The Advanced Practice Provider in Observation

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Disclosure

I have no actual or potential conflict of interest in relation to this presentation.

The APP Run Observation Unit

Staffing
Training
Hiring
Beyond typical ED management
Customer service
Quality and safety
APP leadership

Three Observation Units

APP Staffing

- 48 APP staff total
- 12 hr shifts
- Staff covers 3 sites
  - Main campus ED
  - Satellite campus ED
  - Urgent Care
- Individuals Rotate to 2 sites
- BWH ED (main campus)
  - ~5-7 shifts/day
- BWFH ED (satellite campus)
  - 3 shifts/day
- Urgent Care
  - 1 shift/day
- Observation
  - 5 shifts/day
How do you staff your observation unit?

Protocols

- Abdominal Pain
- Allergic Reaction
- Atrial Fibrillation/Flutter
- Back Pain
- Cellulitis
- Chest Pain
- CHF
- Dysglycemia
- Dehydration/Hyperemesis
- Flank Pain (Pyelo/Stones)
- Generic/General Complaint
- GI Bleed
- Headache
- MI
- Minor Traumatic Brain Injury
- Neurologic Complaint
- Pneumonia
- Psychiatric Emergency
- Syncope
- Traumatic Brain
- TIA/Stroke
- VTE: DVT and PE

APP Staffing

- 6 Observation APP staff
- ~36 rotating ED APP staff
- 6 Observation APP staff per diem

APP Staffing

- How do you staff your observation unit?
- Protocols
- What is our most frequently used protocol?
- Frequency of use (2015-2019)

APP Staffing

- Attending rounds 1-2 hrs
- Patient-to-APP ratio 8-12:1
- Consider additional coverage during morning and evening hours
- Other tasks during mid-day
  - Microbiology results follow-up
  - Critical results from discharged patients
  - Patient calls
What is our most frequently used protocol?

- **Generic Protocol**: 23%
- **Chest Pain**: 13%
- **Psychiatric Illness**: 11.5%
- **Neuro Eval (Stroke/TIA)**: 10.5%
- **Abdominal Pain**: 7%
- **LEFT BLANK**: 4.5%

Frequency of use (2015-2019)

- **Fever**
- **PICC line issue**
- **Nephrostomy tube issues**
- **Non-operative hip fx**
- **Pancreatitis**
- **Falls**
- **Weakness**
- **Failure to thrive**
- **Hypertension**
- **Hyponatremia**
- **Hand infection**
- **Gout flare**
- **And many, many more...”

Staffing

I better call the back line to get a STAT read and get this one discharged ASAP.

I’d love to hear more about your dog’s surgery. But first let’s review your home medications.

My patient in room 2 has chest pain after walking to the bathroom.

Let’s check an EKG, give nitro, and send a troponin STAT.

Hire for Observation

- **Emergency medicine**
- **Critical care**
- **Inpatient medicine**

- Prefer experience
- Perks
  - Autonomy
  - Expedited care
  - Reduced documentation burden
  - Work/life balance
- Welcomed change for seasoned EM or IM APP

Training

- Peer mentor program
- Teaching topic list
- Training checklist
- Training manual
Support Your Existing Staff

- Observation updates at monthly staff meetings
- Provide CME opportunities
- Specialist guest lectures at staff meetings

Beyond typical ED management

Beyond Typical ED Management

- MEDICATION RECONCILIATION
- DIABETES MANAGEMENT
- VTE PROPHYLAXIS

Beyond Typical ED Management

- Active medication management
  - Clarify responsible team
  - Pharmacy may help
  - Special considerations
    - Chest pain
    - AKI
    - Bowel regimen

Beyond Typical ED Management

- Order insulin sliding scale and home basal insulin for diabetics
- Check glucose TID with meals & hs
- Beware: steroid induced hyperglycemia
- Diabetic discharge support

Diabetes Management in Obs

Common Insulin Conversions

<table>
<thead>
<tr>
<th>Long acting insulin duration</th>
<th>Short acting insulin duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novolin Mix 70/30</td>
<td>Aspart ~3-5 hours</td>
</tr>
<tr>
<td>NPH ~12hrs typically dosed BID</td>
<td>Novolin mix 70/30</td>
</tr>
<tr>
<td>Lantus (Insulin glargine)</td>
<td>NPH ~12hrs typically dosed BID</td>
</tr>
<tr>
<td>24hrs typically dosed QD</td>
<td>Aspart ~3-5 hours</td>
</tr>
<tr>
<td>Short acting insulin duration</td>
<td>Aspart ~3-5 hours (good if patient eating) typically dosed qAC and qHS</td>
</tr>
<tr>
<td>Regular insulin ~5-8 hours (good if pt NPO) typically dosed qAC and qHS</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Levemir (insulin detemir)</th>
<th>Lantus (insulin glargine)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:1</td>
<td>1:1</td>
</tr>
<tr>
<td>NPH ~ Lantus (insulin glargine)</td>
<td>Lantus (insulin glargine)</td>
</tr>
<tr>
<td>Humalog (insulin lispro)</td>
<td>Novolog (insulin aspart)</td>
</tr>
<tr>
<td>1:1</td>
<td>1:1</td>
</tr>
<tr>
<td>Humulin/Novolin (Regular human insulin)</td>
<td>Novolog (insulin aspart)</td>
</tr>
<tr>
<td>1:1</td>
<td>1:1</td>
</tr>
<tr>
<td>Novolin Mix 70/30</td>
<td>calculate units as 70% NPH and 30% insulin aspart</td>
</tr>
</tbody>
</table>

Long acting insulin duration

<table>
<thead>
<tr>
<th>Insulin</th>
<th>Type of Insulin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novolin</td>
<td>Insulin Aspart</td>
</tr>
<tr>
<td>Humalog</td>
<td>Insulin Lispro</td>
</tr>
<tr>
<td>Humulin/Novolin</td>
<td>Regular Insulin</td>
</tr>
<tr>
<td>Lantus</td>
<td>Insulin Glargine</td>
</tr>
<tr>
<td>Levemir</td>
<td>Insulin Detemir</td>
</tr>
</tbody>
</table>
Diabetes Discharge

Beyond Typical ED Management

PADUA

Baseline features | Score
--- | ---
Active cancer* | 3
Previous VTE (with the exclusion of superficial vein thrombosis) | 3
Reduced mobility† | 3
Already known thrombophilic condition‡ | 3
Recent (≤1 month) trauma and/or surgery | 2
Elderly age (≥70 years) | 1
Heart and/or respiratory failure | 1
Obesity (BMI ≥30) | 1
Acute infection and/or rheumatologic disorder | 1
Epileptic seizure | 1
Ongoing hormonal treatment

*Patients with local or distant metastases and/or in whom chemotherapy or radiotherapy had been performed in the previous 6 months. Bedrest with bathroom privileges (either due to patient’s limitations or on physicians order) for at least 3 days. †Carriage of defects of antithrombin, protein C or S, factor V Leiden, G20210A prothrombin mutation, antiphospholipid syndrome.

Score ≥ 4 is high risk: pharmacologic prophylaxis is indicated

Customer Service

Quality and Safety

APP Leadership Structure

- Safety huddle policy
- Peer submitted case review
- Review the data
- Steering committee

Beyond Typical ED Management

- PADUA prediction score
- Automatic notification at 24hr mark in EMR
- VTE order set with medication choices

VTE PROPHYLAXIS

Customer Service

Timing of testing and results
Backlines for reading rooms
Weekend and holiday schedule
Consultant availability

Disposition support from:
- Case management
- Physical therapy
- Social work
- Patient relations

Can you come back tomorrow? Maybe then I’ll be ready to go home...

Quality and Safety

APP Leadership Structure

Initial hire
Salary increase
Extracurricular project
Annual renewal
Observation, urgent care, IT, new hire training

PA-I
PA-II
PA-III

Salary increase
Discretionary admin time
Takes APP admin call
App training/mentoring

Leadership

Observation

APP

Leadership

Works with department leadership for

• Protocol review/development
• Policy review/development
• Quality assessment process
• Data review/steering committee

Residency updates/orientation

New attending orientation

Summary

• Recruit experienced APP’s
• Hire dedicated APP observation staff
• Ideal staff rotates
• New graduates need more training/support
• Support your current staff
• Anticipate inpatient-like issues
• Organize testing schedule and back line #’s
• Encourage staff feedback
• Create APP leadership opportunity with observation

References


Contact me!

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