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Context

Regions and Autonomous Provinces are responsible for establishing and managing institutional accreditation in Italy; this decentralised model led to a different evolution of legislation regarding accreditation and to diverse implementation methods.

Recently, the need to agree upon common standards and procedures for accreditation has arisen, also taking into account recent European guidance aimed at promoting cooperation among Member States to ensure safe and high quality healthcare (Directive 2011/24/EU). The institutions involved (Ministry of Health, Agenas, the Regions/Autonomous Provinces) cooperated in revising the system to define a national model for accreditation of health facilities.

Methods

As a result of an extensive discussion and sharing process, a national framework for accreditation was established. This accomplishment is summarised in the “Technical specification for reviewing legislation on accreditation,” a document which identifies 28 standards and 123 criteria. Standards and criteria refer to 8 policy statements regarding: management system of healthcare organizations, services, suitability of facilities and equipment, staff skills, communication, clinical appropriateness and safety, improvement and innovation, patient centeredness.

The document has been shared with the Regions/Autonomous Provinces and formally approved by the State/Regions Agreement of December 20th, 2012 (rep. atti n. 259/CSR).

By using the same, shared methodology, deadlines have been defined for implementation of the national standards for healthcare organizations and guidelines have been adopted for the functioning of the 21 Regional Accrediting Agencies, to further ensure uniform procedures throughout the country (State/Regions Agreement of February 19th, 2015 - rep. atti n. 32/CSR).

Results

A nationwide accreditation system has been implemented in Italy, based on elements considered as essential to ensure quality and safety of care. Currently, the Regions/Autonomous Provinces are working to adapt their accreditation systems to the national standards, by reviewing and integrating accreditation manuals and setting-up/adapting Regional Accrediting Agencies.

A National Working Group will be in charge of monitoring the regional systems adaptation processes also through carrying out specific audits at regional level. In carrying out this task, the Working Group will be supported by auditors specifically trained and included in a national register. The training course for national auditors, organized by Agenas in 2016, was planned with the aim of providing an overview of the national legislative framework and of developing shared and validated procedures and evaluation tools for auditing the Regional Accrediting Agencies.

Discussion

In the last five years, accreditation has been the focus of major national reforms and revision. The key elements that contributed to the success of the initiative have been the involvement of the different institutional stakeholders in defining the new system and the adoption of shared conceptual frameworks and procedures. In the next years, it will be crucial and challenging for the National level to support and monitor the implementation of the new system at the regional level.

The Italian path towards standardization of the different regional accreditation models, supported by a strong cooperation between central and regional levels could represent a model to be followed in other national and international contexts.

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Context

Health systems across Europe face the challenge of meeting growing demand for healthcare with increasingly limited resources. Since 2010/11, the pace of healthcare funding growth in England has slowed significantly at a time when the National Health Service (NHS) is treating more patients than ever before.

There are a range of ways in which healthcare organisations can respond when funding does not cover demand. This research seeks to understand what impact recent NHS financial pressures have had on patient care and whether that impact differs in different parts of the health system.

Methods

We explored the impact of financial pressures in four different service areas: genito-urinary medicine (GUM), district nursing, hip replacement and neonatal services. These were selected to vary in terms of their commissioner, position on the patient pathway, payment arrangements and provider type. For each service we: reviewed relevant academic and grey literature; analysed published data on funding, activity and outcomes; conducted semi structured interviews (n=99) with relevant national stakeholders, patient representative organisations, commissioners and providers. As far as possible, we selected interviewees from organisations that varied in terms of performance (clinical and financial) and geography. Interviews were audio recorded and professionally transcribed. Transcripts were analysed thematically and combined with findings from the evidence review to develop structured accounts of the pressures facing each service area and their impact.

Results

For district nursing and GUM services, although there is significant geographical variation, we found evidence that static or reducing budgets are combining with other pressures to affect access and quality in some parts of the country. For hip replacement services, the first signs of patient care being widely affected may be emerging: although activity has grown in recent years and patient reported outcomes continue to be excellent, waiting times for the average patient are increasing and activity levels are lower this year than last. In contrast, available data on neonatal services shows performance at a national level has improved against a number of quality indicators in recent years. However, longstanding issues remain and there is considerable variation in performance between units. While we found examples of staff working hard to maintain service quality and innovate, there were also instances where innovation was stifled due to lack of resources.

Discussion

We found that a combination of financial and other pressures are affecting different NHS service areas to different degrees. In addition to explicit impacts that can be easily measured (like waiting times) financial pressures are affecting patient care in ways that are difficult to detect with currently available metrics. This highlights the importance of defining and monitoring quality in services where metrics are currently scarce. We also found evidence that staff are acting as shock absorbers, working longer hours and more intensely to protect patients. This is particularly worrying given the well-established link between staff wellbeing and care quality, and unlikely to be sustainable. With acute services such as hip replacement and neonatal care relatively protected so far, while some community-based and public health services like GUM and district nursing have been cut, the NHS appears to be moving away from its goal of joined-up services focused on prevention.

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Context

The introduction of medical revalidation – a requirement for all doctors in the United Kingdom to demonstrate their continuing fitness to practice once every five years in order to retain their licence with the General Medical Council – is the largest single change to medical regulation in the UK for decades. Revalidation was introduced in 2012, and by 2018 the first cycle of revalidation will be complete. There are some parallels with recertification in the USA though medical revalidation covers all doctors. Similar reforms are being considered in other countries. We examine the implementation and impact of these reforms.

Methods

We undertook a mixed methods study combining national surveys of all organisations employing doctors; in-depth qualitative case studies in 12 healthcare organisations; a cohort study using structured reviews of cases of doctors with performance problems; and a quantitative analysis of NHS hospital episode statistics (HES) data. For this we analysed data for all inpatients treated for myocardial infarction, hip fracture, pneumonia, stroke or that received bypass or hip replacement surgery in England between April 2008 and March 2015. We estimated comparative interrupted time-series models exploiting the fact that doctors were revalidated at different time points to isolate the effect of revalidation on performance from concurrent changes. All models adjusted for case-mix and time-invariant differences between clinicians. To test whether revalidation changed the rate doctors stop being clinically active we estimated survival models for all consultants who were clinically active in 10 large specialties in 2008/09.

Results

We found substantial evidence of both qualitative and quantitative changes in healthcare organisations and their oversight of doctors' practice as a direct result of the introduction of the requirement for revalidation, and that revalidation for some groups of doctors (locums, those in portfolio careers etc) was problematic. But our quantitative analysis found that revalidation is associated with very little change in patient outcomes such as readmission rates, mortality rates or length of stay. Consultants in the lowest quintile of performance on these measures in 2008/9 showed a very slightly larger effect of revalidation. The rate at which hospital consultants ceased clinical activity increased significantly around the introduction of revalidation.

Discussion

The introduction of medical revalidation has been a contested and controversial reform, with support from professional bodies and associations but considerable scepticism about its value and reluctance to engage from many doctors. We find that the reform has been successfully implemented across most healthcare organisations and groups of doctors, and we find that revalidation has led to changes in organisations and how they oversee medical performance and quality, and to some doctors exiting the workforce, but not yet to quantitative changes in quality measures in the areas we studied. The General Medical Council is now reviewing medical revalidation. Changes could be introduced to build on the experience to date and to maximise its impact on quality and safety.

Professionalism, Skill Mix and Change

Identifying motivational factors for Health Care Professionals.
A comparative study of the perceptions of physicians, nurses and medical-technical staff

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Context

The provision of high-quality health care depends on the institutional and technical design but also on the capabilities and efforts of the health care workforce. Health care reforms affect a number of critical aspects, among them working conditions, required skills and the remuneration and incentives system. Health care professionals can be regarded as strategic actors who can be supporting, blocking or distorting the proposed reform measures. An exploration of the motivating factors for today's health care professionals may generate valuable information on how to maintain or improve their motivation when developing new approaches to health care delivery.

Methods

The research was designed to answer the following three questions:

- What are the most important motivators for health care professionals?
- To what extent are their expectations met in their current workplace?
- How do the perceptions compare between the professional groups?

An online-questionnaire was developed to measure individual preferences for motivational factors and the degree of motivation. The development of the questionnaire was based on motivational theory, especially Herzberg's Two-Factor Theory, Mc Clelland's Need Achievement Theory and questionnaires used in previous studies on motivational factors in health care settings. The sample comprises physicians, nurses and medical-technical staff working in the inpatient and/or outpatient sector in order to capture diversity of practice settings.

Statistical methods include frequency distributions, explanatory factor analysis, internal consistency reliability test via Cronbach's alpha, parametric T-test and multivariate analyses. All analyses were performed with SPSS version 23.0.

Results

The response rate was the highest for medical-technical staff and lowest in the physician group. The three top motivators are work attributes (interesting work, meaningful work), autonomy (decision-making autonomy) and work-life balance. The second strongest motivator is recognition followed by social relationships (teamwork, networking, peer support). The lowest ranked motivators are payment and job security.

A parametric T-test was conducted to analyse the difference in the responses according to profession, age group, working experience and work-life preferences. The top motivators were ranked similar in all groups. Significant differences ($p < 0.05$) in the importance of motivators have been found between professional groups. Social relationships for example perceived nurses higher than other professional groups. Payment was more important to medical-technical staff compared to other professions.

Discussion

Mastering the challenges of today's health care systems depends also on the engagement of the health care workforce. The findings of the study provide insight in the factors influencing work motivation. This information can be used for creating attractive new workplaces and support the diffusion of innovative forms of care.

Working environments should meet the need for interesting and meaningful work. They should enable health care professionals to exploit their skills and knowledge and offer opportunities for further skills development.

Bureaucratic organizational structures and too much regulation bear the risk of being highly demotivating for health care professionals who are dedicated to their core profession and their desire for independence and autonomy.

Integrative forms of care can offer practitioners in the out-patient sector certain advantages: they can share resources, recruit administrative staff and concentrate on their core tasks. They offer more flexibility in working time scheduling which increases work-life balance.

The influence of collaboration climate and competence development on job performance, commitment and uncertainty in patient treatment: validation of a theoretical model across four hospitals

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Context

Quality and certainty in patient treatment is important both to health service providers and patients. New technology, advances in treatment and administrative systems together with increasing expectations from patients get the health services under pressure. We investigate how organisational climate focused on collaboration and the human resource practice competence development impact the worker outcomes self-reported job performance and organizational commitment, and the employees' perceptions of uncertainty in patient treatment. We control for gender and number of working hours, and validate the theoretical model across four hospitals. The study addresses important factors in order to influence the delivery of care.

Methods

A self-completion questionnaire with validated measurement instruments was collected from 9162 employees working in four Norwegian hospitals. The overall response rate was 40%. Based on a criterion of belonging to a professional group directly involved with patients, 6445 employees were extracted from the total sample and included in the current study.

Results

Confirmatory factor analyses and structural equation modelling confirmed both the measurement concepts and the theoretical relations of the theoretical model.

In all four hospitals, the opportunity for competence development had a strong positive relation with collaboration climate, job performance and organizational commitment. Collaboration climate contributed positively to job performance and organizational commitment. According to the hypotheses, job performance and job commitment were negatively related to uncertainty in patient treatment. The model explained 10 to 17 percent of the variance of uncertainty in patient treatment across the hospitals. The model explained most variance related to organizational commitment (25-28 percent). The influence from two control variables, gender and number of working hours, were weak or insignificant.

Discussion

This study shows that the human resource practice opportunities for competence development in hospitals, as well as focusing on a climate for collaboration, matters for worker outcomes like job commitment and job performance, which in turn reduces uncertainty in patient treatment. Competence development also influences the collaborations climate. Since worker outcomes and indicators of quality of care are related, the managerial implication of these findings is to focus on both human resource practices and organizational development in interventions to improve quality of care. Study findings are in line with earlier research indicating that organizational climate both influence worker and patient outcomes (MacDavitt et al, 2007). The results indicate that hospitals more capable in developing competences and collaboration climates, will have a higher likelihood of high performing and more committed workers, which in turn have positive influences on quality of care based on more capable personnel in care deliveries.

Exploring the black box of medical managers' professional and managerial skills. Evaluating the mediating and moderating role of value congruence, role engagement and professional identity in the budgetary participation and performance link

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Context

Healthcare reforms introduced new model of governance for professionals, which moved into hybrid roles and took on managerial responsibilities (e.g. medical managers). There is a body of literature exploring the characteristics of medical managers, who might experience a scarce alignment between professional values and organizational requirements. Building on the value congruence paradigm, this research focuses on how medical managers' budgetary participation reinforces value congruence and this, in turn, enhances positive feelings of engagement in managerial roles, thus affecting their managerial performance. We also consider how medical professional identity interacts with budgeting practices in providing (dis)alignment between professional and organizational values.

Methods

The research was conducted in an Italian hospital. Data collection included three stages. First, internal documents were analysed to collect organizational information about the site. Second, unstructured interviews were conducted to gain information about budgeting procedures and responsibilities. Third, to test the hypotheses a survey was conducted. Consistent with the research framework, the questionnaire was made up of six sections addressing: (i) demographic information of the respondents, such as age, gender and tenure in hospital; (ii) budgetary participation; (iii) value congruence; (iv) managerial job engagement; (v) medical professional identity; and (vi) managerial performance. A total of 96 questionnaires were returned (response rate: 100%). Partial Least Squares (PLS) algorithm was used to test the hypotheses which comprises a measurement model (to test the psychometric properties of the scales used to measure the constructs) and a structural model that includes an interaction effect.

Results

The results from the PLS measurement model indicated that each construct exhibited satisfactory reliability and validity. The results of PLS structural model showed that budgetary participation had a positive and significant effect on value congruence ($b=.35$; $p<0.01$), but a non-significant effect on managerial performance, thus suggesting the presence of a mediational effect. Value congruence was positively associated with job engagement ($b=.68$; $p<0.05$) and performance ($b=.37$; $p<0.05$). Job engagement was significantly positively related to performance ($b=.48$, $p<0.05$). Professional identity had a positive and significant effect on value congruence ($b=.22$, $p<0.05$). To test the mediational effect, the step-wise approach suggested by Baron and Kenny (1986) was employed and a full mediation was found. In addition, results showed that professional identity acted as a moderating variable which decreased the direct link between budgetary participation and value congruence.

Discussion

This study expands our knowledge on previously underexplored effects of budgeting on healthcare professionals' values, managerial job engagement and performance as well as the role of medical professional identity. Results are consistent with the proposed sequence of relationships: involvement in budgeting positively affects medical managers' value congruence which in turn affects job engagement and both positively impact performance. The full mediation of value congruence and job engagement on the participation-performance link provides evidence that the cognitive effects of participation on the alignment between medical managers' values and organizational requirements induce positive feelings of engagement in managerial roles; both value congruence and job engagement positively affect medical managers' performance. The counter effect exerted by professional identity on the participation-value congruence link demonstrates that high identification in the medical profession acts as a barrier that can somewhat hinder medical managers' involvement in budgeting and thus its effects on value alignment.

Yellow Hats are not just for builders- using Improvement Labs to develop staff support systems for emotional labour

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Context

The Francis Report identified many contributory factors in organisational failure. One aspect is the need to care for staff (West 2012)^[1]. Physical safety appears understood – hence the "yellow hats" analogy. However, healthcare involves emotional labour which is often unrecognised in practice. Emotional labour can lead to stress resulting in staff being less able to deliver compassionate care^[2].

^[1] West, M., & Dawson, J. (2012). Employee engagement and NHS performance. The King's Fund, 1-23 p. 20

^[2] Sawbridge, Y. and Hewison, A., 2013. Thinking about the emotional labour of nursing-supporting nurses to care. *Journal of health organization and management*, 27(1), pp.127-133.

Methods

Previous action research projects by the authors^[1] had demonstrated the challenges involved in external facilitators supporting behavioural change. Improvement Lab principles involve collective working to develop solutions to a specific challenge relevant to those involved^[2] and these principles were adopted to design a one day workshop with teams of three from every attending organisation (nine organisations in total). An introduction to and the evidence behind a number of existing support systems was produced (see example template below) to help them decide which would have the best 'fit' for their organisation. and teams worked through a series of steps to use this evidence to design their own approach and develop an implementation plan.

^[1] <http://www.birmingham.ac.uk/staff/profiles/social-policy/sawbridge-yvonne.asp>

^[2] Malby, R. (2016) The nature of Labs- a short briefing. London South bank University.



Results

On the day evaluations of the Improvement Lab indicated a growth in confidence and skills before and after the event in terms of developing a support system in house. (Four underconfident reduced to nil, six confident to nine post event with 18 reporting feeling fairly confident now). We are reviewing the impact in terms of whether teams have implemented their plans- and the data is currently being collected (see template below). This will be available at conference. Informal discussions indicate that teams have developed some small-scale changes in practice (spending time at every team meeting exploring how staff are feeling about their day) and others exploring larger scale projects such as introducing Schwartz rounds across the Trust^[1]

^[1] Goodrich, J. (2012) Supporting hospital staff to provide compassionate care: Do Schwartz Center Rounds work in English hospitals? *JRSM*. 105 (3), 117–122.

Discussion

The relationship between staff morale and patient wellbeing has been demonstrated^[1] though improving morale requires action on a number of fronts including culture; work environment and staff engagement. Supporting staff with the emotional aspects of their role is an element that receives scant attention in practice when compared with training and support for technical aspects of roles^[2]. Staff are the vehicle for delivery of good patient care and so supporting them to do this well is a crucial responsibility for managers. Our work looks to find practical, evidence-based solutions for organisations to adopt. This Improvement Lab is one such example.

^[1] [https://kclpure.kcl.ac.uk/portal/en/publications/the-importance-of-staff-wellbeing-and-the-patient-experience\(0988f7c3-31a5-4511-948b-85da5b48dce0\).html](https://kclpure.kcl.ac.uk/portal/en/publications/the-importance-of-staff-wellbeing-and-the-patient-experience(0988f7c3-31a5-4511-948b-85da5b48dce0).html)

^[2] Gabriel Y. (2015) Beyond compassion: replacing a blame culture with proper emotional support and management: Comment on "Why and how is compassion necessary to provide good quality healthcare?" *Int J Health Policy Manag*. 2015;4(9):617–619. doi:10.15171/ijhpm.2015.111

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Context

Italian healthcare system is often recognized as one of the top healthcare system in international rankings (WHO). Moreover, it is one of the most famous touristic destination. However, Italian hospitals have started to show recently interest in inbound medical tourism. In this paper, we provide four case studies of Italian private and public hospitals investing in inbound medical tourism as the Italian NHS is an ideal platform for this investigation as it includes both private and public providers, enabling to highlight the differences between the two typologies.

Methods

We have singled out, in the Italian context, respectively two public and two private hospitals investing in medical tourism. Hence, we have applied the case study approach to each context in order to survey how each hospital has defined its strategy in this specific sector and which organisation changes have implemented. Scientific literature provides a model of services' chain to be implemented by hospital investing in medical tourism. We have referred to this model in order analyse hospitals' activity in this sector.

Results

Results show how private hospitals have identified their potential market in terms of geographic area and pathologies; however, they are still defining their "fishing" strategy. As far as organisation aspect, in one case, there have been enough investments aimed at providing those specific services required by medical tourism. In the second private hospital, it seems that the management does not perceive the wide amount of investment in terms of organisation changes required by medical tourism services' implementation. Last, public hospitals have experience of international institutional programmes of inbound patients, and they are starting to be aware that medical tourism requires also a strong investment in marketing. Moreover, as they are subject to strong financial and institutional constraints by the NHS, they struggle with the necessity to invest resources in this specific area.

Discussion

According to evidences collected in these four case studies, Italian medical tourism sector seems to be still half-backed. In general, some providers just miss the last mile, while other ones still need to be fully aware of what medical tourism services require. Moreover, on background, all providers are struggling with the lack of an internationally recognised brand of Italian healthcare similar to what happens in fashion, design or cooking. However, this paper shows also that providers are aware of the potentiality of this sector and a further effort is still needed to succeed.

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Short Paper

The take up by UK patients of the opportunities under the EU Directive on cross-border health to seek treatment in another member state is the start point for an analysis of the importance of the political dimension in the core system dynamics of the EU national health systems.

A case study of patient outflows from Wales adopts a multi-method approach. It draws upon secondary data in the form of government reports on waiting lists for health care, collaboration with a health journalist and the use of FoI requests in an action research project, previously unpublished data on uptake of the EU directive by UK patients, and two individual patient experiences of negotiating treatment to receive medical treatment abroad. A critical realist analytical frame explores the political realities of the implementation of the EU directive in the UK.

At the macro-political level In the UK, the political sensibilities that are potentially offended by seeking cross-border health care implode around 1) the implied rejection of the NHS concept by UK patients, 2) being seen to favour continued relations between the UK with the EU after the Brexit, and 3) to be complacent on migration and border control issues in the face of persistent, unplanned, increases in population. At the micro-political level, one patient case reports how she had to work against the ignorance of her own GP. She had to live with the consequences of; 'upsetting' the economic and professional power base of the local consultant surgeon, rejecting the conditions of the NHS Wales with its undue waiting times, and having to bear the additional anxiety of dealing with a complex and fledgling administration system surrounding the Directive.

Implications for the EU of the position found in the UK are discussed, including the importance of building a framework to deal with these challenging developments at a micro, meso and macro level that challenges the dominant narratives and power distributions in national health care systems.

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Context

Primary healthcare is a leading dimension of healthcare. Children are a key sector of society, and depend on primary care for preventive services as well as for first contact treatment in a timely way. The United Nations Convention on the Rights of the Child (UNCRC), which all EU/EEA countries have signed, applies to "all children within the jurisdiction of the State, without discrimination of any kind", and ensures the right to health, on a comparable basis to children resident in the jurisdiction.

Methods

The Models of Child Health Appraised (MOCHA) Horizon 2020 funded project running from 2015 to 2018 (see www.childhealthservicemodels.eu) is tasked with reviewing the patterns of primary care provision in the 30 EU/EEA countries, and identifying future optimum models. By obtaining data on national policy in a structured way from the MOCHA country agent in each country, the European Network of Ombudspersons for Children, NGOs, and official national documents, the project has ascertained the treatment intentions for primary care for asylum-seeking and other migrant children in each of these 30 countries – see http://www.childhealthservicemodels.eu/wp-content/uploads/2015/09/20160831_Deliverable-D3-D7.1_Migrant-children-in-Europe.pdf.

Results

The picture is worrying. Despite the trauma and distress endured, only 20 of 30 countries (67%) had policies entitling asylum seeking children to primary and secondary care equal to that of resident national children. Worse, only 11 countries (37%) committed to offering such care to irregular or undocumented migrants. Given the challenges of registering for asylum, and the trauma of evacuation from conflict areas, it is a major ethical concern that there is so little priority to honouring moral and treaty duties to provide primary health care for children. Actual care delivery may be less than, or indeed better, than policy specifies, but mandated entitlement as expressed in national policies is a key foundation.

Discussion

The response to the humanitarian crisis in Europe is of deep concern. Between 300,000 – 400,000 of the one million migrants who arrived in Europe in 2015 were under 18. The MOCHA study found that the majority will receive primary health care less than that provided to local child residents. In the short term, there is a need to identify infectious diseases and to ensure immunisation, and to address the full range of physical and psychological health needs. In the longer term, if migrant families are able to return to their home countries once strife is over, if the returning younger generation have unresolved health issues it will simply compromise such aims to return to normal society. On the other hand, if such migrants become locally resident, it will reduce that net societal gain and provide the host country with ongoing health needs to be met which were avoidable.

The English National Health Service belongs to the People or its doctors and technocrats? Gobbledegook, technocrease and the strange case of Sustainability and Transformational Plans.

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Short Paper

I saw the call this year for provocative essays for this year's EHMA. I have not attended the annual conference for some 13 years and since then much has changed in publicly funded health care in England. However, policy makers and implementers have still much to learn about involving the public in plans for health and social care. So I felt a call to arms to write this essay which explores the deep disconnect which in many cases continues to exist between local people in a town, city or county and national politicians and NHS policy implementers at often at both national and local levels. There is an evident lack across many areas of England of meaningful engagement with the public as major radical plans are being pushed and led by local and national NHS agencies sometimes with the support of other agencies in social care. These are called Sustainability and Transformational Plans.

I argue that many of these plans are being obscured by the deliberate adoption of more sector based jargon only understood by policy makers and implementers who I will now refer to as technocrats.

These plans are now out for consultation after national and many local kerfuffle's of claims that many of the plans had been drawn up in secret by technocrats without often meaningful public engagement. This paper will analyse the STP of West Yorkshire with a particular reference to one mainstay of its proposals i.e. the reduction of the number of hospitals to have Accident and Emergency departments. It will take a particular look at the proposal in Huddersfield to close the existing A and E and build these services to compensate for this at one of the local hospitals in the town of Halifax.

To conclude the English NHS has to work harder with the people who are the owners of this incredible institution and not just by putting them at the periphery when making radical plans. The language used in this STP s ensures that the local public are not even engaged as equals in terms of decision making for service reform. I do not deny that radical change has to be achieved in English health and social care however in some cases there may well be limits to the power of technocrats, national politicians and senior doctors in terms of what is or not acceptable to local people and local politicians. After all we live in a democracy. It may be unwise to think that you can bamboozle the public with more technocrease. The public will take to the streets, lobby their MPs, run highly effective campaigns to have their voices heard as did their ancestors who built this liberal democracy.

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Context

Executive boards of European hospitals can address quality management [1]. However, some boards might lack capability to bring about service improvement and patient participation [2], and boards recognise trade-offs between quality and financial balance [3].

In 2013, a public inquiry into serious failings at an English hospital found that its board had prioritised financial concerns and neglected service quality [4]. The subsequent national reform agenda for the NHS focused on: boards and leadership, including patient and staff engagement; and stronger external supervision of hospitals. Can these reforms succeed alongside efforts, common across Europe, to reduce public sector budget deficits [5]?

Methods

Between January and April 2016, we conducted an online survey of members of boards of all 154 acute and specialist hospitals in England at that time. Board members in the following roles were invited to participate: Chief Executives; Chairs; Directors of Nursing, Finance and Medicine; Non-Executive Directors; Board Secretaries. Following two email reminders a postal version of the survey was mailed out.

The survey questionnaire included self-assessed ratings of: how much the board emphasises various purposes; the greatest challenges boards face to improving leadership; and board knowledge of what matters to staff, patients and regulators.

443 board members and secretaries (24%) from 143 boards (93%) responded. We calculated statistical correlations between self-assessments, ratings of leadership from the National Staff Survey, and performance ratings published by the quality regulator for hospitals. We thematically analysed qualitative data from open questions to provide additional insights.

Results

Survey respondents indicated that the Francis report [4] had helped produce more cohesive and well-informed boards, focused on service improvement. Board engagement with staff had improved, but patient and public involvement was more challenging.

There were statistically significant correlations ($p < 0.05$) between self-ratings of the emphasis given to various board purposes and external performance ratings and staff ratings of leadership. Lower ratings were associated with less emphasis on looking outwards (representing the interests of all stakeholders and enhancing the reputation of the organisation) compared with an internal focus on holding executives to account and supporting executives. Lower ratings were also associated with viewing finances and responding to regulators as being particularly challenging.

73% of respondents identified financial pressures as being a significant barrier to improving hospital leadership. 68% identified meeting the demands of regulators as being a barrier; the emphasis on monitoring performance against targets detracted from more strategic, future-oriented thinking.

Discussion

It appears that boards can have an impact on service quality, but financial constraints or too much direction by central government or regulators may limit improvement. Boards that emphasise all five key governance attributes suggested by theory [6] may be more effective. Boards find it more difficult to engage with external stakeholders (transparency attribute), staff, and particularly patients (participation attribute); and boards of lower performing organisations appear to place less emphasis on such engagement.

Further research might investigate whether a lack of engagement limits performance, or instead reflects a need for poorly performing organisations to focus on sorting out board personnel, structures and processes and on responding to the concerns of regulators. We are considering such issues through in-depth case studies, as part of on-going research into how hospital boards have responded to the Francis report [4], funded by the Department of Health in England.

References

- [1] Botje D, Klazinga NS, Suol R, Groene O, Pfaff H, Mannion R, Depaigne-Loth A, Arah OA, Dersarkissian M and Wagner C (2014) Is having quality as an item on the executive board agenda associated with the implementation of quality management systems in European hospitals: a quantitative analysis. *International journal for quality in health care*, pp1-8, DOI: 10.1093/intqhc/mzu017
- [2] Chambers N, Joachim M, Mannion R (2016) *Hospital governance: policy capacity and reform in England, France and Italy*. Chapter 13, pp245-264. In Greer SL, Wismar M, Figueras J (eds). *Strengthening Health System Governance: Better policies, stronger performance*. Open University Press, Maidenhead.
- [3] Thorlby R, Smith J, Williams S, Dayan M (2014) *The Francis report: one year on. The response of acute trusts in England*. Nuffield Trust: London.
- [4] Francis R (2013) *Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry*. HC947.
- [5] Maresso A, Mladovsky P, Thomson S, Sagan A, Karanikolos M, Richardson E, Cylus J, Evetovits T, Jowett M, Figueras J and Kluge H (Eds) (2015) *Economic crisis, health systems and health in Europe: Country experience*. WHO Regional Office for Europe/European Observatory on Health Systems and Policies.
- [6] Greer SL, Wismar M, Figueras J & McKee C (2016) *Governance: a framework*. Chapter 2, pp27-56. In Greer SL, Wismar M, Figueras J (eds). *Strengthening Health System Governance: Better policies, stronger performance*. Open University Press, Maidenhead.

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Context

In the Netherlands, eight University Medical Centres are responsible for providing highly specialized care for patients with complex conditions, conducting clinical research and training doctors. In 2014 the Ministry of Health initiated a policy experiment – ‘TopCare’ – granting three non-UMC hospitals additional funds for a period of four years to also undertake those complex ‘academic’ activities in specific fields in which they are seen as centres of excellence (e.g. eye care and neurology). The aim of the experiment is to investigate whether it is desirable to open the financing system for complex care, research and training also for non-UMCs.

Methods

For this paper, we are interested in the way the three non-UMCs manage the complexity that comes with their new responsibilities and how they try to gain legitimacy from actors in their environment. To answer these questions, we have conducted over 50 interviews with national stakeholders and key actors within the three hospitals. The interviews focused on the background and aims of TopCare; the management of specialized care, clinical research and medical training within each of the hospitals; and the strategies that the hospitals use to gain legitimacy from patients, other hospitals and policy makers. We have also studied policy documents about the organization and funding of Dutch hospitals in general and the TopCare program in particular. Finally, we have conducted ethnographic research of TopCare within the three hospitals: observing team meetings, discussions about complex patients and informal get-togethers as well as interviewing key actors ‘on the job’.

Results

Our analysis shows that hospital administrators and doctors use a variety of infrastructures to manage the complex and often intertwined activities of specialized care, clinical research and medical education. These infrastructures are material (e.g. high-tech medical equipment), digital (e.g. clinical databases), procedural (e.g. protocols), personal (e.g. PhD-students, statisticians) and relational (e.g. collaborations with UMCs). In their communication to stakeholders, hospitals on the one hand emphasize their ‘sameness’ in comparison to UMCs (e.g. in terms of quality of care) and on the other hand argue that they are different (e.g. their research focus on clinical relevance instead of – just – scientific relevance). This leads to a complicated balancing act in which the hospitals have to learn how to organize their new activities well and at the same time are trying to create a new institutional space in relation to other (non-) academic hospitals.

Discussion

This study points to the wide variety of infrastructures that play a role in hospital governance. The infrastructures are dynamic and sociotechnical: they exist through interactions between people and materials, spaces and technologies. It takes a lot of time and effort from different actors to build, shape and maintain the infrastructures and make them ‘work’ in daily practice. This internal organizational work is indispensable in the external legitimation efforts of hospital managers and doctors, for example organizing conferences, writing academic papers and training nurses and residents. Gaining legitimacy from patients, other hospitals and policy makers requires continuous evidence that the internal complexity can be managed. Additionally, by comparing themselves to UMCs and strategically choosing to differentiate themselves in specific ways, the three hospitals are gaining legitimacy in the context of TopCare. It however remains to be seen whether this legitimacy is sustainable after the experiment ends.

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Context

Broadly defined health technology assessment (HTA) is the systematic evaluation of medical technologies regarding their effectiveness, appropriateness and efficiency as well as social and ethical aspects and implications. In practice HTA is the most contemporary and precise process of decision making in healthcare globally. The process is multidisciplinary, giving a different point of view and depth during the evaluation of a given health technology. At the same time, every country benefits from the implementation of HTA and it has its specific internal conditions. Big number of countries globally have not yet implemented the use of HTA because of varying reasons.

Methods

In a 3-month period we used the method of document analysis of different sources regarding the presence of HTA bodies all over the world. A process for verification of the information, used was developed and implemented. The same process was used to derive the presented information from the analysis. The limitations of the process used for gathering, processing and presentation of the data was accounted for. Verification of the data and requests for additional clarification were performed by contacting the corresponding institutions. The results were analysed using a multi-criteria method. A desk analysis was done of secondary data used in specific articles that review the HTA systems in some of the observed countries.

Results

The research was conducted via analysis of the healthcare systems in 175 countries around the world. The analysed countries had vast social and economic differences. Five criteria were used for classification regarding those differences: Population; Life expectancy at birth; Per capita total health expenditure; World Bank income group and GNI per capita.

It was found that it is possible to establish a correlation between the socio-economic parameters of a country and the existence of an active HTA agency in it. There are also some exceptions. There are countries with high levels of economic development, which have not yet adopted the process. There are also countries that have big populations and good social parameters, which also have not yet adopted the HTA process. Meanwhile there are also examples of the opposite, an example being a nation of 100 000 people actively implementing HTA in the decision making in their healthcare system.

Discussion

The question whether a country should strive to have its own HTA agency or just follow the decisions of an outside HTA agency, based in a country with similar socio-economic parameters is multi-dimensional and should be considered on a case to case basis. The organization and maintaining an HTA agency is complex and expensive in most cases. Looking beyond costs the benefits of a functioning HTA agency is indisputable and a lot of countries have undertaken the necessary steps towards this, better healthcare decision making process. The attached research shows the tendencies regarding the levels of social and economic development of the countries making steps towards establishing an HTA agency of their own.

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Context

One of the most important components for strengthening health system in modern conditions is the presence of a clear National policy for the Human resources management (HRM). The absence of effective state policy in this area led to a quantitative and qualitative crisis of the health workforce.

Methods

In order to develop National policy for HRM we conducted analysis of the status of human resources management in health system of Kazakhstan, aimed to identifying barriers (SWOT-analysis) and areas for further development.

Results

One of the most serious barriers to the creation of effective human resource capacity in the health system of Kazakhstan is an old human resources management system, the lack of qualified managerial capacity, outdated principles of personnel services, the lack of specialists in management and health economics. The lack of motivational incentives to work, low wages, lack of social protection of healthcare workers have led to a decrease in the inflow of young staff in the health system and "aging" of medical staff, the outflow of health workers in more highly paid industries, increasing migration index. The current system of the human resources forecasting and planning is a little effective.

As a result of analysis of existing problems, we determined a key goal of the National policy for HRM – increasing the efficiency of human resource management, ensuring the provision of quality of the health services.

Discussion

Achieving the goal of the National policy for HRM requires the following tasks: 1. Improving approaches to the human resources planning and forecasting; 2. Improving the HRM; 3. Improving the professional competencies of human resources in health (HRH); 4. Improving the professional training of evaluation system of conformity of the HRH qualification; 5. Modernization of personnel services in health organizations at all levels with the introduction of modern HR-technologies.

Implementation of the National policy for HRM should ensure: 1. the establishment of an integrated system of planning, recruitment, training, development and support of HRH; 2. The revision of educational programs at all levels on the basis of professional standards; 3. Creation of a single register of HRH; 4. Creating an effective system of evaluation of professional training, conformity qualifications of HRH; 5. Improving HRM in the health system; 6. Partial transfer of functions for the HRH development to professional associations.

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Context

Many European countries assure the quality of healthcare services through regulation and inspection. A thorough understanding of how healthcare regulation can affect organisational performance is necessary if regulatory regimes are to be both economical and facilitate service improvement. However, the impact of regulation is notoriously difficult to measure and simplistic assumptions about cause and effect are made when the reality is more complex.

This research seeks to develop a more sophisticated understanding of regulatory impact (positive and negative, intended and unintended) and to use that to analyse the intended impact of the Care Quality Commission's regulatory model, introduced in 2013.

Methods

We undertook a review of literature on regulatory regimes and their impact, methodologically grounded in realist synthesis (Pawson 2006) and rapid realist review (Saul et al 2013). We used a combination of database searching, citation tracking and collating grey literature, reviewing titles/abstracts and full content to identify 107 relevant papers.

We collated key documents published by the CQC on their regulatory regime and other relevant CQC documents such as board meeting minutes. We undertook semi-structured interviews with some CQC staff and other key informants and observed CQC meetings about the new regulatory model.

We developed a framework of eight impact mechanisms from the literature, and used it to code and analyse our documents and interviews about the CQC's regulatory model.

Results

We identified and describe eight impact mechanisms through which regulation can affect organisational behaviour and performance. These are: anticipatory, relational, informational, stakeholder, directive, systemic, lateral, and organisational impact.

When this framework was used to analyse the Care Quality Commission's new regulatory model, three impact mechanisms were most frequently identified and fully articulated in documents and interviews: informational, anticipatory and directive impact. Mechanisms which rely more on actors other than CQC (such as stakeholder, and lateral) featured less frequently. For each mechanism, we have identified a set of distinct steps that lead to impact: regulatory processes, expected behaviour changes, intermediate and ultimate impacts. We identified differences in how the mechanisms operate in the different sectors that CQC regulates, and some tensions between them. Although the analysis considered each mechanism separately, we found that they operate collectively - a single CQC process can involve multiple impact mechanisms.

Discussion

Our framework of impact mechanisms draws attention to the range of ways in which a regulator can affect organisational performance and shows that there are important alternative impact mechanisms to those which traditionally focus on directive enforcement at the level of the individual organisation.

By applying the regulatory impact mechanisms framework to the CQC we have been able to unpick a complex set of relationships between processes, behaviours and outcomes. Our analysis shows that the impact pathways that closely relate to the regulators own activity have been more thoroughly thought through and defined than the pathways that rely on the actions of others. However, the latter are key to the effectiveness of the CQC's regulatory model.

The framework provides a useful tool for helping regulators and regulated organisations better understand and articulate how organisations respond to regulation, identify areas for development, and achieve service improvement.

Exploring the use of "Process Mapping" in practice in the healthcare sector

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Short Paper

Over the last 15 years many developed healthcare systems have implemented initiatives to improve quality using tools drawn from industrial engineering. Process Mapping (PM), either as a stand-alone methodology or as part of techniques such as Lean or Six Sigma, is seen as useful in Quality Improvement (QI) projects. PM helps us understand "work as-is" rather than "work as-imagined" and is an important tool to identify areas for QI or to understand the settings of interventions. Studies show that significant differences persist in how PM is used, yet there is little empirical evidence on how PM is used and adapted to work in different contexts. This work reports on a study of QI projects in the UK's National Health Service.

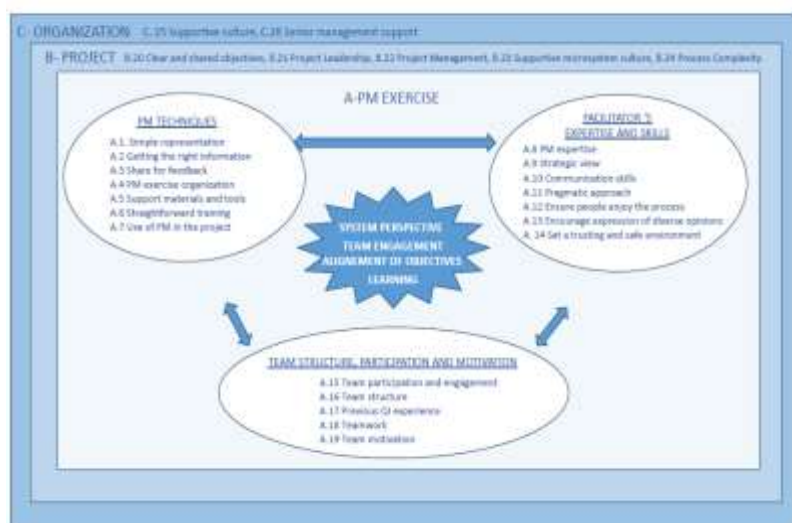
We used a systematic literature review and an inductive approach, purposefully selecting QI projects in different healthcare settings and gathering data from documents, observations, interviews and focus groups. Issues explored include the use of modelling techniques, project management approaches and perspectives of the participants. Qualitative data analysis focused on identifying the relationships between PM, the context PM was being used in and the benefits of its use.

We identify key success factors and challenges to the effective use of PM in different settings. Whereas in other industries the main benefits ascribed to PM relate to the "physical map" and technical aspects, in healthcare they are more related to the opportunity to reduce cognitive boundaries, share knowledge and promote greater engagement of project stakeholders. PM serves as "ice-breaker", fostering communication among healthcare professionals within the same care pathway but each with highly-specialized clinical knowledge and different representations of the process in question. The soft skills of leaders, such as their ability to involve and motivate stakeholders across organizational boundaries and create a safe and trusting environment, are crucial.

There is no single recipe-book of PM to ensure success- its use in practice depends heavily on the scope of the project, on the setting and organizational and behavioural aspects. However, PM can be seen as a pivotal tool when applied iteratively through the QI projects' lifecycle. The benefits of PM in healthcare go beyond the identification of bottlenecks, gaps or the design of new improved processes, typical of its use in engineering projects. Its real value is in its capacity to provide greater understanding of the reality of a QI task, across

different interest groups and organizational boundaries. The more complex a process, the more the clinical and organizational knowledge about it is fragmented, and stakeholder objectives are conflicting, the more QI projects are likely to benefit from PM. These features, together with the relative ease of the method, make PM a promising technique in healthcare, where more sophisticated techniques often fail.

Conceptual model of Success Factors for PM exercises in QI projects



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Context

Lean has shown to deliver significant performance improvement in healthcare organisations. However, its practical implementation remains challenging and the ability to deliver in the long term is an under investigated issue. The study draws on the main streams of literature on implementation science and lean management healthcare to explore: (i) the organisational conditions that are relevant for a sustainable lean implementation; (ii) the continuous process of reciprocal interdependence between lean as a system-wide organisational strategy and its context of application, and (iii) the influence of these mutual adaptation mechanisms on the sustainability of the implemented practices.

Methods

A multiple case study was conducted on three Italian hospitals where the implemented lean practices had reached a significant level of integration and routinization throughout the organizational context. As a primary source of data, interviews were performed to get an in-depth understanding of the implemented lean practices and of the organizational context; the semi-structured interview guide was built on the insights gained from a previous literature review on the relevant organizational conditions for effective lean implementation in healthcare. A theoretical framework was used to systematize the evidence from the directed qualitative content analysis performed on the interview data, with the aim of tracing and exploring the interdependencies among the relevant elements emerged. The socio-technical system model (with its social, technical, external environment components), drawing from a system perspective of organization, was considered well suitable to capture both the system-wide perspective and the mutual adaptation mechanisms.

Results

As emerged from the empirical analysis, the organizational context and the lean approach originally adopted have both been evolving some of their traits over time (i.e. mutual adaptation mechanisms) and the continuous combination of these changes was relevant to facilitate the integration and the internalization of lean as a working part of the organization (i.e. sustainability). In particular, the use of the theoretical framework pointed out some key interrelated patterns (social, technical, external environment): decentralization of responsibilities to practically work on lean (i.e. introducing lean as a professional approach); stable guidance, sponsorship and support, at all organizational levels (i.e. top management and middle managers); the structuring of an intermediate level between the top management and professionals (i.e. lean roles); the launch of internal events (i.e. lean contest); continuous learning and improvement process (i.e. pervasive training program and networking activities); comprehensive approach to the optimization of hospital production processes.

Discussion

In coherence with recent research calling for more attention on implementation and sustainability issues related to the use of lean in healthcare, the study is a positive contribution to fill a gap in the literature as it offers valuable insights for future comprehensive and rigorous research on the variance in the outcomes of these interventions. The empirical analysis shows that the implementation and the maintenance of lean efforts over time is the result of a continuous process of adjustments and modifications occurring in the overall change program and in its context of application (across the entire technical, social and external environment spectrum), so that they mutually fit each other. Furthermore, in terms of practical implications, the use of the theoretical framework provides a realistic reading of the critical interrelated factors that hospital managers need to take into account when implementing quality improvement approaches in hospitals.

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Short Paper

Situated Novelty

Healthcare innovation has been a hot topic among policy makers, researchers and professionals, attracted to the longstanding public debate by high expectations of the potential benefits. Putting innovation into practice, however, is often more complex than expected, and the results are sometimes even disappointing.

This study focuses on the governance of innovation. It sees the notions of 'governance' and 'innovation' as paradoxically related. It further explores this inherent paradoxical relation between innovation and governance by analysing how healthcare innovations are enacted in practice, and what can be learned from such an understanding about the governance of processes of innovation?

This PhD-research delivers in-depth insights into healthcare innovation processes, based on the lessons learned in five case studies of innovation practices. As a result of those case-studies it introduces a multidisciplinary approach to the governance of healthcare innovation under the name: 'Situated Novelty'.

In the Situated Novelty approach, innovation is not just about novelty. It emerges from contextualized, interactional and time-dependent processes and has different meanings in practice. Situated Novelty emphasizes the importance of never-ending processes that construct innovations and their value.

In this view, the governance of innovation consists of attempts made to influence emergent, temporary and fluid processes of change. Situated Novelty has major implications for innovation practice, management and policy as it has the potential to change current attitudes to innovation and opens up new possibilities to act. It argues, for example, that the management of innovation goes beyond setting conditions that merely cultivate novelty. Management of innovation proves to be more about the efforts that facilitate the work that is inherent to innovation and efforts that organize the required reflexivity to create legitimacy and an innovation's value.

Overall, the Situated Novelty approach argues for deeper practical and theoretical reflection on the essence and meaning of innovation. Therefore, this research will be of interest for all concerned with the management, organization and governance of innovation in healthcare practice and beyond.

The manuscript of the dissertation can be downloaded from the website: www.situatednovelty.com

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Context

The NHS in England has undergone enormous change over the past 70 years in the way it has been managed and organised. Central to this has been impact of events on the relationship between '(medical) professionals' and 'management' (e.g. Griffiths report; Bristol, Alder Hey and Shipman; revalidation). Medical education is a mediated result of cultural, social, political and economic forces (Kuper & D'Eon, 2011) and plays a key role in the construction of professional identity and transformation of lay person to professional and the introduction of leadership and management training into medical curricula was the focus of this study.

Methods

Adopting a retrospective case study approach encompassing Hiles' (1999) model of disciplined inquiry, the study focussed on the case of the Enhancing Engagement in Medical Leadership project, which aimed to embed leadership and management training into medical curricula. This research explored how project members enacted change within medical education through the use of capital, drawing on Lockett et al's (2014) formulation of these concepts, which themselves built on Bourdieu's (1986) seminal work on forms of sociological capital. Interviews were conducted with members of the EEML project team and steering group, many of whom had positions of influence and status in other relevant organizations in this field. A review of documentary data encompassing published and non-published project materials was also undertaken. An open coding and thematic analysis approach was adopted to gain deeper insight into the interview data, whilst the documentary evidence was used to confirm and support the interview analysis.

Results

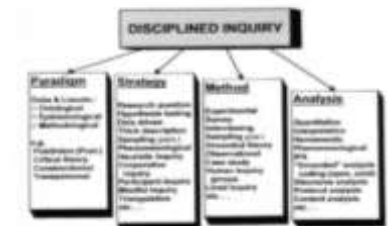
This case study research revealed that contextual and environmental conditions, as well as exogenous shocks and endogenous motivation led to this change initiative occurring. Routine and recognised 'practices' resulted in significant change through embedding the Medical Leadership Competency Framework into contested medical curricula space. Key individuals (conceptualised as 'opinion leaders') were able, with other project members, to adopt an approach to change, understanding the prevailing conditions, identifying the project's purpose and committing to an emerging form of practice known as 'mirroring'. Moreover, this study explored how opinion leaders achieved change through making use of theirs' and others' capital resources to form a cross-field collective capital, known as system capital. Using this, they adopted a disposition in their practice beyond professions known as system centrism.

Discussion

This study contributes to perspectives regarding the role of human agency in practices that break with existing institutions (Battilana, 2011), through individual and collective use of mutual system capital, which can be defined as a cross-field collective form of capital, encompassing social, symbolic and cultural capital. The related concept of system centrism enables an understanding of how change in strongly institutionalized environments can take place when individuals are willing to look beyond their own professional groups, world views or logics (which can incorporate them) towards something that offers a new, emerging view of all of their constitutive worlds. This study therefore contributes to debates and discussions regarding professional and occupational status, across both public and private sector domains. Moreover, it argues that the nature of professionalism is ever evolving and changing, offering an interpretation beyond the notion of ideal type professionalism and more in line with understanding of hybrid professionalism.



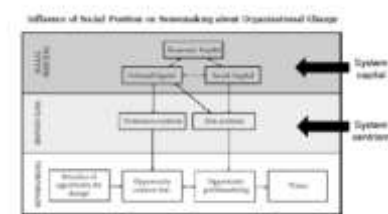
Hiles' (1999) Model of Disciplined Inquiry



Prevailing conditions



System capital and system centrism



Summary of study findings

Background and Context	Research Questions	Theoretical Contributions	Contributions
Interest in management and professions	How do opinion leaders enact and effect change within medical education?	Agency (institutional work / entrepreneurship)	4-phase 'mirroring' process System capital
A relevant case in the EEML project	What processes are involved in opinion leaders' actions and practices that are important in effecting change?	Practice Theory	4-phase 'mirroring' process System centrism
	How does this case further our understanding of strongly institutionalized environments?	Capital and social position	System capital System centrism

Gareth Rees

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Context

The effects of less than optimal health workforce numbers, skills or distributions are felt across the entire health system. Thus, the aim of health workforce planning is to meet the health system's needs with a sustainable and fit for purpose workforce. Frequently though, the conventional forecasting approaches used for this complex and challenging task are limited and become less effective in times of change or conditions of uncertainty. A means of addressing uncertainty is through the futures discipline of foresight. This PhD applies foresight and actor dynamics to address the uncertainties of New Zealand's health workforce planning problem.

Methods

The study, which is influenced by the La Prospective method of scenario planning, uses a mixed methods multi-phase design that combines three foresight methods: actor analysis, scenario development and policy Delphi. La Prospective is a way of focusing on future situations, where the future is an outcome of the intentions and actions of various actors, rather than being a continuation of the past. Firstly, the actor analysis identifies the actor's critical and strategic issues and creates positional, relational and influence data. Second, these issues and actor data are used to augment a normative scenario to develop plausible exploratory alternatives, creating complete descriptions of future situations. Thirdly, these scenarios are interrogated through an online policy Delphi to develop and rate health workforce policy proposals. As an example of the approach detailed case studies are developed from two overlapping areas of health, Primary Care and Older Persons.

Results

From inductive content analysis of 18 workforce documents and aggregated data from 35 interviews, the actor analyses reveal dominant actors of considerable influence in conflict over a few critical workforce issues, facilitative actors who may contribute to multi-actor alliances and actors with little or no influence. These actors' interactions delineate sets of conflicts ridden divisive issues or actor battlegrounds. The normative scenarios, developed for each case using a deductive content analysis of 12 workforce planning documents, when combined with the actor battleground data produced a number of alternative descriptions of future workforce situations. Analysis of these using policy Delphi reveals that: (a) the scenarios are a reasonable facsimile of plausible futures, with some rated more desirable, likely or valid than others; and (b) those policy proposals that favour care networks, clinically influenced services and leadership, team-work cultures and emphasise inter-professional education are deemed more desirable and feasible.

Discussion

Considering the findings from the three foresight methods together this study provides guidance to workforce planners and policy makers on the use of a complimentary approach to overcome some of conventional workforce forecasting's limitations. The combined findings clarify how critical workforce issues are able to be identified and how responses may be formulated with regard to actor influence and intervention effectiveness. The synthesis of the findings reveal: (a) that connections between a workforce system's strategic issues and the actors' strategic behaviour aids to clarify potential future situations, and (b) that scenario methods and analysis are useful tools to help reduce uncertainty by devising and rehearsing policy options. As such, the approach provides a framework for exploring the complexities and ambiguities of a health workforce's evolution; it offers a means to capture the values, beliefs and power of diverse actors; and it underlines the importance of people in health systems.

Erik Renkema

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Context

Physicians work in a context of public and professional accountability. Accountability might induce physicians to engage in behaviours like reducing litigation risks or a reluctance to report incidents, which could undermine achieving the positive goals of these accountability systems. Previous research has not explained in detail how physicians deal with the increasing pressures from accountability systems. This knowledge is crucial to assure that physicians act in line with the professional standards and societal values.

This thesis aims to reveal how physicians perceive and behave in the context of public and professional accountability, and the personal goals they attempt to achieve.

Methods

Data were collected on physicians' thoughts and emotions (attitude) regarding the accountability context, the influence of work conditions on litigation risks, and how these factors influence various defensive behaviours.

First, in-depth interviews with 31 physicians were conducted, transcribed and inductively coded. Hierarchical cluster analysis was used to identify clusters of physicians based on their litigation attitude. Second, a questionnaire was distributed in eight Dutch hospitals to measure physicians' litigation attitude, perceived patient pressures and defensive medicine behaviour. Exploratory factor and multiple regression analyses were carried out to determine relationships and interactions. Finally, semi-structured interviews were conducted with 22 diverse stakeholders in the litigation process to identify relevant work conditions.

A job-crafting lens was applied to research how physicians craft their work in the public and professional accountability context. Therefore, narratives and real-life accounts were analysed on how physicians perceive and craft their work, including the aims of their crafting behaviours.

Results

Two equally large physician' clusters were identified: one with a positive and one with a negative litigation attitude. The negative cluster was relatively more concerned regarding litigation risk, whereas the positive cluster seemed less bothered. Physicians with a negative attitude showed often a reluctance to disclose incidents. In a public and professional accountability context, physicians perceive: pressure from patients, the necessity of applying high-risk procedures, and emotional pressures and doubts. Survey results showed that a negative litigation attitude and perceived pressures from patients had a direct and positive relationship with defensive medicine (assurance and avoidance behaviour).

Physicians craft their work in various ways. They apply unnecessary testing, and avoid care procedures to avoid high risks and conflicts with patients. Incidents are shared with colleagues and their assurance is asked to reduce emotional stress. To avoid accountability consequences, they show reluctance to disclose incidents, and offload responsibility for incidents onto colleagues.

Discussion

Many physicians perceive public and professional accountability as a work stressor. The thesis shows how this context evokes behaviours that contribute to physicians' self-serving aims of maintaining their reputation, performance and well-being, but sometimes run counter to the original aims of these accountability systems. As such, the oft-heard call for 'openness' about medical incidents will not be easy to achieve.

Managers should set the required conditions to fulfil physicians' needs to interact, offer peer support and create a fair and just work culture to eliminate behaviours, such as offloading responsibility onto others, that have negative consequences for colleagues and for the organization. Policymakers also should take physicians' contrary behaviours, in response to current policies, into account. Further, physicians and patients need to be aware that when physicians perceive pressure from patients for care this can lead to defensive medicine behaviour that negatively affects the quality and safety of patient care.

A Comparative Study of VHI in Europe: Transformations and Challenges for Public Healthcare System

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Context

In Europe, private contribution to total healthcare spending is around 20%. The relation between the public and private coverage of healthcare is under debate, but such a debate is often grounded on the assumption that the two systems are alternative in satisfying consumers' needs. Starting from an alternative assumption that public and private coverages contribute in a mixed way to satisfy the same patients / consumers' needs, we look, from an industry / market / products perspective at Voluntary Health Insurance (VHI) in countries, where there is a significant coverage by public bodies (e.g. Italy, France, Spain, Portugal and UK).

Methods

For each country, we have run a deep desk analysis of the following issues: (i) healthcare expenditure and its components; (ii) public healthcare system in terms of funding mechanism and provision activity; (iii) private healthcare providers' market; (iv) VHI market. In the same way, we have carried out a desk analysis of VHI's products, singling out the most innovative ones in every analysed national market. Hence, we have integrated all these information, usually scattered, in one broad picture in order to identify integration mechanisms and pathways between public and private coverage. In summary, the structure of the system in relation to private funding, innovation in health insurance solutions, changes in the structure and products of the insurance industry are investigated in order to explore the best ways to integrate VHI in the framework of public policies.

Results

First, some clear trends in the VHI markets in all considered countries emerge. Innovative insurance coverages are breaking the old taboo of adverse selection using digital channels and addressing new population targets (i.e. no upper age limits, and no restrictions based on medical history). At the same time, insurance companies are using new strategies aimed at maintaining their population in good health instead of just refunding medical expenses. Secondly, results of this comparative study show that the role of private funding is increasingly important in the overall functioning of health systems, including their statutory component (NHS or social insurance in France). Last, we have identified three main ways in which VHI integrates framework of public policies: (i) by an institutional framework; (ii) by market; (iii) by individuals / consumers.

Discussion

Given the above results, we think that the emerging question is how to integrate VHIs and their services in countries' health care systems and how to act in a proactive way to make healthcare systems more efficient and sustainable. We suggest that governments and their institutions can better regulate and manage private funding, according to the integration way used in each country.

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Short Paper

The aim of containing health-care costs has become more problematic for publicly-funded health systems in recent years as a result of austerity policies following the 2008 financial crisis, rising demand and health-care inflation. To address this financial context and to enable greater entrepreneurialism, some health-care provider organisations in England have been allowed, since 2012, to increase the share of the total revenue from sources which are not the National Health Service (NHS) to 49%. This might include revenue from hospital car parks, clinical trials, and international medical tourists, for example.

This paper is the first comprehensive analysis of these financial data for all English organisations. We examine differences by type of organisation (eg. specialist provider), geography (urban/rural), and income from local government agencies. Overall, only 1.7% of all providers' income came from non-NHS sources. However, among specialist providers, this figure rose to 10.4%. One orthopaedic hospital secured 32% of its income from outside the NHS. Such income might underpin the traditional health service provision but also accelerates commercialisation of a publicly-funded institution. These 'private' sources of revenue will not solve the financial crisis facing many providers but they may signal a greater entrepreneurial approach of these organisations in the future.

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Maastricht University, Maastricht, Limburg, The Netherlands

Context

Interaction between pharmaceutical companies and healthcare providers is increasingly scrutinized by academics, professionals, media, and politicians. However, most empirical studies and professional guidelines (for example the American Medical Association's guideline on gifts) focus on unilateral donor-recipient types of interaction (for example gifts) and overlook or fail to differentiate between bilateral, mutually beneficial, exchanges of resources such as R&D collaborations. Yet, unilateral and bilateral interactions between industry and non-profit organizations differ in the level of goal-alignment. This difference could affect the opportunity to create value through collaborative agreements and therefore, failing to differentiate can leave potential beneficial interactions unused.

Methods

We used a systematic literature review to study the effects of bilateral interaction between pharmaceutical companies and healthcare providers. We searched the PubMed and EBSCO databases for empirical, peer-reviewed articles concerning any type of bilateral interaction between pharmaceutical companies and healthcare providers. We included articles which were written in English and published between January 1st, 2000 and October 31st, 2016. Furthermore, the title or abstract of these articles had to include one keyword related to pharmaceutical companies, healthcare providers, interaction, and effects.

Results

After assessing title and abstract of the 1,370 articles retrieved by our search, 11 were analysed. Studies addressed the following types of bilateral interaction: (a) education-related interaction (N=2), and (b) research-related interaction (N=9). The articles reported various effects of interaction between pharmaceutical companies and healthcare providers: (a) altered prescribing behaviour (N=4), (b) effects on research output (N=3), and (c) potential ethical dilemmas (N=4). Studies focused on education-related interaction reported negative effects such as ethical issues. Likewise, some studies find that research-related interaction between pharmaceutical companies and healthcare providers improve scholarly impact of joint scientific publications, while others find that it negatively affects clinical practice and integrity.

Discussion

This review identified a few methodological limitations in the analysed articles such as reversed-causality issues related to cross-sectional designs. Reviewed studies furthermore vary in terms of measured effects and reported outcomes. Likewise, interaction occurs in various forms that all have specific effects. However, our study showed that the reported effects of bilateral interaction are predominantly adverse. Even though economic theories suggest differences between unilateral and bilateral interactions (for example goal-alignment), the effects of bilateral interaction identified by our study are similar to those reported in research regarding unilateral interactions. That is, most empirical studies focus on adverse effects of bilateral interaction, thus leaving the potential positive effects mainly unreported. Therefore, future empirical research on positive effects of bilateral interaction is recommended. These studies should furthermore include outcomes at the health system level such as costs and quality, since current empirical studies merely focus on intermediary outcomes (for example prescribing behaviour).

Anastasia Balasopoulou, Alexander Tsigkas
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Context

The OR is one of the most critical areas in a hospital. In Hippocraton Hospital, in Athens, the OR faced delays and strong conflicts, especially between anaesthesia and theatre areas. Performance measurements (OPIs) provided proof of a waste of resources and under-performance, despite the fact that famous surgeons serve there.

The work flows improvement, by applying Lean, is an efficient approach to improve performance and create a strong ground to build on. The OR, as a system, should be more effective but also governed under a condition of self-organization, since this could help to achieve necessary adjustments towards continuous improvement.

Methods

The methodology selected as appropriate, after creating the necessary sense of urgent and building coalitions to support change, is Cybernetics combined by Lean.

According to Cybernetics principles "effective regulation, control and communication" are important dimensions for both operational and organizational aspects. thus a "building block" method was applied to structure the OR system in "Loops of Processes" organized as "circular" when Lean approach was applied to procedures' improvement. So both organizational and operational aspect, respectively, have been designed to function supplementary and create a stable environment.

The change was designed to be supported by new tailor-made IT system when a new Nurse manager, capable to understand and lead the change, has been also established.

Measurements have been recorded and OPIs extracted before and during the change process.

Results

The more obvious results are those reflected by measurements on quantitative aspects. In such terms the results include less postponed cases, higher productivity, earlier "first cut" time, reasonable extension of working time in swifts, shorter waiting time for the patient within the OR.

In terms of organizational and mainly qualitative aspects the increase of personnel's satisfaction is significant. Also the culture of acceptance of continuous recording of activities appears as clearer, compared to the previous situation, which impacts a positively the degree of transparency for all professionals. Finally the knowledge - continuous learning enhanced by the introduction and application of new interventions -like the modern IT, as well as by Lean.

Finally the personnel's satisfaction is considerable increased due to the more organized work patterns.

Discussion

All professionals working in hospitals have very often the feeling that the operational improvement, despite the fact that it is undoubtedly in the core of clinical work and especially in OR, is not as sufficient or "safe" as we tend to believe.

The supplementary application of the two approaches, Cybernetics and Lean, aims to give an answer to the need to combine both organizational and operational aspects, by increasing the functional interaction between them.

Further issues incorporated in Cybernetics, as self-organization, are expected to be seen and assessed in a next phase of the change, when it is expected to be more stable and comprehensive. But this does not decrease the significance of the approach.

As a conclusion, it seems that this combination creates a dynamic methodology that suites to the hospital care because it can tackle the complexity of the system because it is a complex system itself.

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Context

Patient flow management has become a policy priority in order to effectively balance the increasing demand of an unknown and variable volume of patients with hospital available resources (Litvak et al., 2005; Hall, 2013; Ardagh, 2015). However, most of the studies do not provide evidence on how specific interventions can improve patient flow performance, and they focus on improving the process on single-stage systems (eg. Emergency Department), without developing a thorough and system-wide framework to measure overall hospital patient-flow performance. Furthermore, many improvements initiatives frequently descend from the healthcare professional needs rather than the patient's (Bate & Roberts, 2007).

Methods

This research is part of a larger project in order to identify if a co-design approach, in which patients and first-line staff work side by side to re-design an hospital process, can improve hospital patient flow. The study is carried out as an action research study with the participation of University Hospital Campus Bio Medico of Rome, a 250-beds Academic Teaching Hospital still in the growth phase. The unit of analysis is the hospital patients' journey starting from the first contact with the structure (reservation office visit) until the first follow-up visit. Orthopaedic patients undergoing a hip or knee replacement surgery are analysed. In the first stage, the goal was to map hospital patient flow by shadowing 8 patients randomly selected and by interviewing first line professionals. The study has undertaken the approval process of the hospital ethics committee.

Results

From September to October 2016, 8 patients were observed and 15 interviews with health professionals were performed: 3 physicians, 4 head nurses, 5 nurses, 2 nurses bed managers and 1 Member of Medical Officer. The analysis of the first data is still ongoing. In the patient journey, it is possible to identify ten main phases and about thirty-six consequent activities and touchpoints. Within the hospital, the patient goes through eighteen different places and get in touch with about twenty different professionals. The professionals identified the main critical points in the process and suggested improvement measures.

Discussion

First results show how the hospital patient's journey is composed by multiple steps, involving many actors: therefore, the involvement of all stakeholders, patients and professionals, is a crucial point to effectively improve the hospital patient flow. The main contribution of this study is the development and analysis of a new approach to manage hospital patient-flow, which allows managers to know how to achieve an efficiently use of hospital resources, while creating a real patient-centred service and involving first-line healthcare providers. In particular, project's results will be informing organization managers about the feasibility of using a co-design approach as an instrument for redesigning the hospital patient flow at the ward level in order to achieve macro-level policy objectives. Furthermore, research findings will contribute to extend the current literature on the use of co-design approach and the integration of co-design and healthcare, addressing how users' experience can contribute to re-design processes.

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Context

End-of-life care for terminally ill cancer patients often includes hospice and home care as care delivery models that emphasize better value creation across the care pathway. Evidence suggest that early referral to non-hospital care settings and limited overly aggressive treatments in the last months before death improve value by increasing the QoL of patients and caregivers (Ferris et.al., 2009; Earle et.al., 2004). Moreover, allocation of resources to appropriate care setting benefits the health systems by improving the allocative value (Grey, 2011), for example, reducing unnecessary hospital admissions, overtreatment or unwarranted procedures (Adelson et al., 2016).

Methods

Despite this pattern, there is a lack of data at national/regional level about the quality of cancer care for patients with advanced disease, especially with reference to appropriateness of setting. To address this concern, we conduct a retrospective administrative database analysis of the population of cancer patients of Tuscany Region dead in 2015. We provide a first description of the heterogeneity of setting of care for cancer assistance in the end-of-life and an assessment of their quality in terms of appropriateness. End-of-life care indicators are build following the international literature (The Dartmouth Atlas of Health Care; Goodman et. al., 2013; Earle et. al., 2003) and are developed using multiple regional administrative databases (hospital and ER, home based, hospice, assisted patient register and drug consumption). Furthermore, we analyse the determinants of such patterns, looking at patient (age, gender, cancer type) and provider characteristics (availability of services and accessibility).

Results

We created indicators on end-of-life cancer patients' stay in hospital in the last 30-day period of life or use of chemotherapy in the last two weeks of life, and indicators on access to palliative care or home care as well as indicators on death rates. Early results highlight a large variability in the distribution of patients across end-of-life care settings and quality of end-of-life cancer care at provider level (i.e., local health authority). Different organizational profiles carry out, with a different approach in designing the end of life process of care.

Additionally, a preliminary inferential analysis identified an association between some of patient-level variables and provider structural characteristics and the setting of death and use of resources.

Discussion

The analysis of quality performance measures for end-of-life cancer patients provides the understanding about who is delivering end-of-life care, in what settings, and intensity of care. The resulting variability across local health authorities detects differences in level of appropriateness of care and quality of care and carries out different practices and organizational structures within the regional healthcare system. These results provide regional administrator and local health management with valuable information on the efficient allocation and use of costly medical services and drug treatments for end-stage cancer disease patients. In fact it is possible to identify areas where supportive service may be lacking, resulting in possible overuse of cancer-directed therapies near death and thus drive systems towards higher appropriateness and performance improvement (Nutti et. al., 2013).

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Context

Increasing cost pressure induces hospital managers to shrink costs by low-price-purchasing strategies in order to gain quick out-of-pocket savings. Studies demonstrate process optimization to be the most effective way for achieving quality enhancement and sustainable cost containment simultaneously. Therefore, this study aims to identify the economic potential of optimizing the process of surgical instrumentation by using size-specific standardized sets for total knee replacements.

Methods

This study is designed as a center-related before and after comparison with different surgical instrument set configurations. While the same set configurations were used in two centers, other set configurations were used in a third center. This design enables to test the robustness of a best result instrumentation setting.

Based on a generic process description the primary research variables activity time, sub-process turn-around-time and quantities of OR trays and instruments used were measured. The secondary research variable is costs.

Results

Using size-specific standardized instrument sets, significantly contributes to reducing handling complexity, to shortening time requirements, to avoiding investments in reprocessing units, to gaining additional revenues and to avoiding staff overtime costs.

Because of a potential time saving per day of 60 minutes an additional profit margin between €300 and €800 per OR day can be achieved. By using a differential cost assessment, a saving potential of €450.57 per total knee replacement procedure could be demonstrated.

Discussion

This study substantiates the superiority of size-specific instrument sets in total knee replacement operations and states the impact of logistical sub-processes like instrumentation management on cost-efficiency of surgical processes.

Developments in Quality and Patient Safety

A partnership between citizens and healthcare organizations to assess and improve patient safety

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Context

The Italian National Agency for Regional Healthcare Services (Agenas), in collaboration with the Active Citizenship Network, is being carrying out activities to promote citizens, professionals and community empowerment since 2007. As part of these activities, a checklist was developed, tested and then used in a nationwide survey to assess and improve person centeredness, through a partnership between healthcare organizations and citizens.

Drawing on the experience of the mentioned survey, during which teams composed of professionals and citizens assessed person centeredness in 287 Italian hospitals, it was decided to develop a similar checklist to assess patient safety.

Methods

Thanks to the joint work of experts in patient safety and civic evaluation, a first draft of the checklist has been developed. The items to be included were selected among those considered to be essential to ensure patient safety at International and National level (WHO, OECD, European Parliament and Council). A further inclusion criteria was the fact that the items could be easily checked by non professionals.

The tool has then been shared with the Inter-regional working group on empowerment and the Committee of the Italian Regions for Patient safety in order to make it ready for testing.

Before the testing, an evaluation procedure (training session, on site visit, assessment, feedback from professionals and citizens) has been defined. The tool has then been tested at the Nuovo Ospedale di Prato (Tuscany) during an on-site visit.

Results

The final version of the checklist includes feedback from the testing and is composed of 30 items, whose aim is to explore the extent to which the organization is committed to: preventing healthcare associated infections (11 items), using the Surgical Safety Checklist (2), reporting incidents (2), improving communication with patients involved in an adverse event and their families (5), providing information to patients on risks and related safety measures in place within the organization (1), correct patient identification (4), measures to manage the risk of fall (4).

Discussion

Having in mind the London Declaration of WHO (Patients for Patient Safety, London Declaration, WHO Patient Safety 29/03/2006), the project outlined met the challenge of making professionals and citizens work "together as partners" in assessing patient safety in hospital facilities. Such partnership proved to be effective to develop a tool to be used to assess safety of the services provided by healthcare facilities, with the aim of identifying improvement actions shared by both organizations and citizens.

The participatory assessment with regards to patient safety issues is quite an innovative approach in Italy, as well as at international level. The tool developed has been made available to all the Italian Regions and is currently used in the nationwide survey to assess and improve person centeredness (underway), aimed at involving about 450 hospitals.

Gillie Gabay

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Context

Demographic and social trends bring challenges to healthcare delivery such as: a growing life expectancy; a growth of the aging population; an increase in chronic illness; an appearance of new diseases; a shortage in physicians and finally; unsustainable costs of caring for the elderly and chronically ill.

Hospitalizations and re-admissions account for nearly one third of the total spent annually on health adversely impacting costs to payers and providers. Strategies to reduce re-admissions were limited and did not promote patient health. Future trends call to highlight health promotion in reducing re-admissions and this is the focus of this pioneer study.

Methods

An empirical explorative retrospective cross-sectional study with 208 respondents with poor health and identical health plans. All measures hold good psychometric properties. This research paves paths to prospective studies.

Results

Self-rated health was strongly related to fewer re-admissions. Perceived control moderated the relationship between self-rated health and fewer re-admissions. Perceived control and self-rated health, together, contributed 5.2% to the variance in re-admissions.

Discussion

This pioneer study explored: links amongst perceived control, self-rated health and re-admissions; the relationship between perceived control and self-rated health and; the moderation of perceived control on the relationship between self-rated health and the number of re-admissions. Perceived control and perceived health status each explained a different share of the variance of re-admissions. Together, these perceptions reduced re-admissions by 40%. Patient-clinician communication upon discharge may be a new direction to reduce re-admissions, improve delivery of care and promote health among elders and chronically ill. To reduce re-admissions, managements need to invest in restructuring the patient discharge process. A physician-patient dialogue shaping patient perceptions about their health status, perceived room for health improvement, and available internal and external resources may make a difference. Findings stress the need to allocate more time and resources for discharge communication processes and for physician training on psycho-social skills that may empower patients upon discharge.

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Context

In 2010 the patient safety administration made several analyses and identified a number of patients with symptoms that could be caused by cancer or other severe illness who diagnosis and treatment had been delayed. Patients were often juggled around in the healthcare system with no coherent care. Three groups of patients that can be identified as especially breached are patients with suspected malignant lymphoma, those having cancer with unknown primary tumour and patients with severe nonspecific symptoms that could be due to cancer.

Methods

The last few years there has been a national initiation of standard care processes in cancer care in Sweden. These processes aim to shorten the time from suspected cancer to diagnosis and to treatment. Diagnostic center in Eskilstuna was initiated in the beginning of 2015 and in the end of September 2016 patients could be remitted to us. The project will continue until December 2018.

We are working for a fast examination and by collaborating with radiology unit we can offer the patients a "fast track" to x-rays. Collaboration with other clinics are crucial for fasten up the process. We have regular meetings with the oncology clinic to secure that patients can start treatment in proper time. We have together with the surgery clinic developed a routine for lymph node extirpation, the patient will get surgery in just a few days.

Results

The project is in the beginning and during the first two and a half months 43 patients have been remitted to Diagnostic center, 31 of them have got a diagnosis (13 cancer and 18 other conditions) and 2 had no illness at all. Our perception is that patients do get their diagnosis faster. We keep track of every patients step in the process and can show exactly how long it takes to set diagnosis.

Discussion

The analysis that was made in 2010 showed that patients diagnosis were delayed even though they were in the healthcare system, the main reason was that they did not have any healthcare provider that held the care together. We can provide that for the patients. The response from patients is that they feel listened to, safe and well taken care of. All patients are asked to fill out a survey after discharge, the results from that will be presented in the national cancer care organization.

Our expectations are that the project will end in showing results for a shorter process getting cancer diagnosis, which will lead to early start of treatment but also show in patient perceived satisfaction. We are working for a permanent diagnostic center.

How health service structure and process explain differences in outcomes in type 2 diabetes provider networks: investigation in six European countries

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Context

The aim of this research is to explain differences in health and service outcomes between provider networks for the treatment of type 2 diabetes patients in primary care in six regions in Finland, Germany, Greece, Netherlands, Spain, and UK. We explain differences in quality of life measured by EuroQol (EQ-5D), glycated haemoglobin (A1c), and service satisfaction between networks by structure and process parameters.

Methods

Research methods encompassed two parts: a) modelling structure and process of care and b) the cross-sectional survey of patient perception of health outcomes and services. Service structure and process were modelled at the regional level using standard templates i.e. operational models, based on data from information systems. In surveys 1459 type 2 diabetes patients were studied in six regions during 2011-2012. The instrument of survey included background information, EQ-5D, perceived service quality and patient satisfaction of care. Stepwise linear regression models with fixed effects of regions were used to explain differences in quality of life, A1c levels and patient satisfaction by annual hours of care, frequency of service use, costs of care, types of human resource, and access to services.

Results

Presented models explained only 20% of variance in quality of life between the networks versus 45% of variance in patient satisfaction. by the attributes of service quality, types of human resources, and access to services. It was found that greater involvement of nurses is positively associated with quality of life and satisfaction (p-value=.000). Moreover, a higher percentage of patients with well-controlled A1c appears to translate to less service use (p-value=.000) and lower yearly costs.

Discussion

A large proportion of differences in outcomes between the studied provider networks remained unexplained. Our findings support the view that the relationships between structures and processes on the one hand and outcomes on the other hand are complex and require not only unidirectional relations from services to outcomes, but also bidirectional relations to explain differences in structure and process of services, e.g. use and costs of services. The findings furthermore confirm the relevance of some, but not all, of the earlier established service quality dimensions from the ServQual model for service satisfaction.

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Context

Prolonged length of stay (LOS) in the emergency department (ED) results in patient and provider dissatisfaction and increased patient morbidity and mortality. The main goals of this research are: 1) to study the ED LOS and to identify its main determinants; 2) to study the ED LOS variability associated with specific organizational characteristic for each hospital.

Methods

As first stage of the analysis, we analysed data from 10 hospitals, from different areas of Italy during one year period. The outcome variable was total ED LOS in minutes. The predictor variables were patient characteristics (age, gender, triage score), discharge pathway, daily ED workload (number of ED admissions, number of hospital admissions from ED, number of patients went through the ED Observation unit and percentage of not urgent triage scores) and the daily hospital bed occupancy rate.

We used three multivariate models (General Linear Model): overall ED admissions (complete model, n=619.956), cases that went through the ED Observation Unit (OBI model, n=50.375) and cases admitted to hospital (admitted model, n=99.162). We calculated the variability explained for each model and analysed the factors associated with ED LOS.

As second stage, we will perform a hierarchical regression analyses (Multi-level modelling).

Results

In the admitted model used in the first stage, the analysed variables explained 51% of the overall ED LOS variability. The complete model and OBI model they explained the 31% and the 32% respectively.

Age, triage score, discharge pathway, daily percentage not urgent triage score and daily hospital bed occupancy rate were significantly associated with ED LOS.

Older age was significantly associated with increased ED LOS. Intermediate urgent triage scores take on average longer LOS (except in the admitted model). On average, not urgent triage scores have shorter LOS, and here we confirmed that when the daily percentage increases, the overall ED LOS decreases for all ED admissions.

The ED admissions who are admitted in Emergency ward or Medical wards takes on average longer LOS than other sort of discharge pathway.

Only important changes in hospital bed occupancy rates are associated with the ED LOS for all ED admissions.

Discussion

The ED LOS is a multifactorial variable, with a lot of variability not explained by the analysed determinants. However, our findings may suggest several strategies to reduce ED length of stay: to divide the ED pathways for not urgent and urgent triage scores and organize dedicated for elderly patients (with chronic diseases and repeated ED admissions), to make easier discharge pathway in medical wards. Finally, relevant increase of the hospital bed availability can reduce ED LOS for all ED admissions. In the next month, the second stage of the analysis (multi-level modelling) will be completed. Including a second level by hospital, it will be possible to analyse the ED LOS variability associated with organizational specific characteristics for each hospital.

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Context

Modularisation is considered to have potential in developing healthcare delivery by enabling the customisation of standardised services through the mixing and matching of standardised service modules. At present, empirical modularity studies in specialised healthcare are scarce. This study compares patient preferences between oncology patients that have a personal nurse and are treated in a tradition specialty-focused outpatient care unit and haematology patients that do not have a personal nurse and are treated in a modularised outpatient care unit.

Methods

A questionnaire to haematology and oncology outpatients was distributed in 2016, including questions related to outpatient care and communication and issues such as personal nurses in outpatient care units, preferred number of nurses in outpatient care unit and satisfaction to outpatient care.

Outpatient care is organised differently in the two specialties: i) haematology patients are treated in a modularised outpatient care unit providing services to over 20 specialties. Patients do not have personal nurses. ii) Oncology patients are treated in the oncology outpatient care unit, in which only oncology patients are treated and all patients have a personal nurse.

A binomial logistic regression was performed to study how various background variables affect preferences of i) a personal nurse in the outpatient care unit and ii) 1-3 treating nurses in the outpatient care unit.

Results

321/410 (78%) of questionnaires distributed to oncology patients and 168/300 (56%) of questionnaires distributed to haematology patients were returned. Both oncology and haematology patients are satisfied with outpatient care unit treatment. Haematology patients preferred personal nurses less compared to oncology patients (OR 0.09, $p < 0.0005$). Similarly, haematology patients more seldom preferred maximum 1-3 treating nurses compared to oncology patients (OR 0.12, $p < 0.0005$).

Discussion

This study demonstrates that severely ill patients can be satisfied with outpatient care regardless of whether they have a personal nurse. It also shows that the organisation of services may be associated with different preferences of severely ill patients. Personal nurses are often seen as the state of art of patient-oriented healthcare. However, care may be organised in different ways, such as the modularised day-hospital demonstrates. Thus it is important to explore patient preferences in regard to different operating models. Present healthcare modularisation literature lacks studies focusing on patient perspectives. Also patient preferences related to personal nurses in oncology and haematology care is limited. This study brings new knowledge related to patient preferences regarding organisation of treatment staff. As only two patient groups were studied and the patient groups had differently organised outpatient care, more research is needed to understand how modularisation and patient preferences may be linked together.

Changes in a Heartbeat - National Target Levels as a Complementary Method in Knowledge Management to increase Adherence to National Guideline Recommendations

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Context

Swedish National Guidelines consist of specific recommendations, indicators and national target levels. The indicators, which are custom made to reflect the key recommendations, are used to monitor the adherence to the key recommendations of the National Guidelines. As of 2011, national target levels are developed for a selection of the indicators, which reflect the key recommendations with the greatest need of improvement. Both indicators and target levels can be used to evaluate the adherence to National Guideline recommendations on a national level (Fig. 1.). Indicators and target level are thus considered valuable tools for improving quality in healthcare.

Methods

In an attempt to assess the impact of target levels on the quality of care, data for indicators with target levels from the National guidelines for Cardiac Care were investigated.

Atrial fibrillation is the main known risk factor for ischemic stroke. According to the Swedish National Guideline recommendations, treatment with anticoagulant drugs is recommended for patients with atrial fibrillation and co-existing risk factors for ischemic stroke (CHADS2-Vasc \geq 2).

The indicator reflecting the aforementioned recommendation is constructed as follows:

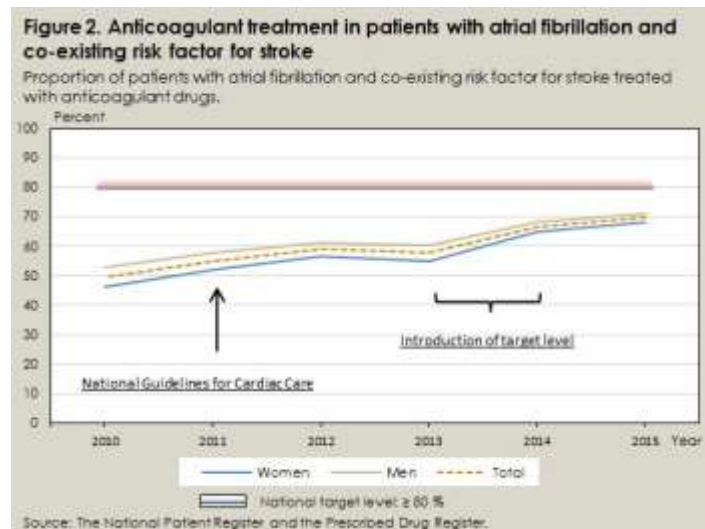
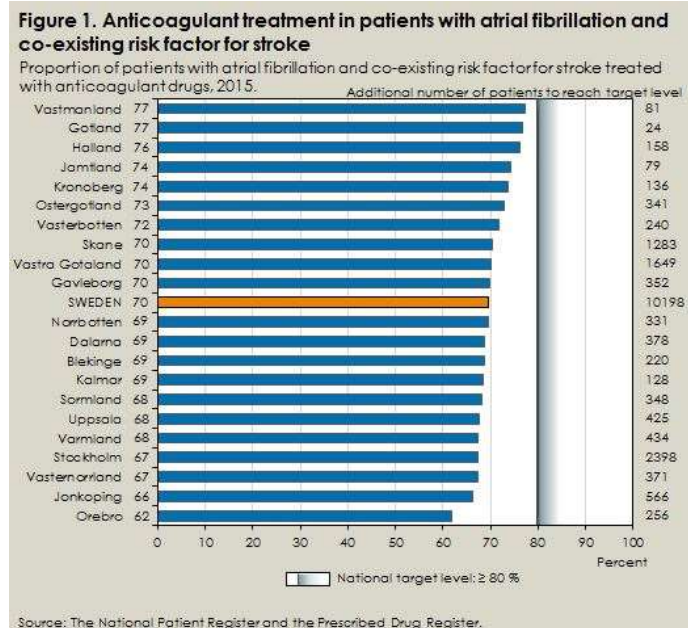
- the denominator includes patients with a history of hospitalization for atrial fibrillation as primary or secondary diagnosis within a time period of five years and CHADS2-Vasc \geq 2.
- the numerator includes the same patient population as the denominator above, the patient population has however also picked up prescribed anticoagulant drugs from a pharmacy during a follow up period of 6 months.

Results

When the National Guidelines for Cardiac Care were introduced (2011), the proportion of patents with atrial fibrillation and coexisting risk factors for ischemic stroke taking anticoagulant drugs increased from 50 to 55 % (2011). However, when a target level was established for the indicator (2014, national target level \geq 80 %), the proportion of patents increased from 58 to 67 % (Fig. 2.).

Discussion

After introducing a national target level for the indicator above, the proportion of patients treated with anticoagulant drugs increased at a higher rate as compared to when only a National Guideline recommendation was available without national target levels. These data suggest that national target levels provide an additional incentive to increase the adherence to National Guideline recommendations which ultimately improves the quality of care.



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Context

Information and communications technology (ICT) plays a central role in modern institutions by facilitating and improving the healthcare sector to conform with the age of information technology. Iraq, as a developing country, highly values the importance of healthcare organization and their role in achieving economic prosperity by developing human resources. Unfortunately, the adoption and usage of ICT in healthcare systems is relatively low or barely non-existent among physicians and healthcare institutes. This study aims to examine the potential prominent factors related to the adoption and usage of ICT among the physicians in the Iraqi healthcare sector.

Methods

The study provides an understanding on ICT usage by adopting a technology organization environment framework combined with a technology acceptance model, as well as applying the diffusion of innovation and social exchange theories.

Results

A self-administered survey was conducted on 500 physicians selected from 5 hospitals in Baghdad. Out of the 500 physicians, 324 returned the questionnaires with a response rate of 64.8%. From the returned questionnaires, 12 were incomplete or had random answers; thus, they were removed from subsequent analyses, yielding 312 usable responses with a response rate of 62.4%. Thirteen factors were chosen to be measured by the questionnaires that have been made for physicians. Findings showed that 10 out of 13 factors namely, attitude toward telemedicine, benefit, connectivity, IT capability, compatibility, concept of data warehouse, technical support, top management support, policy, and upper-level leadership, were significant determinants of participation in adopting telemedicine. However, cost, privacy, and culture were excluded statistically from the model using the step-by-step regression method.

Discussion

The study provides recommendations to healthcare leaders and policymakers toward promoting a successful adoption and diffusion of technologies in the future. Moreover, it clearly describes the adoption in the field of healthcare technologies, such as telemedicine and telehealth, in the context of developing countries, particularly in the Middle East.

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Context

Telemedicine deviates from the predominant direct and personal treatment. Thus, it not only represents a drastic departure from the current state of the art, it also constitutes a discontinuous change that creates a new line of business that does not conform with the existing business models of health care providers.

In health care, the adoption of discontinuous digital innovations such as telemedicine by incumbents is claimed to be affected by government regulation or the economic framework. However, research in other contexts has shown that the adaptability of incumbents is also influenced by their ability to leverage their specialized complementary assets.

Methods

The diffusion of digital innovations in health care provides a rich empirical context to study the impact of institutional and organizational factors on incumbent adoption of discontinuous innovation. The quantitative study was conducted in the context of European hospitals in the period from 2012 to 2013. The sample contains hospitals from 30 European countries. The examined telemedicine applications encompass provider-to-provider as well as provider-to-patient interaction: teleradiology, telemonitoring, teleconsultation with other health care practitioners, and teleconsultation with patients.

Results

58% of the hospitals in the sample had adopted at least one of four telemedicine applications. 41% of the hospitals had adopted teleradiology, 14% had adopted telemonitoring, 31% teleconsultation with providers, and 15% teleconsultation with patients. The findings from regression analysis suggest that complementary assets have a stronger effect on the adoption of telemedicine applications than regulations and the economic framework. The existence of complementary technologies had a strong positive effect on adoption, whereas the impact of the regulations was significantly less robust and more ambiguous, and financial incentives exhibited only a limited impact.

Discussion

The findings illustrate that infrastructure and technological competences acquired due to the employment of complementary assets will increase the likelihood of the adoption of digital innovations, and confirm the importance of complementary assets in the face of discontinuous innovations. In contrast, the regulatory framework can either promote or inhibit discontinuous change by requiring organizational accountability and by influencing resource flows. Therefore, regulatory elements can yield contradictory effects on discontinuous change.

Based on our findings, we argue that public policy aimed at promoting digital innovation in health care should also focus on complementary assets and the underlying infrastructure. Furthermore, our findings support the argument that matching policies with the characteristics of the innovation may be crucial in accelerating technology development.

Evidence in the healthcare management workplace: professional expertise and sense-giving strategies in adopting innovations in English hospitals

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Context

Evidence-based management promotes decisions based on best available evidence, which can help enhance organisational performance. Evidence draws upon dissimilar professional knowledge bases and domains of expertise and is also determined by the practice context. These challenges appear to be particularly important in healthcare organisations, with highly professionalised and diverse workforce; each with its own expert knowledge and matured evidence base, who need to collaboratively work within multi-disciplinary teams. How do these professionals with different work identities (e.g. clinical vs. non-clinical) use various forms of evidence in making organisational decisions? Especially how does this process unfold in the adoption of innovations?

Methods

The study used qualitative methods of inquiry. We drew on exhaustive qualitative data, namely, 191 in-depth interviews with executive and operational clinical and non-clinical managers from different professional groups across nine English acute NHS trusts. Ideas from organisational sense making literature helped frame the study. The use of evidence was investigated over eighteen months across 27 different innovation technology 'decision domains' in the clinical area of hospital infection control. We employed a two-phased approach to the fieldwork. Phase 1 focused upon senior (director level), middle-level, and operational managers involved in organisational decision-making. Technology products for Phase 2 research were then sampled, which examined in detail the stakeholders involved in specific cases of evidence use. Data analysis was carried out in three main phases (developing a set of narratives, identifying issue domains, ground up construction of themes). To facilitate coding, we used the qualitative data analysis software NVivo 10 (QSR International).

Results

The findings delineate how various types of evidence were mobilised by healthcare managers with different professional identities (clinical vs. non-clinical manager) in making organisational decisions. The findings reflect on important premises concerning the interaction amongst attributes of evidence, attributes of the professionals involved in the organisational process, and sense making conditions; these factors mediated how evidence was valued and used in-practice and in-context. The tension between professional autonomy and the realities of day-to-day practice in the formalised environment of hospital care shaped the use of evidence in innovation adoption decisions. Claims to professional expertise and shared attribution of expertise on particular innovations decisions played also a key role in the process; formal experts and relative experts who provide local information were identified as undertaking key expert roles in technology adoption decisions. We finally identify and detail specific sense giving strategies employed by healthcare professional experts: evidence flexing and perspective taking.

Discussion

Interestingly we found that 'high' and 'established' scientific evidence about technologies did not override other forms of evidence, such as cost and experiential knowledge about ease of use. Equally, low evidence strength, with an emergent scientific evidence-base did not preclude these technologies from being adopted. Unlike previous work which exclusively focused on the purposeful sense giving activities of organisational leaders this study argues that the sense giving activities of multiple actors are relevant. We found evidence that implicit, tacit sense giving appeared to supersede any purposeful sense giving engaged in by nurses and non-clinical managers and official hospital 'leaders'. We also found that groups of inter-professional experts worked best when expertise within the group was clearly attributed. Entrenched positions particularly around what constitutes 'evidence based practice' in infection control have been suggested, while senior medical consultants act as role models and have a greater influence on junior staff than any official organisational policy.

Hippocrates Oath and Organisational Trust in top management of Public General Hospitals

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Context

Organisational trust is critical for pivotal organizational outcomes. Distrust of physicians in their top managements jeopardizes the ability of hospitals to maintain their existing assets of human capital and hinders the delivery of high quality safe care. Known predictors of aggregated shared organizational trust are: Managerial support, administrative justice and meeting job expectations.

Professional core values reflected in the Hippocrates oath were not yet tested as a predictor of organizational trust. This study tests organizational trust among senior expert physicians, in their top management teams at general hospitals.

Methods

The sample comprised of 790 senior expert physicians at all departments of ten public general hospitals. Measures hold good psychometric properties. Structural equation modelling (SEM) was performed. Data collection lasted for two years and a half with no seasonal effects. Following ethical approval, at each hospital, surveys were collected for about six months.

Results

In all previous studies trust was a single construct concept. Findings showed that among senior expert physicians, trust was a two-construct concept: daily trust and career trust. SEM showed the study model is recursive, only direct effects were found. All independent variables were predictors of trust. The modelling explained 30% of the variance in daily trust and only 5% of the variance in career trust.

Three predictors explained 'Daily trust' (by strength): perceived quality of care, satisfaction with medicine and meeting job expectations. Three predictors explained 'Career trust' (by strength): job expectations, organizational support and seniority. Bootstrapping for this model indicated acceptable stable indicators of goodness of fit of the relationships in the modelling.

Discussion

Delivery of quality care is the main axis of the social exchange between parties. Seniority moderated the relationship between the core value and trust. Job satisfaction was found to be a predictor of organizational trust rather than an outcome of trust as in other work contexts. Findings stress the importance of the perception among physicians that their top management is allowing and facilitating high quality of care to their patients. Findings support an alignment between espoused and enacted organizational values of quality of care. Lack of alignment of values may significantly damage trust.

Management is to consistently facilitate high quality care, notwithstanding financial constraints and changing arrangements of health maintenance organizations. The work environment in hospitals is to be designed so that job expectations of senior physicians are fulfilled. Expectations (i.e., influencing clinical decision making, professional activities, acknowledgement, belonging to a professional community), must be facilitated to enhance organizational trust.

Management by processes: a Patient First strategy or/and a hospital organizational model?

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Context

Our hospital mission "Always, the patient first" is embedded on the process management model promoted by the institution since 2014. Placing patients in the centre of our activities and ensuring Health Care Workers (HCW) participation were key to implement a comprehensive process management strategy. The aim of this core activity was to eliminate unnecessary activities that do not add value to our work and preserve the valuable patient care operations. Our objective was to improve patient care flow, patient and HCW safety, improve quality, use the best available evidence and promote multidisciplinary team-work, HCW participation and organizational learning.

Methods

Setting: national and international reference hospital (1100 bed) standing for more than 7 mill. people in Catalonia including a community reference area of 432,391 inhabitants. A new process management Technical Office was created, consisting of HCW and engineers, with formally trained and experienced in process and operations management. Previously used process management methodology was complemented with standardized tools (lean, kata, design thinking ...) to create an innovative methodology ("advanced processes"). Our approach included simpler tools, plain language and accessible working plan to HCW. Our continual improvement of process stands on Plan-Do-Check-Act steps based on Deming Cycle. Processes were prioritized according to clinical care relevancy: organizational wise (Emergency department, hospitalisation, critical care, surgical rooms, outpatient clinic and day-hospital) and clinical processes (femur fracture, lung cancer, transplantation).

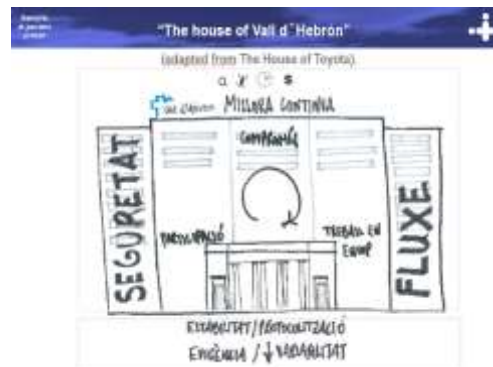
Results

Strategy results in 2016 compared to 2015:

- Variability reduction and standardization of procedures and circuits.
- 48% reduction of surgery patients on the waiting list (out of guarantee time).
- 35,89% reduction of patients on the outpatient's waiting list.
- 57,01% decrease on patients waiting to be programmed on the outpatient clinic.
- 7,53%% reduction on the outpatient waiting list time.
- 76.4% reduction of vascular surgery reprogramming.
- 41.2% reduction of hospitalisation before vascular surgery
- 37.2% reduction of bed occupancy in internal medicine ward
- 34.44% reduction of reported patient complains at emergency department

Discussion

The hospital Directive Board launched an institutional strategy based on HCW leadership. The operations management methodology was adapted to the culture of our hospital. Both Technical Office and Directive Board supported the implementation working closely with HCW. This innovative approach fosters continuous improvement integrating this new culture into daily team-work. Several benefits were obtained from the ongoing project, including: greater simplicity and agility in the organization care operations, significant reduction on patient care waiting list and times, time reduction of patient care process, improved patient and HCW satisfaction. The process management model developed by our team integrates Patient First strategy in the hospital organizational model thanks to an approach adapted to HCW culture and active participation.



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Context

In healthcare, lean approaches have been gaining in popularity throughout the current century. One aim is to sustainably improve all processes through structured problem solving. In first-order problem solving, problems are resolved but underlying causes remain. In comparison, second-order problem solving involves in-depth questioning of work practices in order to discover and remove the root causes of problems (Meijboom et al., 2016). In this respect, this research investigates the relationship between lean maturity and second-order problem solving. Additionally, we explore the meaning and moderating role of lean leadership in stimulating employees to develop and sustain a culture of improvement.

Methods

The research has been carried out in a Dutch hospital where ward teams in different lean phases follow the lean-based Productive Ward programme, a programme that incorporates attention to leadership (White et al., 2014). The study design incorporates 15 retrospective case studies (unit of analysis: ward teams) with 45 interviews (the team leader and two nurses in each). The interview protocol is designed to assess the level of lean maturity/adoption (Malmbrand and Åhlström, 2013), the level of second-order problem solving based on the scenarios developed by Meijboom et al. (2016), the level of perceived performance and leadership practices. Terms used by the informants related to lean leadership behaviours were coded inductively, leading to second-order concepts and aggregated dimensions. Then, in cross-case analyses, the cases with anticipated low, medium or high levels of second-order problem solving were compared with deviating cases to explore the moderating role of lean leadership.

Results

A regression analysis identified significant positive relationships between lean maturity and second-order problem solving, between second-order problem solving and perceived performance and, partially mediated by second-order problem solving, between lean maturity and perceived performance. The study found 14 aggregated leadership dimensions: lean leaders (1) convince their team of the importance of the programme and involve everyone from an early stage, (2) are present on the work floor, (3) visualise, provide insights and use information sessions, (4) pay attention on an individual level, (5) monitor progress and take action when necessary, (6) facilitate by providing time and resources, (7) seek support from higher management, (8) use the core team as a driving force, (9) encourage nurses to take the lead, (10) develop the team to becoming self-steering, (11) use communication skills, (12) act as a coach, (13) act as a role model and (14) support lean principles.

Discussion

In line with a study in Belgian hospitals by Meijboom et al. (2016), we found significant relationships between lean maturity, second-order problem solving and perceived performance. Lean leadership appears to be a multifaceted concept that can strengthen these relationships. Previous research showed that lean leaders go to the Gemba, empower and trust their teams, are modest, work in a spirit of openness (Aij et al., 2015), are committed to self-development, coach and develop others, support continuous improvement on a daily basis, encourage participation in improvement activities, create vision, align goals (Poksinska et al., 2013) and support organisational learning (Van Dun and Wilderom, 2016). In addition to these, we showed the importance of the leader's personal involvement and of developing the team to become self-steering. Previous studies on lean leadership have neglected transformational leadership theory. The lean leadership dimensions we have revealed are mainly transformational, and to an extent transactional.

Developing a Measurement Matrix of the Strength of Primary Care for Children

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Short Paper

Good quality primary care is a priority in any health system, but each European country has its own model, with variable consumer-orientation, quality and outcomes. In conjunction with the European Commission, the PHAMEU project developed a measurement framework to assess the strength of primary care in 34 European countries, and this was presented in publications by Kringos et al. (2010, 2013).

Children are a very important segment of the population. Children's health determines the health of the subsequent adult population. Thus child health is also a determinant of the health of the workforce and of the economy, as well as of the capacity of the adult population as carers of children and older adults, while a less healthy population is a burden on society.

However, primary care for children needs to present differently from primary care for adults. Moreover, childhood has its own life course, and healthcare needs and types of support required, including prevention needs, change from infancy, through early childhood, into the more independent and self-determined teenage years. Children cannot advocate for services until well into their second decade, and are therefore dependent on society to ensure optimum service provision. However, service provision may not be optimal for particular child age-groups, while children may have health needs different from their parents' perception.

A further challenge underlying these generic needs is that there are professional variations in patterns of provision - some countries favour a primary care paediatrician model, others a generalist family practitioner model. The role of nurses within primary care varies significantly between countries. Addressing the current lack of comparative evidence, the Horizon 2020 project 'Models of Child Health Appraised' (MOCHA) - see www.childhealthservicemodels.eu - is examining the different models and components to identify optimum approaches.

One specific objective is to produce a child-specific comparative measurement matrix. The PHAMEU model, though carefully constructed, takes very little account of the needs of children for child-centric primary care. Consequently, the MOCHA project is in the process of constructing a child-focussed primary care assessment method. This will start by seeking consensus, through a Delphi process, on 10 dimensions to be considered. It is anticipated that for each of the 10 dimensions there will be five separate measures, each based on scientific rationale as to the topic and the measure, and that this set will be constructed separately for each of the three age groups 0-4, 5-9, and 10-17 years, enabling compilation of age-specific and overall indices.

This presentation will report on the outcome of the Delphi process and the resultant 10 dimensions agreed. It will then describe the process of compiling the sets of measures and their data sources, and the current state of that construction work, and invite feedback.

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Context

The Models of Child Health Appraised (MOCHA) Horizon 2020 funded project running from 2015 to 2018 (see www.childhealthsrvicemodels.eu) is tasked with reviewing the patterns of primary care provision in the 30 EU/EEA countries, and identifying future optimum models. One aspect currently being studied is the use of Electronic Health Records, and the foundations for e-health in each country to enable safe and effective future primary health care delivery (including appropriate information linkage with secondary care and other partners).

Methods

Local agents of MOCHA in each country were asked to respond to structured enquiries about the existence, and time of creation, of unique record Identifiers (URI) to enable the effective linkage of children's records in their country. Second, the national E-Health policies for each study country held on the WHO Global E-Health Observatory were identified, and the country agents asked to verify whether these were the latest policy documents, and whether there was mention of the special issues of child health data and functionality requirements in these policies. Third, country agents were asked about the existence and extent of usage of electronic records in primary care, and whether these included functions covering child health; also whether there were case-based child public health systems operational in the country.

Results

The results are worrying for ensuring safe and effective primary health care delivery to children in European countries. Of 28 countries analysed, 5 do not have a URI to link records, of which 2 have no plans for such. In only 8 countries is it issued at birth, meaning that in 20 countries linkage for early multi-provider care is difficult. In the 24 national E-Health strategies examined, in only 10 countries was there any mention of children's health data or record functionality requirements; children were invisible in the other 14 countries. Regarding the current use of EHR systems, the data are still being collated (completion end January 2017), but are showing a wide variation in EHR use in primary care from no availability to complete coverage, and in whether these systems have child health functionality included. There is a similar spread on use of case-based child public health monitoring systems.

Discussion

Thus in most countries effective electronic data linkage of children's records, especially immediately after birth, is compromised. Furthermore, in 58% of countries there is no mention of the need for e-health to contain special aspects for children's primary health care. These functions should include birth data sets; height, weight, and computed growth velocity; achievement of developmental milestones; and scheduling and outcome of immunisations and of health assessments to local schedules. Use of recognised standards is also very variable, with many countries still using local rather than international consensus standards. On the other hand, some countries have innovative systems, yet knowledge of these is not widespread. Full analysis will be available for the presentation, together with an update on steps being taken to promote improvements.

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Context

Paediatric primary care departments face several organizational challenges due to the raising expectations of citizens and the lack of skilled professionals. Primary care nurses are equipped to manage and follow-up a wide range of paediatric consultation in collaboration with their care team.

At CASAP, a primary care team in Catalonia, we planned a reorganization process in 2010 which was implemented progressively throughout 2010-2014 aiming at increasing the responsive capacity of the paediatric department.

Methods

Our reorganization process pivoted in increasing nursing leadership implementing a nurse-led management of acute demand and increasing preventive community health activities by means of adopting new information technologies. Some structural modification took place such as the detachment of nursing from the paediatric consultant and developing shared check-ups.

Nurse research and training played a fundamental role in empowering nurse practitioners to increase their responsive capacity.

A clinical guideline to support the nurse-led management of acute demand of children and a nursing guide of follow-up visits was developed in collaboration with the paediatricians working in the team and the direction of the centre.

Results

Services provided expanded from regular check-ups and acute care to a range of complementary services encompassing allergy tests, dermoscopy, minor surgery and cryotherapy. From 2013 to 2014, a total of 1,140 acute visits were provided by the paediatric team 65% of those been tackled autonomously by nurses. The responsiveness deferred from 87% in wounds to 66% in trauma or 60% in diarrheal cases.

Community health activities also expanded by the use of social media and increased services basket including health promotion for new-borns, breastfeeding support, virtual consultation for youngsters and the extension of the Health and School Program.

Discussion

Nurses have the potential to lead the process of care for both healthy children and most acute cases visited in primary care settings.

Collaboration between nurses and paediatricians helped in defining the areas where nursing can reach better levels of responsiveness.

The combination of a research agenda, a planned training program, the use of social media and the provision of the right equipment were crucial in the successful implementation of the paediatric reorganization process.

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Trinity College Dublin, Dublin, Ireland

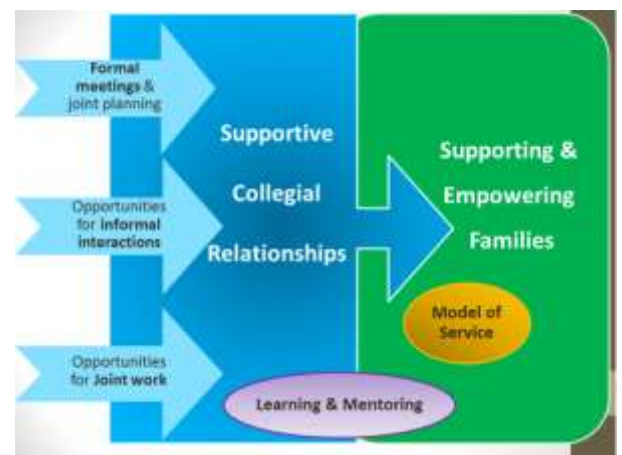
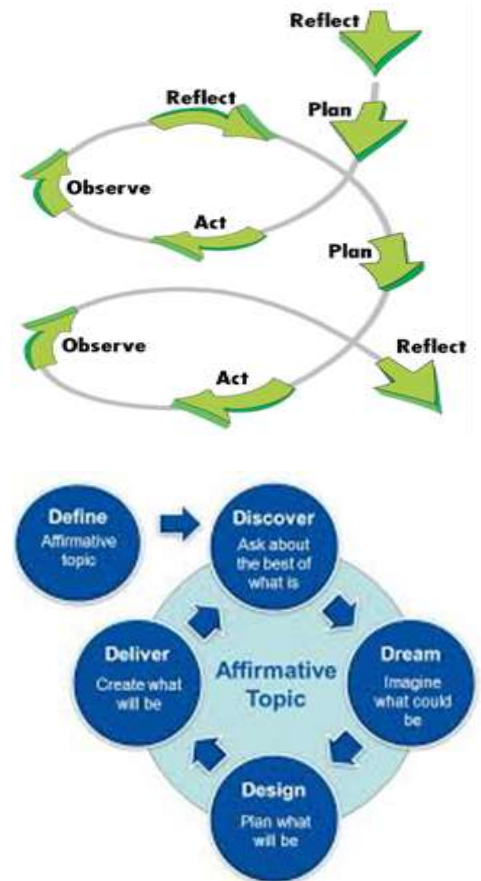
Short Paper

Multi-disciplinary teams, in all their guises, are a cornerstone of future health-services but our understanding of how to support them, particularly in non-acute settings, is limited. Further investigation is required and this Irish project demonstrated that Action Research (AR) and Appreciative Inquiry (AI) are of particular value and relevance in this regard. They generate real-world learning and are meaningful to clinicians – they have the potential to provide context-specific support through the challenging reforms and reconfigurations of the coming decades.

This project used an AR approach to generate multi-level discourse and actionable knowledge in relation to multidisciplinary teams in children's disability services across Ireland. In an environment of uncertainty and change, during a complex national reconfiguration of services, the project sought to understand how front-line teams could be supported to develop collaborative, family-centred practice. Cycles of reflection and co-planned action proved effective in enabling diverse groups, within complex social and organisational contexts, to engage in positively-framed discourse.

The story of how the project unfolded is described, including changes in direction and emphasis. It included cycles of co-inquiry with collaborators; the development of an on-line survey; AI workshops with front line clinicians and the use of 'Provocative Propositions' to prompt debate and inspire action. A particular focus emerged - to enable positive, future-orientated conversations that would help to 'build bridges' – to create shared visions of the future, across organisational and discipline boundaries.

The project generated new learning at the 1st, 2nd and 3rd person level in relation to working relationships and shared values in these environments – an area that has been poorly explored in the literature to this point. It provided insights into the lived experiences of multidisciplinary teams and succeeded in making tacit values espoused – in particular about the sustaining nature of collegial relationships. It empowered 'micro-communities' to reflect and learn together and it facilitated the co-creation of context-specific plans to support healthy collaborative practice across agencies, disciplines and hierarchies. As importantly, it generated experiential learning about the value of shared reflection and positively-framed narratives within the complex stakeholder environment of healthcare.



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Short Paper

As in many European and other countries, health care in The Netherlands is challenged to deliver high quality care, within limited budgets, to a fast-growing number of aging citizens that need long term care. To meet this challenge innovative solutions and health care models are needed. Future trends should not only be identified but also feed the agenda and design of health care reform.

Based on desk research and interviews we identified 9 ongoing trends that play a role in the reform of long term care in the Netherlands, but these trends can also be of interest for other countries. The trends are: (1) aging at home; more complex care in nursing homes and other institutions, because elderly stay at home as long as possible ; (2) increased cultural diversity; (3) increased working in temporary networks for professionals, which asks for specific expertise; (4) new competencies like networking, coaching and flexibility; (5) technology has the future; (6) person centred long term care and innovative client driven financing mechanism; (7) decentralisation and the changing role of (local) governments and focus on added value; (8) a new holistic concept of 'positive health' that will be leading in health care delivery and transformation; (9) tailored knowledge and information for clients and formal/informal carers, provided by a huge diversity of sources, channels, platforms, devices and interfaces.

The trends show that classical roles of a number of stakeholders will change and that technology will have a huge impact and be a driving force. In an additional study on signals of change in a much wider context of future society, we found 13 signals that were rated by 51 experts as 'high possibility' and 'high impact'. They range from cybercrime, global population reaching crisis level, fresh water shortage, plant based diets to retirement security, and tissue engineering in plants.

It is interesting to share and discuss these trends and signals with an international audience, to discuss overarching issues that are relevant for reforms of long term care systems in Europa. In our session we share our work by telling the colourful story of 88 years old Anna in 2030 who survived a stroke, living in her new house and neighbourhood full of e-health. Animations of scenarios of the technological future are also available. The publication of Anna was part of a report of the Ministry of Health, which combined the vision of 25 Dutch knowledge institutions, user groups and opinion leaders about the future of long term care.



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Context

In the last two decades, acute hospital bed numbers and lengths of stay have reduced in all Italian regions. These measures, driven by economic pressures, have impacted on the provision of rehabilitation services and accentuated the need for a viable alternative to acute hospital care. Care in community hospitals is one of these alternatives and in recent years it has become an increasingly important component of the post-acute care pathway for elderly people in Italy and elsewhere.

Methods

We used a case study methodology to examine the role and function of a community hospital based in a small town (≈4,500 inhabitants) located in Italy. Multiple data collection procedures were used to learn about the type of services provided and the main financial and organizational features. We first identified potential participants following three main steps: desk-based research, selection of main stakeholders, and ‘snowballing’ approach to identify further participants. Thereafter, semi-structured interviews were conducted in person during a four-day site visit in July 2015 or by phone on a later date (Table 1). Non-participant observation was conducted in the public areas of the hospital. A review of available documents and online resources describing the hospital (i.e. mission, status, activities, costs) was also performed. Lastly, we used local statistics to develop a profile of the population served and to understand the hospital in relation to other health and social care services.

Table 1. Details of interviews carried out

Participant code	Participant's role	Mode of contact
GP1	GP Coordinator (community hospital)	Face-to-face
GP2	GP (community hospital)	Face-to-face
S1	Nurse Coordinator (community hospital)	Face-to-face
D1	District Nurse Coordinator	Face-to-face
CR1	Mayor	Face-to-face
CR2	Municipal Councillor	Face-to-face
S2	Social Assistant (community hospital)	By phone
D2	District Coordinator	By phone

Results

The community hospital in question opened in a remote, hilly area of Italy in 1996 following the conversion of the local acute hospital into a new facility entirely run by general practitioners (GPs). At present, five GPs work in the hospital with other professionals including specialist doctors, nurses, physiotherapists and social assistants. The participative GPs' leadership style and the importance of interdisciplinary teamwork were emphasized in interviews. The hospital accepts medically stable patients (mainly elderly above 65) for short-term rehabilitation, social care assessment and palliative care not requiring intensive therapies or high technology diagnostics. These admissions can often prevent re-hospitalization to the acute hospitals or shorten the length-of-stay after surgical interventions. Moreover, the community hospital was reported to enable the containment of healthcare costs and out-of-pocket expenses. The facility was formally acknowledged as ‘community hospital’ by the Region in 2015 and is currently going through changes in service delivery systems.

Discussion

A provision of appropriate care for the elderly increasingly demands improved integration between health, psycho-social and social care services. This case study provides an example of the response of the Italian healthcare system to the need for enhanced options between acute hospital care and home care services. The positive perceptions expressed by the community hospital staff and community representatives interviewed confirm the achievements of this model of care, which was defined as ‘the community service with the highest healthcare intensity’. In recent times, the community hospital also faced a number of difficulties mainly related to disjointed co-operation and coordination with acute services and managing changes to systems and processes. Despite these challenges, the case study suggests that the community hospital may represent a promising way of managing post-acute and chronic conditions in the growing elderly population in European countries.

Nour Alrabie

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Context

French Health Home is a relatively new fashion concept highly encouraged by policy makers. Three hundred homes in 2013, they are rising to reach 1000 this year. In Health Homes, self-employed health professionals (Medical & paramedical staff) get to work together in a shared location. They continue their liberal exercise but supposed to share a common health project.

In some health homes, health professionals succeeded to build up a patient-centred integrated care approach in which they would share time together around one case while in other homes; communication is highly limited and meeting arrangement sounds problematic by itself.

Methods

This is an ongoing qualitative research in which we aim to find out the success factors and barriers to integration. An objective of 20 semi-structured interviews is to be achieved in April 2017. The interviews are held mainly with health professionals working in Health homes (General practitioners, specialists, nurses, physical therapists, pharmacists, radiologists, psychologists, etc.). Five external informants (Lawyers, consultants and coordinators) are interviewed as well, being directly working on these projects. The Data will be analysed with the principles of Gioia methodology for qualitative research making use of NVivo program.

Results

The results will form a model of success factors and barriers to integration. The empirically driven model will be confronted, compared and completed by existing literature on integrated care and integration.

Discussion

The identification of success factors and barriers to integration would be interesting to give insights to Health Homes Insiders to move from co-location to cooperation, collaboration and integration. They would be able then to move from sharing costs to creating and sharing value. The results would be equally interesting to partners especially policy makers whose agenda is willing to promote health homes and integrated care.

When austerity strikes- nurse performing minor skin surgery

Sandra Stenroth

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Context

We have struggled with the problem of delays and waiting times for our patients with malignant melanoma. New patients were not received in a timely manner. In average, they waited 35 days from that we received the referral until the primary surgery was done. When interviewed the patients expressed that they wanted shorter waiting times to surgery. We wanted to modify our procedures by "skill-mix" which we had tried before in other areas with good results.

Methods

A nurse was educated to do minor skin-surgery at our clinic. She was taught by senior surgeons and also by a professor in surgery from Karolinska, Stockholm. She attended suturing class at the hospital and after she had done 50 surgeries, while attending by a physician, she started doing the surgery by herself. The surgeries are performed at the outpatient surgery unit with local anaesthetics.

Results

The result of our restructuring initiative is shorter waiting time for our patients with malignant melanoma, they are now received within 7 days. The nurse performs skin surgery one day every week and that includes patients with basal cell carcinoma, atheroma, lipoma, dysplastic nevus, squamous cell carcinoma and malignant melanoma. All patients are remitted from the dermatology clinic to the clinic of surgery. After performing the surgery, the pathology sample are remitted to the pathologists and if the surgery is radical the patient receives a letter with the answer. If there is a malignant disease the patient comes back for a new appointment with either surgery or planning for surgery. The nurse lectures trainees and new physicians at our clinic. We have studied patient journals and there is no difference in complications when we compared surgeries performed by the nurse from the physicians.

Discussion

Patients want easier and flexible access and have no problem to be seen and treated by trained nurses. That encourage teamwork in between professions and the patient is an important part of that teamwork. Better accountability and a higher standard of quality, as the nurse does the surgery every week. 2014 she performed 173 surgeries, 2015 173 surgeries and 2016 184. The right care to the right patient in right time leads to improved efficiency. We have calculated that we save one million SEK a year by this skill-mix. Earlier we were forced to send our patients to other counties because we did not manage to receive them in time. Now we do them all at our clinic.

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Context

To build a bridge between innovative medical technologies and clinical practice, the technical physician (TP) was introduced in the Netherlands in 2009. In order to bridge this divide effectively, a temporary independent authority to perform reserved procedures has been granted for TP's. Reserved procedures are medical procedures (e.g. catheterizations, injections and endoscopy) that only certified and proficient professionals, traditionally physicians and midwives, are allowed to perform independently. The Dutch Ministry of Health has commissioned a study to evaluate the (cost-)effectiveness of granting technical physicians an independent authority to perform reserved procedures.

Methods

The temporary independent authority to perform reserved procedures has initiated a process of implementation. The implementation model of Grol (Grol & Wensing 2001) is used to understand the factors associated with this process. The model distinguishes between: features of the policy; target group; patient features; social context; organizational features and; the methods of implementation. As part of a larger Mixed Methods study (Creswell et.al. 2003), semi-structured interviews and participant observations are conducted. These are based on the implementation model. An editing analysis style is used, through which meaningful data are documented and categorized using the implementation model. Schemes, patterns and structures are searched for using NVivo version 11 software.

Results

Despite a national mandated independent authority, it has become clear that the level of autonomy of technical physicians differs greatly between medical specialisms, institutions and regions. The degree of successful implementation seems heavily dependent on: prior knowledge of reserved procedures clause (features of the policy); stakeholders involved (target group); the complexity of cases (patient features); the acceptance of technical medicine and the willingness to share tasks (social context); the type of institution involved (organizational features); and the mechanisms involved (methods of implementation).

Discussion

The results demonstrate how contextual elements promote and hinder the implementation of the temporary independent authority of technical physicians in the Netherlands. Such contextual elements are important to include when evaluating the (cost-)effectiveness of this initiative, as well as similar healthcare changes. Including such contextual elements will not only provide a deeper understanding of why certain policy initiatives succeed or fail in their objectives, it will also provide policymakers with increased knowledge how best to implement future healthcare innovations more effectively.

João Gregório, Luis Lapao

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Context

Healthcare acquired infections can be prevented by means of hand hygiene (HH) compliance. It represents a huge burden for nurses in daily work activity. Nonetheless, leading busy healthcare workers to comply with HH remains puzzling. Recognized hurdles are lack of time, forgetfulness, wrong technique, lack of motivation and awareness about compliance. This study aims at exploring the use of digital technologies like gamification to promote nurses' HH compliance self-awareness and action. Real-time data collected from an indoor location systems (i.e. Internet of Things system) will provide feed-back information to nurses working in a ward.

Methods

A design science approach is used to design and test a solution. Gamification was selected as the solution to the compliance problem to engage and motivate people to achieve specific goals. An innovative indoor system, based on Beacons (iBeacon™), is used to collect data on nurses' position (and time) to enable both the detection of HH moments and its validation. Each nurse carry a device running an application that use the received signals to detect its proximity to the beacons, being able to know to which one it is closest to, thus knowing its relative position in the room. After this, data is collected to display, in anonymous way, nurses' compliance in real-time. Changes in behaviour were measured.

Results

The compliance of HH in the ward was studied before and after the intervention. The system was installed and tested with significant precision. 35 Beacons were placed in the ward (in the room's doors, in each alcohol-based hand rub container, in each sink and in each side of the bed). Even though times aren't totally accurate, we are able to detect nurses' movements using proximity and quantify compliance. Participant nurses approved the measure as an opportunity to improve their performance.

Discussion

The impact of gamification on HH compliance is still under evaluation. So far the results show significant improvements in nurses' awareness. The nurses participated from the beginning enabled a higher sense of ownership in the process, recognized as a performance enabler.

All participants agreed that proper digital solutions implementation would require adjustments in the organization and on the workforce. There are areas that the eHealth services will enable to optimize HR whereas other areas that will demand more health professionals, probably even promoting the emergence of other professions. Technological change eliminates routine labour, whether physical or cognitive, and it increases demand for non-routine work typically requiring more education. Nevertheless, the impacts of digitization are much more profound and raise many questions open to research.

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Context

Antibiotics prescription is a complex process. Antibiotics are among the most prescribed and used drugs in clinical practice. However, it is estimated that 20-50% of antibiotics are improperly prescribed. Antibiotic Stewardship Programs (ASP) could contribute to optimize Antibiotic therapy, ensuring the proper use and minimizing side effects. This work aims at characterizing the utilization of Antibiotics in an intensive care unit (ICU) of cardiac surgery in the first six months of implementation of an ASP. The implementation was made through both the collaboration of a multi-professional team (Internists, cardiac-surgeons, pharmacists and nurses), and the use of an information system (HAITool).

Methods

Following a case-study methodology, this retrospective descriptive study analyses data gathered six months before and after the implementation of the ASP. It was completed with an observational study focused on the role of the clinical pharmacist. The multi-professional team visited the patients in the ICU ward weekly, focusing on patients with a length of stay higher than 7 days. Patients were submitted to Antibiotics prophylaxis with vancomycin and gentamicin, 48h prior to surgery. The focus of the intervention was the subsequent Antibiotics prescriptions.

Results

It was observed a reduction of 3.61% in the overall consumption of Antibiotics, with some Antibiotics, such as Ciprofloxacin and Linezolid registering reductions of about 96%. On the other hand, Antibiotics such flucloxacillin or amoxicillin/clavulanate registered an increase of 300-to-500%, suggesting a switch to first line Antibiotics. The two most consumed Antibiotics in this ICU were Gentamicin and Cefazoline. After six months of intervention, Gentamicin consumption decreased 1,32%, while Cefazoline increased its consumption 27,38%. It is estimated that in 30% of the cases, a pharmacist intervention was necessary (e.g. dose adjustment or IV/Oral switch).

Discussion

It was clear that the HAITool information system in this hospital enabled a quick access to information that is critical to inform the successful implementation of an ASP. A better use and access to the information on Antibiotics use, microbiology data and prescription patterns in the unit, will allow better tailored solutions to aid professionals in the implementation of ASP.

Pharmacists' intervention in this program was essential to decreasing Antibiotics consumption. However, the access to information on Antibiotics use, microbiology data and prescription patterns, via this evidence-based tool for ASP, was considered a major driver of success.

Measuring safety performance at the team level in hospitals – what matters?

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Context

So much of healthcare is delivered through team working and in particular multi-disciplinary teams, which exist in a variety of different forms across the healthcare system. Data relating to business performance, quality and patient safety is extracted from electronic patient data recording systems, audit findings, incident reporting systems etc. This data is often collated and analysed at the organisational level and at national clinical care programme level. However, meaningful data, that is data that can help teams improve how they perform, and data to improve safety is often not fed back to the healthcare teams at a local level.

Methods

A mixed-methods approach was undertaken to explore the current data that is gathered in relation to different teams (acute medicine team, perioperative team, integrated care team) across three hospital sites in the Ireland East Hospital Group. Semi-structured interviews took place with the Business, Quality and Safety Managers in each of the relevant hospitals. Documentation analysis of current data recorded in relation to the teams' areas of working was also carried out. Team meetings were attended and an analysis of what data was fed back to the teams was conducted. Semi-structured one-to-one interviews took place with team members to determine what performance, quality and safety data would be meaningful, that is would drive performance, to have recorded and presented back to their teams. Through a series of Co-Design workshops with representations from the teams, patient representatives and researchers, a template was developed for each of the teams to feedback meaningful data.

Results

Results highlight that large amounts of data are gathered in relation to performance efficiency (e.g. length of times to be seen, average length of stays, number of patients seen, admission/discharges by time of day); quality of care (e.g. number of complaints received, hand hygiene audits and safety (e.g. number of infections, stroke 30-day mortality rates, number of incidents). Much of the data however is convenience data for judgement or payment and not necessarily the data needed to drive improvement. Data is often gathered by different departments, not triangulated to create a broader picture of performance, presented in a manner that makes it difficult for teams to digest, and not directly related to performance at the team level. Safety data tends to focus on what goes wrong (what Resilience Engineers refer to as the 'absence of safety') rather than on what proactive measures are being taken to improve safety.

Discussion

Large amounts of data are gathered in hospitals. When healthcare teams are asked how they know if they are performing efficiently in a patient-centred manner and safely, it can be difficult for them to assess this. In collecting and disseminating the data there is not enough attention given to teamwork and team performance measurement. Teams often do not know what effective teams are, how they behave or what they need to do to improve their own performance. *Data* needs to be translated into *information* and then it needs to become a source of *knowledge* for people. It is when data becomes meaningful knowledge that relates to team performance that teams can use this knowledge to change and improve. Simple ways of presenting data to become meaningful or transformative knowledge for teams were developed during the Co-Design workshops.

Marie O'Shea, Una Cunningham
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Context

It is acknowledged that staff engagement plays a major role in improving quality and safety and is considered an important component of effective teams. Improving staff engagement in innovation and quality improvement is a core feature of many healthcare organisations' strategic plans. However, outside of these organisations, instances of effective teamwork can occur without any underpinning strategic plan.

The aim of the study is to firstly identify the common factors that are employed by organisations and, secondly, by individual teams in order to improve staff engagement and provide insight into factors that contribute to team effectiveness.

Methods

A grey literature review using a snowballing approach was carried out to identify healthcare organisations internationally that are implementing initiatives to improve staff engagement in innovation and quality through strategic planning. This was followed by a review of their strategic plans and, where possible, their respective national performance reports. Telephone interviews were also conducted with key members of some of the organisations involved to ascertain further details.

The common factors that recurred across the strategic plans were identified using a thematic analysis approach.

For the second part of the study, healthcare teams that are reputedly working effectively, without an underpinning strategic plan, were identified through impartation of local knowledge and expert opinion. Structured interviews will be conducted with a cross-section of the team members including administrative support staff to explore their experiences of working within an effective team and to elucidate the factors that are believed to influence same.

Results

Preliminary results suggest there are strong commonalities across the strategies of the healthcare organisations studied. These include, inter alia, introducing social partnership models; developing organisational values in consultation with staff; devolving decision-making; involving staff in organisational change and innovation and quality improvement at the front-line; investing in professional training of individuals and teams; creating cultures of openness, mutual respect and fairness; introducing mechanisms for top-down and bottom-up communication including the introduction of key staff to enable this; encouraging employees at all levels to raise concerns, propose innovation and participate in decision-making; clearly defining the roles of managers; changing management styles from control and command to one that encourages teamwork and facilitates innovation; and supporting line managers in performing their functions of supporting their teams, fostering a clear set of organisational and team objectives, bringing team members together and identifying and removing barriers. Further analysis is ongoing.

Discussion

These factors relate to organisations' staff knowing and relating to a clear purpose, as outlined in the organisational values, that in turn relate to team and individual objectives, working within an appropriate culture, good cross-communication mechanisms, suitable leadership, support for leadership, encouragement and facilitation of devolved decision making and resources to support same. The organisations studied have varied approaches to introducing and developing these factors.

The seven most commonly described characteristics of effective teams are clear purpose, appropriate culture, specified task, distinct roles, suitable leadership, relevant workers and adequate resources. Some of these relate to the characteristics of staff engagement.

Beyond these organisational level initiatives, it will be informative to understand how reputedly effective teams that are not underpinned by an organisational strategy have developed and sustained staff engagement. The results of this work will inform the co-design of an intervention aimed at increasing staff engagement and collaborative working.

Aoife De Brún, Eilish McAuliffe
University College Dublin, Dublin, Ireland

Context

Networks have been considered an important component of providing integrated health services and improving quality and continuity of care. This research highlights the value of social network analysis (SNA) as a tool to understand how a network develops and operates. SNA offers a set of methods to map and analyse relationships between people, teams, and organisations. SNA can explore how patterns of relationships can operate to facilitate or inhibit communications and capacities in systems. A case study using a recently established Irish hospital network will be presented to illustrate the value of SNA for understanding management networks and exploring leadership.

Methods

Social network analysis was employed to explore the operation of one of the 7 newly established hospital networks in Ireland. One hospital group in Ireland was selected for this study. The hospital group senior management team as well as the Chief Executive Office or General Manager, Director of Nursing, and Clinical Director of each of the 11 hospitals in the network formed the sample ($n=40$). An online survey was distributed at two time points over a 6-month period to explore the frequency of contact and collaboration between members. Network maps and related metrics, including centrality, centralisation, and density, will be generated to understand how the network is operating. In-depth semi-structured one-on-one interviews were also conducted to supplement the social network data at each data collection point. Interviews will provide insight into barriers and facilitators to increased collaboration. Qualitative data was thematically analysed and UCInet was used to generate network maps.

Results

The social network results will highlight the value of this approach as a diagnostic and descriptive tool, by presenting the results of the case study based on one hospital network in Ireland. Network maps at various time points will highlight the value of measurement over time to capture the dynamic nature of networks. Exploration of the metrics underlying the network maps will highlight the value of social network analysis to explore influential actors in the network, including those operating as 'bridges' to connect other sub-groups or clusters in the network. Implications for those at the core of the network (i.e., central actors in a network) and those on the periphery will be discussed in the context of the case study presented.

Discussion

The results will provide insight into how the newly established network is operating and along with the qualitative data, will explore the factors that facilitate or inhibit collective leadership and collaboration. Depicting the network at multiple time points facilitates understanding of the dynamic nature of the network, exploring how the network structure may evolve over time, especially in a newly established network. This presentation will highlight the value of social network analysis for diagnostic/descriptive purposes as well explore how it may also be employed as an evaluative tool. The results of social network analysis can be used to inform intervention design, highlight weaknesses in the network, or to identify opinion leaders. This knowledge can be of significant value to health management, especially in the context of innovation and diffusion of knowledge.

Una Cunningham, Aoife De Brun, Marie Ward, Eilish McAuliffe
UCD School of Nursing, Midwifery and Health Systems, Dublin, Ireland

Context

Co-Design is a methodology used traditionally in healthcare to actively involve patients with healthcare staff to re-design services and to provide a better patient experience. This paper describes the use of co-design in a novel way to design an intervention to support collective leadership using Irish healthcare workers' experiences of teamwork.

The co-designed intervention will focus on the capacity of teams for leadership as a collective process. Co -design will ensure that the intervention is grounded in reality reflecting a bottom up, service needs approach.

Methods

As part of this "Co-Lead" project, a co- design team to develop the intervention was formed. The team included volunteers from four selected healthcare teams in the Ireland East Hospital Group, individuals from the wider healthcare system, the research team and two patient representatives. (n=12-14). Six workshops with this co-design team were facilitated by the research team over a six-month period in order to:

- Identify challenges to working collectively as a team
- Develop an understanding of the team supports needed
- To explore the utilisation of data to improve team performance

The outputs of the co-design workshops together with data previously collected from interviews with healthcare workers and case studies on effective healthcare teams has been combined to inform the main components of a custom-designed intervention to support collective leadership in teams. A pre-designed framework was used to capture team interactions and outputs during the workshops which were also audio-recorded.

Results

The co-design process was an effective methodology for identifying target areas for a collective leadership intervention, designing inputs, prioritising content, and selecting outcome measures. Team members demonstrated a willingness to participate and to try new things. Patient representatives provided insight in terms of their expectations of healthcare.

Key areas identified for inclusion in the intervention were underpinned by patient -centred compassionate care and collective leadership. Themes emerging included: sharing purpose, responsibility and accountability; role boundaries and inter-dependencies; resilience, dignity, respect and psychological safety; effective communication; critical reflection, innovation and task sharing.

Outputs from the co-design process together with data from interviews with healthcare workers and case examples of healthcare teams complemented each other in terms of their contribution to development of the materials.

A range of teaching methods is required including online platforms, interactive workshops and team based activities to reflect different learning styles and competing demands for healthcare teams.

Discussion

The use of co-design methodology has resulted in tangible outputs. It has facilitated the development of a set of resources that will enable healthcare teams to develop a collective approach to leadership and to work together more effectively in care delivery and towards their team objectives.

In practice, the co-design process ensured participation, learning and use of the shared repository of skills within the co-design team. The customised co-design approach was grounded in everyday teamwork situations ensuring that learning will be targeted directly at addressing service needs.

The use of the co-design methodology will result in a radical shift not just for curriculum design but also in programme design and delivery. The co-design process carefully re-considered the content, teaching methods and learning outcomes that best suit the needs of healthcare teams.

The new intervention will be evaluated on four healthcare teams prior to scaling up.

Roisin O' Donovan, Aoife De Brun, Marie Ward
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Context

Safety culture is defined as shared values, attitudes and behavioural norms that determine the degree to which team members' attention and actions are directed towards minimising patient harm. Safety culture is a complex phenomenon which interacts with a variety of factors including communication, teamwork and leadership. Creating a safety culture within healthcare teams means fostering mutual trust and shared values among team members, along with an understanding of the importance of minimising patient harm through preventative measures. Literature will be explored to identify any interactions between safety culture and patient safety outcomes and how factors may influence these interactions.

Methods

An initial scoping of the literature was carried out by searching Google Scholar using 'safety culture' and 'patient safety' as key terms, and using snowballing sampling to identify relevant papers. A more comprehensive search strategy was developed based on this search. This second search was performed using major databases (Psychinfo, Pubmed, CINAHL and Academic Search Complete). The key search terms used were: safety culture, safety climate, patient safety, safety measures, communication, leadership, and teamwork. The reference lists of relevant papers were examined for any additional papers or grey literature cited. Inclusion criteria were: peer-reviewed papers from any country, published in English between January 2006 and February 2017 which presented experimental or observational research studies related to safety culture or patient safety in healthcare.

Results

This narrative review will examine relevant literature to identify emerging themes of how healthcare teams create a safety culture and how they can meaningfully measure and sustain it. These themes will be discussed in relation to how they may contribute to the creation and maintenance of safety cultures within healthcare teams and will explore whether or not safety culture influences patient safety through teamwork, communication and leadership. Findings will be used to inform the co-design of an intervention to develop collective leadership within Irish healthcare teams.

Discussion

These results will provide insight into how the current literature can inform our understanding of how to develop, measure and sustain safety culture in healthcare teams. This presentation will highlight common factors identified as crucial to creating and maintaining a safety culture in healthcare teams and how this safety culture affects patient safety outcomes. The results will also be used to inform the design of an intervention to enhance safety culture in healthcare settings. Integrating the findings from studies investigating the many factors that influence and contribute to safety culture among healthcare teams will highlight aspects of safety culture and patient safety where further research is needed.

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Context

Innovations in Information Technology are revolutionizing health care system and hospital setting. Some innovations are 'top-down', like an Electronic Medical Record, while others are 'bottom-up' and often have a 'back door adoption', as the use of WhatsApp and apps to support clinical and care processes. It is still little studied which are the key factors that influence the intention of healthcare workers to use some digital technologies, both 'top-down' or 'bottom-up' implemented, and which is the influence of clinical specialty and professions on this issue. Moreover, it is not clear the difference between teaching and non-teaching hospital on this issue.

Methods

The objectives of the study are the following:

- to understand which are the main factors that influence the intention to use digital technologies introduced 'top-down' or 'bottom-up' in;
- mapping the current use of smartphone and apps in hospitals by doctors and nurses, and professional's awareness about the risks and benefits of this phenomenon;
- to evaluate the differences between teaching and non-teaching hospital for any findings.

The project is being conducted through a multi-method study, which started in November 2016, including observations, surveys and interviews. Professionals (nurses and physicians), IT staff and hospital's managers have been selected as participants to the project. Moreover, a multicenter survey will be conducted in about twelve international teaching and non-teaching hospitals, using questionnaires. A partner Teaching Hospital Campus Bio Medico of Rome has been involved in the project. The Hospital is home of a whole range of clinical, teaching and research activities.

Results

The research project has been approved by the Hospital Campus Bio-Medico General Management and Ethic Board in November 2016. Between July and October 2016 the first version of questionnaires have been realized: one for the study of digital innovations 'top-down' (EMR) and one for the study of digital innovations 'bottom-up' (WhatsApp and apps).

For each questionnaire have been designed the items by translating in observable and measurable elements the concepts identified in theoretical frameworks and in research questions. Finally, the two questionnaires have been designed and revised in detail by the group of researchers in the period between August and October 2016. Moreover, a pilot test was carried out to identify any problems in the questionnaires before proceeding with their distribution for the Survey. The pilot test consisted in submit the questionnaire to a group of 10 professionals defined as a sample and interviewing each of them individually.

Discussion

The Survey in the University Hospital Campus Bio-Medico of Rome has been started in January 2017 and it is ongoing. We expect to have the first results within February 2017. Moreover, the multicenter study will be started within April 2017. The study will provide important findings for executives and managers who work in the health care context, for researchers and professionals involved in digital innovation processes and for managers of Hospital Information Systems. The results will help to broaden the knowledge and the existing literature in this area, and they may be used for future research in order to create a model for digital innovation in a teaching hospital setting, and for understanding the phenomenon of the spread of digital innovations guided by the leadership (top-down) or promoted and guided by the professionals (bottom-up).

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Context

The continuous booming of mHealth allows the development of new models of care, and will most probably revolutionize the overall delivery of care. However, evidence on the effects of mHealth is still scant and literature mostly focuses on chronic diseases. To address this research gap, we researched mHealth current utilization in cancer and cancer supportive care and aimed at assessing the perceived impact of mHealth on clinicians and patients that already use these technologies. Their opinions can be effectively compared with those of individuals that do not use mHealth in order to inspect how perceptions are moulded through active utilization.

Methods

We carried out a survey on 1,033 cancer patients and 1,116 oncologists in 5 European countries (France, Germany, Italy, Spain and the UK) and the United States. The survey was administered through Qualtrics. The objective of the questionnaire was twofold: to assess both the current State of the Art of mHealth in cancer care (how many oncologists and patients use it, how often and for which purposes) and the perceived mHealth performance with respect to several different dimensions: efficiency, effectiveness, clinical effectiveness, and quality of life (Nasi et al., 2015).

Results

The proportion of Users among clinicians is extremely higher than the one observed in the patient group (77% vs 28%) and this gap takes place in all geographic areas. As to the impact of mHealth on clinicians' activities and on patients' self-management and overall quality of life, Users in both groups express a higher degree of agreement with respect to all dimensions previously mentioned than Non-Users. Among Users, those who use mHealth more frequently and for symptom management and compliance enhancement express higher levels of perceived improvement.

Discussion

mHealth can provide a more accurate way of managing cancer care. Although evidence is not definitive on actual benefits, Users perceive higher levels of satisfaction with respect to efficiency, effectiveness and impact on overall quality of life. However, the actual spread of such technologies is still scarce, especially among patients, and with very limited utilization for activities related to treatment and follow-up. For mHealth to actually develop its alleged potential, several barriers still need to be tackled and overcome, ranging from financial management to privacy concerns.

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Context

The relevance of ehealth/mhealth technologies in the pursuit of the objectives of Health-2020 is considered as critical to overcome health systems challenges, among them achieving the objectives of the European policy framework and strategy for the 21st century and of the Global Strategy on Human Resources for Health: workforce 2030. The health systems' context is demanding innovation and digital technologies: Increasing demand for health services from ageing-populations, greater mobility of patients, limited supply of health-workers due to higher rates of retirement than of recruitment, pressure to maintain access while controlling-costs, and the new digital-skills requirements for an effective healthcare digitalization.

Methods

This presentation illustrates how new technologies, mHealth and eHealth, can improve how the health workforce delivers services that respond to population needs. A literature review covering European and African cases combined the following terms "Human Resources for Health", "eHealth", "mHealth", "healthcare service delivery"; and "digital skills". The results were compared with the WHO Workforce 2030 strategic objectives.

The analysis considered the following topics: communication and management technologies, examples of impact on health workforce performance (availability, accessibility, acceptability, quality), discussion of facilitators and barriers to the optimal utilization of new communication and management technologies, implications for the for education of health workers, for management of health services, for policy-making, and for research.

Results

eHealth and mHealth technologies have been used in several European and African countries. These technologies have been applied in the context of the digitalization of healthcare services: Electronic Health Records, Telemedicine, Internet of Things -sensors network at home/mobility, Big Data/Artificial Intelligence, New Diagnostic systems, Robots, Social networks (addressing social dynamics in health consumption and behavior). The examples of impact of eHealth and mHealth on health workforce performance show the following effects:

- a) Availability: eHealth/mHealth improves availability and cost-effectiveness of services to patients;
- b) Accessibility: it improves patients' access to services (e.g. specialized care services at a distance);
- c) Acceptability: mHealth services are more transparent, and make communication with patients easier (and it can be further used within the health system);
- d) Quality: recent developments of mHealth show considerable improvement in patient safety processes.

The availability of digitally competent healthcare professionals is a prerequisite to achieving those results.

Discussion

Facilitators and barriers to the optimal utilization of new communication technologies relate to individuals, to professional groups, to provider organizations, to institutional environment (economic, legal, political factors). Among the most important are HRH digital skills; the utilization of mHealth/eHealth tools presents significant Implications for the education of health workers, for the management of health services, for policy-making, and for research. The technology is here; it is already changing other markets but healthcare is lagging. Are health professionals prepared to make the best use of it? What are the main barriers to overcome?

The Future of Integrated Care

Integrated coordination of healthcare resources. Redesigning the future of complex chronic disease

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Context

Population aging results in an increase of chronic disease prevalence, defined as the leading cause of mortality and disability nowadays. New chronic care models need to face a wide range of demographic, health, social and economic challenges. The classical healthcare model that is known to be reactive, fragmented and focused on acute care. The current system must be redesigned into a territorial, proactive, integral and collaborative model. Home-care services are commonly delivered either by primary healthcare or hospital teams. Healthcare models adapted to chronic complex patient need to be sustainable, rapid, personalized and to ensure geographical proximity to patient home.

Methods

Objective: coordinate all chronic care services in the region, identifying innovative patient centred solutions that are feasible to implement. Early identification of patients with specific chronic disease care in order to avoid clinical decompensations and to reduce emergency department visit and hospitalisation.

Scope: national and international reference hospital (1100 bed) standing for more than 7 mill. people in Catalonia supported by 19 primary healthcare teams.

Identification of the target population: Adult patients identified as chronic complex patients at risk of decompensation (most of them, with multiple visits to emergency department or hospitalisations) or those who required an early clinical intervention or advanced clinical care.

Design of the intervention: definition of the functional care plan and service portfolio. The intervention needs to coordinate the whole territorial patient flow (primary care, hospital, emergency department, socio-sanitary centres, home care...).

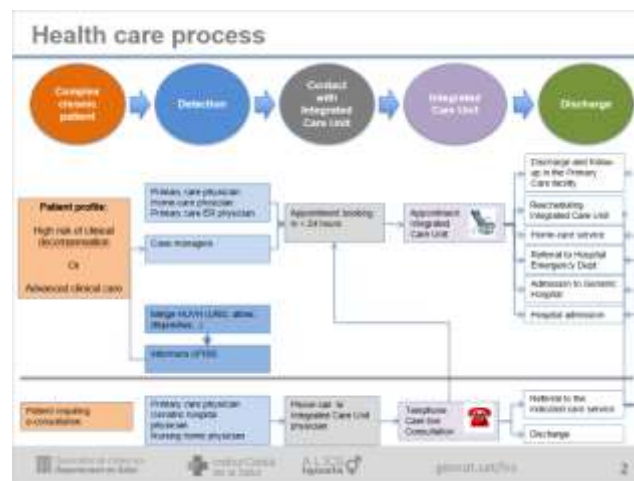
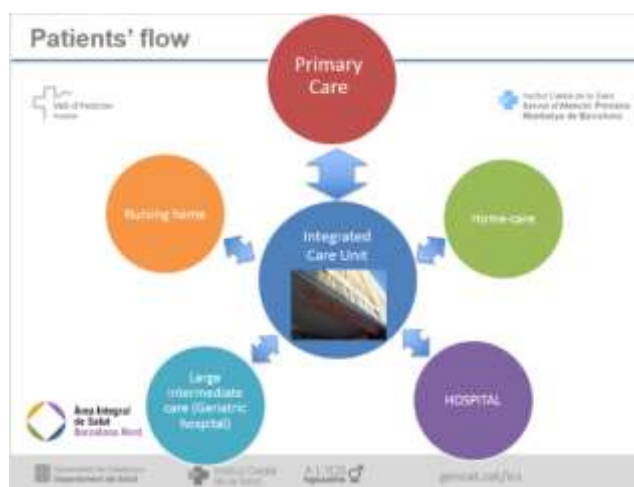
Evaluation: Indicators were defined to cover four dimensions: effectiveness, accessibility, patient flow, and satisfaction.

Results

We launched a unique chronic care model: a high resolution facility located at Primary Care level. All available home-care services were centralized and managed by a multidisciplinary team (family & internal medicine doctors, nurses and case managers) to ensure social and clinical integrated care. In a first phase (first trimester 2017) a fully equipped facility was built to coordinate the activity of five primary healthcare teams (94,749 adult inhabitants), 5,875 out of them were identified as the target population (2.67%). Services include outpatient clinic and day hospital: basic diagnostic procedures (analytics and image), therapeutic procedures (i.v. treatments and perfusions, paracenteses, oxygen and aerosol therapy), a telephone care line to support health professionals, health promotion intervention including individualized intervention plans and caregiver education. Case management and patient flow is coordinated from a unique work station connected to the shared medical record.

Discussion

Shared leadership and collaborative working between primary care and hospital is crucial to coordinate territorial chronic care resources. Strategic Alliance between Institutions is the key to design patient first strategies. Continuum of care of complex patient's chronic conditions will be entirely managed by a multidisciplinary team for the first time in our context. The remaining population on Barcelona Northern Area will be incorporated progressively into the model that is expected to prevent decompensation and complications. Additionally, the new model should reduce potentially avoidable readmissions and hospitalisations and decrease patient visits to emergency department. Perceived satisfaction, functional situation and quality of life of patients will be monitored. Monitoring the activity from the kick off onwards will allow a comprehensive comparison with the previous heterogeneous and multi-entry system. Late breaker results of this innovative care solution will facilitate the future pathway of integral chronic care in Europe.



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Context

Chronically ill patients often do not receive the right care at right place. For Chronic Obstructive Pulmonary Disease (COPD), for example, task division and collaboration between providers can be improved. Still, since financial incentives provided by purchasers (e.g. health insurers or governments) do not stimulate improvement, achieving better performance remains challenging. Here, we argue that healthcare purchasers struggle with their role in improving care supply chains (SC), which relates to tensions in interests between purchasers and providers. By studying adoption of different institutional logics by SC members we aim to understand this difficult position of care purchasers.

Methods

We conducted a longitudinal single case study aimed at the interactions of multiple stakeholders involved in COPD care in a province in the Netherlands. We collected data during project team meetings, interviews, follow-up phone calls and informal discussions. Interviews were aimed at understanding the reasoning and interests of different stakeholders during negotiations and discussions aimed at improving task division and collaboration in the COPD care chain. Data analysis was based on an inductive approach (identification of informant terms, first order coding, second order coding, pattern matching) by which we achieved understanding of logic use and how this affected decisions with respect to task division and collaboration in the SC (Gioia, Corley et al. 2013).

Results

In the studied region, a care purchaser and providers frequently discussed improving task division and collaboration. Care providers' professional logics were initially aligned: they agreed on improvement opportunities like stronger preventive care and case-management. However, conflicting interests and professional 'micro-logics' also appeared: general practitioners (GPs) perceived case-management as their task due to their personal knowledge of patients, whereas pulmonologists gave physiological arguments by emphasizing the specialist role of hospital nurses.

By proposing changes of financial incentives, the purchaser initially used a SC orchestrator logic, which could overcome tensions between GPs and pulmonologists. However, we also observed a shift towards pragmatism and cost-control logics. Firstly, to overcome its dependence towards GPs, the purchaser started a case-management project solely with pulmonologists, thereby increasing tension between providers. Secondly, as outcomes of improvements were uncertain, purchaser managers demanded co-investments from providers when negotiating contracts. Both approaches discouraged providers which mitigated successes of intended improvements.

Discussion

Consistent with the institutional logics literature, we observed that, despite their initial alignment in (professional) logic use, care providers adopted conflicting (micro-professional) logics (McPherson, Sauder 2013). This logic adoption seemed to relate to their financial interests. Furthermore, we found that the purchaser changed from a SC orchestrator's logic towards pragmatic and cost-control logics. These changes seemed to relate to their dependence towards care providers, and to uncertainty around future SC performance. Although this logic use was on short-term justifiable, tensions in the SC remained which hampered long-term improvement of task division and collaboration. In conclusion, our study shows that purchasers' decision-making when managing healthcare SCs is based on more than their interests and provider's interests only. Medical professionals, managers and policy makers should be aware that factors like uncertainty of care outcomes and dependence can lead to counter-intuitive behaviour which may hamper improvement of chronic care SCs.

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Context

Setting aims and objectives in integration programmes is a key part of developing a shared vision and defining common goals for all participating organisations. Many programmes start off with relatively high aspirations for service changes and improvements, and, as the programme develops, more realistic views about what is achievable become more prominent. The study investigated this process of 'emerging realism' amongst key participants in a regional integration programme in the North West of England.

Methods

The study used a longitudinal design and a mixed methods approach to investigate the change of programme goals and aspirations amongst key participants. It utilised surveys and semi-structured interviews to obtain the views of professionals on programme objectives, shared vision and common goals amongst programme leads from all participating organisations and monitored their views over a two year period. Survey responses were subjected to trend analysis and cross-tabulations to identify views specific to professional groups, roles or organisations.

Results

Our data shows a significant levelling off of confidence amongst programme participants about the programme that initially identified goals and could be achieved by the end of the programme. There was also a considerable shift of emphasis and re-appraisal of programme aims and objectives which may have contributed to safeguarding the success of the programme in the long term.

Discussion

Integration programmes with high aspirations are likely to be set up to fail. Defining realistic programme aims appears to be a critical aspect of ensuring the success of the programme and to maintain high levels of commitment from all participants. Aiming for 'quick wins' and 'low hanging fruits' may improve perceptions amongst participants of shared vision and common goals.

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Context

Iran has experienced several reforms during the three past decades. The most successful reform is the establishment of the health network system which has reduced health inequities and improved healthcare coverage and access. However, its positive effects are not seen in all levels of the health system and are restricted to the level of primary care. In parallel and after this reform, many small and big reforms have implemented such as establishing family physician and hospital evolution plan, although imperfect. Therefore the present study is done to explain the formation process and the failure causes of Iran's health system reforms.

Methods

This research is part of a qualitative study performed at the national level to "develop a model for recent health system reforms in Iran based on its process and by using of grounded theory." Thirty interviews were conducted with national and sub-national policymakers at different sectors. A combination of purposeful and theoretical sampling method was used to select the participants. The semi-structured in-depth interview was utilized as the main strategy for data collection. All interviews were transcribed literatim from the recordings. Following the Corbin and Strauss recommendation, constant comparative analysis with simultaneous data collection and data analysis was performed in three phases: open coding, axial coding, and selective coding. As recommended by Schwandt et al. the trustworthiness of the current study was assessed using four criteria: credibility, confirmability, transferability, and dependability.

Results

Sixteen subcategories and three categories were extracted from the data through content analysis. Unstable socio- economic context, managerial and political ravages, and lack of a master plan were the three categories. An examination of the main categories led researchers to characterize Iran's health sector reforms as "fragmentary". Regarding the first category, participants claimed that targeted subsidy plans along with economic sanctions have adversely affected Iran's health system, e.g., resource restriction, increasing healthcare costs which thereby decreased affordability, and lowering of the financial protection of the people. Moreover, data analysis showed that political and managerial issues as restraining or encouraging factor to play very important roles in Iran's health system performance and reforms. In this regard, respondents complained of adverse effects of political instability in the health sector. Furthermore, segmented or even controversial master plans have caused confusion in Iran's health system, and thereby the directions of all reforms are obscure.

Discussion

By definition, health-sector reforms should include sustainable and purposeful changes to improve efficiency, equity, and effectiveness; otherwise it could be harmful rather than useful. Implemented reforms in Iran's health system demonstrate that they have no master plan and are in a state of chaos. The system is fragmented not only in financial resources but also in leadership. Discordance between public and private service, separated health insurance, and lack of universal protocols and guidelines is hampering this system. Also, public health expenditure as a percentage of gross domestic products is still low and needs to be amplified. A comprehensive, long-term master plan is needed to avoid different or even opposing reforms that are inefficient and beyond the control of the government. Rapid political changes is a threat for Iran's Healthcare system and privacy policy should be considered to preserve this system against hazardous effects of this contextual issue.

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Context

Systemic anti-cancer therapy (SACT) is a common but toxic treatment for cancer. There is an increasing appreciation of the importance of measuring health services on the basis of outcomes to inform safe, quality care. Key performance indicators (KPIs) provide one tool to monitor the quality of services. To date, no outcome KPIs have been developed or implemented in the Irish SACT service. This study aimed to develop a multi-stakeholder consensus on an evidence-based, prioritised list of outcome KPIs for SACT services.

Methods

The Delphi technique is an anonymous, iterative, facilitated group approach in which participants complete a number of questionnaires or "rounds", interspersed with feedback reports containing participants' comments. Existing KPIs and possible outcome areas for the development of KPIs were identified from the literature. A multi-stakeholder panel of patient advocates and health professionals (n=35) rated the importance of the KPIs over three Delphi rounds, followed by a final prioritisation round. KPIs rated as less important were discarded after each round in line with pre-determined criteria. Participants also rated KPIs on validity, reliability, acceptability and feasibility using a tool developed by the Health and Information Quality Authority (HIQA) and provided comments on barriers and facilitators to implementation. Quantitative data analysis examined consensus, stability of responses and differences in stakeholder groups. Qualitative data analysis was undertaken on responses to questions on barriers and facilitators to implementation.

Results

The response to the invitation to participate was 40% (n=109). The Delphi panel consisted of 35 people, including medical oncologists (7), haematologists (4), palliative care specialists (4), patient advocates (5), oncology nurses (10), oncology pharmacists (3) and cancer service managers (2). The response rates per round ranged from 70% to 92%. A total of 26 KPIs reached agreement on level of importance. Of these, nine KPIs were prioritised. Kendall's coefficient of concordance found that there was weak agreement on the prioritised list ($W=0.101$), which was statistically significant ($p=0.012$). The Wilcoxon signed-rank test found good stability of responses between rounds. The Kruskal-Wallis test found no statistically significant difference between responses of stakeholder sub-groups. The nine KPIs scored lowest on feasibility. Key facilitators to implementation of the KPIs included IT systems for data collection, improved data quality/matching and staffing to collect KPI data.

Discussion

The nine prioritised KPIs included outcome and process KPIs. The KPIs were in the areas of (i) death within 30 days of receiving SACT (2), (ii) Neutropenic sepsis (2), (iii) assessment of advanced cancer patients for palliative care needs (1), (iv) medication errors from SACT treatment (1), (v) patient information on treatment plan and side effects (1), (vi) multidisciplinary team discussion (1) and (vii) timeframe from surgery to SACT (1). In addition, areas for possible inclusion in audit, patient experience surveys and clinical guidelines were identified. Collection of data for these KPIs on a national basis would provide an opportunity to measure and improve the quality of SACT services in Ireland.

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Short Paper

The security threat in the world is changing, which results in changing military capabilities. But there are more changes, for example exponential growth in technology and aging through society. Civilian healthcare is adapting to those changes and military healthcare is adapting on both military capabilities and civilian healthcare.

Therefore we must ask ourselves the question: 'Are we in charge to deliver the best military healthcare?'. This question is essential for staying relevant in these changing times. From one perspective, we need to find our relevance in the *military* health ecosystem and from a second perspective we have to create 'Sustainable Health in Readiness'.

The military health ecosystem is developing using the medical and military intervention graphical charts. From a military perspective, it is desirable to prevent a conflict and from a medical perspective it is desirable to prevent becoming ill. The health ecosystem must predict health effects based on the military scenario, which will lead to advanced advice to the military commander and preferably to a decreased healthcare footprint.

Sustainable health in readiness will increase the predictive power of health effects, by focusing more on health instead of healthcare. The soldier will be supported on his/her readiness level, becoming *fit for life*, *fit for function* and *fit for mission*, where regarding to resilience *fit after action* must not be forgotten. Key-elements of sustainability are food, sleep, fitness and mental resilience.

The presentation will bring the two above mentioned perspectives, which are going to play a dominant role for the '*military* Health Futures'.

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Context

Leadership refers to systematic activities that are based on an organisation's values and strategy. The purpose of leadership is to ensure that the personnel are able to perform their basic task as well as possible. Good leadership and professional management are an essential success factor in the operations of an organisation and in ensuring the well-being of the employees. What is the personnel's view of the leadership in a university hospital?

Methods

The material was collected September 2016 in a Finnish university hospital. The personnel well-being questionnaire developed by Professor Manka was used as the measure. This entails 14 components of well-being at work, and results for three of these (sense of control, workplace functionality, know-how and willingness to develop) are presented herein. The questions uses a rating from 5 to 1, where 5 = I agree completely and 1 = I disagree completely. The questionnaire has been established to have good validity and reliability. Means and percentages were used in the analysis of the material.

The respondents worked in surgery and oncology wards. The majority of the participants were female (92%, n=266) and nurses (n=250, 85%). Most of the respondents were employed on a permanent basis (n=218). Roughly half of the respondents had more than 10 years' experience of working in the hospital in question (n=139, 48%).

Results

Forty-three percent of the respondents felt that the leaders of the organisation are good and appreciated at their job (3.2). Just over one third felt that leadership in the organisation is based on fairness and trust (mean 2.9). The poorest ratings were given (62%) to the functioning of the reward system and to the opportunities to influence (2.3).

The majority of the respondents (75%) felt that their immediate superior is friendly and approachable (4.0). The manager gives the respondents (60%) the right amount of power and responsibility (3.6). Slightly less than half of the respondents felt that they were familiar with the organisation's objectives, vision and strategy (3.2). Responsibility and power are, in the respondents view, divided clearly (3.0). Slightly less than half felt that the directors of our organisation are not adequately interested in the personnel's well-being and that communication does not work well enough (2.7).

Discussion

- Leadership in a university hospital is largely based on fairness and trust.
- The managers are approachable and supportive.
- The managers give the personnel the right amount of power and responsibility.
- The personnel's awareness of the organisations objectives, vision and strategy need to be increased.
- The reward system should be developed further.
- The division of power and responsibility needs to be clarified.
- Communication should be increased.
- Personnel well-being requires active leadership.

Catarina Maia

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Context

According to national and European guidelines, particularly those in Health 2020 - European Framework Policy Reference and Health Strategies, World Health Organization, National Health Plan and the Charter of Educating Cities, was developed at Santarém's public schools the project "Drop hour - let's all drink water!", a childhood hydration project, created by a group of teachers and students of Portuguese Institute of Naturology, focusing on the implementation of proactive policies to promote healthy living habits, namely through the issue of children's hydration, which has assumed increasing importance, considering its connection to the prevention of many diseases. The goal of the project was focused in stimulating the students to increase the daily intake of water and inform them about the importance of hydration and the dangers and signs of dehydration.

Taking advantage of the project in Schools of our city, in Santarém village - Portugal, we investigated the relationship between the increase in daily water intake and the levels of attention and concentration in 72 children of 3rd and 4th grade, aged between 8 and 11 years.

The conclusions of this study reveal satisfactory results in this area, confirming that an increase of the daily water intake for a period of four months, positively influences the levels of attention and concentration in school children aged between 8 and 11 years old.

Methods

The probabilistic sample included, in total, 72 students. For the development of the study two groups were created: one intervention and one control, both with 36 students each. The evaluation of attention and concentration levels was verified through the application of the BAPAE - Battery of Skills for School Learning, by direct method and of a confidential nature, that is, without any element that would allow to identify the participant student, but only to age and sex. The BAPAE records were analysed and interpreted by a psychopedagogue that validated the results.

Results

From the analysis carried out, we can conclude that a relationship between the increase in water intake and the levels of attention and concentration in school-age children (3rd and 4th years of the 1st cycle of the Alcanede School Center) is confirmed.

This relationship was verified with an increase in daily water consumption of about 1L, compared to that previously ingested (the increase was from 1.06L to 2.08L in the period between February and June / 2016 - 4 months), representing an improvement Of global attention and concentration levels by about 10%.

Discussion

In the implementation and development of the project, some difficulties were experienced in getting students to ingest water during the class period, taking into account that, as mentioned by teachers, this fact could be motivating Interruptions in the classroom, so that students could resort to the bathroom, which would make it difficult for the normal course of the school period, and could be detrimental to learning. For this reason, the teachers chose to approach and work on the theme in the classroom, stimulating water intake before and during the morning interval (between 11h and 11h30m) and in the afternoon (between 3h and 3h30m), As well as during the lunch period (between 1 pm and 2 pm).

Elina Mattila, Kaija Leino
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Context

A good workplace is a community with an open atmosphere. Giving feedback is a natural part of a well-functioning workplace. Quality patient care requires skilled personnel who have a sense of control over their work. The managerial staff plays a key role in setting development targets and arranging opportunities for further training. Personnel appreciate having opportunities to learn new things in their work. Research questions are: what is the personnel's experience of the functionality of their workplace in a university hospital? How well do the personnel feel they know and can control their work in a university hospital?

Methods

The material was collected September 2016 in a Finnish university hospital. The personnel well-being questionnaire developed by Professor Manka was used as the measure. This entails 14 components of well-being at work, and results for three of these (sense of control, workplace functionality, know-how and willingness to develop) are presented herein. The questions uses a rating from 5 to 1, where 5 = I agree completely and 1 = I disagree completely. The questionnaire has been established to have good validity and reliability. Means and percentages were used in the analysis of the material.

The respondents worked in surgery and oncology wards. The majority of the participants were female (92%, n=266) and nurses (n=250, 85%). Most of the respondents were employed on a permanent basis (n=218). Roughly half of the respondents had more than 10 years' experience of working in the hospital in question (n=139, 48%).

Results

More than half of the respondents felt that mistakes can be discussed openly at the workplace without fear of the consequences (3.2). Slightly over half felt that enough positive feedback was given on the work (3.3). The respondents gave the poorest ratings to the item of independent problem-solving, although 45% felt that this aspect was also well-implemented in the workplace (3.2). The atmosphere at the workplace was also considered to be good (3.8). Furthermore, it was the respondents' experience that they are given more responsibility as their know-how increases (3.5) and that they have sufficient know-how for their current duties (4.4).

They felt that they are able to work independently (3.4) and participate in setting the goals concerning their work (3.3). In addition, the respondents felt that each employee's duties correspond with their abilities and skills (3.2) and that all tasks are appreciated (3.4).

Discussion

- The atmosphere in workplaces is positive.
- Feedback and the solving of work-related problems should be developed further.
- Employees should be able to discuss failures and mistakes more openly than currently.
- The work is considered meaningful and the opportunities for developing one's know-how good.
- The personnel have a sense of control over their work and feel they are able to influence the work.
- More attention should be directed towards having each employee's abilities and skills correspond with their duties.

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Context

Due to the increased interest of healthcare managers to improve quality of service and achieve customer satisfaction, they have turned to Total Quality Management (TQM). TQM is an approach to achieve competitiveness in the healthcare sector through quality oriented culture, achieving high-quality with low-cost of service. However, in a large healthcare organization, the quality of service provided varies between departments. Therefore, each department must be approached internally in order to improve the quality of service where it lacks. The aim of this work is the implementation of a TQM model into an individual healthcare department, using the proposed framework.

Methods

To create the proposed framework, we used the European Foundation for Quality Management (EFQM), the Common Assessment Framework (CAF) and ISO models. Other industrial and research-based frameworks from the healthcare sector have also been analysed.

We used a triangulation of data collection methods in order to collect our data. Our research methods include empirical observation, interviews and secondary data analysis.

Results

The proposed framework consists of 6 stages:

1. Organization's basic values: Adopted in order to align the examined department with the rest of the organization.
2. Culture change: This stage concerns a comprehensive culture change of the department, from traditional (current) to a quality- and patient-oriented culture.
3. Department's specificities: Strengths, Weaknesses, Opportunities, και Threats (SWOT) analysis is being used among others, as to accomplish a dedicated implementation of TQM to a department.
4. Data collection: Data collection uses triangulation of methods. Findings concern TQM implementation obstacles and factors to be considered prior to the implementation.
5. PDSA/ PDCA quality improvement cycle: Appropriate tools and techniques are being used to manage data findings by the quality improvement cycle. This is an iterative process, until data findings are solved.
6. Procedure standardization: This stage concerns the standardization of solved data findings.

Discussion

Our literature review showed that although many researchers study the concepts of TQM, very few implementations of a TQM framework with specific stages exist. The proposed framework has been designed based on the reviewed organizational models and other existing frameworks from the literature.

Existing frameworks implement a TQM model into healthcare sectors, organizations and institutes. This study though, provides a framework that can help individual departments or clinics to improve their quality of service by internal procedures.

According to the literature, "No one solution is effective for planning and implementing TQM in all situations" (ASQ, 2006). The novelty of this study is that the proposed framework can be customized according to the needs of individual departments and specificities in order to reach high quality.

Reference

Westcott, R., 2006. *The Certified manager of Quality/ Organizational Excellence Handbook*. 3rd ed. ed. Milwaukee: ASQ Quality Press.

Eva Krenyacz

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Context

Scarce resources and continuous rise of debts usually cause a stronger cost control and cost containment. Hungarian government tries to stabilize the sector with (re)continuous centralization and nationalization. In organizational level, this environment would require a better use of controlling devices. The paper shows that centralized health care environment affects the institutional controlling systems, and even modifies the decision support and the attitude of managements. The paper focuses on characteristics of hospitals management; specifically the interpretations, tools and daily practice of the management (highlighted controlling) and incorporation in decision-making were examined.

Methods

With tools of qualitative research, I defined the management control in hospitals and highlighted the influence of external factors. Therefore, top managers of hospitals, external experts/consultants and governmental managers were interviewed and decision supporters were asked in homogenous focus group in semi-structured interview situation. Additional questionnaires were used before the focus group discussion for better understanding of the research topic and the respondents' views. The typed interview texts were coded in MAXQDA12 software.

Results

The result of the research shows that top managements of Hungarian health care organizations face unique challenges caused by (under)financing, performance volume limitation, debt accumulation and centralization/nationalization. These elements have a significant impact on the internal systems of hospitals and on the interests of stakeholders. This environment would require a better use of controlling devices however the result of this qualitative research is the devaluation of hospital controlling systems. As a result of the centralization and the phenomenon of debt consolidation, financial perspective is in the thinking of hospital top managers; they try to achieve economic stability with monitoring of liquidity and lobbying for bailout. As the result of the research, I identified three different management tools.

Discussion

Thus the current controlling system is basically focused on financing, many institutions only deal with performance analysis, and department-level controlling works poorly and patient-level controlling and modelling does not function. Today, controlling is a retrospective analytical tool, with 'Jolly Joker' function (ad-hoc tasks instead of the classic controlling function). Due to the performance limitations, the excessive emphasis on budgeting leaves no room for the application of controlling approach and its tools, which could be a modern management tool, taking into account the quantitative and qualitative standard of patient care. Some other identified neuralgic points of the study are the following: unbalanced financing rates between medical professions cause internal tension and disinterest in medical management, financial security of the activities is required to compose a sustainable professional structure, but institutions only know approximate values and reduced financial resources hinder the operation of the motivation system.

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Context

Recent demographic and economic developments are forcing European NHSs to provide care at local level, as a strategy to contain costs without affecting service quality. After performing a literature review concerning the management of healthcare services at local level, it seemed that this research field is still in its infancy phase. Especially, logistics/supply chain, performance management and economic evaluations were scarcely explored, because the difficulty to find reliable on-field data and to formalize complex and multidisciplinary processes, typical of these research issues. Due to literature gaps, the present study focused on the distribution management of health technologies at local level.

Methods

Three research questions guided the study: i) what distribution models of health technologies were developed by Local Health Authorities (LHA)? ii) what are the economic/quantitative performances of the distribution models previously identified? iii) and what about the perception of the related qualitative performances?

A multiple case study was designed for the analysis of the different alternatives for distributing health technologies (i.e. absorbent devices for incontinence) at a local level, involving a sample of 12 LHA of a specific Italian Region (Lombardy). After an analysis of distribution processes, in a benchmarking approach, we designed specific Key Performance Indicators (KPI) in order to compare the economic/quantitative performances reached by each LHA. We collected quantitative data (target population, devices delivered and economic resources involved in the distribution processes), over the period 2011-2014, in order to feed this set of KPIs. We conducted also semi-structured interviews with LHAs' managers, collecting perceptions and qualitative data.

Results

In Lombardy Region, two main distribution models were identified:

1. Distribution through pharmacies: patient goes to a pharmacy within the LHA territory and withdraws the authorized amount of absorbent devices.
2. Home delivery: the LHA calls for a tender to identify the provider of products and logistics services. A distributor delivers the authorized amount of products at patient's domicile.

In the observed period, from an economic/quantitative point of view, home delivery provided an higher amount of devices per patient (2.33, year 2014); distribution through pharmacies presented a lower unit cost per patient (€0.53, year 2014); but both the models were equal in terms of unit cost of the service per device (€0.26, year 2014). The LHAs' managers perception of qualitative performances revealed that distribution through pharmacies is preferable for all the investigated dimensions (economic and logistic efficiency, responsiveness to users' need, improving LHA's processes).

Discussion

Our results suggest that, in the studied time frame, home delivery's performances has changed (larger amount of devices distributed with similar costs): the explanation could be founded in the regional tender for the supply and home distribution of devices, adopted by some LHAs starting from 2012. But, considering qualitative performances, distribution through pharmacy was the best option. In conclusion, based on the obtained results, it seems that it isn't impossible to identify the best distribution model for absorbent device. From the interviews with LHAs' managers, it emerged that a new distribution model could be implemented, assuring quality and economic sustainability of the service. It could be based on the voucher system: the patient could select the preferable place, where withdraws products, and the type and the amount of absorbent devices, respecting a fixed economic sum, defined by LHA on the basis of the clinical conditions of the subject.

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Short Paper

One of the key challenges to the continued viability of healthcare organizations is the development of accurate cost information on which to base strategic and operational decisions (Porter, 2010). In this regard, the healthcare literature has discussed the feasibility and the advantages of using activity-based costing (ABC) (Arnaboldi and Lapsley, 2005), which is claimed to increase efficiency and cost control by providing greater visibility into organizational processes and their cost drivers.

This literature, however, appears limited in two respects. First, it has mainly discussed the application of ABC to single departmental units, procedures, or services (e.g., Cinquini et al., 2009; Demeere et al., 2009). Only relatively few studies focus on the cost of treating specific diseases over their full cycles of care. Such an approach, however, is expected to produce much more accurate - and managerially relevant - cost information. Indeed, it could help healthcare providers optimize over the full cycle of care by eliminating processes that don't add value, improving resource allocation, and speeding up cycle times (Kaplan and Porter, 2011). These advantages are particularly critical with respect to chronic diseases, which require long-term care accounting for the vast majority of total healthcare spending both in U.S. (Mayes and Oliver, 2012) and in Europe (Paulus et al., 2013). As the ever-growing prevalence of chronic diseases is causing major economic consequences for healthcare systems worldwide, a cost-effective management of chronic care represents an imperative for today's healthcare organizations (de Bruin et al., 2011).

The second limitation of healthcare literature on ABC stems from the various drawbacks of this costing technique itself, which has been described as particularly time consuming and costly (see, e.g., King et al., 1994). In response to such limitations, Kaplan and Anderson (2007) suggested a new approach to ABC, called time-driven ABC (TDABC), which greatly simplifies the costing process as it requires estimates of only two parameters: the unit cost of supplying capacity and the time required to perform an activity.

Starting from these premises, this paper explores the potential application of TDABC to the treatment of chronic diseases over a full cycle of care. It reports evidence from an interventionist field study focused on type 2 diabetes treated in a primary care centre of an Italian local health unit. The results demonstrate the feasibility of the proposed costing approach, as well as its various advantages over more traditional costing systems (i.e., improved benchmarking, cost-benefit analyses, and identification of optimization initiatives). Applying TDABC over a specific disease's full cycle of care offers significant opportunities for cost containment. It provides a structured approach to analysing activities, reducing costs, and improving quality.

Identifying low-value interventions in a tertiary hospital, barriers and possible and solutions to reduce them. Survey and focus group findings

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Context

Low-value healthcare interventions include: 1. Interventions considered inappropriate, because they do more harm than good 2. Interventions considered unnecessary, because they do not modify clinical decision-making, and 3. Interventions providing low benefits at high costs. Low-value interventions affect Healthcare systems' quality and sustainability. Identification and reduction of low-value intervention allow decision-makers to invest in other more valuable.

In this project we aim to identify low-value interventions, barriers and possible solutions to reduce them in the Vall d'Hebron University Hospital of Barcelona, one of the biggest tertiary hospitals in Spain.

Methods

We carried out two online surveys and two focus groups. In one survey, doctors from different specialties gave their opinion on 5 to 10 recommendations from initiatives such as Choosing Wisely, NICE Do not Do recommendations, and others about low-value interventions. Questions included doctors' agreement with the recommendations (yes/no), reasons for disagreement, adherence in our hospital, and whether they considered them useful or not. The same survey is currently being replicated in Nursing.

Focus groups included professionals from the surgical and the medical field separately. Twenty practitioners from different specialties were randomly selected taking into account an even distribution according to sex and age. One specialist in diagnostic tests and one nurse were also included in each group. Participants were asked to give examples of low-value interventions, barriers when trying to avoid them, and possible solutions to reduce them. We analysed the results based on a phenomenological approach.

Results

Survey response rate between doctors was 25% (164 participants from 27 specialties). We assessed 135 recommendations (68% on diagnostic tests). Over 80% of doctors agreed with 80% of the recommendations. Reasons for disagreement were mostly related to missing the right diagnosis. At least one doctor considered adherence was less than 70% in 33% of the recommendations, and 85% of recommendations were considered useful or very useful.

Eight professionals participated in the focus group of medical specialties and seven in the surgical group. We identified 181 verbatim equally distributed between the two groups. Participants gave examples of 12 low-value interventions. The most common barriers were related to defensive medicine, no trust in scientific evidence, and resistance to change. Decision-making with patients with high literacy skills was identified as an important barrier in the medicine group.

Solutions proposals included improvements in leadership, coordination between departments to avoid duplicated tests, and teamwork.

Discussion

In this project we identify over 50 low-value health interventions in our hospital, also some of the barriers and solutions expressed by practitioners to reduce them. Defensive medicine was identified as one of the most common barriers.

We conclude that other resources beside protocols and guidelines may be needed to make practitioners feel more confident with their decisions. We identify the following improvements: reinforcement of training tools in health providers to identify trusted scientific evidence; implement educational material to facilitate Doctor-Patient communication in decision-making; setup our information systems in order to reduce duplicities in tests. Finally, it is necessary to empower practitioners to identify and avoid low-value practices themselves.

Process optimization in total knee replacement procedures: the impact of size-specific instrument sets on process costs, handling complexity and out-of-pocket gaining

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Context

Increasing cost pressure induces hospital managers to shrink costs by low-price-purchasing strategies in order to gain quick out-of-pocket savings. Studies demonstrate process optimization to be the most effective way for achieving quality enhancement and sustainable cost containment simultaneously. Therefore, this study aims to identify the economic potential of optimizing the process of surgical instrumentation by using size-specific standardized sets for total knee replacements.

Methods

This study is designed as a center-related before and after comparison with different surgical instrument set configurations. While the same set configurations were used in two centers, other set configurations were used in a third center. This design enables to test the robustness of a best result instrumentation setting.

Based on a generic process description the primary research variables activity time, sub-process turn-around-time and quantities of OR trays and instruments used were measured. The secondary research variable is costs.

Results

Using size-specific standardized instrument sets, significantly contributes to reducing handling complexity, to shortening time requirements, to avoiding investments in reprocessing units, to gaining additional revenues and to avoiding staff overtime costs.

Because of a potential time saving per day of 60 minutes an additional profit margin between €300 and €800 per OR day can be achieved. By using a differential cost assessment a saving potential of €450.57 per total knee replacement procedure could be demonstrated.

Discussion

This study substantiates the superiority of size-specific instrument sets in total knee replacement operations and states the impact of logistical sub-processes like instrumentation management on cost-efficiency of surgical processes.

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Context

Future of welfare is a complex, yet extremely interesting phenomena. When engaging and encouraging citizens to be more active participants in planning and developing to the rounding society, there is a need to clarify how to the different concepts are used to describe actors and their position in welfare markets. Citizen in welfare services is often described patient, client or consumer but meaning of these terms varies and changing continuously. During the past years, individuals have gained new status as consumers and clients instead of patient which emphasises rights and power instead of obligations.

Methods

Intention of this study is to identify current ways of citizen participation in welfare services. Main question is how to engage citizen to be active participants to society, planning and decision making in welfare services? Data is gathered from literature and selected documents of citizen participation and engagement in welfare services. However, study will utilize current and former citizen participation projects in other fields since participatory methods are less used in welfare.

Results

This study approaches citizen participation in welfare from the concept of active client, where citizens are understood as active participants to welfare service planning and development as well as policy making. They are also willing to participate to society activities and their own wellbeing. Welfare markets are understood in wide perspective that various sectors can provide and they include both traditional welfare services and services that are supporting wellbeing, like cultural and commercial services. Theoretically, this study will enrich the discussions on subjective wellbeing, welfare markets and citizen participation in welfare. Practical aim is collect and provide tools to the Finnish welfare sector.

Discussion

This study is on-going process which means that results are preliminary. Assumption is that understanding individuals (e.g. needs, demands, and appreciations) and giving voice to citizens are the key elements to the development of future wellbeing and welfare. This will reshape traditional welfare system and increase sustainability both in welfare services and in the society. Welfare and wellbeing are often confused and misunderstood. One way to clarify these concepts is to divide welfare to macro and microlevels that is used especially in social sciences. Macro welfare or wellbeing is often measured by individual and population health objective measurements and by gross-domestic income (GDI), for example. (see e.g. OECD 2013, Stiglitz et al. 2009.) Micro level instead, is individuals understanding and feeling their personal, subjective wellbeing (SWB) tells how people feel about their life satisfaction in their circumstances. (Kroll 2011; Kraut 2008; Veenhoven 2002.)

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Short Paper

Management of healthcare institutions focuses primarily on patient satisfaction and outcomes of treatment, but should also aim at sustainability of the whole system, including buildings and infrastructure. Modern medicine is highly energy dependent and without it any assistance to patients is practically impossible.

It is well known that fossil fuel combustion is the greatest contributor to greenhouse gases (GHG) worldwide (EU hospitals are responsible for 5% of carbon-dioxide emissions). Fossil fuels are a major contributor to air pollution, which is attributed to 7 million deaths per year. A transition to low carbon economy, increasingly based on clean, renewable energy, not only protect environment from climate change, but also have health benefits for world's population currently suffering from the impacts of air pollution.

Scientific evidences support statement that fossil fuel-based energy generation, particularly coal, has serious consequences for human health. It was one of the main reasons to establish Healthy Energy Initiative as a "global collaboration of health professionals, health organizations, and health researchers engaging in science-based advocacy for a move away from fossil fuel-based power generation, and toward clean, renewable, healthy energy options". Healthy energy future in healthcare system is possible through developing curricula and educational materials for future health professionals and general public, supporting research on the health impacts of energy choices, promoting health sector progressive deprivation from fossil fuel.

Investing in energy sustainability of the healthcare system should enable the possibility to reallocate the budgets of the energy bill towards the healthcare, or even better toward prevention. It is important to allow national healthcare systems to benefit from savings achieved and to stimulate the use of renewable and healthy energy sources.

EU targets on Climate change and energy sustainability, like reduction of GHG by 20% (30% in special cases) compared to 1990 level, provision of 20% of energy from renewables and achievement of 20% increase in energy efficiency, are different activities which should be integrated in national healthcare systems.

EU is proposing and supporting progressive decarbonization steps (to act now for the future) of healthcare systems to: understand carbon footprint and create a baseline scenario (emissions inventory of healthcare organizations and identification of principal sources of emissions, prioritization of reduction measures); create a reference scenario (identify decarbonization potential); create a "Climate Action Plan" aiming at reduction of GHG; allocate budget for improvements in energy efficiency and investments in renewable energy sources that would make facility (hospital) energy sustainable and (partially) independent, track progress and savings from implemented measures.

Health sector should lead-by-example in mitigating GHG for improvements in public health. It can be achieved only if "healthy energy" is part of the priorities set, actively supported and coordinated by the management of the healthcare system at different levels.

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Context

One of the key drivers for healthcare costs of orthopaedic work-related trauma patients is the lengthened return-to-work time (RTW time). Time spent on sick leave is affected not only by medical factors, but also by work environment, administrative issues and personal matters. There is a need for innovations that can integrate handling of multifactorial rehabilitation-related issues into the orthopaedic care process.

Methods

In 2014, a Finnish insurer-based hospital implemented a new organizational model, in which a member of staff with no medical background named Work Master (WM) is in charge of coordinating the patient's return-to-work process.

We report a controlled before and after analysis of a new Work Master service model. Interviews with WMs and a medical professional from the hospital were performed to gather a coherent overlook on the intervention, the implementation context and mechanisms for shortening the RTW time. A cost-effectiveness analysis is conducted using register data from the hospital and the insurance company to compare the RTW time and insurance and medical costs between the WM patients and regular orthopaedic injury patients.

Results

The findings of this study describe the organizational model implemented and the role of the WM in this model. In addition, the effects of the model on healthcare cost, insurance compensation, and on the length of sick leave in days are reported.

Based on the interviews, four factors related to a lengthened RTW were identified: The severity of the trauma is the most relevant factor; however, also the physically and socially demanding work environment, demanding life situation and bureaucratic challenges (e.g. with arranging a part-time sick-leave) add to the stress caused to the recovering patient. The WM model integrates the handling of all these challenges into the care process, in which the facing of these aspects has traditionally been sporadic. The key tasks of a WM include communicating with the patient, the medical professionals, the employer representative, and the insurance company to solve the possible challenges hindering the recovery process.

Discussion

Only a part of factors related to delayed RTW can be affected by means of clinical medicine. Establishment of a WM position that handles the non-clinical problems may streamline the recovery process and reduce the costs accrued from lengthened return-to-work time.

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Short Paper

While providing healthcare services, healthcare institutions create medical waste, the amount of which depends on the applied procedures, the amount of wasted supplies, budgeting reasons and other factors.

Waste management is one of the components that the WHO lists as important for running a healthcare institution, as well as for mitigating climate change, giving further arguments for the systematic solution for the problem of disposing medical waste.

Seeing as how high-risk infectious waste actually is for both patients and staff, treatment of said waste is crucial for their safety.

Healthcare institution systems are always strained by new employees, who must complete training relevant to their job description, which, if it changes, necessitates further training. Also, every new procedure and novelty relating to equipment, materials and space requires a new framework for training and briefing.

Waste selection at its place of origin is a requirement for managing medical waste well. The treatment of infectious waste imposes upon the management the necessity of assessing the cost-effectiveness of its own waste treatment system, or of managing the procedures needed for involving external resources. This creates room for the development of independent companies whose primary goal is infectious waste treatment, but also for the healthcare institutions themselves to see a chance for further development of new services that can create a profit and thereby assist in making them more sustainable (with further defining of the human resources needed and ways of financing them).

The current system for managing medical waste in Serbia is mostly directed at treating infectious waste and collecting and exporting pharmaceutical waste. Managing infectious waste requires a functioning array of waste disposal plants, named Central Treatment Facilities (CTF) and Local Treatment Facilities (LTF), where infectious waste is sterilized by steam and, if needed, comminuted. After being treated, non-infectious waste is disposed at sanitary landfills. The Institute for Public Health of Vojvodina (IPHV) has been assigned as a CTF since 2012. The amount of treated infectious waste from the IPHV, Community Health Centers from the South-Bačka territory, the Institute for Employee Healthcare and private healthcare institutions has been steadily rising. However, the allocated funds from the Healthcare Insurance Fund has, in 2014 and 2015, covered less than 50% of the costs of the services relevant for infectious waste treatment, endangering the sustainability of this system.

The inability to provide enough employees, maintenance for equipment and vehicles for infectious waste transportation, as well as possessing limited storage capacities for said waste, obstructs the provision of quality services and makes room for the long-term risk of leaving said waste untreated.

Finding a way to provide adequate financing for the treatment of infectious waste is crucial for adequate risk management for healthcare systems.

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Context

The traditional hierarchical leadership model is clearly failing in healthcare, the evidence for this being the litany of failures and errors and the clear link to poor leadership and inadequate accountability mechanisms. In response, this research programme draws on emerging theories of collective leadership (Collective leadership is not the role of a formal leader, but the interaction of team members to lead the team by sharing in leadership responsibilities). In contrast to traditional approaches that focus development on the individual as leader, the approach in this programme of work is on developing the team as a dynamic leadership entity.

Methods

This 5-year programme of research designs and implements leadership interventions for 4 team types within a group of eleven hospitals and tests the impact of these interventions on staff performance and patient safety. The overall aim is to support quality and safety cultures through the development of a new model of healthcare leadership that is associated with effective team performance. Figure 1 outlines the work packages within this programme of research. The main research questions addressed are:

- *What are the common leadership needs identified by healthcare teams?*
- *Do leadership development needs differ according to team type?*
- *How does a collective leadership intervention impact on team performance, employee's job satisfaction, on employee's work engagement and on retention?*
- *What is the relationship between collective leadership, job satisfaction, work engagement and intention to leave?*
- *How does collective leadership impact on safety cultures in hospitals?*

Results

This presentation will address the preliminary results from work packages 2 & 3 of the study with an emphasis on the challenges of designing a trial to assess the impact of a co-designed intervention across different team types. Attributing changes in the variables under study to the intervention required the collection of qualitative and quantitative data at different levels and different time points. Triangulation of the data lends more weight to the findings.

Discussion

The study demonstrates the importance of paying attention to design considerations in order to maximise the potential to demonstrate the relationship between the intervention and any changes occurring in the variables of interest. Proving cause and effect within a dynamic healthcare environment with limited ability to control variables is a challenging task. However, the importance of developing an evidence base for organisational interventions is clear, particularly if we are to avoid the mistakes of the past and advance our understanding of what inputs are most likely to lead to improved outcomes. This study and the learning from it will prove useful to researchers and managers whose aim is to understand and improve organisational performance.

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Context

Patients, doctors and nurses are constantly exposed to numerous hazards during surgical procedures in the operating theatre. Operating nurses' service is of high significance. Safety culture is defined as the manner that patient safety is perceived and implemented in an organization. The collaboration with the rest of the operating theatre's personnel, the safety staff and the infection control are extremely important. Effective communication skills in the operating theatres usually result in good patient outcomes. Cyprus' health standards are relatively at very good levels in comparison with other developed countries.

Methods

Safety Attitudes Questionnaire is used in this study for exploring patients' safety in the operating theatre. This instrument is used for exploring nurses' experiences regarding practices implemented in the operating room and staff attitudes for improving their working conditions. A modified questionnaire (Sexton et al., 2006) was used comprised of 51 items, 5 concerning socio-demographic data of the participants and 46 concerning their experiences in OR safety and their opinions as to how to improve OR safety, using the Likert scale (1-5). The Safety Attitudes Questionnaire is a psychometric instrument measuring aspects of the safety culture in a variety of workplaces. It measures safety aspects such as teamwork climate, job satisfaction, management perception, safety climate, working conditions and stress recognition. A random sample of 112 OR nurses was selected from the Archbishop Makarios III Hospital, one of the main Cyprus public hospitals, located in Nicosia, commenced operating in September 1984.

Results

The majority of participants in this study are quite experienced (11-15 years); moreover 76.8% have 6-20 years of experience. So, we can presume that their opinions are reliable. Male, permanent staff, attending the one-year perioperative nursing course who were quite experienced (21-25 years of total work experience and work experience at the Makarios III Hospital) achieved the highest level of experience regarding OR safety. Nursing staff pointed out the need for further improvements regarding OR safety. Participants with more than 25 years of experience do not report high levels of experiences in the OR regarding safety. Statistically significant differences exist among the subgroups of each of the socio-demographic characteristics examined concerning each of the aspects of participants' opinions and notions on OR safety. More experienced staff might be in need for education regarding more recent safety procedures and techniques followed in the OR.

Discussion

Patient safety issues are the field most strongly pointed out to be in need for further improvements. Also, issues related to guidelines and teamwork needs improvements. Males have significantly higher scores regarding experience with safety issues in the OR compared to their female counterparts. Use of the SAQ to assess climate in clinical areas allows valid comparisons between hospitals, OR safety areas, and types of nursing staff, as well as tracking of change over time. Nursing staff experiences and attitudes concerning the important issue of patient and staff safety in the OR has never been investigated in the context of Cyprus before. Investigating the issue of safety is of utmost importance because it will contribute to the improvement of the quality of the healthcare services provided in Cyprus as well as to the working environment of the nurses.

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Abstract

This paper will investigate how the managers in the pharmaceutical industry experience and strategically deal with the tension that is strongly present in this industry: the tension between profit seeking business goals and the societal challenge of “access to medicine”.

Link to the theme of EHMA 2017 Conference

My paper is linked to the theme of “Health Futures” from the angle of external trends in economy. It studies the tensioned role of the pharmaceutical industry in today`s global society. The tension comes from the fact that pharmaceutical companies are acting according to the profit maximization logic but at the same time they are pressurized strongly by society to provide access to medicine to the ones who can`t afford it themselves. The external trend related to economy in general is to reaffirm the societal role that corporations should have.

Theoretical Background and Methodology

This study contributes to the field of strategy research by studying how the new requirements regarding the political role of corporations are perceived by the managers that are responsible of the strategic activities. I will investigate the pharma managers` experiences of strategically coping in their tensioned business environment. I adopt a paradox lens through which it is possible to explore how organizations can attend to competing demands simultaneously rather than aiming at choosing to attend to just one end of the competing alternatives (Smith & Lewis, 2011).

This study will be a case study that is qualitative and empirical by nature. I will lean on a narrative approach when it comes to a methodology. I will interview managers that are working in one of the biggest multinational pharmaceutical companies in the managerial roles where they are constantly confronting the tension between profit seeking business goals and expectations to address the societal challenge of “access to medicine”. Through narratives individuals make sense of their environment and experiences (Rhodes & Brown, 2005).

References:

- Margolis, J. D., & Walsh, J. P. (2003). Misery loves companies: Rethinking social initiatives by business. *Administrative science quarterly*, 48(2), 268-305.
- Rhodes, C., & Brown, A. D. (2005). Narrative, organizations and research. *International Journal of Management Reviews*, 7(3), 167-188.
- Scherer, A. G., & Palazzo, G. (2011). The new political role of business in a globalized world: A review of a new perspective on CSR and its implications for the firm, governance, and democracy. *Journal of management studies*, 48(4), 899-931.
- Smith, W. K., & Lewis, M. W. (2011). Toward a theory of paradox: A dynamic equilibrium model of organizing. *Academy of Management Review*, 36(2), 381-403.

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Context

Important trend in the development of modern health systems is the introduction of market mechanisms for management and competition. This is one of the factors for the introduction of a modern marketing approach in the hospital management. Hospital marketing is closely connected with the focus on the patient itself. It is necessary to carry out systematic marketing research among different population groups in order to meet the specific health needs. Due to the specificity of the health service, the "word of mouth" is the most powerful weapon and most common reason a patient to choose a specific medical setting.

Methods

The survey was conducted among 300 hospitalized patients in V-th Hospital for Active Treatment – Sofia. The respondents – patients from different departments of the hospital are directly related to marketing activities and policies and the establishment of a working marketing-management strategy. They are the main target group of this organization. The survey was also conducted among 280 medical specialists in the same Hospital. Respondents are working at different departments of the hospital and are directly related to marketing activities and policies and the establishment of a working marketing-management strategy. They represent the main group, which provides medical services to patients and are transporters of marketing strategies and concepts of the organization.

Results

The distribution by occupation of respondents is as follows: 41.07% of professionals are nurses, 37.5% doctors, 10.71% midwives, 5.36% - therapists and 5.36% others. Health professional experience of employees surveyed is 46% of medical specialists have worked more than 20 years, 27% having less than 20 years, and 27% having less than 10 years of experience.

71.43% of doctors believe that there are unmet demands for health care services that are not currently subject to the activities of the specialist, but in the future can be covered in a limited volume, 23.81% in significant volume and 4.76% have no information. 69.57% of nurses and 83.33% of the midwives believe that there are unmet needs in a limited volume, and respectively 17.39% of nurses and 16.67% of midwives - in significant volume. 100% of the physical therapists and other medical specialists think there are unmet needs in limited volume.

Discussion

The main objective of the marketing approach is the recognition of the unmet needs of clients / patients in a particular organization. 17.9% of all medical specialists believe that there are some unmet health needs that are not currently subject to their activity. The relevance of the problem in terms of ongoing continuous health reform in Bulgaria is the need for a radical reorientation of healthcare facilities - from "patient care" to "meet the demands of patients."

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Context

As healthcare is being gradually digitalized, the trend "internet of people" comprises connectivity and interactions between devices, processes and people. There is still minimal research investigating healthcare stakeholders' perceptions on the benefits and risks to adopt internet of people in healthcare and, accordingly, our study thus aimed to survey the stakeholders' perceptions of benefits and risks for adopting internet of people in healthcare. It is important to understand this so that necessary actions can be directed accordingly to reach full potential of internet of people in healthcare.

Methods

Based on the literature, we developed a questionnaire addressing 6 risk areas (i.e. human, social, political, regulatory, ethical-legal, technological and financial risks) to the adoption of internet of people in healthcare. The questionnaire was distributed online to relevant stakeholders within digitalization in healthcare recruited via authors' networks, social media and snowballing effect.

Results

Opinions from 177 participants with various backgrounds (e.g., responding as a service user, healthcare organization, clinician, researcher, policy maker) living in 24 countries (e.g. Norway, the UK, USA, Australia, Singapore, and South Africa) were gathered. 49% of participants rated the risks related to ethical, legal. Top five ethical, legal, political or regulatory risks to the adoption of internet of people in healthcare are Ownership and access of which data, Inequality in accessing technology, Different rules and regulations in different geographical areas can inhibit globalization of digital data flows, Different IT laws and regulations in different countries and Unclear governance structures to promote public trust in the use of digital data. Survey participants also suggested how to overcome these risks by, for example, stakeholder engagement, demonstration of benefits and values of internet of people, and building public trust.

Discussion

The risks and barriers in adoption of Internet of people hinder the full potential of it. Patients, policy makers, regulators, healthcare staff and manufacturers need to work together to build trust and follow through so that the adoption of internet of people only benefits healthcare.

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Short Paper

Depression is one of the most commonly diagnosed psychiatric disorders in the world. The high prevalence of depressive disorders is reflected in the serious consequences of the health sector, social welfare and economics.

The aim of the study is to analyse data on the prevalence of depressive disorders among Polish population of working age. The study, "Epidemiology of psychiatric disorders and the access to mental health care. EZOP - Poland ", allowed assessments of prevalence of common mental disorders. The study demonstrated that over the past life in 3% of the Polish population in the productive age experienced at least one episode of depression.

After extrapolation, it was estimated that lifetime prevalence of a depressive episode could be diagnosed in 766 thousand Poles of working age. During the study, apart from symptoms of depression, the activity and subjective well-being were assessed. When number of symptoms did not fulfil necessary threshold points for diagnosis according to the ICD-10 and DSM-IV criteria approx. 30% of the respondents reported subjective feeling of being depressed with severe negative influence on work performance.

Based on this result, it can be estimated that about 8 million Poles was struggling with problems of depression, which greatly affects their quality of life. Data gathered by the Department of Social Welfare indicated that in 2015 because of a depressive episode more than 204 thousand medical leaves were issued, and the number of days of sickness absence at work amounted to nearly 4 million. Moreover, depression is 10th among the conditions causing the longest employee absenteeism. The above data show that depressive disorders are a significant problem in Polish society and are important cause of absenteeism and presenteeism.

Wearable GPS devices in individuals with pre-clinical Alzheimer's disease: our experience on a novel approach to control everyday physical activity

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Context

30 million people currently suffer from Alzheimer's disease, a chronic neurodegenerative disorder (in Italy affects more than 1 million people) requiring a complex, multidimensional care approach: they become confused, with a gradual loss of decision-making skills, an impairment of the memory associated with cognitive deficits in orientation. The advances in the field of wearable sensors for remote and continuous monitoring of physiological and movement data, particularly the mobile devices that possess an integrated GPS tracking system, represent a valuable tool to locate patients with complex medical conditions, or in case of emergency.

Methods

3 adult patients with pre-clinical Alzheimer's dementia and symptoms of cognitive deficits have been equipped with portable GPS devices and have been observed during their normal life, for two weeks. These instruments transmitted location data and information about emergency situations (e.g. falls) to caregivers' smartphones and computers in real time. The patients and their helpers' experiences were recorded by downloading data directly from those instruments and by interviews about relevant episodes in the observation period and QOL insights

Results

During the observation period, the 3 patients recruited for the study never got lost thanks to these devices

Discussion

The use of these portable devices allowed our patients to obtain a more adequate and immediate assistance when needed, as well as to achieve an improved independence in their daily activities. Family members and caregivers were alerted in case of emergency situations throughout an alarm message and they could check the location of the patient at any time. Caregivers could use this information to implement interventions as needed. The implementation of wearable GPS devices had a positive impact on the patients' QOL.

Wearable GPS devices have been demonstrated to be valuable for the increasing number of people with Alzheimer's disease, as well as individuals with a disability and their families and caregivers. These results suggest that the intervention reduced caregivers' (health care professionals, families) distress, as well as health care costs for those patients. Future research is needed to promote the clinical deployment of wearable sensors and systems.

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Introduction

Advances in wearable medical devices that work with specific biometric sensors and health-monitoring applications, integrated with modern wireless communication technologies, have promoted the development of diabetic monitoring and treatment, with a positive impact on the quality of life (QOL) of these patients. These wearable medical devices have been demonstrated to provide a more accurate insulin therapy, in which a PDM calculates the exact dose needed, with significant improvements in glycaemic control.

Methods

5 wearable medical devices have been tested: Omnipod Insulin Management System, MiniMed® Paradigm® 712, Accu-Chek®, OmniPod®, Animas® Vibe™ Jewel CARD™. These devices have been tested for 6 months on 2 patients with type 1 diabetes, and their glycaemia levels, accesses to the hospital, complications and personal comfort have been recorded by directly downloading data from the machine and by personal questionnaires

Results

During the observation period the 2 patients recruited for the study had no accesses to the hospital and their average glycaemia levels were in the range. They generally reported a satisfactory QOL and no complications

Discussion

The use of these portable devices allowed our patients to achieve a more adequate amount of injected insulin and a better glycaemic control, with a consequent reduction of the hypoglycaemic episodes and in the related hospital and GP accesses. The implementation of wearable devices had a positive impact on the patients' QOL: these tools resulted to be efficient diagnostic as well as therapeutic instruments, small in size and with low power consumption, capable to transmit data directly to health-monitoring applications on smartphone or tablets, thus being very valuable especially in young patients.

The reduction in diabetes-related complications, hospital admissions, GP interventions and drug needs, together with an improved QOL in diabetic patients using wearable medical devices, suggests that using these tools in a larger population may lead to significant reductions in healthcare costs.

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Context

Data, particularly sensitive in terms of fundamental rights and freedoms shall entitle special protection because the context of its processing could create significant risks for fundamental rights and freedoms.

Bulgaria, as EU Member State has implemented the EU Data Protection Directive 95/46/EC with the Personal Data Protection Act, promulgated in the State Gazette No. 1 of 4 January 2002.

Increasingly widespread use of biometrics in the implementation of medical activities requires the application of a new approach in terms of awareness regarding existing risks to the rights, ethics and freedoms of all of us, as a user of medical service.

Methods

The right to protection of personal data forms part of the rights protected under Article 8 of the ECHR, which guarantees the right to respect for private and family life, home and correspondence and lays down the conditions under which restrictions of this right are permitted.

Bulgaria, as EU Member state and country which has ratified the United Nations Universal Declaration of Human Rights has the obligation to comply with the ECHR. It has incorporated the ECHR in its national law, which requires to act in accordance with the provisions of the Convention.

The Personal Data Protection Act, defines the term "personal data", as any information relating to an individual who is identified or can be identified directly or indirectly by ID or by one or more specific signs. Biometrics can be defined as the science of identifying people through a physical characteristic.

Results

Biometric technologies imply that unique or distinctive characteristics of a person are collected, measured and stored for the automated verification of a claim made by that person or the identification of that person.

Data processing for the health of persons on grounds of public interest must not lead to the processing of personal data for other purposes by third parties such as employers or insurance companies and banks.

The principle of transparency requires that any information about the data subject to be brief, clear, understandable and easily accessible form, using clear and unambiguous formulations, including visualization. This is particularly important in cases where used information platform is a technological complexity with a large number of participants, which actually hinders the data subject, as it prevents known and understood that gather related data, by whom and for what purpose.

Discussion

The processing of personal data in accordance with the definition given in §1, item 1 of the Supplementary Provisions of the Personal protection Data Act introduced into Bulgarian national legislation, is any action or set of actions that can be performed upon personal data by automated or other means, such as collection, recording, organization, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination, making available, alignment or combination, blocking, erasure or destruction.

There is a legal possibility in certain cases fingerprints to be included in the category of so called "sensitive data". Consent should be expressed in terms of the purpose of data processing.

Lack of transparency and lawfulness of the processing of personal data could lead to physical, tangible or intangible damages where processing could lead to discrimination, identity theft or identity fraud as a result of which may be significant adverse economic or social consequences.

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Context

Ethical approach towards rare diseases should be introduced at highest possible level in every national framework, as it is directly related to the right to the highest attainable standard of health.

Main problems posed by rare diseases focused the attention to some ethical consequences raised by the lack of recognition and visibility of rare diseases.

In Bulgaria, the specifics of rare diseases create challenges for the registration of patients. The genetic nature of most rare diseases suggests the need to investigate and track family related cases, which is not always possible.

Methods

Rare diseases are a threat to the health of patients as they are life threatening or chronically debilitating diseases with a low prevalence and a high level of complexity. Despite their rarity, there are so many different types of rare diseases that millions of people are affected.

The difference in availability and quality of care provided to patients with rare diseases by the national healthcare services for diagnosis, treatment, and rehabilitation decreases the chances of achieving significant prolongation of life of patients with rare diseases. Patients often face lack of quality information and appropriate support at the time of diagnosis, as well as lack of appropriate multidisciplinary healthcare, which results to valuation of main principles in health systems such as universality, access to good quality care, equity and solidarity.

Results

Many families remain profoundly affected by genetic conditions, in spite of improved treatment, education, and support services. There is a substantial cost to society for non-institutional, outpatient, educational, medical and social services, as well as lost economic output from family members who care for persons with genetic disorders.

Within genetic services, efforts should be directed towards extending the reach of genetic services at the primary care level, with the utilization of technologies and personnel that are appropriate to the needs, expectations, and beliefs of the community.

The difficulty in obtaining the correct diagnosis is one of the most important issues for rare disease patients. Late diagnoses delay the beginning of adapted treatments and can have severe irreversible, debilitating and life-threatening consequences.

Another important issue, which has an ethical approach, is the lack of good clinical practice guidelines for some of the existing rare disease conditions.

Discussion

In 2014 Bulgarian authorities adopted Ordinance ^[1] on the conditions and procedures for registration of rare diseases and designation of Centres of Expertise and Reference Networks for rare diseases.

The Bulgarian Commission on rare diseases consists of total of 16 members, of whom 7 medical specialists and 4 representatives of the Ministry of Health. It supports the activities of the Minister of health and the Director of the National Center of Public Health and Analyses (NCPHA) on matters concerning rare diseases.

Health care and treatment for rare diseases should meet the requirements of criteria providing better access to consultations and medical exams, multidisciplinary approach in preventing misdiagnosis of rare diseases, as well as psychological treatment and support in cases of misdiagnosis.

^[1] Ordinance No. 16 of 30 July 2014 on the Centres of Expertise and National Registry for Rare Diseases

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Context

Primary Healthcare (PHC) strengthening can be considered a longer-term strategy to cover population's health needs, looking forward to the universal access paradigm. This strategy demands both innovative approaches and a compromise from governments to organize healthcare services responding to these challenges. Portuguese PHC is a good example of such an endeavour. Long-time sustainable and innovative strategies are required for effective PHC reform. This will be addressed by an overview of six innovation-waves dynamics since 1962, and by identifying a set of challenges that need to be addressed for sustainable healthcare-reform.

Methods

Kingdon's three-streams theory of policy development is used to analyse events from 50-years of reform considering the cycles of policy-making (as innovation-waves) and the path of change and innovation. This approach was chosen as a methodology to assess the process of implementing a reform, including the identification of facilitators and obstacles to translate guidance to policy-makers. This approach provides information to policy-making and address future challenges.

Results

Like other European countries, Portugal has engaged in a reform of its health services aiming at strengthening family-care services to provide universal access services. It was found that innovations have been introduced in five distinct-waves: in the 1960's, 1970's, 1980's, 1990's, in 2000's and the last one in the 2010s. The combination of government and other actors enable the creation of "policy-windows" favourable to reform. Sustainable change takes many years and requires all actors in the health-system to act systematically and in coherence. The evolution of the PHC-reform as a set of smaller reforms, or innovation-waves, during 50 years is highlighted. However the adoption of laws not accompanied by the allocation of adequate resources and governance rules is not enough to support a major reform, such as strengthening PHC and making it the point of entry of the health system.

Discussion

The use of Kingdom's three-stream model helps figuring out the relevance of people, institutions, leadership and windows of opportunity. The findings of the observational study help to support the need for improvement of nurses' work processes. The notion of "lack of time" is somehow supported by our data, which made the necessity to improve ward and work processes organization more visible. However, several issues arisen from this study. As a global conclusion, managers are required innovation-training to assist PHC into the next innovation wave, addressing issues like chronic care and eHealth.

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Context

In recent years, under tighter financial constraints and in order to increase their efficiency levels, many regional health systems in Italy implemented recentralizing reforms and policies. In all regions, a better coordination among public healthcare organizations (basically Local Health Units and Independent Hospital) was seen as a major objective. Not only regions actively promoted cooperative processes among public institutions, but in many cases they merged pre-existing institutions.

Methods

A multiple case studies methodology was used in order to compare different approaches (with or without merging) to the integration of services and processes. Of the three cases considered, two are based in a Emilia-Romagna and involve the integration of one LHU with one IH, the other is based in Tuscany and examines the merging of five LHUs in a single entity. Cases were purposively selected to allow comparison of different integration models. Semi-structured interviews were conducted from November 2016 to January 2017 with managers involved in the processes. Relevant public and non-public documents were also collected. The interviews covered different areas such as the background, the drivers, the objectives of integration, the processes involved, and the assessment of their impact on service delivery. We developed the findings looking at each single case as well as across cases.

Results

The three cases present different levels of integration: in the first the integration process doesn't lead to the merger; in the second the collaboration is pursued in view of a future merger; the last case represents an experience of integration that follows an institutional merger. We identified six internal and external drivers of integration: increase of services quality, increase of operational efficiency and safety, increase of clinical competence, search for economies of scale and rationalization of resources, influence of institutional and political environment, integration of clinical pathways. Cases present different governing bodies and different kinds of agreements with varying degrees of formality. In the merger case rules are defined *ex ante* (the regional decision mandating the merging), whereas in the others two cases how to govern the partnership is decided along the way without an institutional framework. Managers interviewed also reported different advantages and drawbacks resulting from the re-organisation.

Discussion

The study identifies useful tools to integrate organizations in public health by mergers or collaboration processes. The interviews show an ambivalent role of the institutional framework: while it can help to overcome the resistance to change, on the other hand it does not help providing operational tools and solutions. In case of collaboration without actual merging, the absence of a specific law can slow down the implementation process but motivates actors to find together the better solutions in order to realize the integration. Another point raised from the study is the problem of managing the larger healthcare organization resulting from mergers. In Tuscany the new legal entities reach to three times their original dimension both in terms of employees and geographic area. From this point of view the principles underlying the organizational choices must be reassessed.

Are Community Health Workers the missing link in improving capacity of the health systems preventive arm?

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Context

Most deaths can be averted through simple evidence-based interventions such as the use of Community Health Workers (CHWs), also known as village health teams in Uganda (VHTs). However, the CHW strategy still faces implementation challenges regarding training packages, supervision, and motivation. The WHO advocates for the use of CHWs to expand health services coverage, as one of the methods to tackle health workers shortages mostly in developing countries.

Methods

CHWs were invited to share their perspectives and experiences on their role: Qualitative interviews (In-depth interviews) with 15 CHWs from three districts i.e. Kamuli, Pallisa and Kibuku explored their motivations, as well as the challenges they encountered. Each CHW was also interviewed independently, which gave insight into the practical day-to-day activities that they engage in.

Results

CHWs mentioned that the key motivation for taking on their role was elevating their status in their community, but the main barrier was lack of confidence resulting from lack of appropriate training and supervision. In-depth interviews revealed that CHWs, contrary to literature, are the 'front line' health workers regarding basic health care, which extends to all preventive diseases. Complex health issues that were addressed by CHWs included provision of care for medication defaulters, sensitisation on antenatal care; malaria; both household/personal hygiene; and being 'first responders to community emergencies.

Discussion

With decentralization level one of the health care systems is now the village or LC 1 where CHWs are found. CHWs are key health support staff who shoulder a significant burden of care at community level. In practice, CHWs provide more than basic care especially to HIV/AIDS and TB patients. CHWs are very crucial in expanding health coverage mostly in rural and underserved communities. This has reduced the burden on health facility staff. However, lack of training and other materials that CHWs lack, make them feel ill-equipped to deal with the challenges that they encounter on a daily basis. If these gaps are addressed then CHWs would be the magic bullet towards improved household health care.

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Context

Uganda did not achieve Millennium Development Goals (MDGs) 4, 5 and 6 despite the various interventions put in place to improve maternal child health (MCH) care as a priority area in the Uganda National Minimum Health Care Package. Evidence from Uganda, shows that sometimes families are not able to access health care because of the high cost of seeking health care. Results from the national health accounts showed that 49% of health expenditure was met by households. Households incur costs for transportation, food, purchase of medicine and other supplies that may not be available at the health facility. With 24% of households earning less than a dollar a day, a high proportion is unable to meet their health care needs as a result of low savings.

Methods

The study used a participatory action research approach of data collection whereby community members and district leaders with support from project staff (Manifest project staff) participated in the identification of the MNH problems in the communities and solutions were sought, agreed on using locally available resources and networks.

Results

It was noted in the intervention arms that the number of saving groups more than doubled from 431 to 915 between September 2013 and December 2016 due to successful mobilization and sensitisation. It was also noted that some parishes which hardly had any saving group at the beginning of the study by the end of 2016 had at least a saving group in every local council 1 with membership of not less than 15 people. Out of 915 saving groups, 22% had members saving for MNH while the rest were either waiting to start saving during the following financial year or they were still waiting to be trained in leadership and management of saving groups.

Discussion

When different stakeholders come together and use participatory action research methods, problems are identified and effective solutions sought and implemented within local social networks. This has been seen through the successful mobilisation of communities into joining or starting saving groups and saving for wealth creation plus health. Findings have shown that it is very possible for communities to be mobilised using participatory action research methods and existing social networks to join community based savings groups and they save for health. It has also been observed that households that save for health are more likely to survive the catastrophic expenditures due to health-related problems

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Context

The importance of Public and Patient Involvement (PPI) in the planning and implementation of healthcare has been recognised in a number of international declarations.

In 1978 the World Health Organization's (WHO) Declaration of AlmaAta set out a vision for primary healthcare, which stated unequivocally that 'people have the right and duty to participate individually and collectively in the planning and implementation of their healthcare'. There is increasing that PPI in the provision of healthcare leads to better health outcomes and better quality of care.

Methods

- Meta -analysis
- Frequency analysis
- Descriptive methods
- Graphical analysis

Results

Results has shown that active participation of individuals in decision-making about treatments leads to improvements in health outcomes; access to quality information facilitates decision-making and supports an active role for consumers managing their own health; effective consumer participation in quality improvement and service development leads to more accessible and effective health services; active involvement of consumers at all levels of the development, implementation and evaluation of health strategies and programmes is integral to their success;

Discussion

Recent years have seen a slow but persistent shift towards the consideration of the patient as a consumer of healthcare services. As a result there have been major changes in the relationships between patients and healthcare providers, as both sides attempt to accommodate the new setting. To some extent, these new relationships are still being developed and considerable work is required in relation to 'buy in' – hence the need for a Toolkit such as this to assist in accelerating the necessary change. Donabedian utilised the idea of "co-production" as a way to conceptualise the relationship between patients and the health services. The concept of a coproduction is that citizen partnership is involved in the provision of any services (Brudney & England, 1983). This implies that not only are the services responsive to consumers, but there is also an acknowledgement of the role that consumers can and do play in the actual provision of services.

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Context

There are increasing numbers of attendances and emergency admissions from Emergency Departments (ED) in England and Wales. Hospital and government initiatives are failing to impact on this trend. The national strategy to reduce unexpected admissions includes increased provision of in-hospital elderly care and increase availability of GP provision. We wanted to assess the likely benefit of implementation of the national strategy on emergency admissions to a District General Hospital in the East of England.

Methods

We used rates for lower layer super output areas (LSOA) for age, deprivation, distance from ED, primary healthcare provision and rates of unpaid healthcare to analyse influencing factors of increased admissions to a local hospital using publicly available data. (Broomfield Hospital, Chelmsford, Essex).

Results

Rates of emergency admissions (68-131 per 1000) were significantly higher than predicted rates (19-42 per 1000) for 98% of LSOAs. Only 2 of the 104 LSOAs for this hospital matched their predicted versus actual ranking. Areas of high deprivation correlated with higher unexpected admission rates and Life limiting long term illness (LLTI). Areas of low deprivation had high predicted but low actual admissions. 22 of the top ranked LSOAs for emergency admissions are within a 10km zone of the hospital. GP provision is clustered within 5km of the hospital, yet those LSOAs have higher than expected admission rate. Age 65-85 had no significant effect on admissions. Unpaid healthcare provision reduces emergency admission rates in the areas of low deprivation but not in high deprivation areas.

Discussion

Deprivation and distance to travel have the strongest correlation with higher actual versus predicted emergency hospital admissions. Age does not have a significant negative impact on emergency admission rates. Using LSOA data we can predict in Chelmsford Essex, that the national strategy of focus on elderly community care and increasing GP provision is unlikely to significantly reduce emergency admission rates. In this area the data would support concentrating primary care and preventative strategies in areas of maximum deprivation to reduce unexpected hospital admissions.

In a multi-ethnic environment in the UK less than 50% of the population can use telephone consultation

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Context

Homerton University Hospital is in Hackney East London and has the most ethnically diverse population in England and Wales. We set up a nurse led telephone triage service (tSTT) to offer lower GI endoscopy to all patients referred on an urgent basis (2 week wait – 2WW) irrespective of their ethnicity

Methods

The first triage phone call for tSTT was an administrator step confirming the patient could be contacted and communicate appropriately in English. If successful, then an appointment time for a nurse telephone triage consultation was confirmed. The tests available for triage were flexible sigmoidoscopy, colonoscopy and OGD.

Results

285 2 WW LGI referrals were received within a 3 month period. 40% went directly to OPA: 17% of referrals were unable to communicate in English on the telephone. 6.7% could not be contacted by telephone and 8.5% unsuitable for mental health or disability issues, including dementia, learning difficulties and anxiety.

162 nurse triage calls were made and 29.6% of them were triaged to OPA. Only 6.6% of the referral cohort needed to see a physician before the test because of multiple medical comorbidities. The remaining 23% could not have a phone consultation for patient choice or non-compliance with the recommended investigations. Less than 40% of the referral cohort were suitable for tSTT.

Discussion

Even in a multi-ethnic urban population this model of care (tSTT) can improve the patient pathway to diagnosis of lower GI illness, including cancer. However, because of multiple patient related socio-economic factors and a significant number of the population having severe mental health problems, this model of care could not be predicted to reduce outpatient clinics by more than 40%.

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Context

Health workforce migration has become a global tendency. For countries with low health care funding outward migration creates substantial problems with respect to health care provision and quality. Latvian health system was subject to considerable public funding decrease during the years of economic crisis in 2009 and 2010. Fiscal adjustments focused at expenditure cuts included the abolishment of human resource development plan and reduction and freeze of salaries for health care professionals since 2009. The goal of the study is to assess the impact of these policy changes, to identify problems regarding health workforce supply and outward migration and to draw further policy options to ensure sustainable health sector development in Latvia.

Methods

The study provides a thorough analysis of Latvian health workforce data using descriptive statistical methods. The study aims to assess the structure and quantity, as well as countries of destination of outward migration by physician specialties and in relation to average number of practising doctors in the study period from 2012 to 2016. Analysis is based on the data obtained from the Health professionals' registry of Latvian Health Inspectorate and the registry of Latvian Doctors' Association on the issued certificates for recognition of professional qualifications required by the Directive 2005/36/EC.

Results

The age distribution of health workforce in Latvia is worsening: 60.5% of doctors are over the age of 50 years in 2015 in comparison to 51.8% in 2012. Alarming is the ratio of nurses to physicians: 1.6 in comparison with the 2.8 in OECD 34 average and in absolute numbers being on the bottom level between EU countries: 4.88 nurses per 1000 inhabitants. Due to low remuneration, physicians hold multiple - up to 4 or 5 jobs.

From 2012 to 2016 780 physicians from Latvia have obtained the certificates for recognition of professional qualifications. The main countries of destination: Germany (33.5%), United Kingdom (20,7%) and Sweden (14.8%). Majority of physicians or 52,3% seeking employment abroad are in the age group up to 30 years and 26.5% from 30-40 years of age.

Outward migration mostly affects radiologists, anaesthesiologists and dentists constituting accordingly 10%, 9% and 7% of practising specialists

Discussion

In the growing competitive environment, the role of health workforce in Latvia has been underappreciated. The shortage of human resources is increasing and has become one of the essential bottlenecks for the development of the Latvian health sector. The shortage of supply of nurses is a hurdle for optimal structure and provision of health care services leading to the supply of more expensive services provided by the doctors and restricting access to primary and ambulatory care. Low salaries and work overload in the public sector stimulate the supply of health services in the private sector covered by out-of-pocket payments, thus increasing inequality in the health sector in general. The study reveals alarming increasing tendency of outward migration resulting in shortage and ageing of health workforce. There is an urgent need to develop a comprehensive human resource.

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Context

As many countries in Europe, Finland is struggling with the sustainability of its health and social care. A forthcoming extensive national-level reform aims to a total integration of health and social care. The Better Everyday Life (BEL) project (2015–2017), funded by the Finnish Ministry of Social Affairs and Health, is a pilot project implementing the principles of the forthcoming reform in practice. The aim of the BEL project is to support high-need clients in everyday life by developing a person-centered, coordinated and integrated care approach including both social care and health care services.

Methods

The most challenging group of the integration reform will be high-need clients, who need both health and social services from several care providers. In the BEL project, integrated care for these 'shared clients' is developed by grass-root professionals, together with clients. Altogether 250 professionals (nurses, doctors, social workers, therapists, teachers etc.) from primary care, secondary care, social care and education sector work together in 37 local, multi-sectoral teams. The team work is supported by coaches and project seminars, aiming to develop concrete tools for integrated care. The Breakthrough method and other LEAN related development methods are used in the project. Each BEL team has focused on a special client group, for example older people who repeatedly visit acute care, families with children who have multiple needs, young people with mental and/or drug problems and unemployed people. The theoretical background of the project is the extended Chronic Care Model.

Results

During the project, the teams have developed concrete tools for multi-sectoral collaboration: a tool for identifying the high needs patients, a comprehensive, shared social and health care plan (SHCP) and collaboration models. The results show that collaboration of the professionals has improved the quality of the everyday life of the clients and decreased the use of care services.

Concrete cases of the project are, for example, The Help Team for school-aged children and their families and the intervention for multi-users of the Acute Clinic. The Help Team developed low threshold 'service' for children with multiple needs, resulting in better coordination of care based on collaboration of experts from health, psychiatric, social and education sectors.

In the acute clinic of a regional hospital, the use of SHCP decreased considerably the visits at the clinic. The cases and the results will be presented in detail in the conference presentation.

Discussion

The project has served as an eye-opener for the professionals. Earlier the members of multi-sectoral teams have not been familiar with each other and the work done in other sectors and organizations. During the project, they have noticed that they work with the very same clients, but separately, each in their own 'silos'. Integrated care implemented through collaboration beyond the traditional sectoral boundaries is necessary in order to improve the care of shared clients and to avoid costs caused by inappropriate and overlapping services. Commitment of and support from management are extremely important. In addition, listening to the voice of the shared patients is in the core of successful integration of health and social care and that's why it is very important to take the service users and experts of expertise with when you develop something new. The professions can't know themselves what really matters to the clients.

Nour Alrabie¹, Antoine Prioux²

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Context

Artisans of Health Futures agree on the necessity of changing paradigm to satisfy emerging needs generated by demographical, epidemiological, sociological and technological changes. Many scholars and policy makers highlight the importance of promoting health rather than healthcare seizing new opportunities offered by technological evolution. This highly interesting approach invites to rethink today's needs and re-invent tomorrow's responses. It gives birth everyday to innovative ideas and tools in regards to different elements of health systems including health professions' future. We identify LGDP* movement as an organisational innovation that question and redesign the job of a pharmacist.

Methods

The current business model of a dispensary pharmacy is based on its sales revenue mainly generated by medicaments delivery. The financial health of the institution depends on the corrupted health of the population and their growing needs for medicaments. In other words, it is based on disease not on health. Such model presents a paradox to basis of health promotion and disease prevention that would require limited medication.

LGDP stands for "Les Gardiens Des Poisons". This French expression means "The Guardians Of Poisons". It's a growing movement of militant pharmacists who defend a risk management approach and a 4P medicine: preventive, participatory, personalized and predictive. They aim to integrate a primary care teamwork that would be articulated around Data generation and Data sharing.

Results

LGDP movement offers a new health promotion based model. In such model, the pharmacist would be not only Poison-guard but also Data-guard. He would be connected to other health professionals and he would develop patients profile entering data related to medication needs & use, lifestyle, family history and predispositions. He would have a core role in patient education and would create a trust-based relationship with his community.

Discussion

This personal and confidential contact with patients would allow not only disease treatment but also disease prediction and consequently prevention. This service is supposed to be recognized by public and private insurance. It's supposed to be evaluated by points and by then the pharmacist would become a pioneer of health promotion as he would be paid for maintaining people healthy. In this new model, value would be crafted on the basis of avoided diseases and non-sold medicaments.

Gergő Merész, Tamás Palicz, Miklós Szócska
Semmelweis University Health Services Management Training Centre, Hungary

Context

Data on procurement processes in the Hungarian healthcare sector is not available in a well-structured format. The aim of this poster is to present the challenges which occurred during the development of a data mining the algorithm on healthcare procurement processes.

Methods

An open-source environment had to be chosen for the development of the data mining algorithm, able to identify the proper type of notification documents on the results of a procurement process and extract as much information as possible from a database.

Results

Data on timing, value, subject, applicants and customer in the procurement process could be collected through identified document models. The collected data can be further linked to company databases, or can be analysed by applying network layouts.

Discussion

The constructed algorithm is able to collect information to proceed with data analysis; however, the integration of further document models is desirable to elaborate the time horizon of the analysis.

Márton Kis, Edmond Girasek, Eszter Kovács
Semmelweis University Health Services Management Training Centre, Hungary

Short paper

eHealth, the integration of ICT into health services, is a major supporting factor in enhancing the quality, efficiency and effectivity of healthcare services. The ultimate objective of EU Members States (MS) is to better integrate eHealth into health policy and better align eHealth investments with health needs. One aspect is the transferability of health data across MS borders, which is linked to the organizational, technical, semantic and legal interoperability of ICT in health. In order to ensure progress and bridge the gaps between the levels of governance, strategy and operation, a dedicated mechanism for eHealth at the EU level has been established: the eHealth Network (eHN).

In order to maintain this overall mechanism and to ensure further common political leadership and the ongoing integration of eHealth into health policy, the “Joint Action to support the eHealth Network” (JASeHN) was launched in May 2015 to take over this preparatory role.

JASeHN is a joint action mechanism that is led by the MS and co-financed by the European Commission (EC). Total budget of the project is 4 million Euro, with 60% funding level (2.4 million EUR serviced by CHAFEA).

The JASeHN consortium has a total of 40 beneficiaries from 28 different European countries. In this presentation, the JASeHN project and its achievements shall be introduced in order to reach the widest range of health policy and management stakeholders.

JASeHN achieved more important policy results so far: successful preparations for the 7th, 8th, 9th and 10th eHealth Network meetings (May 2015 until Nov 2016), particularly achieved adoption by the eHealth Network of:

- Release 2 of Guidelines on the electronic exchange of health data under the Cross-Border Directive 2011/24/EU for use cases
 - Patient Summary for unscheduled care
 - ePrescriptions and eDispensations
- Relevant policy documents supporting governance of different stages necessary for the implementation of the Member States' generic services under the scope of the eHealth Digital Service Infrastructure, financially supported with CEF funds.
- Other related documents supporting eHealth policy developments
- Preparations for the 11th eHealth Network meeting (9th May 2017 in Malta)

In this poster the main achievement will be presented and interdependencies of technical and policy documents with respective responsibilities and implementation stages.