

Eliminate the Denominator

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Most quality dashboards contain data on rates of hospital-acquired infections, adverse drug events, falls and other harm events (e.g., central-line infections per 1,000 line hours or falls per 1,000 bed days). Typically, these rates are shown next to a benchmark rate for that indicator, usually established by analyzing the rates for comparable hospitals, and then displayed as the 50th, 75th or 90th percentile. It's not uncommon for the dashboard to display any rate better than the 50th or 75th percentile as green. Expressing data as rates with benchmarks allows the quality staff and executive team to answer a question commonly asked by boards: "How are we doing compared to other hospitals like ours?"

Knowing how you're doing compared to other hospitals isn't a bad thing. However, some innovative hospitals have started asking different questions and using different performance indicators to answer questions.

Instead of asking, "How are we doing compared to the competition?" they're asking, "How are we doing compared to the theoretical ideal?" (The theoretical ideal is often 100 percent or zero.)

To track the answer to that question, they're eliminating the denominator (i.e., they are tracking total number of central-line infections each month and total number of falls each month).

There are five reasons why this is a good idea:

1. **Neither your basic patient population nor your types of service change dramatically from month to month** (with some notable exceptions for seasonal conditions such as allergies and for institutions with large seasonal influxes of snowbirds). So a raw count of the number of people who

fall in your hospital, get infected or have adverse drug events is a fairly accurate indicator of the burden of harm over time.

2. **Any time we make a measurement more complex** (e.g., by making it a ratio between two measurements), we add measurement error. How accurately are we measuring things like ventilator days?
3. **If a measurement is not adding value** (many denominators fall into this category), they're simply adding measurement waste. Somebody has to keep track of line hours. Is this value-added activity or not?
4. **To get benchmarks, deciles and other indicators of comparative performance**, we usually send our denominator-based measurements to some national or regional data compiler (e.g., Premier, VHA, state hospital association) to get them to send us back our percentile ranking and position. This inevitably introduces delay. How old are the data shown to your board? Six months? Nine months? This isn't a timely way to oversee and steer improvement.
5. **Finally, and most importantly**, many of these denominator-based measurements lull hospital leaders into complacency in two ways. First, ratios make the data fairly abstract (e.g., 4.9 infections/1,000 line hours). Compare this to what that abstraction really means for one hospital: 14 people doubled their risk of dying in our care last month because of a line infection we gave them. If we want our board members to understand our data and to oversee its improvement with urgency, they need to understand it viscerally. Eliminating the denominators helps.
The second way denominators cause complacency is when leaders

look at their dashboards and say, "Hey, we must be pretty good. All our indicators are green." To which I say, "And what, exactly, does it mean to be green?" Being better than the 50th percentile for hospital-acquired infections in a health care system where 200,000 people incur serious harm every year from these infections is not green.

So what do I recommend?

Try eliminating the denominator for many of your performance indicators. Track the number of patients who are harmed or receive the care they should receive every month against the theoretical ideal, either 100 percent or zero. Your data will be more accurate, more timely and more viscerally meaningful, and that will give you a jump-start on improvement.

Note: From time to time, you might still have to answer the question, "But how are we doing compared to others?" For this you will need denominators. But if you've been working with the theoretical ideal in mind, you might find something interesting when you check your performance against the competition: You've blown right past the benchmark!

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