Understanding the Role of Advanced Practice Providers (APP) in Inpatient Hematology: Tips for Success and Lessons Learned

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Presented at FLASCO Rapid Integration Meeting, Sept 21, 2019
Financial Disclosures

• None
Objectives

Today, we will:

- Help you understand the role of the Advanced Practice Provider (APP) in an inpatient hematology/oncology service
- Share some tips on how to succeed as an APP in an inpatient hematology/oncology service
- Share resources to create an effective orientation program
- Miami Cancer Institute's model
Part I: Understanding the Role of the APP in Inpatient Heme/Oncology
Overview:

- Physician Assistants and Nurse Practitioners
- Front-line providers
- Face of the practice
- Perform new patient consults
- Follow-up
- Daily rounds
- Assist with transition of care
- End-of-life discussions
- Patient education
- Performing bone marrow biopsy and aspiration
Introduction:
The APP Role in Inpatient Hematology, cont.

Things to keep in mind:

- Difference between outpatient and inpatient hematology/oncology
- To be effective, must be ready to follow patients for a short time then transition to outpatient care
- Can be emotionally-draining (at times)
- Be ready to embrace the multi-disciplinary team concept
Part II:
Pearls of Wisdom
As you get started…

- Schedule a tour of the hospital
- Gather department directory
- Know the resources available in the hospital
  - Make friends with the medical librarian!
- Shadow nurses on the oncology floor
- Shadow an inpatient oncology pharmacy
- Discuss expectations with collaborating physician(s)
Inquire how consults are generated
How will you know when you need to see a consult
Set up a consistent pattern of “rounding” with attending – physically or virtually
Own your patients
  - Decide who will follow-up on patients next day
    - MD or APP?
Review billing practices/processes
Pearls of Wisdom: How to Approach Consults

At the start of every consult, be sure to:

- Introduce yourself with your title – Nurse Practitioner or Physician Assistant
- If possible, do not introduce yourself as a member of the oncology team at first, hematology sounds more benign
- Find out how much information patient has been told prior to your consult
- Review every note written in the medical record by other providers!
Approach to consults

▪ Review pathology report
▪ Trend the patient’s labs
▪ Review all imaging studies
▪ Review all home and inpatient medications
  ▪ Last dose of chemotherapy (PO or IV)
  ▪ Side effects to prior cycles
  ▪ Anti-coagulation medications
  ▪ History of allergies
▪ Document chronology
▪ Name of oncologist/prior treatments

Pearls of Wisdom: Approaching Consults, cont.

Also:
Pearls of Wisdom: Approaching Consults, cont.

Communicating A New Cancer Diagnosis to Patients:

- Start by explaining the process: what to expect and the “why” for procedures and tests
- Consider the time frame involved in diagnostic tests to minimize anxiety/ frustration
- Give patient and family time to ask any questions
- Understand difficulty of the moment for the patient and family
- Always put yourself in their place and treat them as you would treat your family!
- Do not see the patient before reviewing documentation
- Do not give bad news to a patient when alone in the room
Pearls of Wisdom: Approaching Consults, cont.

End-of-Life Conversations

- How to have difficult conversations - help patient and family bring into focused goals of care and quality of life issues in a compassionate and empathic manner

- Palliative care resources

- Find a mentor
Recognizing Hematologic Malignancies:

- When consulted for benign hematology evaluations, must recognize a possible underlying malignancy or disorder.
  - Abnormal CBC
  - Abnormal differential (i.e. blasts, lymphocytes)
  - Coagulation studies (i.e. APL)
  - High LDH

- If appropriate evaluation is not done, conditions with significant mortality when not treated, can be missed.
Pearls of Wisdom: The Physical Exam

- Perform a thorough physical exam
- Undress the patient
- Check the patient’s back
  - Look for signs of bleeding
- Perform gender- and age-specific exams
Part III: Orientation Program
Orientation Program: 
**Overview**

- No national standard for APP orientation program
- Each institution creates their own
- Combination of didactic and practicum
- 8-12 weeks
- Preparation to meet 90 day competencies
<table>
<thead>
<tr>
<th>WEEK</th>
<th>ACTIVITIES</th>
<th>GOALS</th>
</tr>
</thead>
</table>
| WEEK 1 | New Employee Orientation  
   - Completion New employee modules  
   - Tour of Facilities  
   - Travel and Reimbursement Training  
   - Clinical Research orientation  
   - Billing Training (Inpatient APP)  
   - Infection Control (Wednesday 1-2pm)  
   - Complete Cerner Modules and Live Course  
   - Access to [ASCO.org](http://ASCO.org) for Certificate Program for APP (Completion within 3 months of start date)  
   - Start ASCO.org Certificate Program, Basics 101  
   - Principles of Oncology and Systemic Therapy  
   - Mentor assigned  
   - Download NCCN.org APP or become familiar with Website  
   - Sign up for ONS.org course:  
     - Post Master’s Foundation in Hematology  
 | Complete all Cerner and BHSF modules  
 | Tour of MCI and Hospital  
 | Complete all relevant trainings  
 | Start ASCO.org Certificate Program, Basics 101  
 | Principles of Oncology and Systemic Therapy  
 | Understanding of billing principles (if billing training available during this week)  
 | One on One: Review of goals |

| WEEK 2 | ASCO.org  
   - Complete all courses in: Principles of Oncology and Systemic Therapy  
   - Complete: Introduction to Diagnostic Evaluation  
   - Start: Introduction to Common Cancers Therapies  
   - Round with Medical Oncology Hospitalists and APPs  
   - Shadow Med Onc APP with special attention to:  
     - Documentation for Consultation and follow up patients  
     - Tumor sites and NCCN guidelines  
     - Attend Tumor Board if available  
   - Use of NCCN APP or website to review NCCN guidelines for Tumor sites  
 | Complete assigned ASCO modules  
 | Begin to acquire knowledge of required elements of documentation for medical oncology patients as it relates to consultation and follow up notes  
 | Knowledge of NCCN guidelines for at least 1 tumor site seen during this week  
 | One on One: Review of goals |

| WEEK 3 | ASCO.org  
   - Complete all courses Introduction to Common Cancers Therapies  
   - Systemic therapy for Breast Cancer  
   - Systemic Therapy for Colon Cancer  
   - Systemic Therapy for Prostate Cancer  
   - Look at [NCCN.org](http://NCCN.org) for Guidelines related to these Tumor sites  
   - Biological Cancer Therapy  
 | Complete assigned ASCO modules  
 | Knowledge of mode of action and toxicities of at least 1 chemotherapy modalities used on patients during the week |
Proficiencies

Medical Oncology Proficiencies

- Basic Science as it relates to development, diagnosis and management of cancer
- Screening and preventive methods for different cancers
- Diagnostic tools to establish diagnosis and evaluate patient with cancer
- Familiar with staging and risk stratification of cancers using tumor-node-metastasis (TNM) staging system and other relevant classification systems
- NCCN guidelines for treatment of cancers by tumor site (NCCN.org)
- Mechanisms of action, indications, administration, complications and toxicities of different therapeutic modalities including
  - Cytotoxic chemotherapy
  - Hormonal therapy
  - Molecular targeted therapy
  - Immunotherapy
  - Supportive care for prevention and treatment of complications of systemic therapy
    - Anti-emetic
    - Infusion reaction
    - Mucositis
    - GI symptoms
- Complications and toxicities
  - Radiation therapy
  - Radiopharmaceuticals
  - Surgery
  - Chemo radiation
- Medical emergencies secondary to cancers and systemic treatment
  - Neurologic- cord compression, increased intracranial pressure, seizures, AMS
  - Cardiovascular- tamponade, SVC syndrome
  - Respiratory- airway obstruction, hemoptysis, toxic lung injury
  - Genitourinary-Hemorrhagic cystitis, obstructive uropathy
  - Gastrointestinal- enterocolitis, SBO, bleeding, perforation
  - Metabolic- SIADH, TLS, hypercalcemia of malignancy
  - Hematologic- Hyper viscosity syndrome, thrombosis
  - Chemotherapy induced- infusion anaphylaxis, extravasation
- Diagnosis and management of paraneoplastic syndromes
- Supportive and palliative care
- Completion of ASCO Advanced Practice Certificate Program

Benign Hematology Proficiencies

- Develop differential diagnosis for adults with existing hematologic diseases or those patient hospitalized for acute illness related to a hematologic disorder
- Knowledge of Benign Hematology Topics Including:
  - Normal Hematopoiesis
  - Sickle Cell disease
    - Indication for transfusion therapy
    - Indication for exchange transfusion therapy
    - Emergencies: ACS, Hepatic sequestration, CVA, MSOF, splenic sequestration Priapism
  - Hemoglobinopathies
  - Bone marrow failures
    - Malignancies and other bone marrow infiltrative diseases
    - Stem cell disorders
    - Other medical conditions: eg. CKD, endocrine disorders, chronic inflammation
  - Disorders of iron and anemia of inflammation
  - Anemia secondary to destruction
    - AIHA
    - Red cell membrane defects
      - PNH
      - RBC enzyme disorders
      - Spherocytosis
      - Elliptocytosis
      - Hypersplenism
      - Infection
  - Megaloblastic anemia
  - Microangiopathic hemolytic anemia
  - Recognize MPN: PV, ET, CML
  - Disorders of platelets
  - Porphyria
  - Hemochromatosis
  - Storage diseases and disorders
  - Physiology of Hemostasis
  - Coagulopathies
    - VWD
    - Hemophilia
    - Factor deficiencies
    - Factor inhibitors
    - DIC
  - Thrombophilia and thrombosis
    - Anticoagulation management
    - Inherited thrombophilia
    - Acquired hemostatic defects
  - Transfusion therapy
  - Recognize Hematologic Malignancies: Leukemia, Lymphoma
Part IV:
MCI’s Model for Inpatient Hematology APPs
Benign hematology and solid tumor teams

6 oncology/hematology hospitalists and 10 APPs + 1 APP Supervisor

Service provided to five hospitals

Consultative service

Monday-Sunday Coverage

RN triage

Separate malignant hematlogy/BMT team
### MCI Model: Role of RN Triage

<table>
<thead>
<tr>
<th>Task</th>
<th>Time Spent/day</th>
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<tbody>
<tr>
<td>Morning Triage Exercise</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Review of each new consult (avg. 25 consults per day including weekends)</td>
<td>6.25 hours</td>
</tr>
<tr>
<td>Communication via email/phone/text with providers</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Data Collection/data entry</td>
<td>30 minutes</td>
</tr>
<tr>
<td>Follow-up Assignments</td>
<td>45 minutes</td>
</tr>
</tbody>
</table>
MCI Model:
Building Your Team

Be sure to:

- Determine current workload (i.e., # of daily consults)
- Determine # of hospitals requiring coverage
- Determine hours of operation (i.e., weekday vs. weekend coverage)
- Define the role of the APP (new consults/follow-up)
- Get physician buy-in!

Avoid:

- Understaffing
- Under-training
MCI Model:  
*Communication is Key!*

**Tips**

- Establish relationships with other hospital-based APP’s
- Direct connection to Internal Medicine hospitalists & specialists (e.g., cardiology, ID, etc.)
- APP consistent provider for patient throughout hospitalization
- Group chat/text with collaborating physicians
- Group chat/text with your team
Part IV:
Final Thoughts
Final Thoughts: Resources

- **Post Masters Foundation in Hematology**
  - Online course designed by ONS, APAO, and ASH
- **ASCO Certificate Program for Advanced Providers**
- **NCCN Guidelines**
- **ASH Guidelines**
- **Hematology and Medical Oncology Best Practices**
  - [https://smhs.gwu.edu/hemonc/live-activities/hematology-oncology](https://smhs.gwu.edu/hemonc/live-activities/hematology-oncology)
- **Up-to-Date** - [https://www.uptodate.com/home](https://www.uptodate.com/home)
- **MD Anderson Introduction to Oncology Course**