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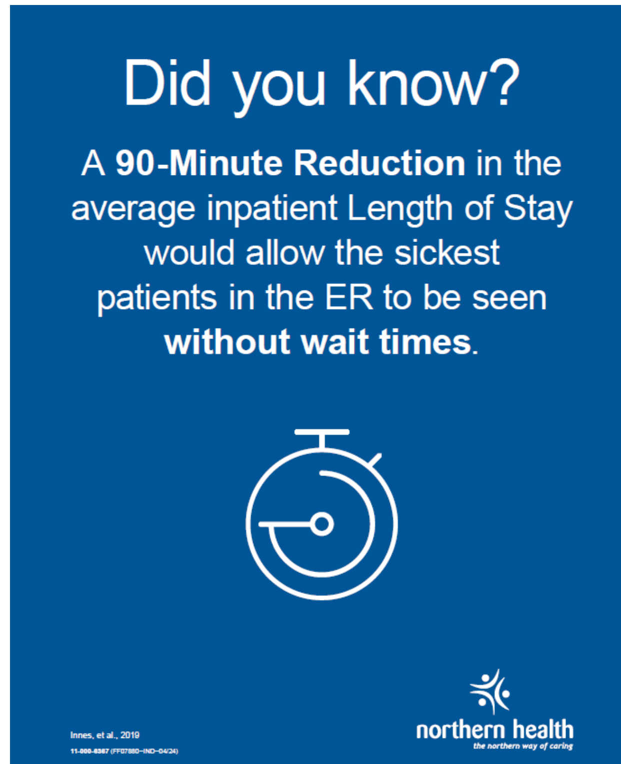
Does this poster trigger you?
Article by Dr. Shyr Chui



A few weeks ago, this poster started popping up in various locations around the hospital. They were seen everywhere including our x-ray department and also on the door of the Doctors' lounge where apparently, it caused quite a stir. So much so that its posting was raised at the next medical staff meeting, and some spicy discussion ensued.

It seems that some of my physician colleagues were "triggered" by this, feeling unfairly 'targeted' by our hospital administration for delays in patient discharge. This is despite the poster not actually mentioning either of the words, "physician" or "discharge".

Like many healthcare facilities in Canada, we have an issue with overcapacity. Our inpatient beds are always full which results in a back-up of admitted patients in our Emergency Department (ED) which, in turn, prevents new ED patients from accessing a stretcher and emergency care. The underlying causes of this hospital overcrowding, or overcapacity, are neither new nor unrecognised, and include inpatients waiting for

Alternative Level Care beds in the community, delays in diagnosis and treatment, carved-out capacity for elective surgery, patients awaiting transfer to either higher level tertiary care or back to their local rural community hospitals and yes, delays in discharge. Due to almost daily messaging for physicians to discharge their inpatients promptly, this issue has become a sore point to say the least. Hence the “triggering” nature of the poster.

However, the sharper-eyed among you will have spotted some additional text in the bottom left-hand corner. This is a literature citation. Does the claim of the poster have, therefore, an evidence base for it?

So, I looked it up and read the paper and to save you time, here’s a summary. Here’s where the claim came from.

Emergency overcrowding and access block: A smaller problem than we think.
Innes G.D. et al. Canadian Journal of Emergency Medicine 2019;21(2): 177-185.

First, the paper is written by Emergency Department physicians, several of them in fact, based in 25 medium-to-large sized hospitals located across the country. They were studying the delays in getting their patients (n= 66,272) seen in their EDs. Their approach was novel.

In all 25 hospitals that submitted reliable data, they started by measuring the average length of time their ED patients (CTAS 1-3) were waiting from triage to time of first care on a stretcher and multiplied this by the number of patients (CTAS 1-3) that ED saw in a year. They called this time value c*umulative emergency access gap*.

Then, they compared this to the *total available inpatient bed hours* by multiplying the number of inpatient beds in that facility by the number of hours and days in a year.

By dividing the *cumulative emergency access gap* by the *total available inpatient bed hours,* they devised a new metric which they called the *fractional access gap* which is an estimate of the size of the problem of ED patient delays due to ED overcrowding relative to the size of the potential solution, inpatient capacity.

In all facilities studied and even given a large margin for estimation error in all of their metrics, the *fractional access gap* came out in the range of only 0.52% to 1.9% (mean 1.14%).

Their conclusion was that the large and ever-present problem of emergency room overcrowding could be solved by a relatively small increase in total available hospital inpatient bed hours, well within the grasp of solutions based on operational efficiency and not requiring the substantial increases in inpatient bed numbers commonly believed and advocated.

But they didn't stop there. By estimating the average number of inpatient discharges per facility per year and dividing by the available inpatient bed hours, they estimated the mean inpatient length of stay (LOS). Multiplying this mean LOS by the *fractional access gap* (1.14%) yielded the figure of 90 minutes. Thus, by their calculations, reducing mean inpatient LOS by 90 minutes would yield the necessary time to eliminate the *fractional access gap* and eliminate ED overcrowding.

All credit to the authors. Their approach is novel and logical. The weakness of the paper however is obvious. It's theoretical. It hasn't actually been done. But it's definitely thought-provoking. The premise that a small change in one part of a system can have a massive impact in another is not theoretical. It's been proven over and over again in healthcare and non-healthcare organizations. The concept of 'leverage' is observed and pursued as a tool for affecting change and improvement universally. I know, I've seen it occur time and time again in the quality improvement projects in which I've been involved. The difficulty is always identifying it and harnessing it for our purposes.

Which brings us back to our poster, which was sadly taken down across the hospital after the physicians' objection. The main goal of the poster was not to beat anyone over the head with a stick. It was to provoke thought, discussion and introduce the concept of leverage.

The kicker? The problem of hospital overcrowding is not going to be solved by just one group in the system, not physicians, not administrators and certainly not the emergency department. It's only going to be solved by adopting a system wide approach and that's going to require collaboration across the board. Hence the reason why the poster went up across the entire hospital and not just the door to the Doctors' lounge.

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Ref: Emergency overcrowding and access block: A smaller problem than we think.
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