

Telemedicine: The Athlete Will See You Now



Kristen Heinan, MD
Pediatric Neurology
University of Virginia

Alfred Atanda Jr., MD
Director, Center for Sports Medicine
Alfred I. DuPont Hospital for Children

MATRC 2018 Hershey, PA

Outline

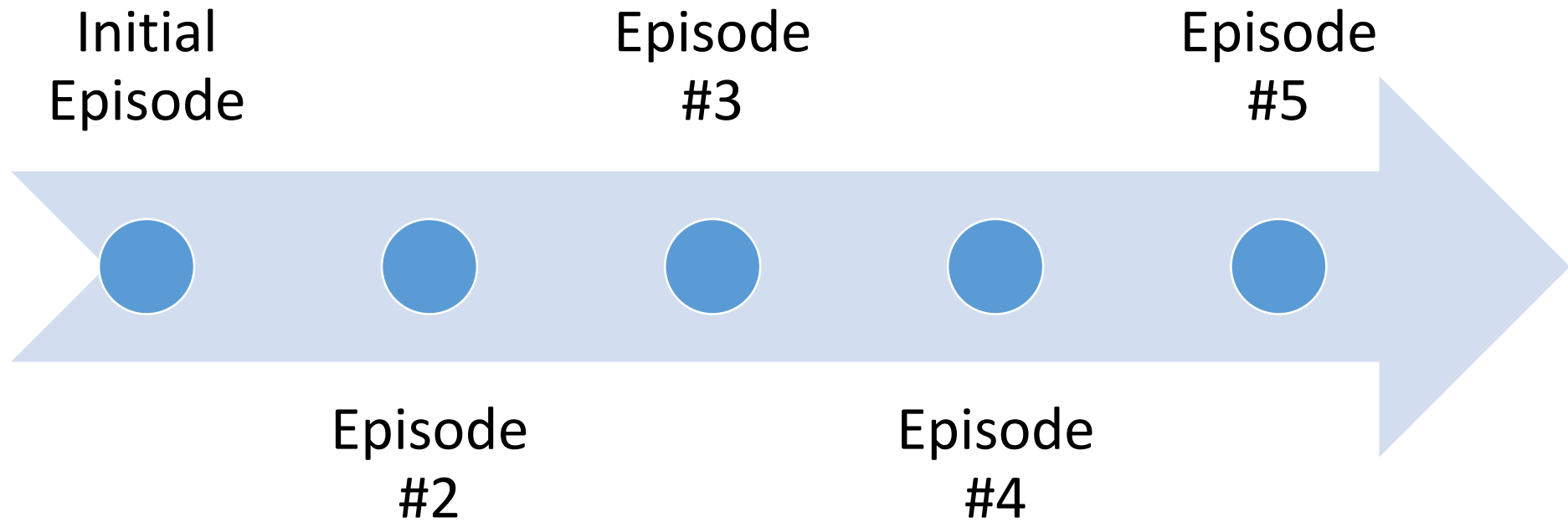
- Episodic Care
- Concussion and MSK flow of care
- “Point of View” theory
- Problems with current model
- Telemedicine Navigator
- Enhanced care model



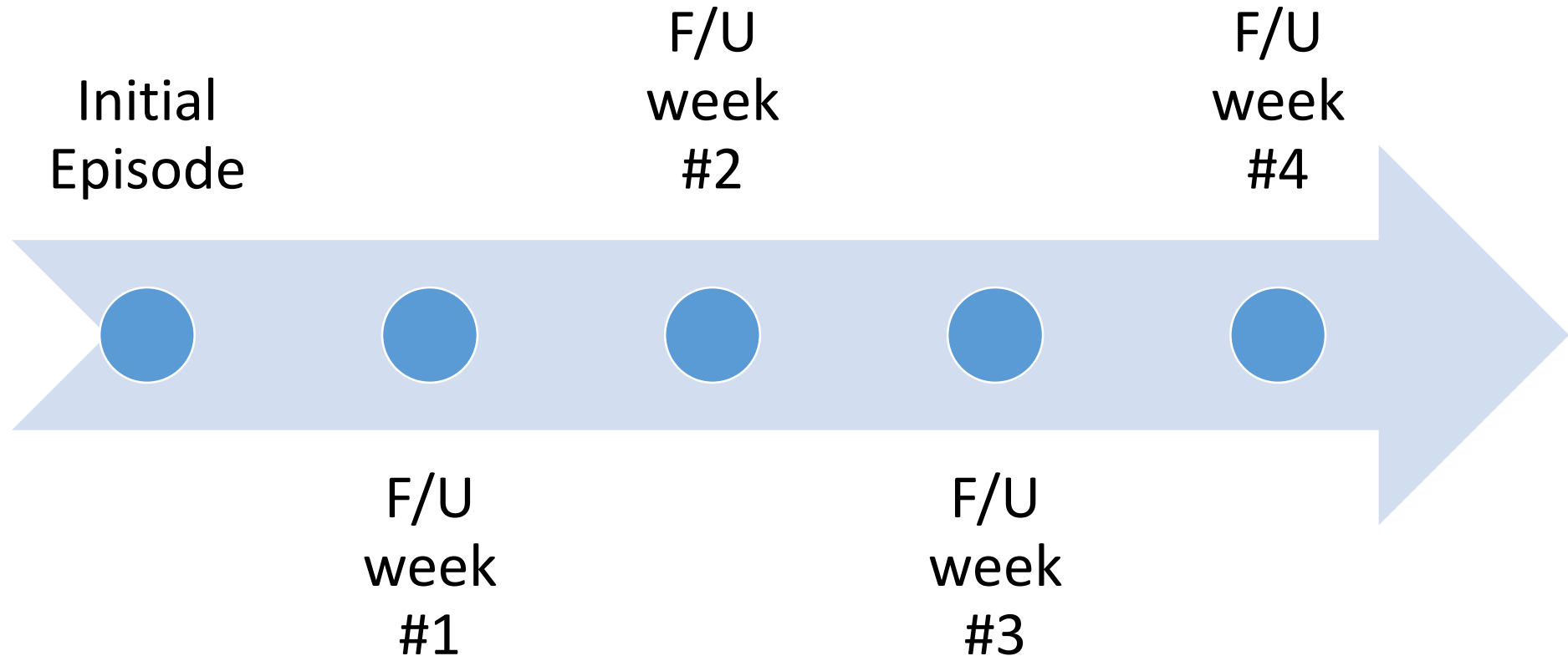
“Episodes” of Patient Experience



Timeline of Episodes



Pre-determined Time Intervals





Flow of Care

Provider

Initial Episode:
15M with
concussion

F/U week #1
sees PCP,
given some
recs

week #2 tries
school,
struggles

f/u week #2
PCP says keep
resting, refers
to specialty
clinic

f/u week #3
gets to
specialty clinic

Patient

Had sideline
eval, removed
from play

F/U week #1
told to stay
home and rest

Thinks he feels
better, tries
school, got some
ssx, panicks

↑anxiety, h/a's,
frustrated,
behind in school

Why am I not
better, when
can I go back to
school/ sports?



Flow of Care

Provider

Initial
Episode: 15M
with
concussion
(happens on
Friday night)

F/U week #1
sees PCP,
given some
recs (PCP busy
clinic, short visit)

week #2 tries
school,
struggles
(school sends
him home)

f/u week #2 PCP
says keep
resting, refers to
specialty clinic
(wait to get into
spec clinic)

f/u week #3 gets
to specialty
clinic (specialist
frustrated w care to
date)

Patient

Had sideline
eval, removed
from play (but it
was such an
important game!)

F/U week #1
told to stay
home and rest
(slept a lot, want to
feel better)

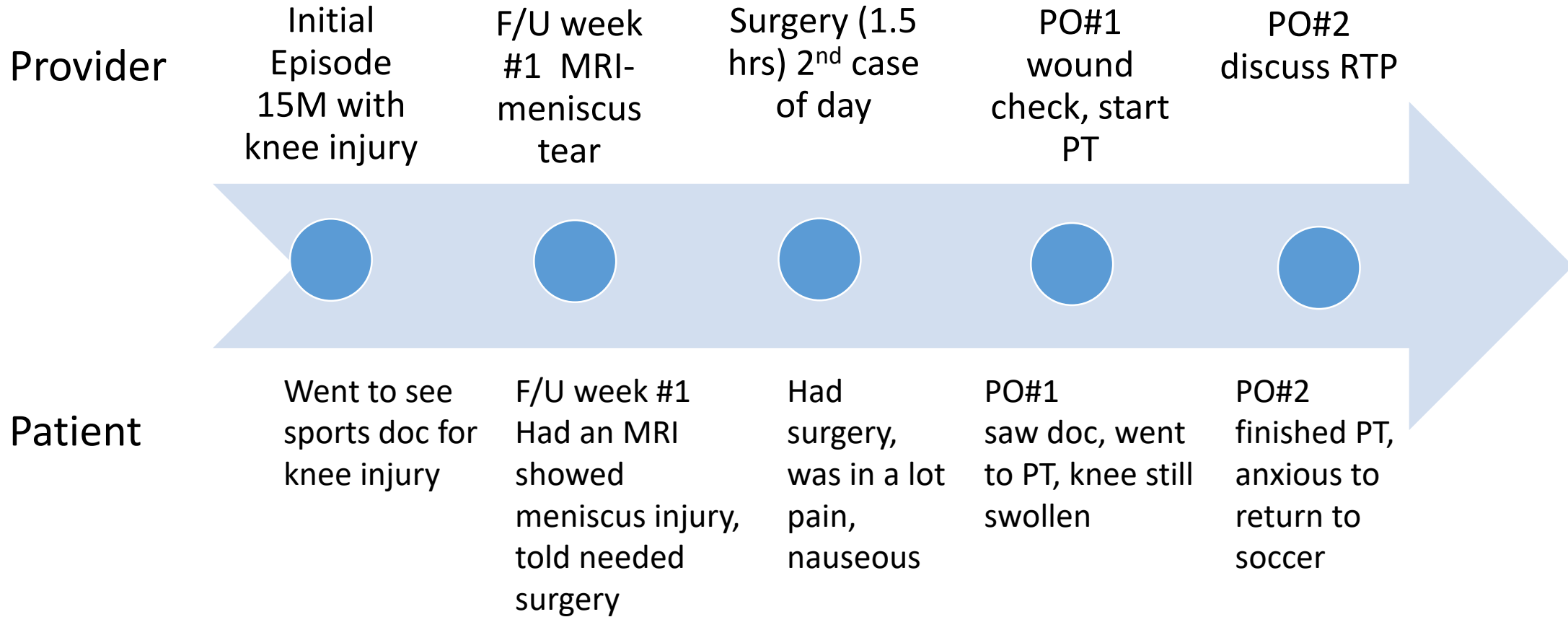
Thinks he feels
better, tries
school, got some
ssx, panicks
(getting behind in
work, "failing")

↑anxiety, h/a's,
frustrated,
behind in school
(isolated from sports/
school/ friends/
identify, parents worry)

Why am I not
better, when
can I go back to
school/ sports?
(why is all this taking
so long, how do I get
better)



Flow of Care





Flow of Care

Provider

Initial Episode
15M with knee injury
(was on call night before)

F/U week #1
MRI-meniscus tear
(resident absent from clinic)

Surgery (1.5 hrs) 2nd case of day
(case delayed for trauma)

PO#1 wound check, start PT
(leaving clinic early to go to conf)

PO#2 discuss RTP
(not feeling well)

Patient

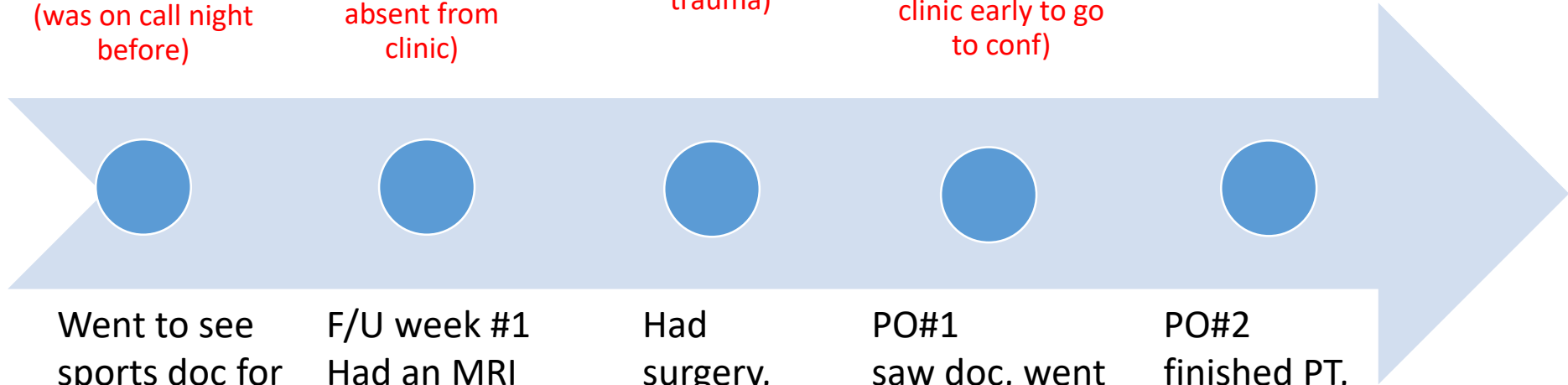
Went to see sports doc for knee injury
(mom took off work)

F/U week #1 Had an MRI showed meniscus injury, told needed surgery
(started to cry, very nervous)

Had surgery, was in a lot pain, nauseous
(missed school dance)

PO#1 saw doc, went to PT, knee still swollen
(couldn't get ride to 1st PT visit)

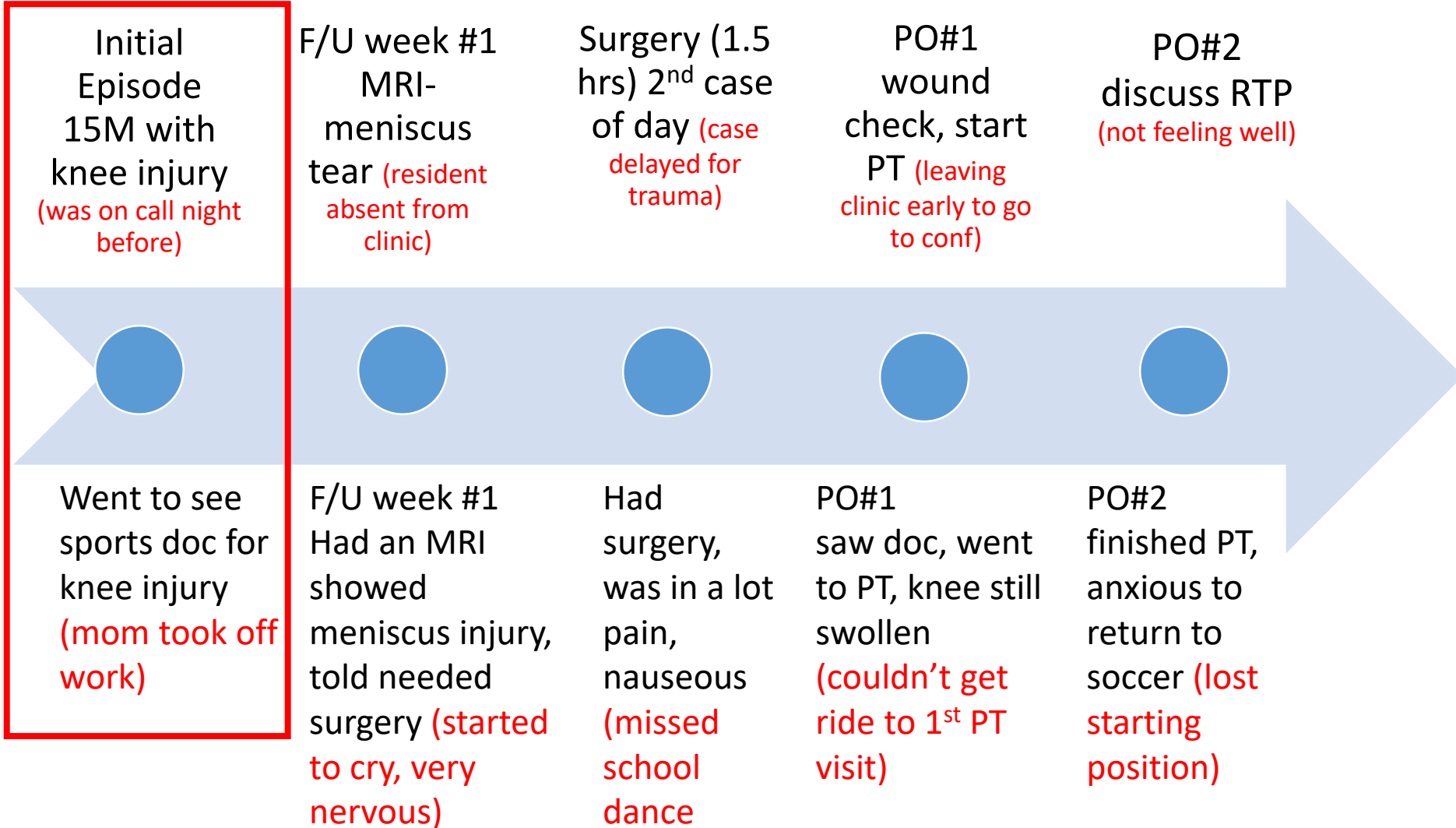
PO#2 finished PT, anxious to return to soccer
(lost starting position)





Flow of Care

Provider



Patient

Specific Episode

Provider

- 10:15 am appt
- 15M, new patient with knee injury
- MA had trouble loading xray from ED
- 20 min visit, patient 30 min late
- Plan: sent patient for MRI, gym note to rest

Patient

- Told to arrive at 10am for 10:15 appt
- Missed math test, mom took off morning from work
- Car broke down, 30 min late
- Doc nice, but seemed sleepy
- Told to get MRI, needed a gym note

Problems with episodic care

- Fragmented
- Affected by real life
- Many missed opportunities for intervention b/w episodes
- Experience very “point of view” dependent
- Provider-view: patient only exists during episode
- Patient-view: problem is continuous and intertwined with daily life
- Each has experiences/life events which affect flow and perception of episodes and how each interacts with the other

Opportunities

- Each party has no knowledge of experience/life issues of other party
- Patient is left alone on journey of problem continuum
- Provider has no contact with patient or other key members of school/athletics/treatment team during gaps between episodes

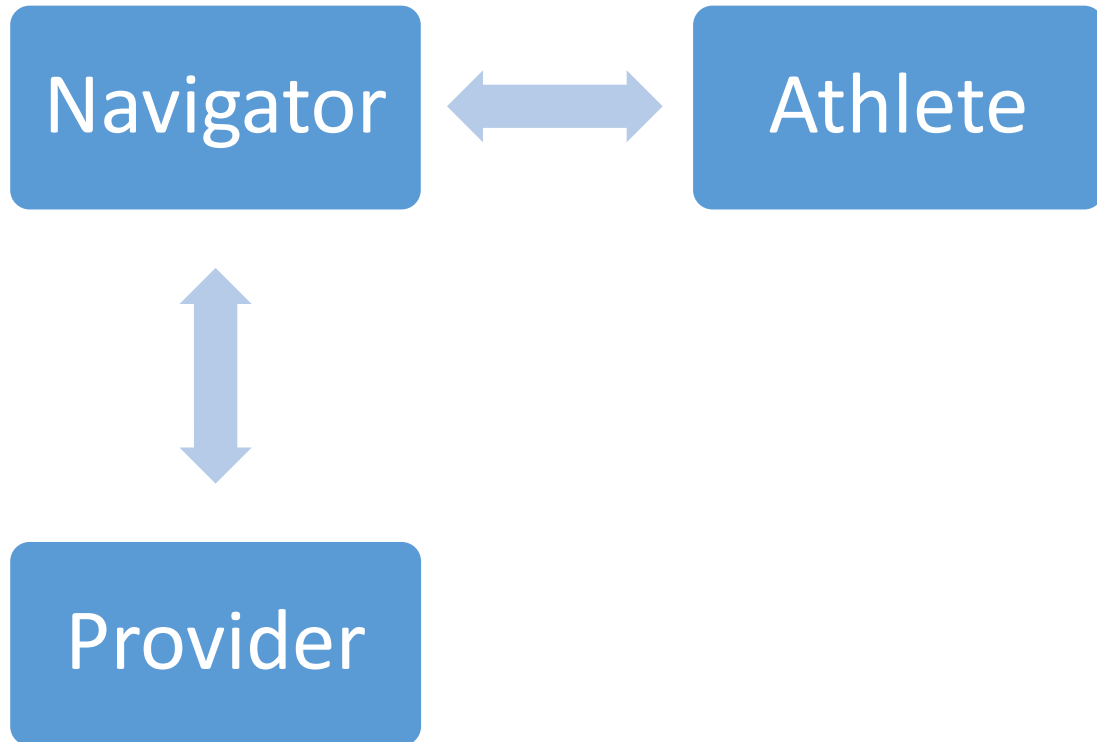
Early Education and Management is Key

- Ponsford J, et al. Impact of early intervention on outcome after mild traumatic brain injury in children. 2001; 108 (6): 1297-1303.
- Intervention: 1 week check in plus educational materials
- Parents of non-intervention group reported significantly greater overall frequency of symptoms at 3 months and more symptoms on the child behavior checklist

Telemedicine Navigator

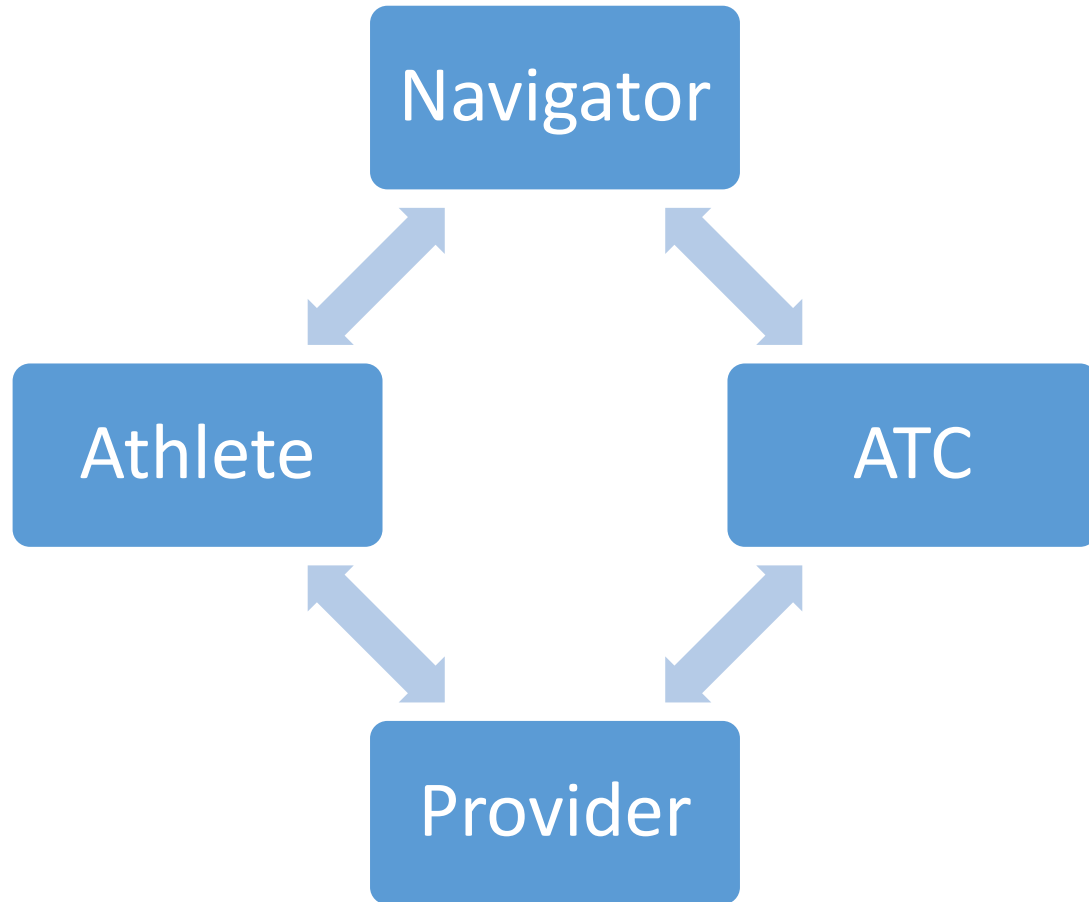
- Navigate patient throughout problem continuum
- NP/PA/MD navigator shepherds patient along their journey
- Clinical member of provider team
 - HUGE opportunity for continued education for other team members
- Communicate with patients/ other providers before & after episodes.
- EMR savvy; can triage new patients
- phone-call, electronic messaging, videoconference capability

Day #2 (concussion the night before)



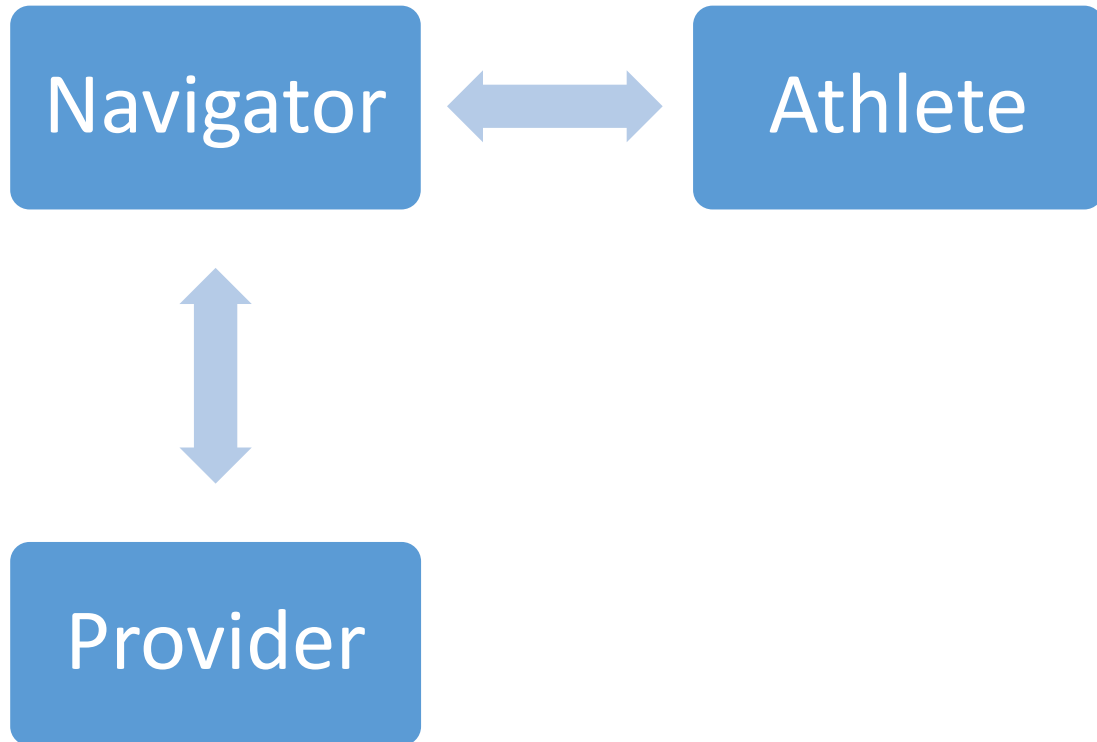
- Athlete upset about concussion
- Navigator reinforces education and acute management plans
- Provider receives status report and set expectations for next visit via navigator

Day #7



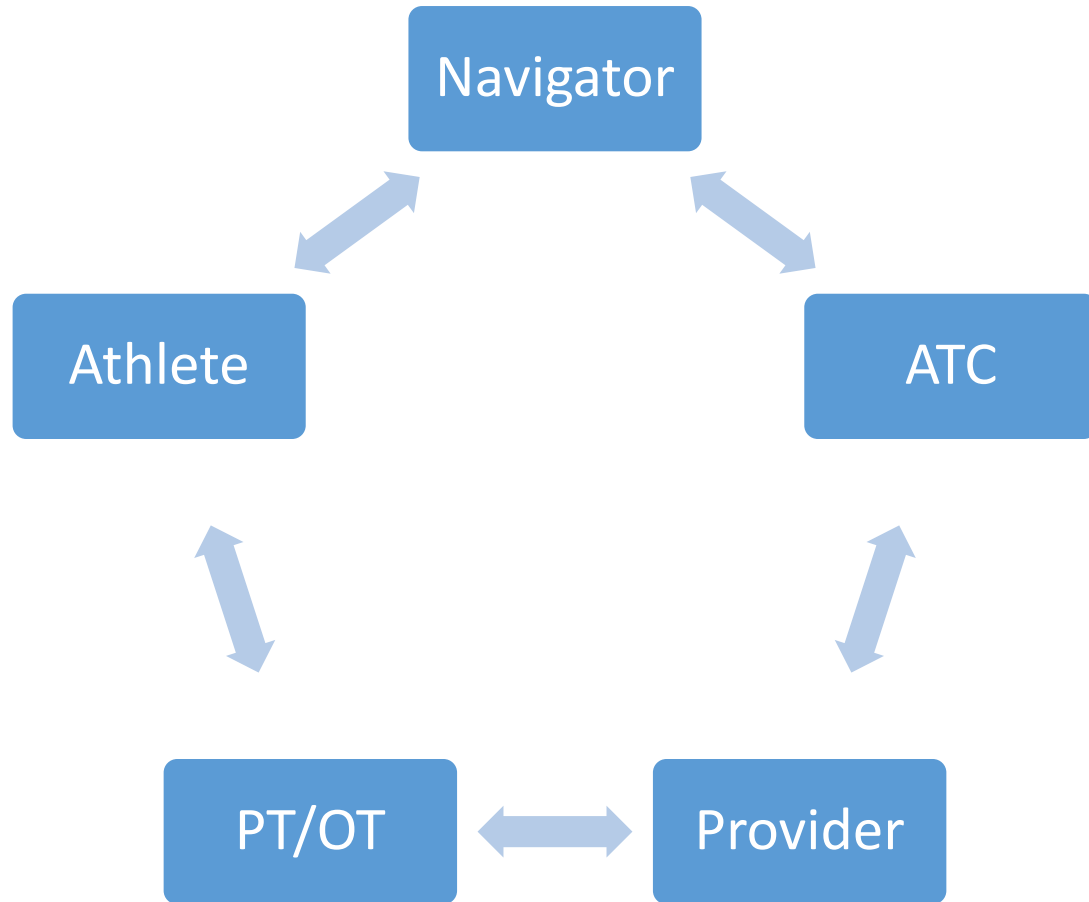
- Athlete reports still having headaches, eye strain, fatigue
- Provider suggests partial days back to school and light physical activity
- ATC develops exercise regimen and activity plan

Day #15



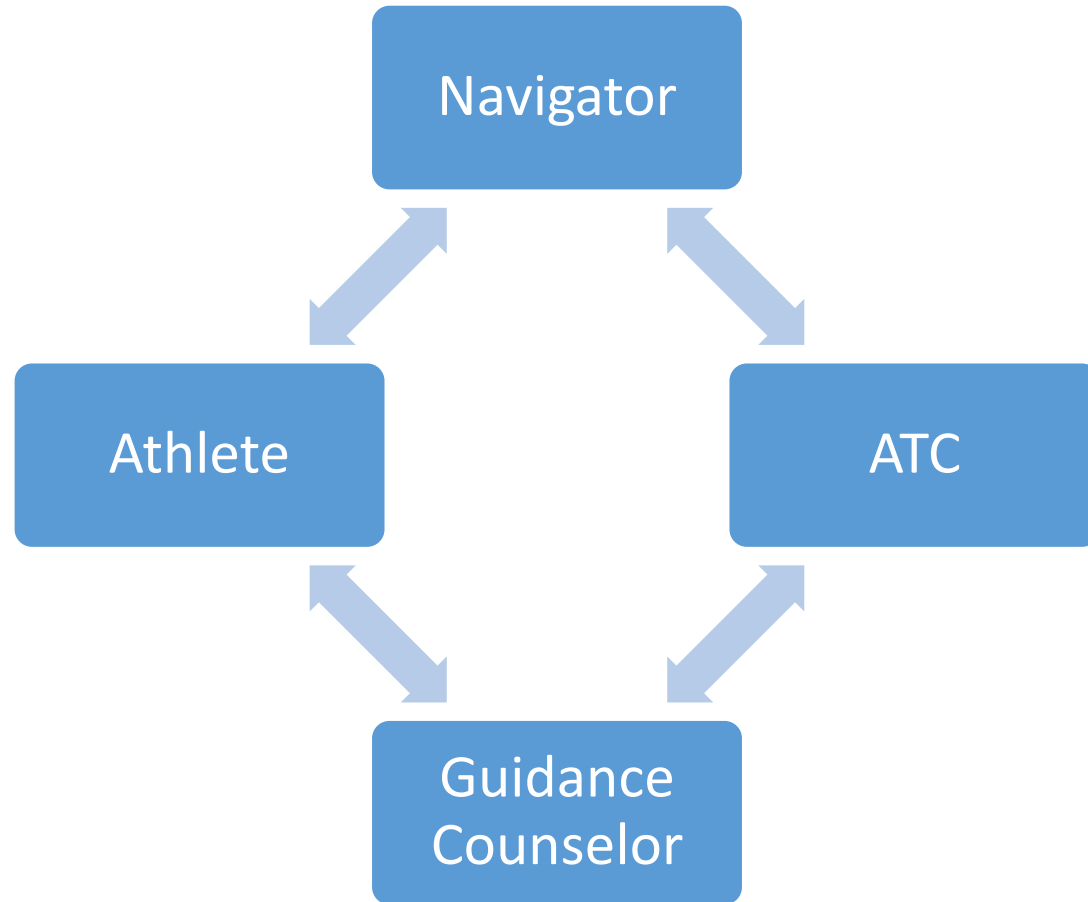
- Athlete has returned to school w/adjustments; headaches with lots of reading, sitting in class, and at end of day
- Navigator sets up specialty clinic visit

Day #19



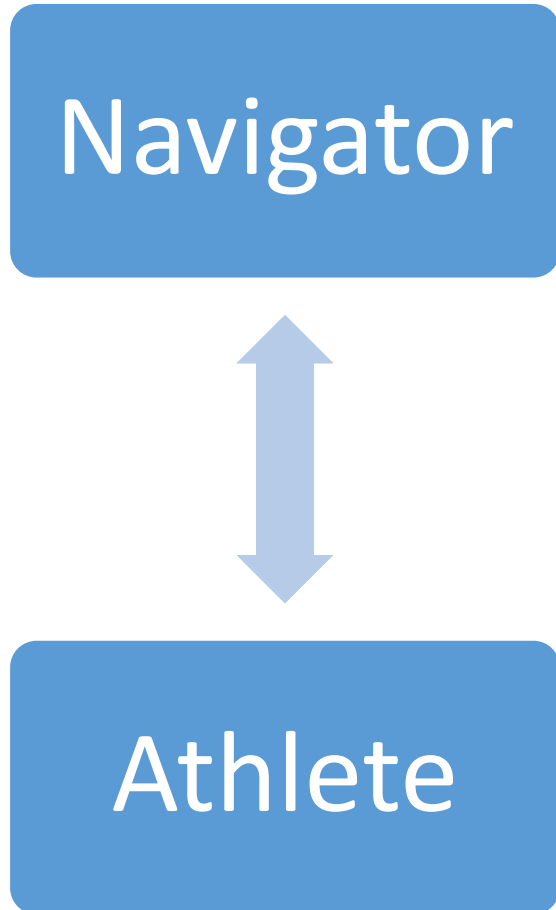
- Athlete PT/OT eval
- Discuss care plans and goals

Day #20



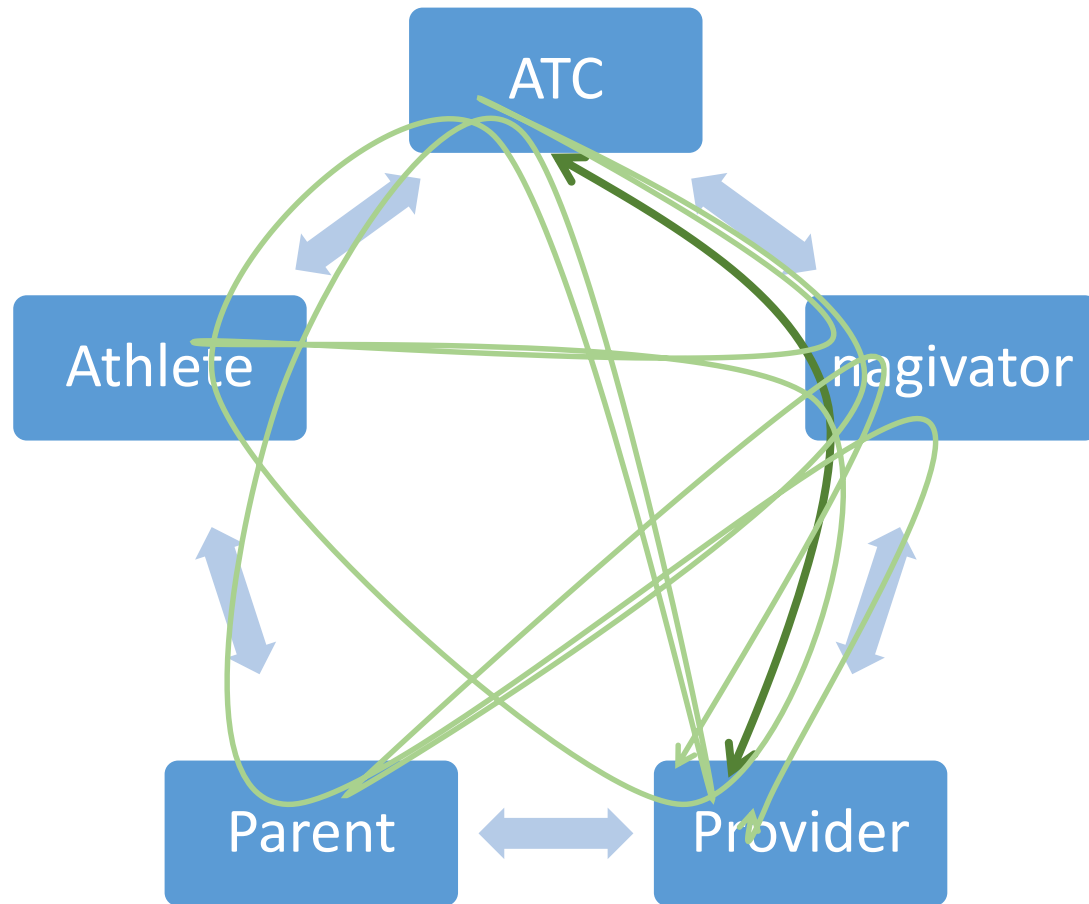
- Confirm academic adjustment needs and goals
- Discuss re-integration back into classroom

Day #20



- Time to debrief about experience
- Ensure understanding of plan moving forward
- Provide information for f/u
- Feedback and evaluation

Beyond...



- Athlete is several a few months beyond injury
- Confides in ATC that he is still having headaches, making it difficult to concentrate in class, despite being on medication (prescribing physician has not heard from patient)
- Need for direct and more frequent communication between patient and provider

Take Home Points

- Episodic care is not ideal
- Patient's problem is a continuum
- Navigator model is optimal
- Many opportunities for engagement
- Bridge between provider and patient
- Potential to improve outcomes, satisfaction, and experience