OR SUPPLY AND DEMAND MANAGEMENT

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ED Crowding
  - Input
  - Throughput
  - Output

Variability
  - Natural (Uncontrollable)
  - Artificial (Potentially Controllable)
    - Scheduling of elective procedures
    - Scheduling of discharges
Eugene Litvak

- Program for Management of Variability in Health Care Delivery
- Boston University Health Policy Institute
UMCB ED Average Registrations by Hour, Sunday

FY 08
FY 09
FY 10
UMCB ED Average Registrations by Hour, Saturday

FY 08
FY 09
FY 10
THROUGHPUT

- A Function of
  - Lab
  - X-ray
  - Nursing efficiency
  - Physician Efficiency
  - Real Estate
OUTPUT

- ED Discharge
- ED Observation
- Movement to Inpatient areas
Variability

- Natural (Uncontrollable)
Staff to peak volumes
  - Expensive
Staff to average volumes
  - Increases error rate at peak times
  - Burns out staff
  - Increases wait times for our patients
Staff to averages with a dynamic pool for peak times
  - Not always practical
  - Maintaining a dynamic pool can be expensive
Strategy for Variability

- Reduce variability
  - Natural variability is not controllable
  - Artificial Variability can be managed
Artificial Variability

- Scheduling of elective procedures
- Scheduling of discharges
Elective Procedures

Scheduled Surgery

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<th>Tues</th>
<th>Weds</th>
<th>Thurs</th>
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- Mon: 2800
- Tues: 3300
- Weds: 3100
- Thurs: 2900
- Fri: 2100
Bibliography