REVIEW ARTICLE

Factors affecting implementation of accreditation programmes and the impact of the accreditation process on quality improvement in hospitals: a SWOT analysis

Gloria KB Ng 吳幗寶
Gilberto KK Leung 梁嘉傑
Janice M Johnston 莊臻寧
Benjamin J Cowling 高本恩

Objectives The objectives of this review were to identify factors that influence implementation of hospital accreditation programmes and to assess the impact of the accreditation process on quality improvement in public hospitals.

Data sources Two electronic databases, Medline (OvidSP) and PubMed, were systematically searched.

Study selection "Public hospital", "hospital accreditation", and "quality improvement" were used as the search terms. A total of 348 citations were initially identified. After critical appraisal and study selection, 26 articles were included in the review.

Data extraction The data were extracted and analysed using a SWOT (strengths, weaknesses, opportunities, threats) analysis.

Data synthesis Increased staff engagement and communication, multidisciplinary team building, positive changes in organisational culture, and enhanced leadership and staff awareness of continuous quality improvement were identified as strengths. Weaknesses included organisational resistance to change, increased staff workload, lack of awareness about continuous quality improvement, insufficient staff training and support for continuous quality improvement, lack of applicable accreditation standards for local use, and lack of performance outcome measures. Opportunities included identification of improvement areas, enhanced patient safety, additional funding, public recognition, and market advantage. Threats included opportunistic behaviours, funding cuts, lack of incentives for participation, and a regulatory approach to mandatory participation.

Conclusions By relating the findings to the operational issues of accreditation, this review discussed the implications for successful implementation and how accreditation may drive quality improvement. These findings have implications for various stakeholders (government, the public, patients and health care providers), when it comes to embarking on accreditation exercises.

Key words
Accreditation; Hospitals, public; Quality improvement

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Department of Surgery, The University of Hong Kong, Queen Mary Hospital, Pokfulam, Hong Kong
GKB Ng, BSc, MPH
GKK Leung, MB, BS, FHKAM (Surgery)
School of Public Health, The University of Hong Kong, Pokfulam, Hong Kong
JM Johnston, PhD, FFPH(RCP)(UK)
BJ Cowling, BSc (Warwick), PhD (Warwick)

Correspondence to: Ms Gloria KB Ng
Email: gloriakbng@gmail.com

Introduction

Accreditation, defined as "a public recognition by a national healthcare accreditation body of the achievement of accreditation standards by a healthcare organization, demonstrated through an independent external peer assessment of that organization's level of performance in relation to the standards",[1] is an important strategy for quality assessment and improvement in health care.[2] Accreditation can be conducted by statutory or voluntary bodies that offer organisational development through external assessment of health services by means of published standards. External assessment determines whether a health care organisation complies with international standards and can provide quality assurance.[3] Accreditation is usually performed by a multidisciplinary team of health professionals and the assessments often include self-appraisal, on-site surveys, peer review interviews, review of documentation, checking of equipment, and the appraisal of key clinical and organisational data.[4]

Concerns have been raised on whether accreditation may only result in organisational changes in standardisation and decision-making processes for care, rather than actual improved quality of care.[5] There is at present a lack of evidence on the efficiency and effectiveness of these programmes and the factors which may affect successful implementation.[3,6-10] A recent review by Hinchcliff et al[11] concluded that there is a lack of strong evidence to support the effectiveness of health service accreditation and highlighted knowledge gaps from empirical research. Another review that aimed to analyse research into accreditation reported that consistent findings were only recorded for promoting change and professional development.[12] Alkhenizan and Shaw[13] reviewed both general and subspecialty accreditation programmes and reported that accreditation improved the process of care and clinical outcomes. It has been highlighted that there was a paucity of high-quality controlled evaluations about the effectiveness of external inspection on compliance with standards in improving health care organisational behaviour, health care professional behaviour, and patient outcomes.[14] This review supplements previous findings by employing a SWOT (strengths, weaknesses, opportunities, threats) analysis to provide a comprehensive view of the factors affecting the implementation of accreditation programmes and facilitates understanding of their potential implications.

The SWOT analysis is described as "a list of an organization's strengths and weaknesses as indicated by an analysis of its resources and capabilities, plus a list of the threats and opportunities that an analysis of its environment identifies".[15] It consists of a confrontation between internal capabilities (strengths and weaknesses) and external developments (opportunities or threats), and aids in identifying strategic options.[16] This review was conducted in the context of an accreditation scheme introduced in Hong Kong. The Hospital Authority Pilot Scheme of Hospital Accreditation in Hong Kong was started in 2009. We aimed to identify what factors could affect the successful implementation of an accreditation programme, and investigate the potential impact of the accreditation exercise on quality improvement in public hospitals.

Methods

Two electronic databases, Medline (OvidSP) and PubMed, were systematically searched from inception to January 2011, using the following search terms: "public hospital", "hospital accreditation", and "quality improvement". Medical Subject Headings (MeSH) were used in order to create a focused search strategy. The search strategy was as follows:

#1: Public hospital.mp. OR Hospitals, Public/

#2: Hospitals/ OR *Accreditation/ or hospital accreditation.mp. OR *"Joint Commission on Accreditation of Healthcare Organizations"/ OR *Quality Assurance, Health Care/

#3: *"Outcome and Process Assessment (Health Care)"/ OR *"Quality of Health Care"/ OR *Quality Assurance, Health Care/ OR *Total Quality Management/ or quality improvement.mp.

#4: #1 AND #2 AND #3

The literature search was conducted on 12 February 2011. The reference lists of the selected articles were also reviewed to identify further studies of interest, and to ensure that potentially relevant articles were reviewed. Articles published up to January 2011 were included. Published non-English citations and citations without an abstract were excluded. Articles relevant to the objectives of this review were included using the following inclusion criteria:

(1) Population was hospitals;

利用SWOT分析影響認證計劃實施的因素和認證過程對醫院質素改善的影響

目的 找出影響醫院認證計劃實施的因素和評估認證過程對於公立醫院在質素改善方面的影響。

資料來源 利用Medline（OvidSP）和PubMed這兩個電子數據庫進行有系統搜索以尋找相關的文獻。

研究篩選 以「公立醫院」（public hospital）、「醫院認證」（hospital accreditation）和「質素改善」（quality improvement）作為搜索的關鍵詞。最初尋找到共348篇相關文獻。經嚴謹分析及評估後選取了共26篇文獻並納入本研究範圍。

數據選取 在已納入研究範圍的文獻中選取數據，並以SWOT進行分析（即將數據歸納為優點、弱點、機會或威脅）。

數據綜合 研究發現認證計劃的優點包括有助提升員工的凝聚力及溝通、建立不同部門跨專科合作、正面改善機構文化，以及提升領導和員工對持續質素改善的意識。弱點包括機構對改革的抗拒、員工工作量增加、對持續質素改善的認知不足、對有關持續質素改善的員工培訓及支援不足、缺乏本地適用的認證標準及缺乏量度表現的指標。機會包括識別可改善之處、促進病人安全、增加額外資金、提升公眾認受性及市場優勢。威脅包括機會主義行為、削減經費、缺乏鼓勵參與的誘因和以規管方式要求強制參與。

結論 本研究以所得的結果在認證計劃的運作安排上，討論了有助成功實施認證計劃的因素及認證計劃如何推動質素改善。本研究結果有助於不同持份者（政府、公眾、病人和醫療服務提供者）考慮與開展認證計劃的相關問題。

(2) Intervention was implementation of hospital accreditation programmes;
(3) Comparators included other quality improvement strategies, before-and-after comparison, or no intervention;
(4) Outcomes included the impacts of accreditation on quality improvement, or identification of factors or barriers that affect the successful implementation of accreditation programmes;
(5) Study design included observational studies (eg time series, cohort, cross-sectional, controlled and uncontrolled before-and-after comparison) or qualitative studies (eg discussion articles, case studies, and commentaries).

Since it is difficult to evaluate quality improvement programmes based on experimental methodologies,[6] in order to provide a comprehensive assessment on the impact of accreditation on quality improvements in hospitals, this review included qualitative studies. Observational studies of any design and qualitative studies were included if they were relevant to the objectives. Articles irrelevant to the research questions or articles on single-specialty accreditation programmes and accreditation of training were excluded. Reviews, periodicals, and conference reports were also excluded. All relevant data of the selected papers were extracted and summarised. Factors which may affect the implementation of accreditation were identified and analysed, using a SWOT analysis to illustrate their potential implications.

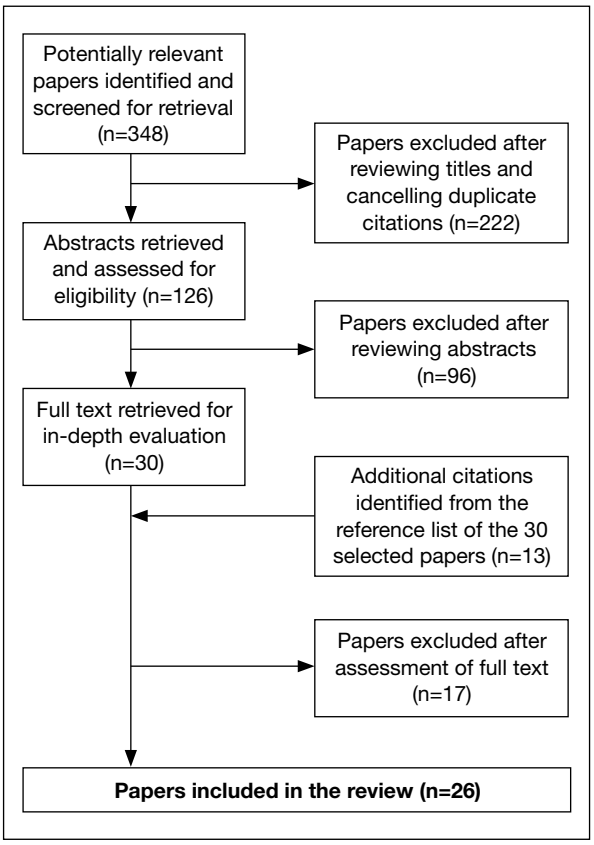

FIG. Selection process from databases of Medline Ovid and PubMed

Results

Initially, 348 citations were identified from the electronic database search; 126 citations remained after the first round of exclusions based on scanning of the titles and cancellation of duplicate citations. After reviewing the abstracts, 30 citations remained and full texts of these were retrieved for further assessment. The reference lists of these 30 articles were also reviewed and 13 additional citations identified. The selection process is illustrated in the Figure. After critical appraisal and selection of the studies based on the defined inclusion criteria, 26 articles were utilised in the final review. These included 9 cross-sectional studies, 12 discussion articles, and 5 commentaries.

Data in the selected articles were summarised with respect to details regarding study design, setting and participants, outcome measures, and key findings (Table 1[4,6-8,17-38]). As presented hereafter, factors affecting the implementation of hospital accreditation programmes and the impact of accreditation exercises were identified. These were analysed and classified using a SWOT analysis (Table 2).

Factors affecting the implementation of hospital accreditation programmes

Linking to funding mechanisms

Hospital participation in accreditation programmes may be associated with direct financial incentives, such as core funding or reimbursement. It has been suggested that the strongest drive for hospital accreditation could be the prospect of additional funding.[17] Hospitals may have to demonstrate quality care in order to satisfy funding and reimbursements agencies' requirements for acceptable quality assurance systems.[18]

In the United States, accreditation has a substantial impact on a hospital's accountability for quality of care, because participation in accreditation allows the hospital to participate in Medicare, which may act as a major source of funding.[19] Many hospitals in the United States rely on the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) accreditation programme for continued participation in the Medicare and Medicaid programmes. Such participation provides an enormous share of reimbursements for most health care institutions, by fulfilling the requirements of hospital bond indentures, and for participation

TABLE 1. Summary of studies included for systematic review

ACHS denotes Australian Council on Healthcare Standards, AHRQ Agency for Healthcare Research and Quality, ANAES Agence Nationale d'Accréditation et d'Evaluation en Santé (National Agency in Accreditation and Evaluation in Health Care), CBA Consortium for Brazilian Accreditation, COHSASA Council for Health Service Accreditation of Southern Africa, CQI continuous quality improvement, FOES final overall evaluation score, HSP Hospital Standardization Programmes, IQIs/PSIs Inpatient Quality Indicators and Patient Safety Indicators, JCAHO Joint Commission on Accreditation of Healthcare Organizations, and QI quality improvement

Study	Study design	Setting and participants	Outcome measures	Key findings
Linking to funding mechanisms				
El-Jardali,[7] 2007	Discussion article	Discussion of hospital accreditation policy in Lebanon from year 2001 to 2005	Not applicable	• Hospitals might adopt opportunistic behaviours with the aim of gaining the accreditation if the hospital funding mechanisms are linked to the accreditation • Setting up an independent body dedicated to quality improvements in hospitals can minimise the political interference to the hospital accreditation policy • Barriers for effective implementation of hospital accreditation policy included organisational culture of resistance to change
Shaw,[17] 2004	Commentary	Discussion of the use of external assessment of health services	Not applicable	• The strongest drive for hospital accreditation was the prospect of access to additional funding • Organisational development was one of the major motives of hospital management to implement accreditation programme
Mandatory versus voluntary nature of accreditation				
Pomey et al,[25] 2005	Discussion article	Discussion of French accreditation system and its impacts on hospital budgetary allocation and accreditation policies	Not applicable	• Accreditation may be regarded as an inspection rather than a CQI process if it is mandatory • Hospitals may adopt strategic behaviours aimed at merely attaining accreditation if the accreditation results are used for resource allocation • The use of accreditation results should be clear and using it for financial sanction is not recommended
de Noronha and Pereira,[24] 1998	Discussion article	Discussion of the quality improvement initiatives, the Five-Track Quality Improvement Strategy, in Brazil	Not applicable	• Accreditation was proposed to be voluntary, distinct from regular legal licensing procedures and to be conducted by independent, non-governmental accreditation agencies • The accreditation result was not linked to funding mechanisms and the report was not publicly disclosed
Shaw,[8] 2001	Commentary	Discussion of characteristics and deficiencies of external assessment of health care in Britain	Not applicable	• Different voluntary and statutory external assessment programmes needed to be integrated to ensure valid standards, consistent assessment, transparency, and public accountability • Accreditation programmes should be patient-centred, clinically focused, complementary to internal quality improvement and results should be publicly available • Absence of government lead and lack of national coordination were the causes for various accreditation programmes developed with little integration, consistency, and reciprocity
Shin,[37] 1995	Commentary	Discussion of history and characteristics of international accreditation programmes and the Korea accreditation programme	Not applicable	• The accreditation programme in Korea started since the Korean Hospital Association introduced the HSP in 1981 • The accreditation programme in Korea was voluntary and the accreditation status and evaluation process were not open to the public • Participation in the HSP influenced the designation of inter-resident training hospitals and the number of trainees allocated
Staff engagement and communication				
Whittaker et al,[33] 2000	Discussion article	Discussion of the overview of accreditation programme in South Africa	Not applicable	• The pilot accreditation programme in South Africa incorporated an integrated, multidisciplinary, and CQI approach with emphasis on capacity building of hospital staff • Accreditation standards were reviewed, adapted to local conditions and constantly updated • Recommendation for accreditation was by an independent and non-profitable accreditation body, the COHSASA
Leadership and staff training				
Braithwaite et al,[4] 2010	Cross-sectional study	Independent blinded assessment of organisational performance data in a random, stratified sample of 19 acute care hospitals in Australia from 2001-2006	Correlations of accreditation performance with organisational culture, organisational climate, consumer involvement, leadership and clinical performance	• Accreditation performance was positively correlated with organisational culture and leadership, and a positive trend was observed between accreditation and clinical performance • Accreditation was unrelated to organisational climate and consumer involvement
El-Jardali et al,[23] 2008	Cross-sectional study	Questionnaire survey of 1048 nurses from 59 accredited hospitals in Lebanon	Customer satisfaction, quality of services provided by the administration, quality of care, quality of services provided by clinical support departments and overall quality of health services	• Leadership, commitment and support, use of data, quality management, staff involvement and hospital size were predictors of quality improvement during and after accreditation process • How senior hospital management managed the accreditation process and the capability of the hospital to use data to improve quality had direct effects on quality improvement • Quality management had the greatest impact on medium-sized hospitals and staff involvement in accreditation had the greatest impact on small-sized hospitals

TABLE 1. (cont'd)

Study	Study design	Setting and participants	Outcome measures	Key findings
Maguerez et al,[27] 2001	Discussion article	Review of 64 CQI projects on patient safety and patient management in France through meeting with project leaders and on-site visits	Not applicable	• Hospital management provided continued support, offered training, created a CQI unit, and allocated a budget to support CQI projects • CQI projects had positive impact on staff attitudes by fostering acceptance of change
Increased staff workload				
Daucourt and Michel,[30] 2003	Discussion article	Review of the French first 100 summaries of accreditation reports available from the ANAES	Not applicable	• Information given to patients and its traceability on patient records, and signing of prescriptions for medication were mostly frequently identified as high-priority areas that needed improvement • No significant difference in accreditation results between hospitals of different sizes and status
Meadows,[29] 2003	Commentary	Discussion of the use of information systems on enhancing regulatory compliance and improving patient safety	Not applicable	• Regulatory requirements from accreditation agency could generate extensive workload on administrative tasks and the use of information system could streamline compliance
Integration and utilisation of information				
Pongpirul et al,[26] 2006	Cross-sectional study	Questionnaire survey of 728 health care professionals in 39 hospitals and 41 nationally registered surveyors in Thailand	Health care professionals' and surveyors' opinions towards 24 selected items in national hospital accreditation standards	• 'Integration and utilisation of information' was considered the major obstacle by both health care professionals and surveyors • 'Adequacy of staff' ranked the highest as a major obstacle by health care professionals • 'Discharge and referral process' and 'medical recording process' were the major obstacles as considered by surveyors
Sunol et al,[31] 2009	Cross-sectional study	Phase I: Questionnaire survey of 389 acute hospitals in 8 European Union countries; Phase II: On-site audits in 89 participating hospitals	Clinical outputs; safety; patient-centredness; cross-border patient-centredness	• Implementation of both internal and external quality improvement strategies in hospitals had beneficial effects on the hospital outputs in terms of clinical, safety, patient-centredness, and cross-border patient-centredness • Internal quality improvement strategies were inter-related at the same organisational level • Different developmental levels in quality improvement was observed within a hospital
Adoption of accreditation standards				
de Noronha et al,[32] 1999	Discussion article	Discussion of the progress of accreditation in Brazil in 1994-1998	Not applicable	• A non-governmental accreditation agency, the CBA, was established in Brazil in 1994 • CBA was responsible for the development of national standards and procedures for the accreditation of health services by adapting the 1996 hospital standards from JCAHO • Cultural acceptance, relevance to the Brazilian health care system, compatibility with Brazilian laws and regulations and adaptability to both public and private hospitals were considered when adapting the accreditation standards from JCAHO
Ovretveit,[36] 2001	Discussion article	Discussion of the criteria and considerations for selecting quality evaluation scheme to assess quality in health care organisations	Not applicable	• How a quality evaluation scheme was introduced and implemented could be more important than which particular scheme was chosen • Balance between simplicity and low cost with scientific validity and credibility was important for the success for quality evaluation scheme
Collopy,[38] 1995	Discussion article	Discussion of the revision of the ACHS survey programme and standards to address the process of care by introducing clinical performance measures into the accreditation process in Australia	Not applicable	• The ACHS developed 150 clinical performance measures to address the process of care, including the process of access, assessment, treatment, discharge, follow-up, and community linkages
Patient safety/reducing medical errors				
Devers et al,[21] 2004	Cross-sectional study	87 Interviews with hospital chief executive officers and directors for patient safety initiatives, 226 interviews with employers and insurance brokers, and 32 questionnaire surveys to key staff responsible for patient safety in hospitals in the US in 2002-2003	Hospitals' patient safety initiatives, level of implementation of JCAHO-related patient safety initiatives, facilitators and barriers of hospitals' safety improvement	• A quasi-regulatory organisation (the JCAHO) was the most effective to reduce medical errors and to drive patient safety initiatives than professionalism and market forces • Meeting JCAHO requirements was the primary driver of patient-safety initiatives in hospitals, especially in areas of reporting and preventing sentinel events, meeting patient safety standards and JCAHO patient safety goals • Medicare was found to be a major facilitator for patient safety improvement as hospitals must be accredited by JCAHO to participate in Medicare • Absence of strong local market incentives and lack of resources and IT infrastructure were found to be major barriers for patient safety improvement

TABLE 1. (cont'd)

Study	Study design	Setting and participants	Outcome measures	Key findings
Hosford,[34] 2008	Cross-sectional study	Questionnaire survey of hospital administrators from 145 hospitals in 45 states in the US in 2006	Reduction or prevention of medical errors	• JCAHO accreditation was an effective intervention to reduce medical errors while medical error reporting and increased public awareness were not effective • Progress of implementing patient safety standards and medical error management system was more substantial in JCAHO-accredited hospitals than non-accredited hospitals • 74% Hospitals provided training to the key personnel who were responsible for implementation of quality improvement strategies, and 96% hospitals provided staff training related to quality improvement
Miller et al,[20] 2005	Cross-sectional study	Analysis of JCAHO accreditation scores and the AHRQ's IQIs/PSIs in 2116 hospitals in the US in 1997-1999	IQIs, PSIs, JCAHO scores, JCAHO FOES, and accreditation decisions	• No significant relationship between accreditation scores and IQIs/PSIs and between JCAHO categorical accreditation decisions and IQI/PSI performance • Worse performance on the PSI factor was associated with worse performance on JCAHO scores • Most hospitals scored high FOES despite broad variation in IQI performance
Mulholland,[22] 2002	Discussion article	Discussion of the legal and operational issues related to JCAHO unanticipated outcomes disclosure standard in the US	Not applicable	• Courts may refer to the JCAHO standards as the hospital standard of care and potential liability may be resulted if hospitals fail to observe these standards and cause harm to patients • The JCAHO developed the unanticipated outcomes disclosure standard and an elaborate system of requirements for identifying and analysing sentinel events to respond to concerns on patient safety • Existing concerns on disclosure of privileged documents to an outside agency like the JACHO could constitute a waiver of the privilege
Ovretveit and Gustafson,[6] 2002	Discussion article	Discussion of the challenges and methods of how to evaluate and improve the effectiveness of quality improvement programmes	Not applicable	• Methodological challenges of measuring the outcomes and attributing causality to complex and long-term accreditation programme were reasons for the lack of evaluation research • Evaluation of quality improvement could be improved by measuring the level of implementation, using wider outcome assessment and developing an explanatory theory
Public disclosure				
Laschober et al,[28] 2007	Cross-sectional study	Telephone survey of 650 senior hospital executives and 664 directors of hospital QI departments from 800 acute-care hospitals in 50 states and the District of Columbia in the US in 2005	No. of QI initiatives in 4 clinical areas: heart attack, congestive heart failure, pneumonia, and surgical infection prevention; frequency of internal sharing and requests of hospital performance data	• Public reporting of hospital quality measures helped to focus hospital leadership attention to QI, increase investment in QI projects, raise staff attention to best practice guidelines and improve internal sharing of QI results • Large (>300 beds), JCAHO-accredited hospitals responded to public reporting efforts more consistently than small, non-JCAHO accredited hospitals • Public reaction to hospital performance reporting was moderate, while internal sharing and use of public reporting were more prevalent within hospitals
Weil,[35] 2001	Commentary	Discussion of the impact of public disclosure on quality improvement and cost reduction	Not applicable	• Whether public disclosure of quality of care and financial information could result in quality improvement or cost reduction depended on the indicators chosen and amount of information disclosed to the public • It could be difficult for patients to compare the quality of care and cost of different health care providers if the accreditation results disclosed to the public limited to whether the organisation was accredited or not
Pawlson and O'Kane,[19] 2002	Discussion article	Discussion of the impact of professionalism, regulation, accreditation, and market forces on accountability for quality of care	Not applicable	• Accreditation results disclosed to the public limiting to the organisation accredited or not may not be sufficient for patients to compare the quality among different hospitals • Accreditation had a substantial impact on hospital accountability for quality of care in the US as participation in accreditation was required for the hospitals to participate in Medicare, a major source of funding for hospitals • Proliferation of new services and products in health care was an important challenge to accreditation as accreditation process focused largely on in-patient standards
Increased investment and resources dedicated to quality improvement				
Hadley and McGurrin,[18] 1988	Cross-sectional study	Survey conducted by the National Institute of Mental Health of 216 state psychiatric hospitals in the US in 1983	Average cost per patient, per diem bed cost, total staff hours per patient, clinical staff hours per patient, % of staff hours provided by medical staff, bed turnover and % of beds occupied	• JCAHO-accredited hospitals had higher values of average cost per patient, per diem bed cost, clinical staff hours per patient, % of staff hours provided by medical staff, bed turnover and % of beds occupied than hospitals without accreditation • Higher values on the 7 hospital characteristics (outcome measures) may reflect conditions necessary for better quality of care

TABLE 2. SWOT analysis of hospital accreditation*

	Internal	External
Positive	Strengths ■ Staff engagement & communication ■ Multidisciplinary team building & collaboration ■ Change in organisational culture ■ Enhanced leadership & staff training ■ Integration & utilisation of information ■ Increased resources dedicated to CQI	Opportunities ■ CQI ■ Identification & prioritisation of improvement areas ■ Enhanced patient safety & reduction of medical errors ■ Additional funding ■ Public recognition ■ Advantage in market competition ■ Development of suitable accreditation standards for local use
Negative	Weaknesses ■ Organisational culture of resistance to change ■ Increased staff workload ■ Lack of awareness on CQI ■ Insufficient staff training & support for CQI ■ Lack of applicable accreditation standards for local use ■ Lack of performance outcome measures	Threats ■ Hawthorne effects & opportunistic behaviours ■ Resource & funding cuts ■ Lack of incentives for participation ■ A regulatory approach for mandatory participation ■ High costs for sustaining the programmes

* CQI denotes continuous quality improvement

in third-party payer programmes.[20-22] This evidently provided a strong incentive for hospitals to meet JCAHO's requirements, with Medicare being a major facilitator of patient safety improvement.[21]

In Lebanon, hospital accreditation policy has been regarded as an incentive-based regulation, as its payment system links accreditation to reimbursement.[7] Accreditation has been linked to contracting with private hospitals, where hospitals may lose health services contracts if they fail to obtain accreditation.[23] By contrast, in other countries like Brazil, there is no financial incentive for hospitals to seek accreditation.[24] Accreditation alone may not be sufficient to promote high quality of care per se, but the latter may be achieved when accreditation is strongly linked to payment or incentive schemes.

Mandatory versus voluntary nature of accreditation

The high costs of sustaining accreditation programmes and the lack of incentives may act as obstacles during the implementation of accreditation.[39] Mandatory accreditation programmes may be regarded as a control measure for the government to inspect hospitals, but this can generate mistrust among the health care professionals.[25] Quality improvement processes may similarly be regarded as merely a formality for completion of accreditation.[26] Moreover, much effort may be spent on standardising practices and resolving safety issues during the accreditation process, which in turn may hinder organisational development of actual quality improvement.[25]

Staff engagement and communication

Good communication within hospitals and the establishment of multidisciplinary teams, in which physicians participate actively, could facilitate the success of continuous quality improvement (CQI) implementation.[6,27] Resistance to quality improvement from health care professionals has been observed[40]; physicians can even be reluctant to participate in accreditation.[41,42] The lack of physician involvement is reported to be a barrier to improvement,[28] just as insufficient staff involvement has been identified as a major obstacle to the accreditation process.[23,26] Problems with engendering staff participation and communication between departments have also been identified as detrimental to quality improvements.[26]

Leadership and staff training

How senior hospital management manages the accreditation process has direct effects on quality improvement.[23] It has been reported that accreditation performance correlated positively with organisational culture and leadership.[4] Leadership, commitment, support, and quality management were predictors of quality improvement during and after the accreditation process.[23] Coherence, with the CQI project overseen and managed by a single commissioned team, can facilitate the success of their implementation.[27]

Increased staff workload

The regulatory requirements from accreditation agencies may generate significant workload in terms of administrative tasks, and compliance with these requirements often results in time-consuming documentation and audit activities.[28,29] Documentation of patient care management was the major obstacle identified by surveyors of national accreditation programmes in Thailand.[26] Information given to patients and its traceability on patient records, and the signing of prescriptions for medication were the most frequently identified defects.[30]

Integration and utilisation of information

The capability of hospitals to use data was found to be significantly associated with quality improvement in accredited hospitals, due to better assessment of performance and compliance with accreditation standards.[23] Integration and utilisation of information was considered to be the major obstacle by both health care professionals and surveyors of national accreditation programmes in Thailand.[26] It was also reported that there could be different developmental levels in quality improvement through accreditation within a hospital.[31]

Adoption of accreditation standards

Cultural acceptance, relevance to the local health care system, compatibility with local laws and regulations, and adaptability to both public and private hospitals were all significant factors to consider when adopting international accreditation standards for local use.[6,32] Patient-centredness and a clinical focus that are complementary to internal quality improvement and publicly-available results were also identified as critical criteria.[8]

Impacts of hospital accreditation

The impact of accreditation was categorised into four areas, namely: personnel and staff, organisation and management, clinical practice, and public and consumers.

Multidisciplinary team building and collaborations were the major impacts for personnel and staff. The accreditation process involves participation by frontline staff to senior management, and provides an opportunity for improving staff communication and sharing of values on quality improvement.[25] It has been reported that an accreditation process may increase staff motivation and improve communication between different service units.[33] The teamwork culture is associated with the willingness of staff to undertake quality improvement initiatives.[23] Moreover, internal quality improvement strategies are inter-related at the same organisational level.[31] Hence, the successful implementation of quality improvement strategies in one area may at the same time facilitate implementation in another.

For organisation and management, the Hawthorne effect and opportunistic behaviours, and increased resources dedicated to quality improvement have been identified as potential impacts of accreditation. Opportunistic behaviours have been observed in hospitals that aim to achieve accreditation status, especially when this was linked to funding mechanisms.[7,25] Hospitals may comply with accreditation standards only during the survey period as a 'one-off focused activity', with doubtful impact on the actual ability of accreditation to bring about continuous improvements.[7]

For clinical practice, the identified impacts include patient safety, reduction of medical errors, and public disclosure. Accreditation may facilitate development of hospital quality management systems (eg documentation management, internal audits, and risk management), and standardise existing treatment and documentation procedures, all of which may improve patient safety.[43] A quasi-regulatory organisation, such as the JCAHO, has been reported to be the most effective in reducing medical errors and driving patient safety initiatives, and not other mechanisms such as professionalism, market forces, medical error reporting, and increased public awareness.[21,34] It has been reported that progress in implementing patient safety standards and medical error management systems were more substantial in JCAHO-accredited hospitals than those that were non-accredited; the former also had more mature medical error management systems.[34] Although a positive correlation trend has been observed between accreditation and clinical performances,[4] contradictory results have also been reported. Notably, no significant relationship was found between JCAHO accreditation scores and Inpatient Quality Indicators and Patient Safety Indicators (IQIs/PSIs), and between JCAHO categorical accreditation decisions and IQI/PSI performance.[20]

Patient choice and market competition were the major impacts identified for the public and for consumers. The market pressure from health care consumers and health care providers' interests in upholding their reputations appeared to motivate providers to implement CQI programmes.[28] Accreditation may serve to provide hospitals with a symbolic 'brand image', which may then be presented to patients as a marketing strategy or to government or regulatory bodies for resource allocation.[25] Thus, attaining accreditation may provide health care providers advantages in competitive health care markets.[44] However, the simplified way of labelling hospitals as either 'accredited' or 'not accredited' without detailing their strengths and weaknesses may not be sufficient for patients to compare the quality of care and costs of various providers and thus make the appropriate choices.[19,35]

Discussion

A SWOT analysis was employed in this review to illustrate factors which may affect the implementation of accreditation programmes and their potential implications (Table 2). It aimed to identify the internal strengths and weaknesses of an organisation, along with external market opportunities and threats.[45] Increased staff engagement and communication,

multidisciplinary team building, positive change in organisational culture, enhanced leadership and staff training, increased integration and utilisation of information, and increased resources dedicated to CQI were identified as internal positive factors (ie strengths) that may facilitate the successful implementation of accreditation programmes. Internal negative factors (ie weaknesses) included barriers such as organisational resistance to change, increased staff workload, lack of awareness on CQI, insufficient staff training and support for CQI, lack of applicable accreditation standards for local use, and lack of performance outcome measures.

This review also identified external positive factors (ie opportunities), including identification of areas to improve, enhanced patient safety, additional funding, public recognition, market advantage, and development of suitable accreditation standards for local use. External negative factors (ie threats) included opportunistic behaviours, funding cuts, lack of incentives for participation, a regulatory approach for mandatory participation, and high costs. Since accreditation programmes involve different stakeholders with different interests, a factor can be a strength or a weakness, an opportunity or a threat in a SWOT analysis, depending on the point of views or expectations. The differences between strengths and weaknesses and between opportunities and threats could be arbitrary, especially in the complex and dynamic context of the health care sector.[46]

Accreditation's rapid growth has been driven by government, purchasers, and the public.[47] The uptake and success of external quality mechanisms, including accreditation, are strongly associated with that country's political, social, and economic climate, which determine the incentives and disincentives for participation.[48,49] This demonstrates the need for a process of political, social, and professional preparation before starting a programme. The importance of understanding accreditation in the context of policy has been emphasised, as different countries have different financial support structures, means of payment, and coordination instruments of the service network. Indeed all of these can shape the accreditation process.[50] Based on the results of this review, implications for successful implementation of accreditation programmes and how they may drive quality improvement are discussed in the context of operational issues as follows.

Defining the programme objectives

For any policy-planning process, defining what aims to achieve is the first and foremost question to consider. The objectives of hospitals to embark on accreditation programmes may include organisational development, public accountability, or to fulfil government regulations. As identified in this review, CQI, advantage in market competition, public recognition, and additional funding were the opportunities for hospital accreditation. However, the balance between organisational development and regulatory control should be established, because a mandatory regulatory approach, Hawthorne effects, and opportunistic behaviours could harm the potential of accreditation in driving quality improvement.

Identifying and engaging stakeholders

The importance of involving the public, purchasers, and government in establishing standards and setting policies in external quality mechanisms has been highlighted.[47] Staff engagement and communication, multidisciplinary team building and collaboration were the identified strengths of accreditation. Thus, developing a receptive environment with mechanisms in place to cooperate and communicate with professionals, academics, and governmental bodies can be beneficial.

Defining the incentives for participation

Incentives for accreditation could include legal requirements, for marketing and publicity, becoming consistent with government policy, and for voluntary organisational development.[51] The incentives for participation in accreditation may vary among public and private hospitals. For public hospitals, accreditation may help to provide evaluation data for performance assessment, which could inform policy-planning decisions and improve facilities. They may also address the public's calls for health care professionals to guarantee quality of care by using more effective strategies to monitor and evaluate performances. In the private sector, the acquisition of accreditation may enhance public image and market advantages. Moreover, market-driven force could be exploited as the major incentive for private hospitals to participate in accreditation programmes.

Defining the relationship to government and establishing an agency

The relationships between accreditation programmes and governments can be discussed in terms of the management, funding, and recognition. Lack of leadership from governments and the lack of national coordination have been reported to be the main causes of the poor integration, consistency, and reciprocity observed in accreditation programmes.[8] Policy on hospital accreditation may be influenced by political will and pressure. Setting up independent bodies dedicated to quality improvements in hospitals but external to the government have the advantage of being relatively less prone to political

interference.[7] If the primary aim is for regulation and public accountability, programmes may be funded and managed directly by the government. If accreditation is voluntary, hospitals which embark on accreditation programmes are more likely to be those with higher quality of services and the abilities to meet necessary standards.[52] The result is that the hospitals which need improvement are least likely to seek accreditation and may therefore remain unidentified.

Standards development

Lack of applicable accreditation standards for local use is a weakness that may hinder successful implementation. The development of standards mainly based on legislation, expert advice, research, current practices and overseas experience, and recent development tend to emphasise the interface between management units and to follow patients' continuum of care.[48] Thus, the process of developing local standards requires review and modification of existing international standards to meet local laws, organisations and expectations, and recourse to pilot hospitals to test the practicality of the standards.[48] During the adoption of suitable accreditation standards, it is important to balance simplicity and low cost with scientific validity and credibility.[36]

Accreditation process

Based on the barriers identified, it is important to assess what would encourage or discourage staff and organisations to change and participate in accreditation in any particular hospital. As allocation of resources to enhance leadership and staff training, and enhance integration and utilisation of information could facilitate accreditation programmes, a systematic process of ongoing quality monitoring would be useful to allow a continuous feedback loop by which a hospital could assess its own outcomes and make organisational improvements when needed.[53]

Sustaining the programme

Consistency of policy support, programme funding, and incentives for participation could be the challenges to sustain the programme.[51] Lack of incentives for participation and high costs for sustaining such programmes were identified as threats to accreditation. It is critical to plan ahead with respect to infrastructure, research, and development costs in different stages of implementation, as well as to secure funding.

Hospital accreditation in Hong Kong

In Hong Kong, fundamental issues for the public sector to consider before embarking on accreditation included determining the incentives for participation, staffing and resource requirements, as well as the benefits and challenges accruing to public hospitals.[54] The pilot scheme of hospital accreditation in Hong Kong was launched with collaboration from the government, the Hospital Authority, and the Hong Kong Private Hospitals Association. It has emphasised the importance of engaging different stakeholders. The keys to success were previously summarised as: (1) partnering with international accreditation organisations; (2) policy support and leadership; (3) stakeholders engagement and education; (4) harmonisation with international standards; and (5) development of a local surveyor system.[54] The experience of one of the public hospitals that participated in the pilot scheme highlighted the importance of bringing about positive change in organisational culture and enhancing multidisciplinary team collaboration and staff engagement.[55] These are all in accordance with the findings from this review.

Limitations

The heterogeneity of the foci of discussions and the methodological flaws intrinsic to individual studies included may limit the applicability and generalisability of this review's findings. It is difficult to evaluate quality improvement programmes based on experimental methodologies and there are methodological challenges to measure the outcomes of accreditation and attribute causality to such complex and long-term interventions.[6] There was a low level of methodological rigour in most of the studies included in this review, as outcome measures were ambiguous and only limited operational details were reported. Many of the articles reviewed were at the level of opinion pieces and observational studies. Critical appraisal of qualitative research included in this review relied largely on the subjective judgement of respective authors. To minimise biases, this type of review may benefit from participation by experts with a range of viewpoints.

The SWOT analysis has limitations in assessing the interconnecting factors related to accreditation. It does not differentiate well between enabling factors and the impact of accreditation as the cause-and-effect relationship could not be demonstrated. Since the programme involves numerous stakeholders, SWOT analysis is limited in clearly illustrating the impacts on were to which specific parties. Other reported limitations relate to inadequate definition of factors (eg factors may fit into more than one category) and the lack of prioritisation.[56] The advantages of using SWOT analysis in this review were that it allowed the health care stakeholders to focus attention on key issues that affect implementation and to recognise

their implications. This may help inform policy formulation, especially as randomised controlled trials for a health care intervention are often difficult to conduct at a community level.

This review described the implications of the results generally applicable to health care systems. It should be noted that health care systems—in terms of the financing systems, mechanisms of service provision and policy agendas—can differ significantly in different countries and between public and private sectors. Therefore, the identified factors and impacts related to accreditation in this review may only serve as references to the local situation in Hong Kong. Ideally, a more comprehensive evaluation of the subject matter should have included the cost-effectiveness of accreditation, but regrettably this was outside the original scope of this review.

Future work

Future work may focus on determining how to correlate accreditation results with clinical indicators and demonstrate associations between compliance to standards and benefits to patient care. Continued reviews of the practicality of accreditation standards, establishing regional networking, and exchanges of experiences on accreditation implementation between hospitals and accreditation bodies may all serve to facilitate more effective implementation of programmes. In relation to the recent accreditation scheme in Hong Kong, future follow-up studies to identify the factors necessary for successful accreditation in local hospitals which have undergone the accreditation process may be useful to ascertain the benefits and improvement areas of the scheme.

The value of accreditation in cost-benefits terms has not been well demonstrated[10] and cost-effectiveness research is currently lacking.[36] Various joint efforts have been recently initiated. For example, the ACCREDIT project aimed at evaluating the effectiveness of Australian accreditation,[10] and the DUQuE project was designed to study how organisational quality improvement systems, organisational culture, professional involvement, and patient empowerment are related to quality of hospital care.[57] Considering the time, effort, and resources needed for accreditation programmes, it is essential to have well-designed research into the effectiveness and cost-effectiveness of such programmes and on future improvements.

Conclusions

Despite the lack of convincing evidence showing the effectiveness of accreditation programmes, the present review demonstrates that their merits may possibly include increased staff engagement and communication, multidisciplinary team building, positive changes in organisational culture, and enhanced leadership and staff awareness about CQI. By relating the findings to the operational issues of accreditation, this review discussed the implications for successful implementation and how this may drive quality improvement. These findings have important implications for the government, the public, patients, and health care providers, whenever embarking on accreditation exercises is being considered.

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