
A	Level 1	Oral, Topical, Inhalation, pre-filled syringes, vials for home use Unit of Use dispensing (inpatient and outpatient) Protocol-required meds that are not Standard of Care (SOC)	30min	
	Level 2	IV doses (chemotherapy and non-chemotherapy) Doses requiring reconstitution LVP, IVPB or syringes Controlled Substances Complex accountability documentation May include protocol-required meds that are not SOC	45min	
	Level 3	More complex than basic Level 1&2 preparations May include protocol-required meds that are not SOC	60min	
	Level 4	To be determined by the protocol, eg Rx-specific blinding, compounding, etc.	TBD	
B		Number of prescriptions per Study Visit		
C		Number of Study Visits/Treatment Arm		
D		Number of subjects enrolled		
MONTHLY ADMINISTRATIVE FEES– These fees reflects time spent: • Maintaining inventory levels and storage areas • Ordering necessary supplies and disposal of expired or unused supplies • Meeting with study monitors and auditors • Updating procedures and regulatory documents as protocol is amended				0.5 hr/month x rate = **$xxx.xx/month** x X months = **$xxx.xx** Variable fee based study duration.
FEES FOR SPECIAL SERVICES– • Randomization schedules • Creating blinding procedures • Coordinating drug use between multiple sites • Prepacking • Compounding • Drug purchases				**TBD** Variable fees study specific.

IPS Budget Agreement

INVESTIGATIONAL PHARMACY SERVICES (IPS) BUDGET AGREEMENT

Sponsor Name					
Protocol Number		IRB Number			
Protocol Title					
Principal Investigator		Phone		Pgr	
Study Coordinator		Phone		Pgr	
Department/Division		BU Managed	IO#		
Funding Agency		BMC Managed	AU #	ACT #	

	Provided Estimates	Entire Study
STUDY INITIATION/CLOSEOUT FEES		
MONTHLY ADMINISTRATIVE FEES		
DISPENSING FEES $xx.xx/Rx Disp'd		
FEES FOR SPECIAL SERVICES		
TOTAL		

Fixed Fees will be billed as soon as the study agreement is executed.
Dispensing Fees and Monthly Administrative Fees will be billed quarterly.
Fees for Special Services will be billed quarterly as they occur.

IPS Charges are estimates based on the information provided prior to study initiation and may be reviewed and adjusted annually.

All payment is due day of invoice and expected within 45 days of invoice. Failure to pay within 120 days will result in discontinuation of IPS support. No study drugs will be dispensed by IPS for new enrollments. IPS handling of study drug for existing subjects will be cease as soon as it is safely feasible. The investigator will not be permitted to initiate any other trial with IPS support for a period of time to be determined by the Department of Pharmacy.

IPS signature: _____ Date: _____

Please contact IPS Manager, Stephen Zalewski at ext. 85957 or via email at Stephen.Zalewski@bmc.org if you have any questions or comments.

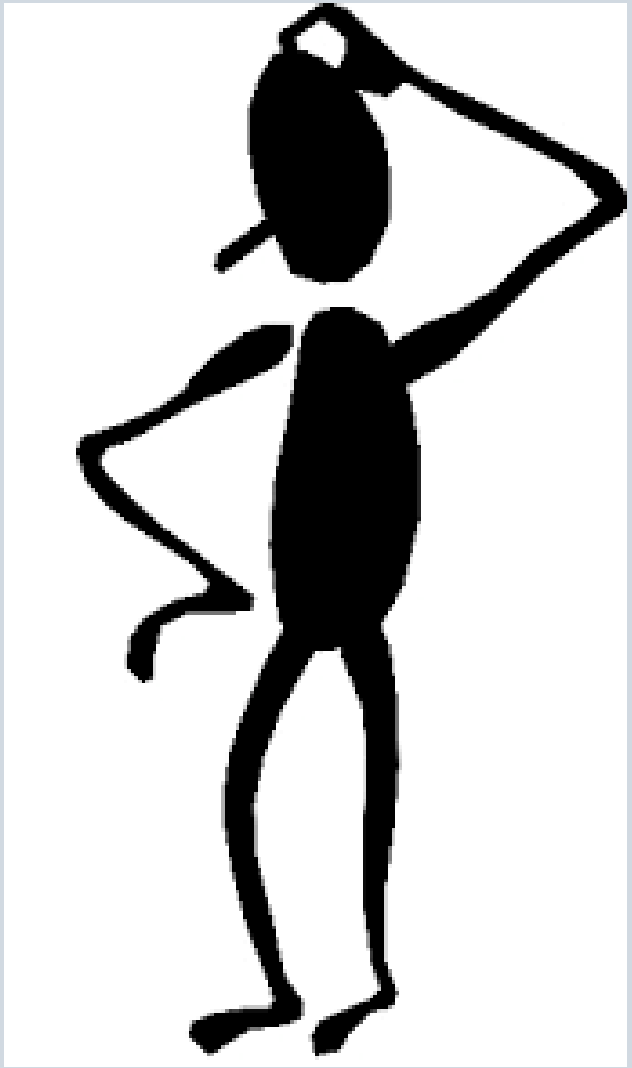
PI Approval Signature: _____ Date: _____
In order for IPS pharmacy to proceed please sign and return the fee schedule to IPS Pharmacy.

What is Meant by “IPS Readiness”?

- Protocol Documents
- IPS Budget
  - IPS will not begin working on an investigational protocol until the budget agreement is signed by the PI.
- IRB Approval
- Training and Delegation of Authority Logs
- IXRS access
- Protocol-specific prescription templates.
- Authorized Prescribers List
- Site logistics

I have enrolled my first participant.

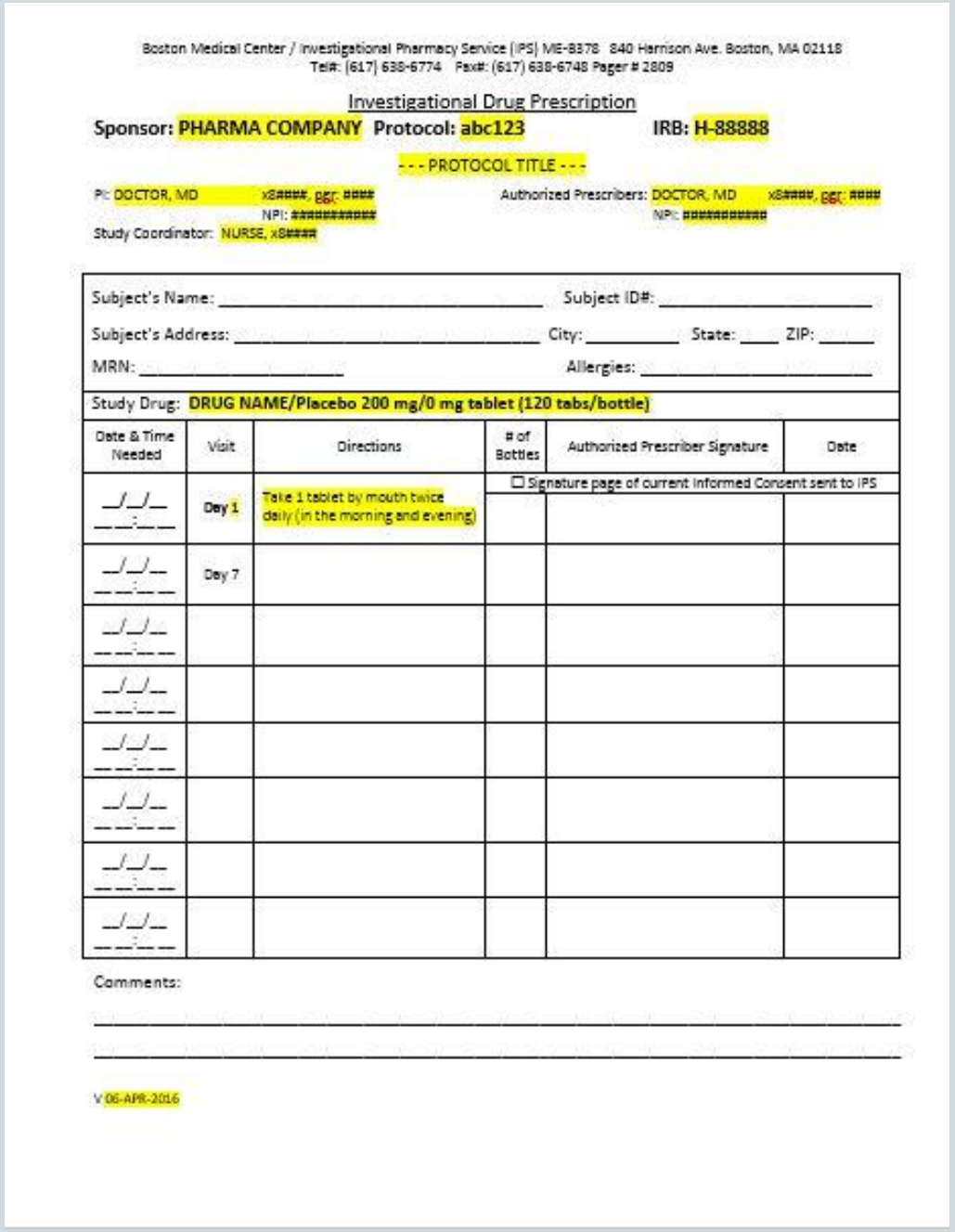
Now what?



3 critical documents

1. Prescription – Paper template or EPIC
2. Informed Consent Form
3. Randomization-Enrollment Confirmation

IPS Rx Template



Boston Medical Center / Investigational Pharmacy Service (IPS) ME-8378 840 Harrison Ave. Boston, MA 02118
Tel#: (617) 638-6774 Fax#: (617) 638-6748 Pager # 2809

Investigational Drug Prescription

Sponsor: PHARMA COMPANY Protocol: abc123 IRB: H-88888

- - - PROTOCOL TITLE - - -

PI: DOCTOR, MD xB####, pgr: #### NPI: ##########
Authorized Prescribers: DOCTOR, MD xB####, pgr: #### NPI: ##########
Study Coordinator: NURSE, xB####

Subject's Name: _____ Subject ID#: _____
Subject's Address: _____ City: _____ State: ____ ZIP: _____
MRN: _____ Allergies: _____

Study Drug: **DRUG NAME/Placebo 200 mg/0 mg tablet (120 tabs/bottle)**

Date & Time Needed	Visit	Directions	# of Bottles	Authorized Prescriber Signature	Date
			☐ Signature page of current Informed Consent sent to IPS		
__/__/__ __:__ __	Day 1	Take 1 tablet by mouth twice daily (in the morning and evening)			
__/__/__ __:__ __	Day 7				
__/__/__ __:__ __					
__/__/__ __:__ __					
__/__/__ __:__ __					
__/__/__ __:__ __					
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Comments:

_____

_____

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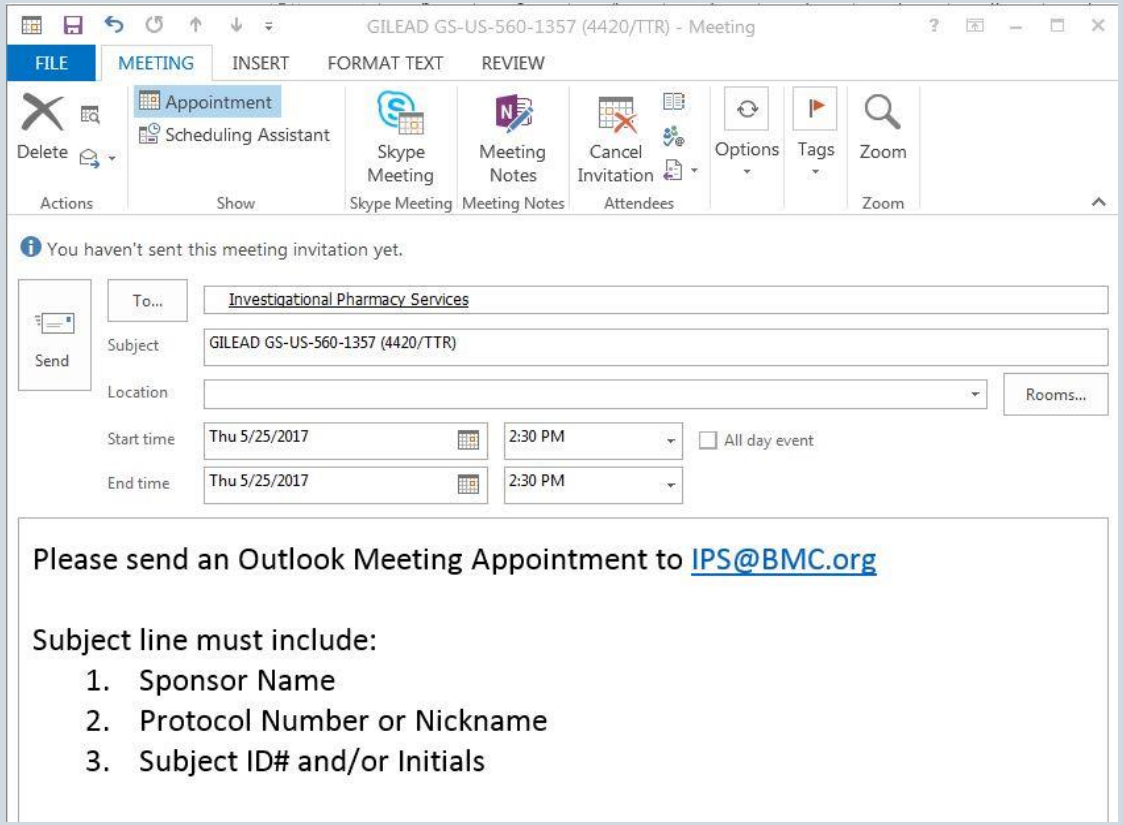
Communication between the study team and IPS is the key to success!

- Scheduling subject, monitor, and sponsor visits



Communication between the study team and IPS is the key to success!

- Scheduling subject, monitor, and sponsor visits
- Site Initiation Visits and Training Sessions
- Study Close-out Visits
- IRB outcome letter and updates – new amendments, enrollment suspensions, protocol extensions and terminations.
- Changes to the BU or BMC account numbers

FAQ – Patients admitted to the hospital while on a clinical trial

Patient admitted to:

1. BMC while on a BU/BMC study
2. BMC while on a study from another institution
3. Another hospital while on BU/BMC study

How Can Pharmacists/IPS Assist?

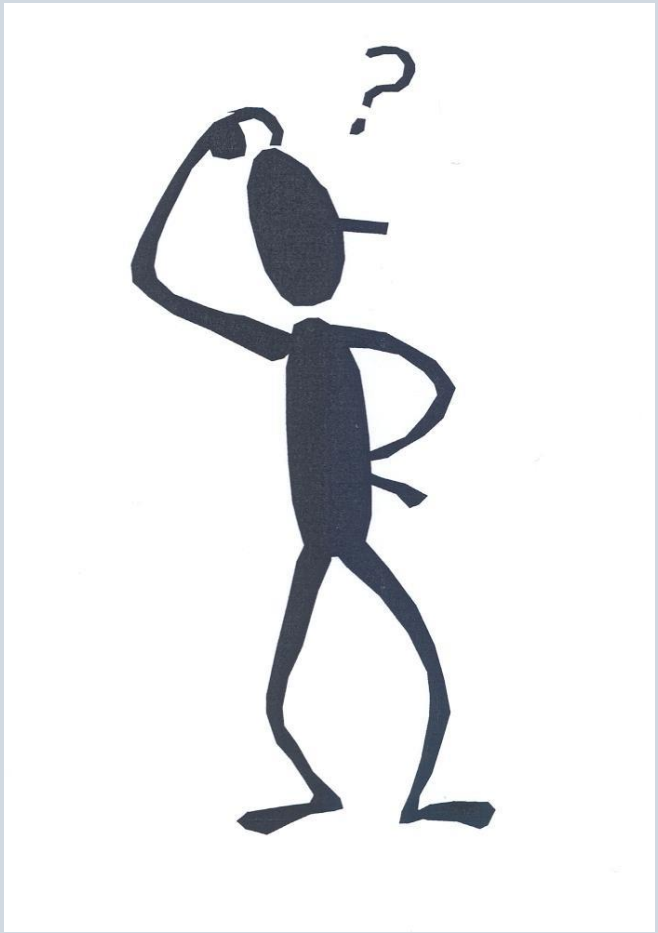
- Admitting/treating physician is responsible – Pharmacist on duty can assist
- Attempt to identify and contact the Principal Investigator to determine what the study is about and what investigational drugs are being used.
- Determine if the hospital admission (Serious Adverse Experience – SAE) is related to clinical study or study drug.
- Assist with emergency unblinding if necessary
- Ascertain if the study drug will be continued while admitted
- Obtain study drug if necessary

FAQ

- Research with FDA-approved, commercially available drugs
- Temperature monitoring – chain of custody
- Blinding investigational products and compounding matching placebos
- Final Drug Disposition
- Archiving study records

In Summary – Why use IPS?

- Required by hospital policy
- Budgeting
- Avoid possible obstacles and pitfalls
- Participant Safety
- Protocol Compliance
- Operational Issues
- Drug Supplies and Handling



Thank you!

Any Additional Questions?