Business process re-engineering in healthcare

Business process re-engineering, also known as business transformation and process change management, is fundamentally rethinking and radically redesigning business processes to achieve dramatic improvements in critical contemporary performance measures such as cost, quality, service and speed.

From a healthcare viewpoint, BPR is a management approach that rethinks present practices and processes in business and its interactions. It attempts to improve underlying process efficiency by applying fundamental and radical approaches by either modifying or eliminating non-value adding activities and redeveloping the process/structure/culture. However, in the health sector, a wide variety of patient groups make the healthcare service a complex project to redesign along these lines, thereby rendering changes context and time sensitive.

Advantages of BPR

Using BPR in the health sector was a response to frustrations amongst managers in organizations who perceived TQM's incrementalism and ability to achieve organization-wide change had failed. The King's College Hospital experience suggests that BPR could be best tried to achieve previously unachieved levels of efficiency in scenarios when other efforts/methods had been unsuccessful. The driving forces for change were aspirations to develop a more efficient system that satisfies consumers' demands for service quality and value for money. At the same time, BPR makes it possible to sustain such quality without necessarily costing more, even though we know that healthcare costs are rising steeply. The third and most important aspiration in the King's project was to improve professionals' job satisfaction, what they felt they always deserved. The aim was to orient healthcare towards and focus on patients rather than organization needs.

The BPR approach focuses on rethinking and redesigning processes from scratch, giving staff opportunities to revisit services in detail, thereby pointing out improvement areas. It strips all non-value adding and unnecessary steps from the process to make services more efficient. Although it is managed top-down and dominated by managers and leaders, decision making is done at the coal-face, thereby empowering the team.

The BPR approach provides a flexible work environment, culture and work practices. It can be valuable for organizations in deep difficulties and performing poorly. In such a crisis, re-engineering may be the only way organizations can survive. Where major structural and cultural deficiencies are identified or are obvious as a poor performance cause, BPR is the best way to handle that scenario – evident from King's College Hospital experiences.

Limitations of BPR

We know that BPR is a top-down approach that staff may resist. It is cited by autonomous clinical professionals as “a brutal and inappropriate technique”. Implementing BPR in healthcare scenarios, where clinicians are key players, therefore, is not only difficult but also unsafe. Thus, BPR may lead to ownership loss and employee de-motivation because they are not involved in planning and change management. Generally, change processes are less-well understood by employees.
Quality improvement in European public services elaborated healthcare TQM and BPR as quality improvement tools. It was acknowledged that many business approaches to quality improvement, including TQM and re-engineering, failed to take account of healthcare’s complexity and the nature of professionalized knowledge. The language and values used in most of these projects were alien to clinicians and so were rejected as management fads. It seems that BPR requires massive culture and structure change if it is to improve quality of the same magnitude. It may be that radical overnight transformation may sound impressive but unrealistic. Structural and cultural change needs time to develop, be accepted and absorbed at all levels, particularly in healthcare settings.

In short, BPR is a high-cost and high-risk project. 70 per cent of all industries could not achieve their targets – a BPR success rate around 30 per cent. In the healthcare sector, on the other hand, from the literature we reviewed, there is no success figure available. BPR carries an unrealistic scope and expectation most of the time, which may be a reason for its 70 per cent failure rate. Its top-down nature and success depends on sustained management commitment and inspirational leadership, which is not easily measured and may not be available up to the threshold needed.

The extent to which BPR is applicable to healthcare

The UK BPR healthcare experience comes from two centrally funded pilot studies:

1. King’s College Hospital, London (KCH); and
2. Leicester Royal Infirmary (LRI).

The KCH project was evaluated by a Brunel team and the LRI scheme by Sheffield and Warwick. Employees in these organizations shared their BPR experiences during evaluation. Consequently, both studies generated interesting and valuable findings as they highlighted to what extent BPR could be applied to healthcare systems. However, the two hospitals were extremes, i.e. KCH was a “sick” unit at the time of the study. LRI, on the other hand, was one of the best teaching hospitals with little scope to improve.

At the end of the pilot studies it was evident from reports that both hospitals could not reach expectations especially the drastic changes and improvements anticipated at the beginning of the BPR projects. Both reduced waiting times and length of stay along with faster diagnostic processes. King’s, over and above these improvements, also made £1 million savings – attributed to “waste reduction” by process mapping followed by removing non-value adding activities and by increasing efficiency in the renewed system. This suggests that BPR is not for everybody and that selecting units to which BPR can be applied is important to achieve desired results. When the two trusts ran the pilot, they also continued to work on their generic and core improvement initiatives at different levels in the process and so it was difficult to attribute success to BPR alone or to assess its relative contribution to overall improvements.

One approach to identify suitable sub processes for applying BPR is process mapping from “door to door”, which helps capture all the process components and applying a lean approach. Identifying value-added activities highlights the non-value-added ones. Each non-value-added activity can be measured and analysed to assess its impact and ways to eliminate activity.

Resource availability, deadline, cost, generic skills and above all, urgency to change help users select the right improvement tool. Also, as raised earlier, change management success is closely related to team morale, ownership and motivation. To achieve quality in healthcare services, therefore, two key staff groups – managers and clinicians, who come from different cultural backgrounds and are knowledgeable in different ways, need to work as a team. Understanding and cooperation are crucial if difficult tasks are to be accomplished.

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However, BPR's failure to consider the human aspects of processes may make it difficult to integrate BPR into healthcare services.

The BPR approach sounds impressive but unrealistic because soft structural and cultural change need time to develop particularly in healthcare settings. We believe that BPR can help to improve health services if it is meticulously planned and applied diligently. In short, even with all BPR's limitations, it is still capable of delivering dramatic results not least because it forces staff to think from outside the scenario or process as a whole and work to deadlines.

**Combined methods**

Healthcare is a more complex system than any manufacturing industry. As a service provider with a major human component there are safety and efficiency issues rather than cost and efficacy, which separates healthcare from industry. BPR, like other single approaches to improve service quality, are likely to be unsuitable for healthcare, which is comprised of a number of sub processes. It has many stakeholders at different levels and there is a wide variation in its internal customer (e.g., fellow professionals) and external customer (i.e. patients) needs.

BPR can be used as a tool for improving some sub-process or sub-unit activity. An example could be what happened in the LRI where BPR was tried as a quality improvement tool in bed management, pathology and OPD service innovation, etc., but not applied in areas where clinician's precision was paramount or where BPR was accepted less-well.

TQM and BPR ideally should always be followed by CQI methods for service improvement to be sustainable and effective. In short, quality management tools designed for industry should be applied to health services with proper selection, caution and care.

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