

# BENCHMARKING IN EMERGENCY DEPARTMENTS AND CLINICAL MEDICINE - AN OVERVIEW

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## Introduction

There are several tools made available for strategists, policy makers and managers, to utilize and bring positive changes to the organization. One of these many tools is benchmarking, which is considered a component of quality management and therefore is commonly used as tool for healthcare improvement.<sup>1</sup> The interests developed by healthcare organizations on benchmarking enables such organizations to understand the best strategies to address the key areas of quality improvement, that is access, effectiveness, safety, acceptability and continuity.<sup>2</sup> In fact, benchmarking can be used as a powerful tool to introduce improvement by preventing organizations from exclusively focusing internally.<sup>1</sup> As such, process measurement without some level of benchmarking will be nothing more than just a historical record. We do need to measure our performance against a measurable and acceptable standard so that our goals are meaningful.<sup>2</sup>

## Definition

Benchmarking is a disciplined process of identifying, understanding and adapting to best practice organizations to improve the performance of ones organization.<sup>1</sup> It requires substantial effort and on-going outreach activity with a goal to identify best operating practices that when implemented, will produce a superior performance. In fact, it is more than setting standards and making comparisons, it helps to align employee productivity with the business goals of the organization. The question now is "What" and "Why are we bench marking?" Is it productivity, service delivery access, acceptability, efficiency or clinical outcome.<sup>3</sup>

Benchmarking emerged in the late 1970s in the industrial and commercial world and has fast infiltrated into healthcare and clinical medicine.<sup>3</sup> Pryor however defines benchmarking as :

"Measuring your performance against that of the best in class companies, determining how the best

in class achieved those performance levels and using the information as the basis for your own company's targets, strategies and implementation."<sup>4</sup>

Robert Camp from Xerox on the other hand defined bench marking as "the continuous process of measuring products, services and practices against the company's toughest competitors or those companies renowned as industrial leaders."<sup>5</sup> According to Camp, benchmarking serves four main functions by:

- analyzing the strength and weakness of the current work process of the operation,
- becoming knowledgeable about the competition and their leaders,
- incorporating the best of the best in the industry
- gaining superiority and become the new benchmark.<sup>2</sup>

It is not surprising that given the context in which benchmarking was developed, competition is therefore viewed as an important concept. In public health organizations like the emergency department, benchmarking is used to focus on continuous quality improvement and has therefore been considered as a useful marker for this.<sup>6</sup> The concept of best practice in clinical medicine however, refers to standards rather than status and levels. There are seven accepted best practice criteria which are important benchmarking tools.<sup>3</sup> These are:

1. Client focus
2. People involvement
3. Employee empowerment
4. Process improvement
5. Information and analysis
6. Leadership, policies and plans
7. Organization performance and improvement.<sup>3</sup>

## Types

There are four types of benchmarking as defined by Camp. These are:

1. Functional
2. Generic
3. Internal
4. Competitive.<sup>5</sup>

1.Functional benchmarking is defined as a comparison of similar or related work processes and outputs with those processes in place in another industry which are directly not in competition with your organization.<sup>3</sup> Generic benchmarking fo-

causes on work or business process with other companies or organization. Both types of benchmarking mentioned above are usually external and noncompetitive. However, these processes are not applied broadly in healthcare organizations for reasons other than health issues are different and more complex. The argument for it is that what we are comparing are process concepts and elements that can be imported into or utilized by health care organization and not directly comparing identical processes in identical settings.<sup>3</sup>

2. Generic benchmarking refers to external benchmarking across the organization producing different products and services that may be considered as sources of innovative practices.<sup>2</sup>

3. Internal benchmarking refers to the comparison of process across areas, which are considered similar but performed by different people across the organization. It may also involve comparisons between the past and the current process activity.

4. Competitive benchmarking compares the systems of one organization with another organization that delivers the same product. It is believed that competitive benchmarking is a misnomer and therefore should be renamed as “collaborative benchmarking” because it is through collaboration that benchmarking can be ever made successful.<sup>5,6</sup>

### Relevance to Healthcare

There are several factors within the healthcare system that drive the benchmarking movement. These include growing pressures to reduce healthcare costs and spending, increased pressure from consumers on healthcare and in relation to practice of emergency medicine, the need to establish best practice in different and geographic variation settings.<sup>2</sup>

As such benchmarking allows the healthcare organization to accelerate and manage changes, overcome complacency and create a sense of urgency, establish cross-functional goals, make informed decisions for consumers and interested stakeholders and look outside the box.<sup>7</sup>

There are various forms of benchmarking which can be applied in healthcare. These include: Results benchmarking and Process benchmarking. Results benchmarking is where managers look at comparative performance within or between organizations against performance indicators that measures efficiency and effectiveness; Process benchmarking is concerned with tasks and activities that turn resource inputs into outputs. Best practice standards, to which the organization aspires as part of its planning and continuous improvement, are also included.<sup>3</sup>

I believe it is important to ask ourselves why we benchmark, when to do it, what to benchmark and how to do benchmarking. In relation to the first question, one will need to ask about our particular management and business issues and whether benchmarking is the right tool to address these. In addition it is important that the organization is adequately resourced and timing is right for benchmarking. However, in doing so, one will need to look at key processes, outcomes and programs for organizational success. When establishing a benchmarking project, one will need to compare performance measures to best practice then apply the lessons to ones own organization.<sup>2-5</sup>

Clinical practices in emergency departments have now been benchmarked and used as clinical indicators with regards to the way and how we manage our patients. This allows emergency departments in this country to be compared with each other in terms of their performance or with other departments in other developed countries with similar settings. For instance, benchmarks have been established in various treatments of diseases such as the ‘door to needle time or catheter lab’ in acute myocardial infarction, the time for the first antibiotics in patients who have bacterial infection, time taken for a patient with chest pain to have an electrocardiogram (ECG), the time taken for a patient with a given triage category to be seen and the time for an admitted patient to leave the emergency department once a definitive plan has been made.<sup>2,9</sup> These are some of many benchmarks that are used to measure how effective the emergency department is in relation to its previous operations or with other emergency departments, either as part of a quality improvement process, or for funding and resource allocation.<sup>2,8,9</sup>

The triage systems in all emergency departments have been benchmarked at a national level and therefore this has been extensively used to assess emergency department level of performance, level of patient clinical acuity and number of patient presentations, resource allocation, and funding. As such, this has placed enormous pressure on individual departments and managers to meet national targets or benchmarks.<sup>9</sup> This has sadly resulted in manipulation of data and dishonesty when such national benchmark targets are practically unachievable.

### Risks

There are many risks associated with benchmarking. These major risks include inappropriate focus, resource drain or competition.<sup>3</sup> I believe that when benchmarking focuses on a micro process or measure, the greater the risk of invalid conclusions; so when translating to a macro end product, certain micro process may have magnified and

therefore can result in an error at the macro level. For example when two emergency departments are compared on the out of hours waiting time for triage category 4 and 5, one would conclude that if department A has a lower average waiting time it would be considered more efficient in managing these group of patients. Without considering a proximal after hours GP, staff profiles, and other in house factors, one could come to an inaccurate conclusion. So when benchmarking, it is important that a balanced overview of the processes including all levels of function are considered.

### Implications

Considering that health expenditure is limited, we must embrace effective and efficient improvement strategies. In addition, we have to be mindful that robust benchmarking can be costly and a significant drain on resources. With a fixed budget, the quest for best value can be more challenging than searching for best-evidenced practice. System improvement requires resource allocation and benchmarking activities to justify spending in this area and therefore should be considered in light of this context.

Competition and benchmarking don't make sense unless collaboration is a feature of it and honesty prevails, otherwise such exercises may be flawed. Other aspects such as de-identification and confidentiality of organizations can also assist in removing competition. Another real effect of competition is seen when poorly performing organization are forced to compete. Been seen in the bottom of the competition ladder may be overwhelming for some resulting in dysfunction and blaming, as seen in recent media outburst about various emergency departments in New South Wales. Such dysfunction may result in dishonesty and negative behavior towards other improvement strategies or complete withdrawal/ reluctance to embrace quality management strategies.

Validity issues are the most threatening to the concept of benchmarking. In order to establish a valid benchmark, measures must be specific, defined, responsive, meaningful, comparable, non-confounding and if external must have a system integrity.<sup>3</sup> For example, cross emergency department comparison of time to catheter lab for revascularization of patients presented with MI will be useless unless the process steps involved are comparable or similar. In fact external validity between different organizations is difficult to achieve and therefore can result in validity challenges.

The question is "can enough be accomplished by just working towards best practice and guidelines and is high level benchmarking is important to emergency departments and clinical medicine?" I believe maintenance of knowledge is important, however profession and standard of practice and management needs to be monitored and assessed. The usage of valid benchmarking allows us to compare our performance with previous performance and with other similar institutions that offer similar types of patient care. Having said this, the government has placed greater weight and emphasis on benchmarking and has used this as a form of comparing various emergency departments in terms of their performance and funding.

### References

1. Welsch S. Emergency medicine benchmarking basics. *Emerg Med News*. 2005; 27(1): 44-45.
2. American College of Emergency Medicine. Benchmarking in emergency medicine. 1997. <http://www.acep.org/content.aspx?id=34362>
3. Kennedy MP, Allen J, Allen G. Benchmarking in emergency health systems. *Emerg Med Aust*. 2002; 14: 430-435.
4. Pryor LS. Benchmarking: a self-improvement strategy. *J Bus Strat*. 1989. Nov-Dec: 28-32.
5. Camp RC. Finding and implementing the best practices. *Business Process Benchmarking*. Milwaukee, WI: Quality Press, 1995:18.
6. Australia. Australian Public Service Commission. Raising the Standard: Benchmarking for better government. <http://www.apsc.gov.au/mab/benchmarking.htm>
7. Centre for Value-Based Health Management. Benchmarking improves your organization's employer health management Initiatives. <http://www.centervbhm.com/bc/index.html>
8. New South Wales Audit Office - Performance Reports - 2000- Hospital Emergency Departments. Delays in getting a hospital bed. <http://audit.nsw.gov.au/publications/reports/performance/2000/hospem/3delaysinhb.html>
9. Paoloni R, Fowler D. Total Access Block Time: A comprehensive and intuitive way to measure the total effect of access block on the emergency department. *Emerg Med Aust*. 2008; 20: 16-22.