



## Panels and Wait Times in an Academic Setting

In an academic setting or any setting where there is sporadic supply, an inevitable demand–supply mismatch is created. This situation is not exclusive to academic settings, but academic settings pose the most dramatic example.

A macro level mismatch (total demand (panel size) = total supply) is unsolvable in any setting. The mismatch created in a sporadic supply environment is at the micro (day-to-day) level. So while the overall demand (panel) = the overall supply, the day-to-day variance of supply creates constant micro mismatches.

At the same time there are two variables in this setting – patients' desire for continuity (to see the same identified and linked provider), and the patients' desire to be seen without a delay.

To solve this we need to make a decision around continuity. Do we choose continuity to the individual provider and in so doing generate a delay since the provider is not present each day? Or do we choose continuity to the group (a set of interchangeable parts of a supply unit) and in so doing while we will not get continuity to the individual provider, we will get continuity to a “team” and at the same time build a system without wait.

In both choices the panel size of the parts of the supply unit have to be balanced against the time allocated to the supply unit. If the choice is for individual continuity then, while there will be a wait, a carve-out model is required due to the variable of sick and not so sick patients (some patients have to be seen each day and others can wait). In addition, if the choice is for continuity to the individual, because of the patient choice for waiting for an appointment, the panel size still has to be balanced against the allocated supply time for that part of the supply unit.

If the choice is continuity to the supply unit (team) then a “do today's work today” model (not a carve-out) can be used. But at the same time, patients' choice within that supply unit for individual provider presence has to be restricted. If there is no restriction to this, offering choice to an individual will create a demand–supply mismatch within the supply unit at the macro level for that provider. The system of care will then fail due to this mismatch. For example, if we have a supply unit of four (one attending, and single R1, R2 and R3), if patients can choose an identified provider within that unit and can choose to wait, then that chosen provider (usually the attending) will be severely mismatched. At that point the consequences are all bad:

- a) Let the wait time (primarily for the not so sick) extend as it inevitably will and use “bargaining” to level the load and move the work to others (you can wait for “your” doctor for six weeks or see another doctor in six minutes), or
- b) Develop an elaborate set of restrictions around appointment types and rules that try to protect the doctor, or
- c) Go into denial and don't open the schedule into the future. The demand sits there in cyberspace but is not allowed onto the schedule.

In any event, all choices that permit over-paneling of any provider lead to serious consequences - long wait times, poor satisfaction, less than optimal outcomes, increased cost, and sub-optimized revenues. Over-

paneling and consequent discontinuity always leads to sub-optimized system performance. In addition, saying “yes” to patient choice that results in an overly large panel inevitably results in saying “no” in action later on.

### **Issues and Options:**

1. The demand (panel) has to = supply at the individual or at the supply unit level. Any mismatch will cause problems.
2. Sporadic supply systems will generate more work and a higher visit return rate. So the “visits per year” part of the demand-supply equation is affected. Panel X patient visits per year = provider visits per day time provider days worked per year).
3. Make a choice about continuity to the supply unit (team) or to the individual provider. The first choice can result in no waits but will require restrictions around patient choice for a specific provider. The second choice will require the use of a carve-out model with its accompanying problems, and will still require a limit to the individual panel size for each of the parts of the supply unit.
4. If continuity to the individual is chosen, individual panel size within the supply unit is balanced for all parts of the unit. A carve out (some appointments frozen for “same day sick”) will be required. The issue will be how to keep the work from going too far out into the future because of patients choosing to wait for their own doctor. There may be differential rates of this patient choice for patients of specific members of the supply unit. For example, I would expect that patients linked to the attending physician would make the choice to wait more frequently than patients of the R1 component. The following interventions will have an effect here:
  - a) At all steps and contacts within the system, sell continuity to the individual provider
  - b) Save enough slots each day for the “same day sick”
  - c) Share those slots equitably between the team (supply unit) members
  - d) Take control over return visits both by scheduling returns in advance and by actively pulling patients into specific providers for needed services.In this way we can reduce some of the randomness of scheduling and choice. The immutable fact here is that demand (panel) has to = supply at both the unit and individual level and we have to make sure that random behaviors don’t undo this balance.
5. In settings where there is a patient reluctance to choose a provider other than the attending:
  - a) Sell the other providers
  - b) Sell the concept of supervision of care and process by the attending provider
  - c) Use electronic and other forms of technology to promote non face-to-face connectivity between all patients and the attending provider as supervisor
  - d) Use proactive approaches for scheduling of return patients in order to influence and direct patient choice.
6. There has to be excess supply in order to absorb the variation in these settings: variation in supply days worked, limits on numbers of appointments offered per day, variation in patient choice and variation of demand.
7. Keep in mind that panel sizes will be lower than “expected” due to higher patient visit return rates, lower provider visits per day and the need for more supply slack to deal with the variation issues.