Health Care Benchmarking

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What is Benchmarking?

Benchmarking is a process of comparison between the performance characteristics of separate, often competing organisations intended to enable each participant to improve its own performance in the marketplace. Its objectives are to obtain a clearer understanding of competitors and of customers' requirements. Benchmarking will also enable innovations (either of process or product) to spread more rapidly through an industry and across industries where appropriate (Beckford, 1998).

The benchmarking theory is built upon performance comparison, gap identification and changes in the management process (Watson, 1993; Camp, 1989; Karlof and Ostblom, 1993). By reviewing the benchmarking literature (Camp, 1989; Zairi, 1992; Smith et al., 1993; Rogers et al., 1995), it seems obvious that benchmarking:

- Helps organisations to understand where they have strengths and weaknesses depending upon changes in supply, demand and market conditions
- Allows organisations to realise what level(s) of performance is really possible by looking at others, and how much improvement can be achieved
- Helps organizations to improve their competitive advantage by stimulating continuous improvement in order to maintain world class performance and increase competitive standards
- Helps to better satisfy the customers' needs for quality, cost, product and service by establishing new standards and goals
- Promotes changes and delivers improvements in quality, productivity and efficiency; which in turn bring innovation and competitive advantage
- Is a cost effective and time efficient way of establishing a pool of innovative ideas from which the most applicable practical examples can be utilised
- To be keen on new developments within the related area, and improves the motivation of employees.

Despite these benefits, time constraints, competitive barriers, cost, lack of both management commitment and professional human resources, resistance to change, poor planning and short term expectations are regarded as the main problems affecting successful benchmarking research (Bendell et al., 1993). A poorly executed benchmarking exercise will result in a waste of financial and human resources, as well as time. Ineffectively executed benchmarking projects may have tarnished an organisation's image (Elmuti and Kathawala, 1997). Moreover, there is no single 'best practice' because it varies from one person to another and every organisation differs in terms of mission, culture, environment and technological tools available. Thus, there are risks involved in benchmarking others and in adopting new standards into one's own organisation. The 'best practice' should be perceived or accepted to be among those practices producing superior outcomes and being judged as good examples within the area. Finally, benchmarking findings may remove the heterogeneity of an industry since standards will themselves become globally standardised and attempts to produce differentiation may fail (Cox and Thompson, 1998).

Overall, benchmarking first requires senior management commitment, particularly to supporting actions arising from the exploration. Second, it requires staff to be trained and guided in the process to ensure that maximum benefit is obtained. Finally, it requires allocation of part of the relevant employees time to enable it to be carried out (Beckford, 1998).

Definitions

Benchmarking has been given many different definitions by different organisations and authors even though each aims to reach the same conclusion (see Table 1). It has been defined by Camp (1989) simply as "the search for industry best practice that leads to superior performance". In other words, benchmarking is a process of finding what best practices are and then proposing what performance should be in the future. The three principles of benchmarking are maintaining quality, customer satisfaction and continuous improvement (Watson, 1993).

Benchmarking studies are perishable and time sensitive. What is a standard of excellence today may be the expected performance of tomorrow. Improvement is a continuous process, and benchmarking should be considered as a part of that process. As a result, although different authors have defined benchmarking in different ways, all these definitions have a common theme, namely: the continuous measurement and improvement of an organisation's performance against the best in the industry to obtain information about new working methods or practices in other organisations (Kozak, 2004).

Benchmarking Process

As implied in the various definitions offered, benchmarking is a continuous process. It encourages the use of Plan-Do-Study-Act (PDSA) cycles when action planning and implementing improvements. The plan phase focuses on the various up front decisions such as the selection of functions/processes to benchmark and the type of benchmarking study on which to embark. In do, one delves in a self study to characterise the selected processes using metrics and documenting business practices. Furthermore, data (metrics and business practices) are collected on the company that is the benchmarking partner. Study refers to the comparison of findings via a gap analysis to observe whether negative or positive gaps exist between the benchmarking company and the benchmarking partner. Act refers to the launching of projects either to close negative gaps or maintain positive gaps. This is the stage that distinguishes benchmarking from "organised industrial tourism" (Pulsat 1994). The PDSA cycle is a recognised "framework for efficient trial-and-learning methodology" which emphasises action-based learning to generate knowledge and predict whether change will result in improvement (Langley et al 1996).

Types of benchmarking

The benchmarking literature can be mainly separated into two parts: internal and external benchmarking. Competitive, functional and generic benchmarkings are classified under external benchmarking (Camp, 1989; Zairi, 1992). The process is essentially the same for each category. The main differences are what is to be benchmarked and with whom it will be benchmarked.

Internal benchmarking

Internal benchmarking covers two way communication and sharing opinions between departments within the same organisation or between organisations operating as part of a chain in different countries (Cross and Leonard, 1994; Breiter and Kline, 1995). Once any part of an organisation has a better performance indicator, others can learn how this was achieved. Findings of internal benchmarking can then be used as a baseline for extending benchmarking to include external organisations (McNair and Leibfried, 1992; Karlof and Ostblom, 1993). All benchmarking processes should start by dealing with internal benchmarking because this requires an organisation to examine itself, and this provides a baseline for comparison with others (Breiter and Kline, 1995). Among advantages of internal benchmarking are the ability to deal with partners who share a common language, culture and systems, having easy access to data, and giving a baseline for future comparisons (Breiter and Kline, 1995). Therefore, the outcomes of an internal benchmarking can be presented quickly.

External benchmarking

External benchmarking requires a comparison of work with external organisations in order to discover new ideas, methods, products and services (Cox and Thompson, 1998). The objective is continuously to improve one's own performance by measuring how it performs, comparing it with that of others and determining how the others achieve their performance levels. This type of benchmarking provides opportunities for learning from the best practices and experiences of others who are at the leading edge.

COMPETITIVE BENCHMARKING refers to a comparison with direct competitors only. This is the most sensitive type of benchmarking activity because it is very difficult to achieve a healthy collaboration and cooperation with direct competitors and reach primary sources of information. It is believed to be more rational for larger organisations than smaller ones, as they have the infrastructure to support quality and continuous improvement (Cook, 1995). Its benefits include creating a culture that values continuous improvement to achieve excellence, increasing sensitivity to changes in the external environment and sharing the best practices between partners (Vaziri, 1992). It may however become difficult to obtain data from competitors and to apply lessons to be learnt from them. A further risk may include the tendency to focus on the factors that make the competitors distinctive instead of searching for the factors contributing to excellent performance (Karlof and Ostblom, 1993).

FUNCTIONAL BENCHMARKING refers to comparative research and attempts to seek world class excellence by comparing business performance not only against competitors but also against the best businesses operating in similar fields and performing similar activities or having similar problems, but in a different industry (Davies, 1990; Breiter and Kline, 1995). For instance, British Rail Network South East employed a benchmarking process to improve the standard of cleanliness on trains. British Airways was selected as a partner because a team of 11 people cleans a 250 seat jumbo aircraft in only 9 min. After the benchmarking exercise, a team of ten people was able to clean a 660 seat train in 8 min (Cook, 1995).

GENERIC BENCHMARKING refers to the comparisons of business function that are same regardless of business. This means that a hotel organisation's accounting department would look at the accounting department of a manufacturing organisation that has been identified as having the fastest operations. It is believed to be easier to obtain data in such arrangements, as best in class organisations are more likely to share their experiences. However, generic benchmarking can take a long time to complete, and research outcomes may need a lot of modification in order for organisations to set their own standards (Cook, 1995).

Benchmarking in Health Systems

All professionals involved in health care are under a duty of care, which involves ensuring the uniform provision of a high quality health service. A widely accepted definition of quality is "the degree to which health services for individual and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (Institute of Medicine, 2001b). The quality of health care is a complex multidimensional concept in constant need of analysis and clarification (Attres, 1993; Gillies, 1996).

Benchmarking was translated to the health system from

the management field and has been used to improve quality in the health services from the mid to late 1990s (Phillips, 1995; Bullivant, 1998 and Camp, 1998). Bullivant (1996) identifies common pitfalls to successful benchmarking, including among others gaining senior management "buy-in", getting started and maintaining momentum.

The comparison of data either within or between health care systems relies on data that may be derived at different levels within the health care system Benchmarking indicators in health have been defined as a measurement tool used to monitor and evaluate the importance of governance, management, clinical and support functions (Wait and Nolte, 2005). Many methodological challenges in the field of benchmarking related to the selection and quality of indicators used to make comparisons both within and between health systems (Mckee and James, 1997; Goddard et al., 2000; Walshe, 2003). Though benchmarking has become an intrinsic part of most developed health care systems, the impact of benchmarking initiatives on improvements in system performance and their integration within the existing policy processes remain to be elucidated (Blalock, 1999; Goddard et al., 2000).

Performance benchmarking is an activity of comparing performance levels to identify gaps in performance. Process benchmarking is the identification of root causes, which lead to achievement of superior performance. Patient experience benchmarking focuses upon meeting patient expectations (Kozak, 2004; Ellis, 2004).

Competitive benchmarking uses performance measures to inform how well or badly a person or company is performing against direct competitors. Comparative benchmarking focuses upon how similar functional activities are handled by different organisations. This removes the competitive edge and therefore provides a greater potential for learning. Collaborative benchmarking involves the sharing of knowledge about a particular activity, with all hoping to improve based upon what they learn (Ellis, 2004).

Clinical practice benchmarking is a process benchmarking which involves the structural comparison and sharing of best practice in clinical aspects of care (Ellis, 2000). It provides a quality assessment and continuous quality improvement approach that supports the development of quality care (see Figure 1) (Ellis, 1995; Ellis and Morris, 1997).

Benchmarks traditionally identified from `the leader in the field' (Camp 1989). In clinical practice, however, benchmarking arriving at the "benchmark of the best practise" demands the acceptance of all levels of evidence shown in Table 2 (Ellis, 1995; Ellis and Morris 1997). Unlike organizational benchmarks where best practice refers to actual systems and processes (Codling 1992; Zairi and Leonard 1994), clinical practice benchmarks include external consideration of what the standard of excellence consists of. This means that best practice can be aspirational, seeking to meet the identified expectations of a quality health service rather than limiting developmental activity to what is currently achieved by "leaders in the field". Although challenging the principles of objectivity and measurability stated in some benchmarking literature as essential (Watson 1993), clinical practice benchmarking encompasses fundamental benchmarking descriptors (Codling 1992; Bogan and English 1994; Zairi and Leonard 1994), supporting continuous quality improvement through comparison and sharing, moving benchmarking further along the sophistication axis shown in Figure 2.

As an example of benchmarking in health service, clinical practice benchmarking is being used by paediatric units in 27 National Health Service Trusts in the north west of England to promote the utilisation of available evidence in to practise (Ellis, 2000). The group was formed in response to members' concerns that there appeared to be inconsistencies in the quality of care across the UK. In addition, resources were being wasted through repetition of effort as practitioners in all areas strived independently to ensure delivery of evidence-based care in the same areas of practice, e.g. paediatric pain control. Figure 3 highlights the inequalities in practice at the commencement of clinical practice benchmarking. Figure 4 indicates that after 24 months of clinical practice benchmarking activity, there is apparently less variance in the benchmarking scores awarded by practitioners, which may suggest greater consistency in practice in the particular areas considered. In addition, for some factors, the median scores are also improving which suggests that the quality of care may also be improving. Networking promotes general exchange of information and also creates a wider supportive culture, especially important in areas of specialist practice where practitioners can feel isolated and ill informed. Benchmarks are re-scored every year and the evaluation of the project suggests not only that practice is developing, but also that by working together, sharing developments and innovations, practitioners are helping to ensure that wherever they are cared for, patients can expect a similar high standard of care.

Clinical governance activity is concerned with providing a systematic approach to improving and maintaining quality in service delivery and care provision. Essence of Care (Department of Health, 2001) involves the structural comparison and sharing of qualitative good practice. It supports local clinical governance activity to help improve quality (Ellis, 2001). It is a sophisticated clinical practice benchmarking approach, which was envisaged to become an integral and effective part of health service benchmarking to support continuous improvement in the quality of patient care and experiences (Ellis, 2001).

Essence of Care consists of a series of best benchmarks relating to areas of fundamental aspects of care that are crucial to the quality of patient experience, for example, privacy and dignity (Matykiewicz and Ashton 2005). Although in arriving at benchmarks of best practice all evidence types shown in Table 2 are taken into account, Essence of Care benchmark compilation expands evidence, with the inclusion of the opinions, experiences and indeed expectations of patients and their carers as the true respected authorities on what constitutes best practice. Learning from others, therefore, is necessarily expanded to learning with

others to develop innovative and new practice to meet patients' expectations and needs, rather than just replication of current good practice (Ellis, 2004).

Although the subjective patient experience is mentioned as central to the quality of the health service (Department of Health, 2000; Phillips, 1995), the use of the Essence of Care is inconsistent. There is an apparent continuing preoccupation in health service with measurement that can support quantitative comparison and elements of competition (Bullivant 1998). This reinforces the traditional view of acceptable benchmarking activity as a "management by fact, data driven" approach rather than a "management by gut" intuition based approach (Watson 1993). Camp (1989) states that considering what satisfies the customer in each individual practice will ensure improved overall performance that benefits customers. This view would support the health service in recognising the value of Essence of Care benchmarking activity accepting that benchmarking generally is not primarily viewed as being undertaken for performance monitoring or to provide comparative data but that it is accepted as a continuous quality improvement approach (Ellis, 2001; Matykiewicz and Ashton 2005). Valuable comparison and sharing can occur without objective measurement. With the necessary ownership, commitment and resource support of the staffs, Essence of Care activity should be encouraged and supported to improve the quality of health care (Ellis 2004).

Conclusion

Benchmarking is a valuable technique for quickly lifting the performance of an organisation. Benchmarking activity is not only about auditing practice to ensure practice is achieving required measurable outcomes but supports open comparison and sharing to allow continuous improvement and development.

The modern health service is being encouraged to ensure uniform provision of high quality health care. Benchmarking pushes the boundaries of best practice ever onwards. Practitioners, aware of developments elsewhere, can develop practice with minimal effort, concentrating resources on new areas for practice development. The potential of benchmarking in the health service has been developed from the quantitative measurement of performance and consideration of processes to the qualitative attainment of best practice around patient experience. The perceived immeasurability and subjectivity of Essence of Care and clinical practice benchmarks means that these benchmarking approaches are not always accepted or supported by health service organisations as valid benchmarking activity. Further research and applications are needed to ensure that benchmarking in health fulfills its objective, namely to further our understanding of where to focus policy efforts in order to improve the performance of health care systems.

Table 1. Benchmarking definitions.

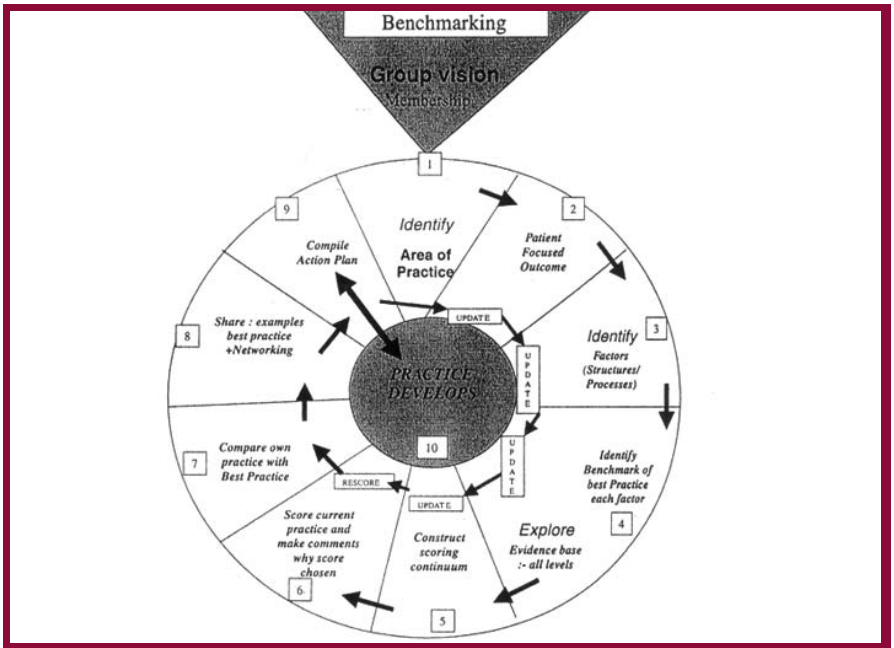
Authors	Definitions
Camp (1989)	The continuous process of measuring products, services and practices against the toughest competitors or those companies recognised as industry leaders.
Geber (1990)	A process of finding the world class examples of a product, service or operational system and then adjusting own products, services or systems to meet or beat those standards.
Vaziri (1992)	A continuous process comparing an organisation's performance against that of the best in the industry considering critical consumer needs and determining what should be improved.
Watson (1993)	The continuous input of new information to an organisation.
Kleine (1994)	An excellent tool to use in order to identify a performance goal for improvement, identify partners who have accomplished these goals and identify applicable practices to incorporate into a redesign effort.
Cook (1995)	A kind of performance improvement process by identifying, understanding and adopting outstanding practices from within the same organisation or from other businesses.
APQC[1] (1999)	The process of continuously comparing and measuring an organisation against business leaders anywhere in the world to gain information that will help the organisation take action to improve its performance.

[1]APQC stands for American Productivity and Quality Center.

Table 2. Classification of types of evidence used to identify benchmarks in clinical practice benchmarking (Ellis, 2000).

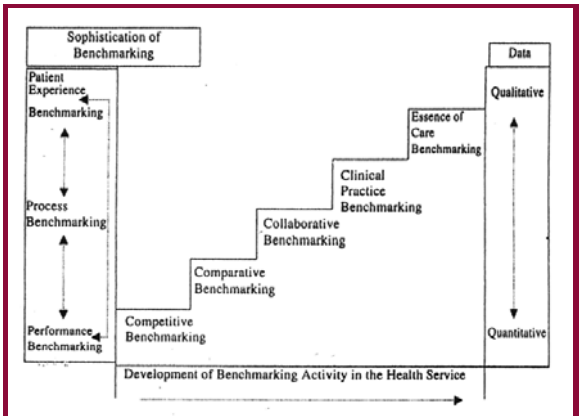
Classification of Evidence
1. NHS Centre for Research and Dissemination or Cochrane database review (systematic reviews)
2. Large scale well designed primary studies randomised controlled trials and other controlled trials
3. Large scale primary studies using other methodologies
4a. Descriptive studies and reports (including national and local standards, guidelines, customer surveys, support groups)
4b. The opinions and experience of respected authorities based on clinical experience, professional consensus

Figure 1. Clinical practice benchmarking cycle for continuous quality improvement towards best possible practice (Ellis, 2000)



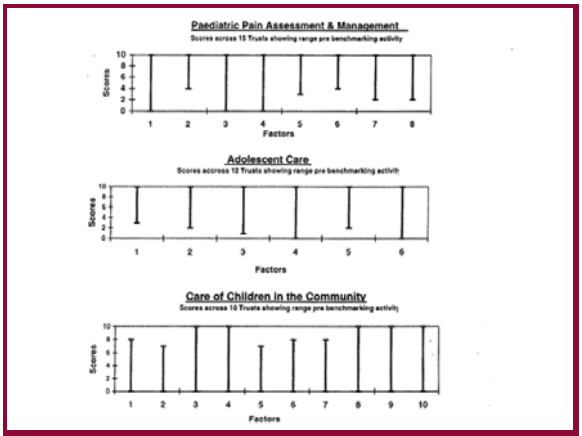
The patient focused outcome for each considered area of practice is agreed. Structural and process are then identified as factors that would support the attainment of the outcome. Through the consideration of all available evidence, the best possible practice within each factor is then arrived at and accepted as the benchmark of best practice.

Figure 2. Benchmarking activity in the health care service (Ellis, 2004)



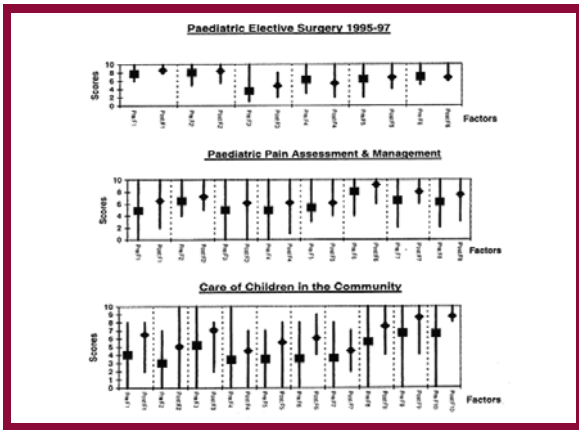
The potential of benchmarking in the health service has been developed from the quantitative measurement of performance and consideration of processes to the qualitative attainment of best practice around patient experience. The benchmarking activity used by the health service has been changed from types of benchmarking that focus upon performance to inclusion of types that can include consideration of process and more recently patient experience.

Figure 3. Practice benchmarking scores before quality improvement benchmarking activity (Ellis, 2000).



Each chart relates to a particular area of practice, e.g. adolescent care. Along the x axes are the different structures and processes that professional consensus identified essential for the attainment of patient focused outcomes that area of practice. They appear as Factor 1 (F1), Factor 2 (F2), etc. The y-axes relate to the scores awarded that factor. Practitioners were asked for each factor to compare their actual practice against a continuum of practice descriptors with a 10 score signifying attainment of the benchmark of best practice. Scores for the number of Trusts stated have been collated, to show for each factor range of scores, self awarded by practitioners across north west.

Figure 4. Benchmark scores comparing pre and post-benchmarking quality improvement activity in a specified area of practice: showing the range of scores and the median scores for each factor (Ellis, 2000).



= range of scores;
= division between different factors;
= prebenchmarking activity median score;
= postbenchmarking activity median score.

The y-axes show the scores awarded and the x axes relate to the structures and processes, the factors. The `pre' column relates to scores prior to any actual quality improvement activity, and the `post' column relates to scores after 24 months of quality improvement activity. The clinical practice benchmarking cycle has been completed and the inner update circle commenced with benchmarks re scored. The dotted line divides the different factors. After benchmarking activity, the range is closing in most factors.

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