Workforce in the Emergency Department

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These hospitals are not all the same; they each have different needs and serve different populations. Their workforce needs will also differ.

What is required to define workforce needs?

1. Agreeing on the priority the emergency department holds within the hospital
    1. *Window of the hospital*, cannot function well if rest of hospital does not
2. Understanding the role of the emergency department within the community
3. Identifying the optimal types and ratios of staff required
4. Describing specifically the roles of each type of staff person
    1. Acceptable workload and output for each of those defined roles

Example of very different workforce requirements

- Hospital #1:
  - Non-teaching hospital, low acuity (admission rate 10%), elderly population in community, inadequate long term care, regional psychiatry centre

VS.

- Hospital #2:
  - Teaching trauma centre, high acuity (admission rate 24%), inner city with indigent patient load

Optimizing staff output

- Nurses and physicians are trained to provide direct patient care – but do so less than 35% of the time
  - They are the most costly health care staff we have
  - Indirect patient care work can and should be performed by (lower paid) support staff

Make the most costly human resource effective

- Physicians should be ‘floating brains’ evaluating, diagnosing and planning treatment for patients
  - Techs can perform skills & procedures
  - Scribes can write up charts, retrieve lab and imaging results, contact consultants

Optimizing ED output

- ED throughput is reduced when a bed is occupied by an admitted patient
  - Patient *hospital* length of stay increases by 24 hours when an admitted patient stays in the ED for more than 8 hours after admission called in
  - Occupancy above 100% results in decreased productivity and *increased risk*
    - Poor ergonomic function - inefficiency
    - Delay in care for new unstable patients
    - Increased risk of disease transmission

Disease cannot tell time

- Emergency Department output is limited by hospital operating hours
  - The ED works 24 hours a day,
  - The majority of hospital resources are present and active *24% of the time* that the ED is open each week
    - Discharge planning
    - Social support systems

Becoming more efficient is not necessarily the same as working faster

- **Example**
  - If elderly patient census is high, then multi-disciplinary team required to properly assess patients
    - Geriatric nurse, community liaison nurse, social worker, physiotherapist
    - Longer ED evaluation results in marked decrease in return visit rate as proper understanding and support in community established
    - *Deconditioning* is the 'elephant in the room' that is rarely addressed.

Defining role in hospital

- Hospital goal to minimize admissions?
  - ED ward for less than 24 hour care is a viable solution *if and only if*
    - Set criteria for patient 'admission' established and respected
    - Length of stay rule respected
    - Physicians receive proper training – not inherent in emergency specialist core skill set

Defining role in hospital

- If the ED is a low priority in the hospital (tertiary care centre with oncology, transplant services etc.)
  - Make it clear to ED staff and physicians
  - Minimize 'first line provider' role of ED
    - Normal patient load will be complex
    - Should not provide primary health care: trauma, pediatrics etc.
    - Provide equipment and training to ensure optimal subspecialty care in the ED

Identify optimal provider staffing

- Specialist Emergency Physician at top of ED health care pyramid
  - Do not need to have specialist see all patients
- Options to include in the mix
  - Mid-level providers
    - Physician assistants, nurse practitioners to care for level 4 & 5 patients and to provide technical skill support for higher acuity
  - Primary Care physicians
    - Fast track
    - Social and elderly patients with multi-D needs
- *Except for very senior trainees, doctors in training cannot be counted as part of the physician pool – they slow down the emergency specialist*

Until roles, priorities, and community focus are defined…

CANNOT CALCULATE STAFFING NUMBERS

Staffing variance examples

- USA:
  - 1.7 – 2.4 patients per hour by MD is established norm, in large part due to time required for documentation (medico-legal)
- Canada:
  - Murray model: varies from 2.7 – 5 patients per hour in ED dependent on CTAS mix, admission rates, academic vs. non-academic
- Australia:
  - All calculations of staffing, MDs and equipment needs based on data linked to (5 level) triage numbers

Where I work – non-teaching community hospital

- Full time clinical load: 12 -14 8-hour shifts per month
  - Occasional physician assistant, no trainees
  - Acuity is moderately high – admission rate 14%
    - Expectation is MD to see 3 patients per hour
  - Total annual patient volume per FTE doc: 3000 - 3400 patients
- USA model: teaching centre, 22 clinical hours per week, admission rate of 24%, 1.7 patients/hr
  - Total annual patient volume per doc: 1800 patients

If MD allowed to focus uniquely on direct patient care

- "Floating brain", efficient ED, no admitted patients lingering in ED due to exit block from hospital, multi-D teams in place 24 hours a day, hospital support services available 24 hours a day….
- Physician output could probably double from numbers in previous examples

In typical crowded inefficient ED

- MD productivity decreases as crowding worsens
- Stress increases
- Need to be fast supersedes need to be good
- Ever increasing multi-tasking and distractions
  - Medical error will worsen exponentially
- Ultimately the environment becomes toxic
  - Loss of interest in working in such an environment
  - Loss of interest to *train* for such an environment – which further accelerates low physician numbers, worsens patient care, work conditions etc.

Talking about numbers of patients to be seen therefore is the LAST point of discussion in workforce discussions

HOWEVER

IF, AS IN HONG KONG, PATIENT NUMBERS PER MD ARE WELL ABOVE ANY OTHER RECOGNIZED NATIONAL NORMS, THEN BURN OUT IS ENSURED – AND A HUMAN RESOURCES CRISIS IS SURE TO FOLLOW

If the environment

- Places staff at risk of infection
- Is conducive to medical error
- Is understaffed
- Has inadequate new specialists in the pipeline
- Has not developed proper support staff and their roles

Then the system needs to be rebuilt….

The number of doctors required

- Will be determined by
  - Emergency Specialist oversight (i.e. the minimum number required)
  - Acuity level of a hospital
  - Ability to introduce mid-level providers
  - Ability to hire support staff
  - The 24 hour efficiency of a hospital, and its level of ED overcapacity issues (*it does not help to hire more doctors if the already present doctors are paralyzed by lack of space*)

The number of emergency specialists required

- Will depend on emergency department
  - Acuity
  - Priority in the hospital
  - Involvement in teaching & research
  - Need for oversight vs. hands on specialist care

The number of emergency nurses required will depend on

- Willingness to have nurses focus on direct patient nursing care
  - Patient care aids
  - Orderlies
  - Lab techs
  - Respiratory therapists
  - Physiotherapists
  - Ward clerks
  - Ancillary nursing expertise: geriatrics, community care, psychiatry

Perhaps the most important criteria to consider

- How much time do *you* want the doctor or nurse caring for *you* (When you are in an ED sick or injured, but definitely scared)
  - To spend NOT thinking about you
  - Being distracted by activities not directly related to patient care
  - To spend assessing you and listening to you
  - To spend explaining your problem and providing education

Questions?
Discussion Time