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Search History

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2. PsycInfo; (NHS OR health OR "national health service").ti,ab; 429942 results.
3. PsycInfo; 1 AND 2; 447 results.
4. PsycInfo; 3 [Limit to: Publication Year 2006-2016 and (Language English)]; 364 results.
5. PsycInfo; (diffusion OR adoption OR innovation OR technolog* OR spread).ti [Limit to: Publication Year 2006-2016 and (Language English)]; 20588 results.
6. PsycInfo; 4 AND 5 [Limit to: Publication Year 2006-2016 and (Language English)]; 181 results.
7. Medline; ((diffusion OR adoption) adj6 (innovation OR technolog* OR product OR products)).ti,ab; 3951 results.
8. Medline; (NHS OR health* OR "national health service").ti,ab; 1937263 results.
9. Medline; 7 AND 8; 1635 results.
11. Medline; 9 AND 10; 1635 results.
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16. Medline; 11 AND 15 [Limit to: Publication Year 2006-2016 and (Language English)]; 395 results.
17. HEALTH BUSINESS ELITE; ((diffusion OR adoption) adj6 (innovation OR technolog* OR product OR products)).ti,ab; 2179 results.
18. HEALTH BUSINESS ELITE; (NHS OR health* OR "national health service").ti,ab; 358901 results.
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20. HEALTH BUSINESS ELITE; 17 AND 18 AND 19; 169 results.
21. HEALTH BUSINESS ELITE; (diffusion AND innovation).ti; 62 results.

1. Diffusion of a Nurse-led Healthcare Innovation: Describing Certified Clinical Nurse Leader Integration Into Care Delivery.

Citation: The Journal of nursing administration, Jul 2016, vol. 46, no. 7-8, p. 400-407, 1539-0721 (2016 Jul-Aug)

Author(s): Bender, Miriam; Williams, Marjory; Su, Wei

Abstract: The Clinical Nurse LeaderTM (CNL) initiative is in its 2nd decade. Despite a growing theoretical and empirical body of CNL knowledge, little is known about CNLs themselves or where and how their competencies are being integrated into care delivery across the country. The aim of this study was to describe certified CNL characteristics and roles as part of a larger study validating a model for CNL practice. This study used a descriptive analysis of survey data from a national sample of certified CNLs. Survey response rate was 19%. Sixty percent have greater than 10 years of RN experience, and 75% have additional specialty certifications. Fifty-eight percent are practicing in a formal CNL role and report a high degree of accountability for all 9 CNL essential competencies. Findings help understand the extent of CNL adoption and spread across the country and the level to which the initial vision of CNL practice is being achieved.

Source: Medline

2. Study protocol: DEcisions in health Care to Introduce or Diffuse innovations using Evidence (DECIDE).

Citation: Implementation science : IS, Jan 2016, vol. 11, p. 48., 1748-5908 (2016)

Author(s): Turner, Simon; Morris, Stephen; Sheringham, Jessica; Hudson, Emma; Fulop, Naomi J

Abstract: A range of evidence informs healthcare decision-making, from formal research findings to 'soft intelligence' or local data, as well as practical experience or tacit knowledge. However, cultural and organisational factors often prevent the translation of such evidence into practice. Using a multi-level framework, this project will analyse how interactions between the evidence available and processes at the micro (individual/group) and meso (organisational/system) levels influence decisions to introduce or diffuse innovations in acute and primary care within the National Health Service in the UK. This study will use a mixed methods design, combining qualitative and quantitative methods, and involves four interdependent work streams: (1) rapid evidence synthesis of relevant literature with stakeholder feedback; (2) in-depth case studies of 'real-world' decision-making in acute and primary care; (3) a national survey and discrete choice experiment; and (4) development of guidance for decision-makers and evaluators to support the use of evidence in decision-making. This study will enhance the understanding of decision-makers' use of diverse forms of evidence. The findings will provide insights into how and why some evidence does inform decisions to introduce healthcare innovations, and why barriers persist in other cases. It will also quantify decision-makers' preferences, including the 'tipping point' of evidence needed to shift stakeholders' views. Practical guidance will be shared with healthcare decision-makers and evaluators on uses of evidence to enable the introduction and diffusion of innovation.

Source: Medline

Full Text: Available from *Directory of Open Access Journals* in *Implementation Science*
Available from *BioMed Central* in *Implementation Science*

3. Digital Health Technology Adoption Depends On Tech Comfort Level, Willingness to Pay.

Citation: Managed care (Langhorne, Pa.), Dec 2015, vol. 24, no. 12, p. 27-28, 1062-3388 (December 2015)

Author(s): Adams, Katherine T

Source: Medline

Full Text: Available from *EBSCOhost* in *Managed Care*

4. The Science And Art Of Delivery: Accelerating The Diffusion Of Health Care Innovation.

Citation: Health affairs (Project Hope), Dec 2015, vol. 34, no. 12, p. 2160-2166, 1544-5208 (December 2015)

Author(s): Parston, Greg; McQueen, Julie; Patel, Hannah; Keown, Oliver P; Fontana, Gianluca; Al Kuwari, Hanan; Al Kuwari, Hannan; Darzi, Ara

Abstract: There is a widely acknowledged time lag in health care between an invention or innovation and its widespread use across a health system. Much is known about the factors that can aid the uptake of innovations within discrete organizations. Less is known about what needs to be done to enable innovations to transform large systems of health care. This article describes the results of in-depth case studies aimed at assessing the role of key agents and agencies that facilitate the rapid adoption of innovations. The case studies-from Argentina, England, Nepal, Singapore, Sweden, the United States, and Zambia-represent widely varying health systems and economies. The implications of the findings for policy makers are discussed in terms of key factors within a phased approach for creating a climate for change, engaging and enabling the whole organization, and implementing and sustaining change. Purposeful and directed change management is needed to drive system transformation. Project HOPE—The People-to-People Health Foundation, Inc.

Source: Medline

5. How can we assess the value of complex medical innovations in practice?

Citation: Expert review of pharmacoeconomics & outcomes research, Jun 2015, vol. 15, no. 3, p. 369-371, 1744-8379 (June 2015)

Author(s): Abrishami, Payam; Boer, Albert; Horstman, Klasien

Abstract: Rapid proliferation of medical innovations in the face of demographic changes and scarce resources is demanding a value-conscious entry of medical innovations into health care systems. An inquiry into value gains significance during the early diffusion phase of an innovation and becomes indispensable as the complexity of an innovation increases. In this editorial, we argue that a value assessment must pay attention to the social processes shaping the innovation's adoption and use, in particular, to the "promises" of the technology and actual "practices" with it. Promises and practices represent real-world value as they account for both outcomes and costs in practice. A systematic exploration of these loci of value, using insights from constructive technology assessment, enables us to make well-informed decisions on complex medical technologies.

Source: Medline

6. Survival of the project: A case study of ICT innovation in health care.

Citation: Social Science & Medicine, May 2015, vol. 132, p. 62-69, 0277-9536 (May 2015)

Author(s): Andreassen, Hege K.; Kjekshus, Lars Erik; Tjora, Aksel

Abstract: From twenty years of information and communication technology (ICT) projects in the health sector, we have learned one thing: most projects remain projects. The problem of pilotism in e-health and telemedicine is a growing concern, both in medical literature and among policy makers, who now ask for large-scale implementation of ICT in routine health service delivery. In this article, we turn the question of failing projects upside down. Instead of investigating the obstacles to implementing ICT and realising permanent changes in health care routines, we ask what makes the temporary ICT project survive, despite an apparent lack of success. Our empirical material is based on Norwegian telemedicine. Through a case study, we take an in-depth look into the history of one particular telemedical initiative and highlight how ICT projects matter on a managerial level. Our analysis reveals how management tasks were delegated to the ICT project, which thus contributed to four processes of organisational control: allocating resources, generating and managing enthusiasm, system correction and aligning local practice and national policies. We argue that the innovation project in itself can be considered an innovation that has become normalised in health care, not in clinical, but in management work. In everyday management, the ICT project appears to be a convenient tool suited to ease the tensions between state regulatory practices and claims of professional autonomy

that arise in the wake of new public management reforms. Separating project management and funding from routine practice handles the conceptualised heterogeneity between innovation and routine within contemporary health care delivery. Whilst this separation eases the execution of both normal routines and innovative projects, it also delays expected diffusion of technology. (PsycINFO Database Record (c) 2015 APA, all rights reserved)(journal abstract)

Source: PsycInfo

7. Moving beyond local practice: reconfiguring the adoption of a breast cancer diagnostic technology.

Citation: Social science & medicine (1982), Apr 2015, vol. 131, p. 98-106, 1873-5347 (April 2015)

Author(s): Maniatopoulos, Gregory; Procter, Rob; Llewellyn, Sue; Harvey, Gill; Boyd, Alan

Abstract: This paper explores the ways in which technological innovation becomes adopted and incorporated into healthcare practice. Drawing upon the notion of 'field of practices', we examine how adoption is subject to spatially and temporally distributed reconfigurations across a multi-level set of practices, ranging from the policy level to the micro-level setting of individual action. The empirical backdrop is provided by a case study of the adoption of Breast Lymph Node Assay (BLNA), a diagnostic technology innovation for the treatment of breast cancer patients. Our aim is to contribute to the development of a more comprehensive analysis of the processes surrounding the adoption and incorporation of complex healthcare technologies into routine practice. Copyright © 2015. Published by Elsevier Ltd.

Source: Medline

8. A new social contract for medical innovation.

Citation: The Lancet, Mar 2015, vol. 385, no. 9974, p. 1153-1154, 0140-6736 (Mar 28, 2015)

Author(s): Horne, Rob; Bell, John I.; Montgomery, Jonathan R.; Ravn, Morten O.; Tooke, John E.

Abstract: Despite burgeoning knowledge about the origins of disease founded on scientific advances, there are increasing public concerns that medical innovation is not helping patients in need fast enough. In the UK, Lord Saatchi's proposal for a Medical Innovation Bill1 is one manifestation of this concern, while the Minister for Life Sciences' current Innovative Medicines and Medical Technologies Review is another. A review of medical innovation is timely; it is not just the time taken for research, but the rising cost of drug development that demand attention. The adoption and diffusion of new technologies and medicines of marginal incremental benefit is one of the biggest drivers of cost in health systems, and contributes to their unsustainability. Although the pharmaceutical industry understandably seeks to recover the costs of drug development, commissioners of health services adopt policies and processes that effectively ration the availability of new products. Recent analyses highlight that in a universal health system such as the UK's National Health Service (NHS) with a finite budget, money spent on expensive drugs could achieve more health benefit if directed elsewhere (PsycINFO Database Record (c) 2015 APA, all rights reserved)(journal abstract)

Source: PsycInfo

Full Text: Available from *Elsevier Science* in *Lancet, The*
Available from *ProQuest* in *Lancet, The*

9. HOW EARLY IMPLEMENTATIONS INFLUENCE LATER ADOPTIONS OF INNOVATION: SOCIAL POSITIONING AND SKILL REPRODUCTION IN THE DIFFUSION OF ROBOTIC SURGERY.

Citation: Academy of Management Journal, 01 February 2015, vol./is. 58/1(242-278), 00014273

Author(s): COMPAGNI, AMELIA; MELE, VALENTINA; RAVASI, DA VIDE

Language: English

Abstract: We report on a multilevel study investigating the diffusion of robotic surgery in the Italian health care system between 1999 and 2010. A combination of qualitative and quantitative methods allowed us to link organization-level processes associated with the adoption and

implementation of the innovation to its diffusion at the population level. Our findings advance the understanding of how early experiences with the implementation of an innovation influence later adoptions, and they draw attention to how the search for social gains drives some peripheral actors to pioneer an innovation and engage in practices of discursive persuasion and skill reproduction that, in turn, constitute them to be "exemplary users." These practices eventually trigger and support the isomorphic diffusion of the innovation, even in the presence of persistent uncertainty about its technical or economic benefits.

Publication Type: Academic Journal

Source: HEALTH BUSINESS ELITE

Full Text: Available from *EBSCOhost* in *Academy of Management Journal*

10. Trialability, observability and risk reduction accelerating individual innovation adoption decisions.

Citation: Journal of health organization and management, Jan 2015, vol. 29, no. 2, p. 271-294, 1477-7266 (2015)

Author(s): Hayes, Kathryn J; Eljiz, Kathy; Dadich, Ann; Fitzgerald, Janna-Anneke; Sloan, Terry

Abstract: The purpose of this paper is to provide a retrospective analysis of computer simulation's role in accelerating individual innovation adoption decisions. The process innovation examined is Lean Systems Thinking, and the organizational context is the imaging department of an Australian public hospital. Intrinsic case study methods including observation, interviews with radiology and emergency personnel about scheduling procedures, mapping patient appointment processes and document analysis were used over three years and then complemented with retrospective interviews with key hospital staff. The multiple data sources and methods were combined in a pragmatic and reflexive manner to explore an extreme case that provides potential to act as an instructive template for effective change. Computer simulation of process change ideas offered by staff to improve patient-flow accelerated the adoption of the process changes, largely because animated computer simulation permitted experimentation (trialability), provided observable predictions of change results (observability) and minimized perceived risk. The difficulty of making accurate comparisons between time periods in a health care setting is acknowledged. This work has implications for policy, practice and theory, particularly for inducing the rapid diffusion of process innovations to address challenges facing health service organizations and national health systems. Originality/value - The research demonstrates the value of animated computer simulation in presenting the need for change, identifying options, and predicting change outcomes and is the first work to indicate the importance of trialability, observability and risk reduction in individual adoption decisions in health services.

Source: Medline

Full Text: Available from *ProQuest* in *Journal of Health Organization and Management*

11. Using a framework to implement large-scale innovation in medical education with the intent of achieving sustainability.

Citation: BMC medical education, Jan 2015, vol. 15, p. 2., 1472-6920 (2015)

Author(s): Hudson, Judith N; Farmer, Elizabeth A; Weston, Kathryn M; Bushnell, John A

Abstract: Particularly when undertaken on a large scale, implementing innovation in higher education poses many challenges. Sustaining the innovation requires early adoption of a coherent implementation strategy. Using an example from clinical education, this article describes a process used to implement a large-scale innovation with the intent of achieving sustainability. Desire to improve the effectiveness of undergraduate medical education has led to growing support for a longitudinal integrated clerkship (LIC) model. This involves a move away from the traditional clerkship of 'block rotations' with frequent changes in disciplines, to a focus upon clerkships with longer duration and opportunity for students to build sustained relationships with supervisors, mentors, colleagues and patients. A growing number of medical schools have adopted the LIC model for a small percentage of their students. At a time when increasing medical school

numbers and class sizes are leading to competition for clinical supervisors it is however a daunting challenge to provide a longitudinal clerkship for an entire medical school class. This challenge is presented to illustrate the strategy used to implement sustainable large scale innovation. A strategy to implement and build a sustainable longitudinal integrated community-based clerkship experience for all students was derived from a framework arising from Roberto and Levesque's research in business. The framework's four core processes: chartering, learning, mobilising and realigning, provided guidance in preparing and rolling out the 'whole of class' innovation. Roberto and Levesque's framework proved useful for identifying the foundations of the implementation strategy, with special emphasis on the relationship building required to implement such an ambitious initiative. Although this was innovation in a new School it required change within the school, wider university and health community. Challenges encountered included some resistance to moving away from traditional hospital-centred education, initial student concern, resource limitations, workforce shortage and potential burnout of the innovators. Large-scale innovations in medical education may productively draw upon research from other disciplines for guidance on how to lay the foundations for successfully achieving sustainability.

Source: Medline

Full Text: Available from *BioMed Central* in *BMC Medical Education*
Available from *EBSCOhost* in *BMC Medical Education*
Available from *National Library of Medicine* in *BMC Medical Education*
Available from *Directory of Open Access Journals* in *BMC Medical Education*

12. Diffusion of innovation: Telehealth for care at home.

Citation: Studies in health technology and informatics, Jan 2015, vol. 216, p. 963., 0926-9630 (2015)

Author(s): Levy, Sharon

Abstract: The 'care at home' study focused on a Scottish telehealth service, which was designed to support children with palliative and complex care needs. Using the diffusion of innovation theory, this poster highlights the differences between the way telehealth is used in the public sector and in a third sector or a voluntary organization. Analysis of the data, taken from interviews with key stakeholders, illuminate barriers and solutions as noted by clinicians who see the clear benefits and potential risks of telehealth use at home. In conclusion, it is argued that a strategic steer towards a culture of innovation is needed to support effective use of telehealth in clinical practice. Senior managers in the National Health Service in the United Kingdom need to 'unleash' the goodwill of staff who are eager to exploit innovation in clinical practice.

Source: Medline

Full Text: Available from *EBSCOhost* in *Studies in Health Technology & Informatics*

13. Lessons from eight countries on diffusing innovation in health care.

Citation: Health affairs (Project Hope), Sep 2014, vol. 33, no. 9, p. 1516-1522, 1544-5208 (September 2014)

Author(s): Keown, Oliver P; Parston, Greg; Patel, Hannah; Rennie, Fiona; Saoud, Fathy; Al Kuwari, Hanan; Darzi, Ara

Abstract: Health care systems are under increasing pressure to cope with shifting demographics, the threat of chronic and noncommunicable disease, and rising health care costs. The uptake of innovations to meet these challenges and to advance medicine and health care delivery is not as rapid as the pace of change. Greater emphasis on the diffusion of innovation and greater understanding of the structural and organizational levers that can be used to facilitate systemwide improvement are essential. This article describes the results of a qualitative and quantitative study to assess the factors and behaviors that foster the adoption of health care innovation in eight countries: Australia, Brazil, England, India, Qatar, South Africa, Spain, and the United States. It describes the front-line cultural dynamics that must be fostered to achieve cost-effective and high-impact transformation

of health care, and it argues that there is a necessity for greater focus on vital, yet currently underused, organizational action to support the adoption of innovation. Project HOPE—The People-to-People Health Foundation, Inc.

Source: Medline

Full Text: Available from *ProQuest* in *Health Affairs*

14. Understanding the adoption dynamics of medical innovations: affordances of the da Vinci robot in the Netherlands.

Citation: Social science & medicine (1982), Sep 2014, vol. 117, p. 125-133, 1873-5347 (September 2014)

Author(s): Abrishami, Payam; Boer, Albert; Horstman, Klasien

Abstract: This study explored the rather rapid adoption of a new surgical device - the da Vinci robot - in the Netherlands despite the high costs and its controversial clinical benefits. We used the concept 'affordances' as a conceptual-analytic tool to refer to the perceived promises, symbolic meanings, and utility values of an innovation constructed in the wider social context of use. This concept helps us empirically understand robot adoption. Data from 28 in-depth interviews with diverse purposively-sampled stakeholders, and from medical literature, policy documents, Health Technology Assessment reports, congress websites and patients' weblogs/forums between April 2009 and February 2014 were systematically analysed from the perspective of affordances. We distinguished five interrelated affordances of the robot that accounted for shaping and fulfilling its rapid adoption: 'characteristics-related' affordances such as smart nomenclature and novelty, symbolising high-tech clinical excellence; 'research-related' affordances offering medical-technical scientific excellence; 'entrepreneurship-related' affordances for performing better-than-the-competition; 'policy-related' affordances indicating the robot's liberalised provision and its reduced financial risks; and 'communication-related' affordances of the robot in shaping patients' choices and the public's expectations by resonating promising discourses while pushing uncertainties into the background. These affordances make the take-up and use of the da Vinci robot sound perfectly rational and inevitable. This Dutch case study demonstrates the fruitfulness of the affordances approach to empirically capturing the contextual dynamics of technology adoption in health care: exploring in-depth actors' interaction with the technology while considering the interpretative spaces created in situations of use. This approach can best elicit real-life value of innovations, values as defined through the eyes of (potential) users.

Source: Medline

15. Understanding whole systems change in health care: Insights into system level diffusion from nursing service delivery innovations—A multiple case study.

Citation: Evidence and Policy, Aug 2014, vol. 10, no. 3, p. 313-336, 1744-2648 (Aug 2014)

Author(s): Berta, Whitney; Virani, Tazim; Bajnok, Irmajean; Edwards, Nancy; Rowan, Margo

Abstract: Our study responds to calls for theory-driven approaches to studying innovation diffusion processes in health care. While most research on diffusion in health care is situated at the service delivery level, we study innovations and associated processes that have diffused to the system level, and refer to work on complex adaptive systems and whole systems change to guide our work. System-level diffusion not only involves the spread of innovations across sector boundaries in a system, it may alter interactions and care delivery within multiple system components, change the nature of the interdependencies between components, and ultimately lead to whole systems change. (journal abstract)

Source: PsycInfo

16. Adopting medical technologies and diagnostics recommended by NICE: the Health Technologies Adoption Programme.

Citation: Annals of the Royal College of Surgeons of England, Jul 2014, vol. 96, no. 5, p. 400-401, 1478-7083 (July 2014)

Author(s): Chisholm, Sally

Source: Medline

Full Text: Available from *EBSCOhost* in *Annals of the Royal College of Surgeons of England [Ann R Coll Surg Engl] NLMUID: 7506860*
Available from *National Library of Medicine* in *Annals of The Royal College of Surgeons of England*

17. The impact of clinical leadership on health information technology adoption: systematic review.

Citation: International journal of medical informatics, Jun 2014, vol. 83, no. 6, p. 393-405, 1872-8243 (June 2014)

Author(s): Ingebrigtsen, Tor; Georgiou, Andrew; Clay-Williams, Robyn; Magrabi, Farah; Hordern, Antonia; Prgomet, Mirela; Li, Julie; Westbrook, Johanna; Braithwaite, Jeffrey

Abstract: To conduct a systematic review to examine evidence of associations between clinical leadership and successful information technology (IT) adoption in healthcare organisations. We searched Medline, Embase, Cinahl, and Business Source Premier for articles published between January 2000 to May 2013 with keywords and subject terms related to: (1) the setting--healthcare provider organisations; (2) the technology--health information technology; (3) the process--adoption; and (4) the intervention--leadership. We identified 3121 unique citations, of which 32 met our criteria and were included in the review. Data extracted from the included studies were assessed in light of two frameworks: Bassellier et al.'s IT competence framework; and Avgar et al.'s health IT adoption framework. The results demonstrate important associations between the attributes of clinical leaders and IT adoption. Clinical leaders who have technical informatics skills and prior experience with IT project management are likely to develop a vision that comprises a long-term commitment to the use of IT. Leaders who possess such a vision believe in the value of IT, are motivated to adopt it, and can maintain confidence and stability through the adversities that IT adoptions often entail. This leads to proactive leadership behaviours and partnerships with IT professionals that are associated with successful organisational and clinical outcomes. This review provides evidence that clinical leaders can positively contribute to successful IT adoption in healthcare organisations. Clinical leaders who aim for improvements in the processes and quality of care should cultivate the necessary IT competencies, establish mutual partnerships with IT professionals, and execute proactive IT behaviours to achieve successful IT adoption.

Source: Medline

18. Technology as system innovation: a key informant interview study of the application of the diffusion of innovation model to telecare.

Citation: Disability and rehabilitation. Assistive technology, Jan 2014, vol. 9, no. 1, p. 79-87, 1748-3115 (January 2014)

Author(s): Sugarhood, Paul; Wherton, Joseph; Procter, Rob; Hinder, Sue; Greenhalgh, Trisha

Abstract: To identify and explore factors that influence adoption, implementation and continued use of telecare technologies. As part of the Assistive Technologies for Healthy Living in Elders: Needs Assessment by Ethnography (ATHENE) project, 16 semi-structured interviews were conducted with key participants from organisations involved in developing and providing telecare technologies and services. Data were analysed thematically, using a conceptual model of diffusion of innovations. Participants identified numerous interacting factors that facilitated or hindered adoption and use. As predicted by the model, these related variously to the technology, individual adopters, the process of social influence, the innovativeness and readiness of organisations, implementation and routinisation processes following initial adoption, and the nature and strength of linkages between these elements. Key issues included (i) the complexity and uniqueness of the "user system", (ii) the ongoing work needed to support telecare use beyond initial

adoption, and (iii) the relatively weak links that typically exist between users of telecare technologies and the organisations who design and distribute them. Telecare is not merely a technology but a complex innovation requiring input from, and coordination between, people and organisations. To promote adoption and use, these contextual factors must be specified, understood and addressed.

Source: Medline

Full Text: Available from *Taylor & Francis* in *Disability and Rehabilitation: Assistive Technology*

19. Factors associated with adoption of health information technology: a conceptual model based on a systematic review.

Citation: JMIR medical informatics, Jan 2014, vol. 2, no. 1, p. e9., 2291-9694 (2014)

Author(s): Kruse, Clemens Scott; DeShazo, Jonathan; Kim, Forest; Fulton, Lawrence

Abstract: The Health Information Technology for Economic and Clinical Health Act (HITECH) allocated $19.2 billion to incentivize adoption of the electronic health record (EHR). Since 2009, Meaningful Use Criteria have dominated information technology (IT) strategy. Health care organizations have struggled to meet expectations and avoid penalties to reimbursements from the Center for Medicare and Medicaid Services (CMS). Organizational theories attempt to explain factors that influence organizational change, and many theories address changes in organizational strategy. However, due to the complexities of the health care industry, existing organizational theories fall short of demonstrating association with significant health care IT implementations. There is no organizational theory for health care that identifies, groups, and analyzes both internal and external factors of influence for large health care IT implementations like adoption of the EHR. The purpose of this systematic review is to identify a full-spectrum of both internal organizational and external environmental factors associated with the adoption of health information technology (HIT), specifically the EHR. The result is a conceptual model that is commensurate with the complexity of with the health care sector. We performed a systematic literature search in PubMed (restricted to English), EBSCO Host, and Google Scholar for both empirical studies and theory-based writing from 1993-2013 that demonstrated association between influential factors and three modes of HIT: EHR, electronic medical record (EMR), and computerized provider order entry (CPOE). We also looked at published books on organizational theories. We made notes and noted trends on adoption factors. These factors were grouped as adoption factors associated with various versions of EHR adoption. The resulting conceptual model summarizes the diversity of independent variables (IVs) and dependent variables (DVs) used in articles, editorials, books, as well as quantitative and qualitative studies (n=83). As of 2009, only 16.30% (815/4999) of nonfederal, acute-care hospitals had adopted a fully interoperable EHR. From the 83 articles reviewed in this study, 16/83 (19%) identified internal organizational factors and 9/83 (11%) identified external environmental factors associated with adoption of the EHR, EMR, or CPOE. The conceptual model for EHR adoption associates each variable with the work that identified it. Commonalities exist in the literature for internal organizational and external environmental factors associated with the adoption of the EHR and/or CPOE. The conceptual model for EHR adoption associates internal and external factors, specific to the health care industry, associated with adoption of the EHR. It becomes apparent that these factors have some level of association, but the association is not consistently calculated individually or in combination. To better understand effective adoption strategies, empirical studies should be performed from this conceptual model to quantify the positive or negative effect of each factor.

Source: Medline

Full Text: Available from *Directory of Open Access Journals* in *JMIR Medical Informatics*

20. Technology identity: the role of sociotechnical representations in the adoption of medical devices.

Citation: Social science & medicine (1982), Dec 2013, vol. 98, p. 95-105, 1873-5347 (December 2013)

Author(s): Ulucanlar, S; Faulkner, A; Peirce, S; Elwyn, G

Abstract: This study explored the sociotechnical influences shaping the naturally-occurring adoption and non-adoption of device technologies in the UK's National Health Service (NHS), amid increasing policy interest in this area. The study was informed by Science and Technology Studies and structuration and Actor Network Theory perspectives, drawing attention to the performative capacities of the technology alongside human agentic forces such as agendas and expectations, in the context of structural and macro conditions. Eight technologies were studied using a comparative ethnographic case study design and purposive and snowball sampling to identify relevant NHS, academic and industry participants. Data were collected between May 2009 and February 2012, included in-depth interviews, conference observations and printed and web-based documents and were analysed using constructivist grounded theory methods. The study suggests that while adoption decisions are made within the jurisdiction of healthcare organisations, they are shaped within a dynamic and fluid 'adoption space' that transcends organisational and geographic boundaries. Diverse influences from the industry, health care organisation and practice, health technology assessment and policy interact to produce 'technology identities.' Technology identities are composite and contested attributes that encompass different aspects of the technology (novelty, effectiveness, utility, risks, requirements) and that give a distinctive character to each. We argue that it is these socially constructed and contingent heuristic identities that shape the desirability, acceptability, feasibility and adoptability of each technology, a perspective that policy must acknowledge in seeking to intervene in health care technology adoption.

Source: Medline

21. Advancing the adoption, integration and testing of technological advancements within existing care systems.

Citation: General Hospital Psychiatry, Jul 2013, vol. 35, no. 4, p. 345-348, 0163-8343 (Jul-Aug 2013)

Author(s): Druss, Benjamin G.; Dimitropoulos, Linda

Abstract: Objective: This manuscript reviews the work on uptake and dissemination of health information technologies in mental health populations and settings, with the goal of informing the future research agenda. Methods: We reviewed both the formal and “grey” literature describing the rates and correlates of uptake for electronic health records (EHRs) and personal health records (PHRs) for general and specialty mental health settings. Results: Rates of uptake and use of EHRs and PHRs are low in general medical settings, and the limited evidence suggests even lower rates for specialty mental health settings. Many of the patient, provider and system-level characteristics associated with lower rates of use in general populations would be expected to be exacerbated in mental health settings. Conclusions: The findings suggest a need to better understand both the causes and strategies for overcoming barriers to uptake of health information technology (HIT) in mental health settings. Observational studies could help to better elucidate the barriers to adoption of HIT that are unique or disproportionate in mental health populations. Implementation science studies are needed to better identify strategies for addressing these barriers and optimizing uptake of mental health HIT interventions. (journal abstract)

Source: PsycInfo

22. Promoting innovation and excellence to face the rapid diffusion of novel psychoactive substances in the EU: The outcomes of the ReDNet project.

Citation: Human Psychopharmacology: Clinical and Experimental, Jul 2013, vol. 28, no. 4, p. 317-323, 0885-6222 (Jul 2013)

Author(s): Corazza, Ornella; Assi, Sulaf; Simonato, Pierluigi; Corkery, John; Bersani, Saverio; Demetrovics, Zsolt; Stair, Jacqueline; Fergus, Suzanne; Pezzolesi, Cinzia; Pasinetti, Manuela; Deluca, Paolo; Drummond, Colin; Davey, Zoe; Blaszko, Ursula; Moskalewicz, Jacek; Mervo, Barbara; Di Furia, Lucia; Farre, Maggi; Flesland, Liv; Pisarska, Agnieszka; Shapiro, Harry; Siemann, Holger; Skutle, Arvid; Sferrazza, Elias; Torrens, Marta; Sambola, F.; van der Kreeft, Peer; Scherbaum, Norbert; Schifano, Fabrizio

Abstract: Objectives: The recent emergence of new psychoactive compounds (novel psychoactive substances (NPS)) has raised prominent challenges in the fields of drug policy, substance use research, public health and service provision. The Recreational Drugs European Network project, funded by the European Commission, was implemented to improve the information stream to young people and professionals about effects/risks of NPS by identifying online products and disseminating relevant information through technological tools. Methods: Regular multilingual qualitative assessments of websites, drugs fora and other online resources were carried out using the Google search engine in eight languages from collaborating countries. These included the following: the UK, Norway, Belgium, Germany, Hungary, Poland, Italy and Spain. Products were tested and prevention messages were developed and disseminated via technological tools such as interactive websites, SMS alert, social networking (Facebook, Twitter), Multimedia (You Tube), Smartphone applications (iPhone) and virtual learning environments (Second Life). Results: The Recreational Drugs European Network project established itself as the first Europe-wide prevention programme designed for NPS based on the efficacy of novel information and communication technology-based forms of intervention. More than 650 NPS products and combinations were identified; relevant information was disseminated to target population and advice was given to both European Union/international agencies and national policy makers. Conclusions: Web-monitoring activities are essential for mapping the diffusion of NPS and the use of technological tools can be successfully incorporated in specific prevention programmes. Furthermore, the involvement of multi-disciplinary international partnerships was and continues to be fundamental for responding to such a prominent challenge. (PsycINFO Database Record (c) 2013 APA, all rights reserved)(journal abstract)

Source: PsycInfo

Full Text: Available from *EBSCOhost* in *Human Psychopharmacology: Clinical & Experimental*
Available from *EBSCOhost* in *Human Psychopharmacology: Clinical & Experimental*

23. Evaluating the implementation of health and safety innovations under a regulatory context: a collective case study of Ontario's safer needle regulation.

Citation: Implementation science : IS, Jan 2013, vol. 8, p. 9., 1748-5908 (2013)

Author(s): Chambers, Andrea; Mustard, Cameron A; Breslin, Curtis; Holness, Linn; Nichol, Kathryn

Abstract: Implementation effectiveness models have identified important factors that can promote the successful implementation of an innovation; however, these models have been examined within contexts where innovations are adopted voluntarily and often ignore the socio-political and environmental context. In the field of occupational health and safety, there are circumstances where organizations must adopt innovations to comply with a regulatory standard. Examining how the external environment can facilitate or challenge an organization's change process may add to our understanding of implementation effectiveness. The objective of this study is to describe implementation facilitators and barriers in the context of a regulation designed to promote the uptake of safer engineered medical devices in healthcare. The proposed study will focus on Ontario's safer needle regulation (2007) which requires healthcare organizations to transition to the use of safer engineered medical devices for the prevention of needlestick injuries. A collective case study design will be used to learn from the experiences of three acute care hospitals in the province of Ontario, Canada. Interviews with management and front-line healthcare workers and analysis of supporting documents will be used to describe the implementation experience and examine issues associated with the integration of these devices. The data collection and analysis process will be influenced by a conceptual framework that draws from implementation science and the occupational health and safety literature. The focus of this study in addition to the methodology creates a unique opportunity to contribute to the field of implementation science. First, the study will explore implementation experiences under circumstances where regulatory pressures are influencing the organization's change process. Second, the timing of this study provides an opportunity to focus on issues that arise during later stages of implementation, a phase during the implementation cycle that has been understudied. This study also provides the opportunity to examine the relevance and utility of current implementation science

models in the field of occupational health where the adoption of an innovation is meant to enhance the health and safety of workers. Previous work has tended to focus almost exclusively on innovations that are designed to enhance an organization's productivity or competitive advantage.

Source: Medline

Full Text: Available from *Directory of Open Access Journals* in *Implementation Science*
Available from *BioMed Central* in *Implementation Science*
Available from *National Library of Medicine* in *Implementation Science : IS*

24. Patient perceptions of a personal health record: A test of the diffusion of innovation model.

Citation: Journal of Medical Internet Research, Nov 2012, vol. 14, no. 6, p. p117., 1438-8871 (Nov-Dec 2012)

Author(s): Emani, Srinivas; Yamin, Cyrus K.; Peters, Ellen; Karson, Andrew S.; Lipsitz, Stuart R.; Wald, Jonathan S.; Williams, Deborah H.; Bates, David W.

Abstract: Background: Personal health records (PHRs) have emerged as an important tool with which patients can electronically communicate with their doctors and doctor's offices. However, there is a lack of theoretical and empirical research on how patients perceive the PHR and the differences in perceptions between users and non-users of the PHR. Objective: To apply a theoretical model, the diffusion of innovation model, to the study of PHRs and conduct an exploratory empirical study on the applicability of the model to the study of perceptions of PHRs. A secondary objective was to assess whether perceptions of PHRs predict the perceived value of the PHR for communicating with the doctor's office. Methods: We first developed a survey capturing perceptions of PHR use and other factors such as sociodemographic characteristics, access and use of technology, perceived innovativeness in the domain of information technology, and perceptions of privacy and security. We then conducted a cross-sectional survey (N = 1500). Patients were grouped into five groups of 300: PHR users (innovators, other users, and laggards), rejecters, and non-adopters. We applied univariate statistical analysis (Pearson chi-square and one-way ANOVA) to assess differences among groups and used multivariate statistical techniques (factor analysis and multiple regression analysis) to assess the presence of factors identified by the diffusion of innovation model and the predictors of our dependent variable (value of PHR for communicating with the doctor's office). Results: Of the 1500 surveys, 760 surveys were returned for an overall response rate of 51%. Computer use among non-adopters (75%) was lower than that among PHR users (99%) and rejecters (92%) ($P < .001$). Non-adopters also reported a lower score on personal innovativeness in information technology (mean = 2.8) compared to 3.6 and 3.1, respectively, for users and rejecters ($P < .001$). Four factors identified by the diffusion of innovation model emerged in the factor analysis: ease of use, relative advantage, observability, and trialability. PHR users perceived greater ease of use and relative advantage of the PHR than rejecters and non-adopters ($P < .001$). Multiple regression analysis showed the following factors as significant positive predictors of the value of PHR for communicating with the doctor's office: relative advantage, ease of use, trialability, perceptions of privacy and security, age, and computer use. Conclusion: Our study found that the diffusion of innovation model fits the study of perceptions of the PHR and provides a suitable theoretical and empirical framework to identify the factors that distinguish PHR users from non-users. The ease of use and relative advantage offered by the PHR emerged as the most important domains among perceptions of PHR use and in predicting the value of the PHR. Efforts to improve uptake and use of PHRs should focus on strategies that enhance the ease of use of PHRs and that highlight the relative advantages of PHRs. (PsycINFO Database Record (c) 2013 APA, all rights reserved)(journal abstract)

Source: PsycInfo

Full Text: Available from *Directory of Open Access Journals* in *Journal of Medical Internet Research*
Available from *National Library of Medicine* in *Journal of Medical Internet Research*
Available from *EBSCOhost* in *Journal of Medical Internet Research*

25. From cottage industry to a dominant mode of primary care: Stages in the diffusion of a health care innovation (retail clinics).

Citation: Social Science & Medicine, Sep 2012, vol. 75, no. 6, p. 1134-1141, 0277-9536 (Sep 2012)

Author(s): McKinlay, John B.; Marceau, Lisa D.

Abstract: Primary health care is essential to population health and there is increasing need for it, especially with an aging population with multiple comorbidities. Primary health care in the U.S. is widely considered in an ever-deepening crisis. This paper presents a detailed case study of the recent rise of a “disruptive innovation”—retail clinics—which have the potential to transform the face of primary health care in the US. We describe six stages in the diffusion of retail clinics, from cottage industry to a dominant mode for the delivery of primary health care, and consider sociopolitical influences that facilitate and impede their emerging potential. Retail clinics may provide a strategic opportunity to re-engineer the primary health care system, although they may also produce worrisome unanticipated consequences. Discussion concerning the potential threats and opportunities posed by retail clinics occurs in the absence of sound evidence concerning their comparative effectiveness and quality-of-care. This case study identifies the sociopolitical influences and processes that determine whether health care innovations rise or fall, and highlights critically important points along the pathway to health system change. (PsycINFO Database Record (c) 2012 APA, all rights reserved)(journal abstract)

Source: PsycInfo

26. Technologies for global health.

Citation: The Lancet, Aug 2012, vol. 380, no. 9840, p. 507-535, 0140-6736 (Aug 4, 2012)

Author(s): Howitt, Peter; Darzi, Ara; Yang, Guang-Zhong; Ashrafian, Hutan; Atun, Rifat; Barlow, James; Blakemore, Alex; Bull, Anthony M. J.; Car, Josip; Conteh, Lesong; Cooke, Graham S.; Ford, Nathan; Gregson, Simon A. J.; Kerr, Karen; King, Dominic; Kulendran, Myutan; Malkin, Robert A.; Majeed, Azeem; Matlin, Stephen; Merrifield, Robert; Penfold, Hugh A.; Reid, Steven D.; Smith, Peter C.; Stevens, Molly M.; Templeton, Michael R.; Vincent, Charles; Wilson, Elizabeth

Abstract: Technologies for global health refers to a broad category of interventions that reduce malnutrition, improve sanitation, and increase safety on roads, and they are distinct from health technologies specifically designed to prevent, diagnose, or treat illness, from the highly specific to the more widely applicable. This report also sets out recommendations. Some of these recommendations are for specific organizations or health needs. Five are overarching. First, increased funding and support are needed to enable the development of more frugal technologies. Second, technology should be combined with other innovations to support effective adoption and implementation—technology should not be considered in isolation from the wider context or health system of a low-income or middle income country. Third, we need to think broadly and take a multidisciplinary approach to development and introduction. Fourth, when possible, technology that is already available in resource-poor settings should be used as a platform for health interventions. Fifth, development needs to be assessed after 2015; the capacity to create and use technology should be a key development measure and a focus for global action. Technology is making a substantial contribution to global health. Yet it could do much more. (PsycINFO Database Record (c) 2015 APA, all rights reserved)

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Full Text: Available from *Elsevier Science* in *Lancet, The*
Available from *ProQuest* in *Lancet, The*

27. Cultural factors in the adoption and implementation of health information technology.

Citation: Cultural factors in systems design: Decision making and action., Jan 2012, (2012), p. 239-564 (2012)

Author(s): Zafar, Atif; Lehto, Mark R.

Abstract: Information management in health care is complicated by the inherent complexity in the way data are generated, stored, communicated, operated on, represented, and understood. All healthcare processes generate data, and the data are stored in many ways and in many locations, filed away on paper, or within "silos" behind the firewalls of institutions, or as tacit knowledge in someone's mind, which often makes the data inaccessible to clinicians and healthcare workers at the time it is needed. This inaccessibility adds to the complexity and fragmentation of health care, because healthcare delivery is designed to be a linear arrangement of tasks, and each task requires knowledge from the previous one. If prior knowledge is not available, the task is not efficient and requires a duplication of subtasks from the previous task in order to regenerate the required knowledge. The field of clinical informatics has taken on the challenge of making this information management process happen through the implementation of health information technology (HIT). The mantra has become one of using HIT to "get the right information to the right person in the right modality at the right time and with the right level of urgency" for effective health care to occur. The acceptance of HIT involves multiple players and a complex set of cultural, political, and economic issues. Part of the issue is that HIT is costly and technically difficult to implement and requires a shift in workflows. It requires IT expertise, something lacking in many healthcare settings, especially with solo or small group providers. It has a steep learning curve and busy providers are unmotivated to adopt and change habits, especially if that means reduced productivity and reimbursement during the implementation phase. Furthermore, the rewards are not immediately noticeable, and it takes a few years to financially recover from the investment. In addition, if improperly implemented, HIT actually has the potential to cause harm. To help avoid these pitfalls, much can be learned from successful implementations of HIT. Involving all relevant stakeholders early on is a major key to success, as implementation will almost certainly involve re-engineering workflow processes, and this is best done collaboratively. Almost all successful implementers have approached change management incrementally by focusing on a specific barrier to care addressed by HIT. Another common theme in successful implementations has been to conduct frequent, sustained, end-user orientations, training, and responsive feedback. Plans were put in place for system evaluation and monitoring, and the HIT systems were viewed as tools to enable care process improvement. We hope this chapter has provides a small glimpse of the complexity of health care, the cultural barriers to good-quality and high-efficiency care, and the role of health information technology. (PsycINFO Database Record (c) 2015 APA, all rights reserved)(chapter)

Source: PsycInfo

28. Making sense of evidence in management decisions: the role of research-based knowledge on innovation adoption and implementation in healthcare. study protocol.

Citation: Implementation science : IS, Jan 2012, vol. 7, p. 22., 1748-5908 (2012)

Author(s): Kyratsis, Yiannis; Ahmad, Raheelah; Holmes, Alison

Abstract: We know that patient care can be improved by implementing evidence-based innovations and applying research findings linked to good practice. Successfully implementing innovations in complex organisations, such as the UK's National Health Service (NHS), is often challenging as multiple contextual dynamics mediate the process. Research studies have explored the challenges of introducing innovations into healthcare settings and have contributed to a better understanding of why potentially useful innovations are not always implemented in practice, even if backed by strong evidence. Mediating factors include health policy and health system influences, organisational factors, and individual and professional attitudes, including decision makers' perceptions of innovation evidence. There has been limited research on how different forms of evidence are accessed and utilised by organisational decision makers during innovation adoption. We also know little about how diverse healthcare professionals (clinicians, administrators) make sense of evidence and how this collective sensemaking mediates the uptake of innovations. The study will involve nine comparative case study sites of acute care organisations grouped into three regional clusters across England. Each of the purposefully selected sites represents a variety of trust types and organisational contexts. We will use qualitative methods, in-depth interviews, observation of key meetings, and systematic analysis of

relevant secondary data to understand the rationale and challenges involved in sourcing and utilising innovation evidence in the empirical setting of infection prevention and control. We will use theories of innovation adoption and sensemaking in organisations to interpret the data. The research will provide lessons for the uptake and continuous use of innovations in the English and international health systems. Unlike most innovation studies, which involve single-level analysis, our study will explore the innovation-adoption process at multiple embedded levels: micro (individual), meso (organisational), and macro (interorganisational). By comparing and contrasting across the nine sites, each with different organisational contexts, local networks, leadership styles, and different innovations considered for adoption, the findings of the study will have wide relevance. The research will produce actionable findings responding to the political and economic need for healthcare organisations to be innovation-ready.

Source: Medline

Full Text: Available from *Directory of Open Access Journals* in *Implementation Science*
Available from *BioMed Central* in *Implementation Science*
Available from *National Library of Medicine* in *Implementation Science : IS*

29. Technology diffusion and substitution of medical innovations.

Citation: Advances in health economics and health services research, Jan 2012, vol. 23, p. 149-175, 0731-2199 (2012)

Author(s): Serra-Sastre, Victoria; McGuire, Alistair

Abstract: The aim of this paper is to examine the diffusion of a new surgical procedure with lower per-case cost and how its diffusion path is affected by the simultaneous introduction of a new drug class that may be an effective treatment to prevent surgery. In particular, we examine whether a process of technology substitution exists that influences the diffusion process of the surgical technology. Given their different cost implications, the interaction of these two different technologies, surgery and drug intervention, is relevant from the perspective of health expenditure. This is of particular interest in health care as technology adoption and diffusion has been cited as a major driver of expenditure growth. Such expenditure growth has been increasingly targeted through the use of market-orientated policy tools aimed at increasing efficiency. Our research is thus addressing the question of how economic incentives influence the diffusion process and we discuss the impact of a set of incentives on hospital behavior. Hospital admission data for the financial years 1998/1999 to 2007/2008 in England are used to empirically test the contribution of prescription uptake and market-oriented reforms. Dynamic panel data models are used to capture any changes in technology preference during the period of study. Our results suggest that the hospital sector exhibits a strong new technology preference, tempered by the interaction of competition for patients and the ability of the primary care sector to substitute treatments. Given the current fast technological change, we examine the technological race occurring in the health care sector. We account simultaneously for the diffusion of different technologies not only within the same typology but also with technologies of a different class.

Source: Medline

30. Adoption of telemedicine: from pilot stage to routine delivery.

Citation: BMC medical informatics and decision making, Jan 2012, vol. 12, p. 1., 1472-6947 (2012)

Author(s): Zanaboni, Paolo; Wootton, Richard

Abstract: Today there is much debate about why telemedicine has stalled. Teleradiology is the only widespread telemedicine application. Other telemedicine applications appear to be promising candidates for widespread use, but they remain in the early adoption stage. The objective of this debate paper is to achieve a better understanding of the adoption of telemedicine, to assist those trying to move applications from pilot stage to routine delivery. We have investigated the reasons why telemedicine has stalled by focusing on two, high-level topics: 1) the process of adoption of telemedicine in comparison with other technologies; and 2) the factors involved in the widespread adoption of

telemedicine. For each topic, we have formulated hypotheses. First, the advantages for users are the crucial determinant of the speed of adoption of technology in healthcare. Second, the adoption of telemedicine is similar to that of other health technologies and follows an S-shaped logistic growth curve. Third, evidence of cost-effectiveness is a necessary but not sufficient condition for the widespread adoption of telemedicine. Fourth, personal incentives for the health professionals involved in service provision are needed before the widespread adoption of telemedicine will occur. The widespread adoption of telemedicine is a major -- and still underdeveloped -- challenge that needs to be strengthened through new research directions. We have formulated four hypotheses, which are all susceptible to experimental verification. In particular, we believe that data about the adoption of telemedicine should be collected from applications implemented on a large-scale, to test the assumption that the adoption of telemedicine follows an S-shaped growth curve. This will lead to a better understanding of the process, which will in turn accelerate the adoption of new telemedicine applications in future. Research is also required to identify suitable financial and professional incentives for potential telemedicine users and understand their importance for widespread adoption.

Source: Medline

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Available from *BioMed Central* in *BMC Medical Informatics and Decision Making*
Available from *Directory of Open Access Journals* in *BMC Medical Informatics and Decision Making*
Available from *EBSCOhost* in *BMC Medical Informatics & Decision Making*

31. Technology adoption and implementation in organisations: comparative case studies of 12 English NHS Trusts.

Citation: BMJ open, Jan 2012, vol. 2, no. 2, p. e000872., 2044-6055 (2012)

Author(s): Kyratsis, Yiannis; Ahmad, Raheelah; Holmes, Alison

Abstract: To understand organisational technology adoption (initiation, adoption decision, implementation) by looking at the different types of innovation knowledge used during this process. Qualitative, multisite, comparative case study design. One primary care and 11 acute care organisations (trusts) across all health regions in England in the context of infection prevention and control. PARTICIPANTS AND DATA ANALYSIS: 121 semistructured individual and group interviews with 109 informants, involving clinical and non-clinical staff from all organisational levels and various professional groups. Documentary evidence and field notes were also used. 38 technology adoption processes were analysed using an integrated approach combining inductive and deductive reasoning. Those involved in the process variably accessed three types of innovation knowledge: 'awareness' (information that an innovation exists), 'principles' (information about an innovation's functioning principles) and 'how-to' (information required to use an innovation properly at individual and organisational levels). Centralised (national, government-led) and local sources were used to obtain this knowledge. Localised professional networks were preferred sources for all three types of knowledge. Professional backgrounds influenced an asymmetric attention to different types of innovation knowledge. When less attention was given to 'how-to' compared with 'principles' knowledge at the early stages of the process, this contributed to 12 cases of incomplete implementation or discontinuance after initial adoption. Potential adopters and change agents often overlooked or undervalued 'how-to' knowledge. Balancing 'principles' and 'how-to' knowledge early in the innovation process enhanced successful technology adoption and implementation by considering efficacy as well as strategic, structural and cultural fit with the organisation's context. This learning is critical given the policy emphasis for health organisations to be innovation-ready.

Source: Medline

Full Text: Available from *Directory of Open Access Journals* in *BMJ Open*
Available from *Highwire Press* in *BMJ Open*

32. NHS Technology Adoption Centre: Blood flow monitor could save NHS £400m per year - but only if implemented correctly.

Citation: Biomedical Market Newsletter, 21 May 2011, vol./is. /(775-777), 10644180

Language: English

Abstract: The article reports on the recommended CardioQ blood flow monitor which could help National Health Service (NHS) save 400 million pounds per year in England. It notes that the blood flow monitor is a device that lessens the rate of post operative complications thus reduces the duration of length care and hospital stay. NHS Technology and Adoption Centre (NTAC) chief executive Sally Chisholm notes the reproducible benefits and partnership of NHS could enhance clinical outcomes.

Publication Type: Periodical

Source: HEALTH BUSINESS ELITE

Full Text: Available from *EBSCOhost* in *Biomedical Market Newsletter*

33. Can that work for us? Analysing Organisational, Group and Individual Factors for Successful Health Services Innovation.

Citation: Asia Pacific Journal of Health Management, 01 April 2011, vol./is. 6/2(29-38), 18333818

Author(s): Eljiz, K.; Hayes, K.; Dadich, A.; Fitzgerald, J.; Sloan, T.; Kobilski, S.

Language: English

Abstract: Objective: Process innovations can increase efficiency and quality in service organisations. [1,2] Health services organisations have been criticised for being slow to exploit process-management innovations. [3,4] To address perceived deficiencies, this article combines knowledge of factors that improve the Diffusion of Innovation (DoI) in health services organisations [5] with organisational behaviour theory [6] to produce a practical tool to assist health managers and clinicians assess the likelihood of an innovation succeeding in their organisation. Design: Semi-structured interviews were used to identify and analyse organisational, group and individual factors supporting or impeding the implementation of process changes in a public hospital sonography department. Setting: Emergency and imaging departments within a public hospital in New South Wales. Results: Using extant research literature and data collected from the hospital, a checklist was developed to identify factors that aid the implementation of innovations within health services settings. The checklist prompts people responsible for innovation implementation to consider key factors that influence the DoI, identify gaps between the current and desired states and develop action plans to address these gaps. Conclusions: The checklist developed in this article helps health personnel predict the likelihood of innovation adoption, and identify gaps to the ideal state at organisational, group and individual levels. The necessity of conscious change management when implementing innovations is also addressed. Given impending national healthcare reforms, this article is both important and timely.

Publication Type: Academic Journal

Source: HEALTH BUSINESS ELITE

Full Text: Available from *EBSCOhost* in *Asia Pacific Journal of Health Management*

34. Understanding innovators' experiences of barriers and facilitators in implementation and diffusion of healthcare service innovations: a qualitative study.

Citation: BMC health services research, Jan 2011, vol. 11, p. 342., 1472-6963 (2011)

Author(s): Barnett, Julie; Vasileiou, Konstantina; Djemil, Fayika; Brooks, Laurence; Young, Terry

Abstract: Healthcare service innovations are considered to play a pivotal role in improving organisational efficiency and responding effectively to healthcare needs. Nevertheless, healthcare organisations encounter major difficulties in sustaining and diffusing innovations, especially those which concern the organisation and delivery of healthcare services. The purpose of the present study was to explore how healthcare innovators of process-based initiatives perceived and made sense of factors that either facilitated or obstructed the innovation implementation and diffusion. A qualitative study was designed. Fifteen primary and secondary healthcare organisations in the UK, which had

received health service awards for successfully generating and implementing service innovations, were studied. In-depth, semi structured interviews were conducted with the organisational representatives who conceived and led the development process. The data were recorded, transcribed and thematically analysed. Four main themes were identified in the analysis of the data: the role of evidence, the function of inter-organisational partnerships, the influence of human-based resources, and the impact of contextual factors. "Hard" evidence operated as a proof of effectiveness, a means of dissemination and a pre-requisite for the initiation of innovation. Inter-organisational partnerships and people-based resources, such as champions, were considered an integral part of the process of developing, establishing and diffusing the innovations. Finally, contextual influences, both intra-organisational and extra-organisational were seen as critical in either impeding or facilitating innovators' efforts. A range of factors of different combinations and co-occurrence were pointed out by the innovators as they were reflecting on their experiences of implementing, stabilising and diffusing novel service initiatives. Even though the innovations studied were of various contents and originated from diverse organisational contexts, innovators' accounts converged to the significant role of the evidential base of success, the inter-personal and inter-organisational networks, and the inner and outer context. The innovators, operating themselves as important champions and being often willing to lead constructive efforts of implementation to different contexts, can contribute to the promulgation and spread of the novelties significantly.

Source: Medline

Full Text: Available from *EBSCOhost* in *BMC Health Services Research*
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Available from *BioMed Central* in *BMC Health Services Research*
Available from *National Library of Medicine* in *BMC Health Services Research*

35. An empirical study of opinion leader effects on mobile information technology adoption in healthcare.

Citation: AMIA ... Annual Symposium proceedings / AMIA Symposium. AMIA Symposium, Jan 2011, vol. 2011, p. 537-542, 1942-597X (2011)

Author(s): Hao, Haijing; Padman, Rema; Telang, Rahul

Abstract: Given the increasing number of applications but slow adoption of IT, including mobile IT, in healthcare, it is important to develop a better understanding of the contextual factors that motivate IT adoption by physicians. Although studies have shown that age or gender may affect physicians' IT adoption, those factors cannot be controlled when deploying a new IT. Therefore, the current research examines empirical evidence of a contextual factor, opinion leader effects, on IT adoption in healthcare that can be influenced by organizational policies. Using a unique panel dataset of physicians' usage of a mobile clinical IT from a community hospital, we observe a significant result that physicians under the influence of opinion leaders are three times more likely to adopt the IT than otherwise. This finding suggests that incentivizing a small proportion of opinion leaders to adopt a new IT has the potential to motivate wider adoption across the organization.

Source: Medline

Full Text: Available from *National Library of Medicine* in *AMIA Annual Symposium Proceedings*

36. A biomedical informatics perspective on human factors - How human factors influence information technology adoption.

Citation: Yearbook of medical informatics, Jan 2011, vol. 6, p. 58-62, 2364-0502 (2011)

Author(s): Meyer, R

Abstract: to select and summarize excellent research published in 2010 in the field of bio-medical informatics human factors. we attempt to derive a synthetic overview of the activity and new trends in this field, from a selection of worldwide research papers published during 2010. this year again, healthcare information technology (HIT) adoption occupies a central role in the field and leads to research focused mainly on measuring impact and factors influencing it. One of the selected papers especially dissects the anatomy of a

nationwide personal electronic health record adoption failure. Due to the vast and increasing amount of excellent works, choosing the best papers in human factors is a challenge. More and more the published work takes into account fundamental principles expressed in Grudin's Laws, one form of which is: "When those who beneût from a technology are not those who do the work, then the technology is likely to fail or be subverted.".

Source: Medline

37. A Study of Perceived Innovation Characteristics Across Cultures and Stages of Diffusion.

Citation: Journal of Marketing Theory & Practice, 01 January 2011, vol./is. 19/1(109-126), 10696679

Author(s): Flight, Richard L.; Allaway, Arthur W.; Wan-Min Kim; D'Souza, Giles

Language: English

Abstract: The intense competition for consumer spending and the significant costs, risks, and potential rewards associated with multinational product introductions make it imperative that every aspect of consumer reaction to new products be explored. This study investigates consumer perceptions of innovation characteristics in two different cultures for technology-based consumer durables representing early and late stages of diffusion. Based on survey data from young adults in the United States and South Korea, we find that significant cultural effects exist between consumers from an individualism-centered and a Confucian/collectivism-centered country.

Publication Type: Academic Journal

Source: HEALTH BUSINESS ELITE

Full Text: Available from *EBSCOhost* in *Journal of Marketing Theory & Practice*

38. Implementing a web-based home monitoring system within an academic health care network: barriers and facilitators to innovation diffusion.

Citation: Journal of diabetes science and technology, Jan 2011, vol. 5, no. 1, p. 32-38, 1932-2968 (January 2011)

Author(s): Pelletier, Alexandra C; Jethwani, Kamal; Bello, Heather; Kvedar, Joseph; Grant, Richard W

Abstract: The practice of outpatient type 2 diabetes management is gradually moving from the traditional visit-based, fee-for-service model to a new, health information communication technology (ICT)-supported model that can enable non-visit-based diabetes care. To date, adoption of innovative health ICT tools for diabetes management has been slowed by numerous barriers, such as capital investment costs, lack of reliable reimbursement mechanisms, design defects that have made some systems time-consuming and inefficient to use, and the need to integrate new ICT tools into a system not primarily designed for their use. Effective implementation of innovative diabetes health ICT interventions must address local practice heterogeneity and the interaction of this heterogeneity with clinical care delivery. The Center for Connected Health at Partners Healthcare has implemented a new ICT intervention, Diabetes Connect (DC), a Web-based glucose home monitoring and clinical messaging system. Using the framework of the diffusion of innovation theory, we review the implementation and examine lessons learned as we continue to deploy DC across the health care network. © 2010 Diabetes Technology Society.

Source: Medline

Full Text: Available from *National Library of Medicine* in *Journal of Diabetes Science and Technology*

39. Key factors influencing adoption of an innovation in primary health care: a qualitative study based on implementation theory.

Citation: BMC family practice, Jan 2010, vol. 11, p. 60., 1471-2296 (2010)

Author(s): Carlfjord, Siw; Lindberg, Malou; Bendtsen, Preben; Nilsen, Per; Andersson, Agneta

Abstract: Bridging the knowledge-to-practice gap in health care is an important issue that has gained interest in recent years. Implementing new methods, guidelines or tools into routine care, however, is a slow and unpredictable process, and the factors that play a role in the change process are not yet fully understood. There is a number of theories concerned with factors predicting successful implementation in various settings, however, this issue is insufficiently studied in primary health care (PHC). The objective of this article was to apply implementation theory to identify key factors influencing the adoption of an innovation being introduced in PHC in Sweden. A qualitative study was carried out with staff at six PHC units in Sweden where a computer-based test for lifestyle intervention had been implemented. Two different implementation strategies, implicit or explicit, were used. Sixteen focus group interviews and two individual interviews were performed. In the analysis a theoretical framework based on studies of implementation in health service organizations, was applied to identify key factors influencing adoption. The theoretical framework proved to be relevant for studies in PHC. Adoption was positively influenced by positive expectations at the unit, perceptions of the innovation being compatible with existing routines and perceived advantages. An explicit implementation strategy and positive opinions on change and innovation were also associated with adoption. Organizational changes and staff shortages coinciding with implementation seemed to be obstacles for the adoption process. When implementation theory obtained from studies in other areas was applied in PHC it proved to be relevant for this particular setting. Based on our results, factors to be taken into account in the planning of the implementation of a new tool in PHC should include assessment of staff expectations, assessment of the perceived need for the innovation to be implemented, and of its potential compatibility with existing routines. Regarding context, we suggest that implementation concurrent with other major organizational changes should be avoided. The choice of implementation strategy should be given thorough consideration.

Source: Medline

Full Text: Available from *National Library of Medicine* in *BMC Family Practice*
Available from *EBSCOhost* in *BMC Family Practice*
Available from *Directory of Open Access Journals* in *BMC Family Practice*
Available from *BioMed Central* in *BMC Family Practice*

40. Why don't innovation models help with informatics implementations?

Citation: Studies in health technology and informatics, Jan 2010, vol. 160, p. 691-695, 0926-9630 (2010)

Author(s): Ward, Rod

Abstract: This paper describes various models that have been postulated to understand and explain the acceptance and diffusion of technological innovation. The wide range of factors relating to the innovation itself, and, most importantly, the human and organisational factors which will impinge on these processes, is detailed. Attempts to apply the model to healthcare settings are explored. In particular a systematic review in 2005 which attempted to integrate the models and apply them in the UK's National Health Service will be critiqued. The strengths and weaknesses of the models are explored, particularly in relation to the minimal testing they have been subjected to. It is argued that the complexity of the theoretical models makes them difficult to apply and questions their efficacy in supporting informatics implementations. The need for a clearer understanding of the factors which make staff positively disposed towards informatics innovation, and those which are likely to make them resist them is made apparent.

Source: Medline

Full Text: Available from *EBSCOhost* in *Studies in Health Technology & Informatics*

41. Uptake and diffusion of medical technology innovation in Europe: What role for funding and procurement policies?

Citation: Journal of Medical Marketing, 01 January 2010, vol./is. 10/1(61-69), 17457904

Author(s): Torbica, Aleksandra; Cappellaro, Giulia

Language: English

Abstract: The producers of medical technology constantly strive to innovate and to improve their products for the benefit of patients. With each new generation of devices enabling less invasive techniques, better clinical outcomes and reduced recovery times, patients are direct beneficiaries of this commitment to innovation. Innovation and patient access to technology are inseparably linked with each national health system's respective coverage, procurement and reimbursement policies. If a particular innovation is not included in the basket of services covered by public resources, there may be a time lag before it enters the system and reaches patients. If the procurement criteria focus primarily on price, it is likely that the quality and innovativeness will be penalised. Finally, if the use of an innovative technology leads to higher costs for the health-care provider, it has to bear the cost until the reimbursement mechanism is updated to include the new technology. Today there are substantial regional differences relative to the financial incentives for introducing new technology and in some cases, it can take years before the new technologies are recognised, which can inhibit the roll-out of innovation within the health system. In addition to utilising different policy choices for funding and procurement, the decision-making criteria used to inform policies vary greatly in European countries. Increasingly, health-care policymakers want scientific, technological and economic evidence before classifying a new technology as reimbursable. Although it is important to ensure that new medical devices are superior to conventional treatments, due to short-sightedness in certain assessment mechanisms and limited availability of clinical trial information, the reliability of estimates of the efficacy and cost-effectiveness can be questioned. As health technology assessment procedures are centralised, it becomes ever more important that coverage decisions regarding new medical devices are made on sound, robust criteria and that they include the full economic benefits – to the patient, to the health-care system and to society – of innovative new technology. As pressure on health-care funding mounts, reimbursement policy, in particular, is being refocused to target the contrasting objectives of health-care expenditure containment and support of innovation. Looking forward, the successful balancing of technological adoption and affordability will require a judicious use of policy levers and will probably be accompanied by more regulatory action.

Publication Type: Academic Journal

Source: HEALTH BUSINESS ELITE

Full Text: Available from *EBSCOhost* in *Journal of Medical Marketing*

42. Adoption and spread of new imaging technology: a case study.

Citation: Health affairs (Project Hope), Nov 2009, vol. 28, no. 6, p. w1122., 1544-5208 (2009 Nov-Dec)

Author(s): Ladapo, Joseph A; Horwitz, Jill R; Weinstein, Milton C; Gazelle, G Scott; Cutler, David M

Abstract: Technology is a major driver of health care costs. Hospitals are rapidly acquiring one new technology in particular: 64-slice computed tomography (CT), which can be used to image coronary arteries in search of blockages. We propose that it is more likely to be adopted by hospitals that treat cardiac patients, function in competitive markets, are reimbursed for the procedure, and have favorable operating margins. We find that early adoption is related to cardiac patient volume but also to operating margins. The paucity of evidence informing this technology's role in cardiac care suggests that its adoption by cardiac-oriented hospitals is premature. Further, adoption motivated by operating margins reinforces concerns about haphazard technology acquisition.

Source: Medline

Full Text: Available from *ProQuest* in *Health Affairs*
Available from *Highwire Press* in *Health Affairs*

43. Balancing adoption and affordability of medical devices in Europe.

Citation: Health policy (Amsterdam, Netherlands), Oct 2009, vol. 92, no. 2-3, p. 218-224, 0168-8510 (October 2009)

Author(s): Schreyögg, Jonas; Bäumler, Michael; Busse, Reinhard

Abstract: Dramatic increases in health expenditures have led to a substantial number of regulatory interventions in the markets for devices over the last years. However, little attention has been paid thus far to the regulation of medical devices and its effects. This article explores the policies pursued by European countries to find the right balance between improving access to new medical devices and restricting market forces to contain costs and ensure affordability. We outline the medical device policies of the four European countries with the largest expenditures on devices: Germany, France, Italy, and the UK. Subsequently, we discuss how these policies attempt to balance technological adoption and affordability by illustrating two case studies from Italy and Germany. We find that reference prices, if defined as maximum reimbursement levels, can help to achieve balance, because they are supposed to contain costs effectively, but do not necessarily act as a hurdle for the adoption of innovations. We also find that policy tools that encourage technological adoption should be used carefully since the benefits of a new technology are often difficult to predict. Finally, we draw a number of policy implications based on our observations.

Source: Medline

44. Stimulating the adoption of health information technology.

Citation: The New England journal of medicine, Apr 2009, vol. 360, no. 15, p. 1477-1479, 1533-4406 (April 9, 2009)

Author(s): Blumenthal, David

Source: Medline

Full Text: Available from *ProQuest* in *New England Journal of Medicine, The*

45. Diffusion of innovations: Smartphones and wireless anatomy learning resources.

Citation: Anatomical Sciences Education, Nov 2008, vol. 1, no. 6, p. 233-239, 1935-9772 (Nov-Dec 2008)

Author(s): Trelease, Robert B.

Abstract: The author has previously reported on principles of diffusion of innovations, the processes by which new technologies become popularly adopted, specifically in relation to anatomy and education. In presentations on adopting handheld computers [personal digital assistants (PDAs)] and personal media players for health sciences education, particular attention has been directed to the anticipated integration of PDA functions into popular cellular telephones. However, limited distribution of early "smartphones" (e.g., Palm Treo and Blackberry) has provided few potential users for anatomical learning resources. In contrast, iPod media players have been self-adopted by millions of students, and "podcasting" has become a popular medium for distributing educational media content. The recently introduced Apple iPhone has combined smartphone and higher resolution media player capabilities. The author successfully tested the iPhone and the "work alike" iPod touch wireless media player with text-based "flashcard" resources, existing PDF educational documents, 3D clinical imaging data, lecture "podcasts," and clinical procedure video. These touch-interfaced, mobile computing devices represent just the first of a new generation providing practical, scalable wireless Web access with enhanced multimedia capabilities. With widespread student self-adoption of such new personal technology, educators can look forward to increasing portability of well-designed, multiplatform "learn anywhere" resources. (PsycINFO Database Record (c) 2012 APA, all rights reserved)(journal abstract)

Source: PsycInfo

46. Application of Diffusion of Innovations Models in Hospital Knowledge Management Systems: Lessons to Be Learned in Complex Organizations.

Citation: Hospital Topics, 01 April 2008, vol./is. 86/2(21-31), 00185868

Author(s): Fahey, Daniel F.; Burbridge, Gregory

Language: English

Abstract: The authors identify a number of lessons to be learned regarding implementing a knowledge management system in hospitals. Building on the diffusion of innovations model, the authors address the development and implementation of a staffing productivity system designed to anticipate future hospital staffing needs. They describe the methodology behind the daily staff management system, efforts to market the system, and the implementation process and subsequent discontinuance of the system in a few early adopter hospitals. The authors address a number of principles of diffusion of innovations in the context of a complex adaptive system and provide insights into why some knowledge management systems fail.

Publication Type: Academic Journal

Source: HEALTH BUSINESS ELITE

Full Text: Available from *ProQuest* in *Hospital Topics*
Available from *EBSCOhost* in *Hospital Topics*
Available from *EBSCOhost* in *Hospital Topics*
Available from *EBSCOhost* in *Hospital Topics*
Available from *EBSCOhost* in *Hospital Topics*

47. Sharing innovation: The case for technology standards in health professions education.

Citation: Medical Teacher, Jan 2008, vol. 30, no. 2, p. 150-154, 0142-159X (2008)

Author(s): Smothers, Valerie; Greene, Peter; Ellaway, Rachel; Detmer, Don E.

Abstract: Information technologies have provided fertile ground for innovation in healthcare education, but too often these innovations have been limited in scope and impact. One way of addressing these limitations is the development of common and open technology standards to scale innovation across organizational boundaries. Research on the diffusion of standards indicates that environmental forces, such as regulatory changes, top-down management support, and feasibility are key determinants of standards adoption. This paper describes the perspective and work of MedBiquitous, the only internationally recognized standards body in healthcare education. Many innovators are implementing MedBiquitous healthcare education standards to effect change within and across organizations. In a resource-constrained and knowledge intensive domain such as healthcare education, collaboration is an imperative. Technology standards are essential to raise the quality of healthcare education and assessment in a cost-effective manner. (PsycINFO Database Record (c) 2015 APA, all rights reserved)(journal abstract)

Source: PsycInfo

Full Text: Available from *Taylor & Francis* in *Medical Teacher*
Available from *EBSCOhost* in *Medical Teacher*
Available from *EBSCOhost* in *Medical Teacher*

48. Factors influencing the adoption of an innovation: an examination of the uptake of the Canadian Heart Health Kit (HHK).

Citation: Implementation science : IS, Jan 2008, vol. 3, p. 41., 1748-5908 (2008)

Author(s): Scott, Shannon D; Plotnikoff, Ronald C; Karunamuni, Nandini; Bize, Raphaël; Rodgers, Wendy

Abstract: There is an emerging knowledge base on the effectiveness of strategies to close the knowledge-practice gap. However, less is known about how attributes of an innovation and other contextual and situational factors facilitate and impede an innovation's adoption. The Healthy Heart Kit (HHK) is a risk management and patient education resource for the prevention of cardiovascular disease (CVD) and promotion of cardiovascular health. Although previous studies have demonstrated the HHK's content validity and practical utility, no published study has examined physicians' uptake of the

HHK and factors that shape its adoption. Conceptually informed by Rogers' Diffusion of Innovation theory, and Theory of Planned Behaviour, this study had two objectives: (1) to determine if specific attributes of the HHK as well as contextual and situational factors are associated with physicians' intention and actual usage of the HHK kit; and (2), to determine if any contextual and situational factors are associated with individual or environmental barriers that prevent the uptake of the HHK among those physicians who do not plan to use the kit. A sample of 153 physicians who responded to an invitation letter sent to all family physicians in the province of Alberta, Canada were recruited for the study. Participating physicians were sent a HHK, and two months later a study questionnaire assessed primary factors on the physicians' clinical practice, attributes of the HHK (relative advantage, compatibility, complexity, trialability, observability), confidence and control using the HHK, barriers to use, and individual attributes. All measures were used in path analysis, employing a causal model based on Rogers' Diffusion of Innovations Theory and Theory of Planned Behaviour. 115 physicians (follow up rate of 75%) completed the questionnaire. Use of the HHK was associated with intention to use the HHK, relative advantage, and years of experience. Relative advantage and the observability of the HHK benefits were also significantly associated with physicians' intention to use the HHK. Physicians working in solo medical practices reported experiencing more individual and environmental barriers to using the HHK. The results of this study suggest that future information innovations must demonstrate an advantage over current resources and the research evidence supporting the innovation must be clearly visible. Findings also suggest that the innovation adoption process has a social element, and collegial interactions and discussions may facilitate that process. These results could be valuable for knowledge translation researchers and health promotion developers in future innovation adoption planning.

Source: Medline

Full Text: Available from *Directory of Open Access Journals* in *Implementation Science*
Available from *BioMed Central* in *Implementation Science*
Available from *National Library of Medicine* in *Implementation Science : IS*

49. The role of action research in the investigation and diffusion of innovations in health care: The PRIDE Project.

Citation: Qualitative Health Research, Mar 2007, vol. 17, no. 3, p. 373-381, 1049-7323 (Mar 2007)

Author(s): Waterman, Heather; Marshall, Martin; Noble, Jenny; Davies, Helen; Walshe, Kieran; Sheaff, Rod; Elwyn, Glyn

Abstract: In this article, the authors discuss the role of action research in relation to the investigation and practical implementation of innovations in health care. The diffusion of innovations is an essential component of the modernization of health services worldwide. However, the literature shows that it is not an easy process to research. A paradox is noted that although action research has much to offer, it has had only a limited impact in the innovation field. Drawing on an example of a project in the United Kingdom, the authors discuss whether action research is a valuable method in the study of the diffusion of innovations. They analyze its strengths and limitations as a "whole systems approach" that combines researching with developing and diffusing innovations. They argue that it is best suited to the study of innovation diffusion where there is a need for high level of adaptation in each new setting. (PsycINFO Database Record (c) 2012 APA, all rights reserved)(journal abstract)

Source: PsycInfo

50. Health care technology adoption and diffusion in a social context.

Citation: Policy, politics & nursing practice, Feb 2007, vol. 8, no. 1, p. 47-54, 1527-1544 (February 2007)

Author(s): Coyte, Peter C; Holmes, Dave

Abstract: This article highlights mechanisms that may further sustainable technological development for the 21st century. The distributional effects associated with the adoption and diffusion of health care technologies are addressed wherein the capacity to capitalize on the health gains from the adoption of technology varies in society. These effects are

caused by the actions of individuals as they segment themselves into distinct social groups. The circumstances under which social institutions are further segmented are explored and may motivate public sector limits on the funding for and diffusion of health care technologies. Safety and efficacy benchmarks are necessary but insufficient conditions for sustainability as product advantage on grounds of cost-effectiveness must also be demonstrated. Furthermore, given the substantial role played by public sector decision makers in purchasing health care technologies, the distributional consequences associated with the uptake and diffusion of technology need to be gauged by product designers and those responsible for marketing.

Source: Medline

51. The diffusion of innovation: factors influencing the uptake of pharmacogenetics.

Citation: Community genetics, Jan 2007, vol. 10, no. 4, p. 231-241, 1422-2833 (2007)

Author(s): Nielsen, Louise Fuks; Moldrup, Claus

Abstract: Inspired by diffusion research, this paper examines how perceived need, health status, experiences with medicine and testing, consumption of mass media and sociodemography influence the public's familiarity, knowledge, attitudes and intentions regarding pharmacogenetics. The objective is to identify factors affecting the adoption pattern of pharmacogenetics in the public. The paper is based on an Internet-based questionnaire survey conducted in March 2005. A total of 3,000 representative Danes aged 18-70 years were included in the survey, representing a response rate of 58.9%. Knowledge of pharmacogenetics, and thus the diffusion of the technology, is influenced by medicine consumption, experienced lack of effect and side effects, use of medical testing and perception of societal need. Increased knowledge is seen in all cases. The general perception of and attitude to pharmacogenetics is related to prior use of medical tests and perception of societal need for pharmacogenetics, which in both cases indicates an increased positive approach. (c) 2007 S. Karger AG, Basel.

Source: Medline

Full Text: Available from *EBSCOhost* in *Community Genetics*

52. Health technology adoption and the politics of governance in the UK.

Citation: Social Science & Medicine, Dec 2006, vol. 63, no. 12, p. 3102-3112, 0277-9536 (Dec 2006)

Author(s): Milewa, Timothy

Abstract: The manner in which clinical and cost-effectiveness data are used to inform decisions about the funding and availability of drugs, therapies and medical devices is inherently politicised within collectively financed systems of health care. The National Institute for Health and Clinical Excellence (NICE) was established by the British government in 1999 to reach evidence-based decisions on whether selected health technologies should be made available by the National Health Service in England and Wales. But NICE is also required to involve a broad range of interested parties in the decision-making process, provide detailed rationales for its rulings and defend appeals from aggrieved parties. Debates about the emergence of 'deliberative' forms of policy governance--based upon participation by a broad range of stakeholders rather than reliance on scientific, bureaucratic or political expertise alone--are thus particularly apposite. This article draws on a study of decision-making within NICE by focusing upon the tenor and orientation of deliberation about the adoption of health technologies. Does such deliberation take place upon a level playing field for different interests? Or do implicit parameters and understandings in the deliberative process tend to privilege some interests by structuring debate and attendant outcomes? Findings suggest that deliberative assumptions and parameters pertaining to fluid and contestable ideas of transparent reasoning and domain competence both reflect and shape relationships of influence and marginality among participants. Broader analytical implications centre on a distinction between 'deliberative democracy' and 'democratic deliberation'. The extent to which this distinction is acknowledged and addressed in policy and practise will have marked implications for the substantive nature of attempts to broaden involvement in decision-making within public

sector bodies such as NICE. (PsycINFO Database Record (c) 2012 APA, all rights reserved)(journal abstract)

Source: PsycInfo

53. Prescribing innovations: A practical framework for effective marketing of medical device innovations.

Citation: Journal of Medical Marketing, 01 July 2006, vol./is. 6/3(195-202), 17457904

Author(s): Appelt, Peter; Hauser, Tino

Language: English

Abstract: Evidence-based medicine (EBM) will become in the future a fact of life for the medical device industry. The authors propose the clinical marketing framework as a strategic tool to optimise product introduction, adoption, life cycle management and business development of medical device innovations. Clinical evidence is increasingly important for the healthcare-related decision making and for the commercial success of medical device innovations. The central aspect of the clinical marketing framework is to use the principles of EBM to develop and drive the clinical marketing strategy. The systematic implementation of the proposed framework starts with a clear definition of the target indication and the potential target user group for the medical device innovation. The next step is to identify the product claims, analyse the scientific evidence supporting them and to define a target evidence level. The evidence gap analysis compares the required evidence level and the available evidence level. The results of the evidence gap analysis, the definition of the required product benefits and the target indication are the most important input for the clinical marketing programme. The key objective of this framework is to support customer adoption and market penetration of the medical device.Journal of Medical Marketing (2006) 6, 195–202. doi:10.1057/palgrave.jmm.5050041

Publication Type: Academic Journal

Source: HEALTH BUSINESS ELITE

Full Text: Available from *EBSCOhost* in *Journal of Medical Marketing*

54. The Diffusion of Public Health Innovations.

Citation: American Journal of Public Health, 01 February 2006, vol./is. 96/2(209-210), 00900036

Author(s): Greenberg, Michael R.

Language: English

Abstract: The article discusses various reports published within the issue, including one by Jack S. Blocker on the commonsense belief of public health innovation and another by Martha Gardner on cigarette advertising.

Publication Type: Academic Journal

Source: HEALTH BUSINESS ELITE

Full Text: Available from *EBSCOhost* in *American Journal of Public Health*
Available from *EBSCOhost* in *American Journal of Public Health*
Available from *ProQuest* in *American Journal of Public Health*
Available from *EBSCOhost* in *American Journal of Public Health*
Available from *EBSCOhost* in *American Journal of Public Health*

55. International diffusion of new health technologies: a ten-country analysis of six health technologies.

Citation: International journal of technology assessment in health care, Jan 2006, vol. 22, no. 4, p. 419-428, 0266-4623 (2006)

Author(s): Packer, Claire; Simpson, Sue; Stevens, Andrew; EuroScan: the European Information Network on New and Changing Health Technologies

Abstract: The objective of this study was to examine and explain the differential international diffusion of six health innovations. A retrospective diffusion study was undertaken of

sildenafil, cyclooxygenase-II (COX II) inhibitors, beta interferon, verteporfin, deep brain stimulators, and drug-eluting coronary stents in ten countries-Australia, Canada, Denmark, France, The Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom. We plotted diffusion curves of daily defined doses per quarter, vials or implants per million population, and examined the association between diffusion and five key variables. Canada, Switzerland, and Sweden are generally high users of new technologies; Spain, Denmark, and particularly the United Kingdom are low users. Almost all countries experienced rapid adoption of sildenafil with diffusion to a similar level; there was variable adoption and diffusion of COX II inhibitors, verteporfin, and interferon beta; drug-eluting stents penetrated the market in a similar way in all but one country; and two countries had very different adoption patterns for deep brain stimulators. Above average health spending and the presence of health technology assessment (HTA) or other guidance reports are consistently associated with increased diffusion. Early warning activity and a national coverage decision being taken are more likely to be associated with a reduced diffusion. The significant differences in diffusion between different countries are not consistent with a neat evidence-based world. The tools available to policy makers to control diffusion (early warning systems, HTA, and a fourth hurdle) play some part in influencing diffusion but need close scrutiny of how successfully they operate.

Source: Medline

Full Text: Available from *ProQuest* in *International Journal of Technology Assessment in Health Care*

56. In support of innovation management and Roger's Innovation Diffusion theory.

Citation: Government Information Quarterly, 01 July 2005, vol./is. 22/3(411-422), 0740624X

Author(s): Wonglimpiyarat, Jarunee; Yuberk, Napaporn

Language: English

Abstract: Abstract: This paper makes a case for the practicality of Roger"s Innovation Diffusion theory. [Rogers, E. (1962). Diffusion of innovations. New York: The Free Press; Rogers, E. (1995). Diffusion of innovations. New York: The Free Press] By using Roger"s Innovation Diffusion theory, the paper explores the innovation process from the development stage towards the diffusion stage (the stage of commercialization) of the two major research funding organizations in Thailand: the National Science and Technology Development Agency (NSTDA) and the Thailand Research Fund (TRF). Theoretical and empirical analysis are attempted, focusing on the relation between the management of research and development (R&D) projects and the level of innovation diffusion. The empirical results can help R&D managers manage the projects to contribute to technological development in industry.

Publication Type: Academic Journal

Source: HEALTH BUSINESS ELITE

57. Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations.

Citation: Milbank Quarterly, 01 December 2004, vol./is. 82/4(581-629), 0887378X

Author(s): Greenhalgh, Trisha; Robert, Glenn; Macfarlane, Fraser; Bate, Paul; Kyriakidou, Olivia

Language: English

Abstract: This article summarizes an extensive literature review addressing the question, How can we spread and sustain innovations in health service delivery and organization? It considers both content (defining and measuring the diffusion of innovation in organizations) and process (reviewing the literature in a systematic and reproducible way). This article discusses (1) a parsimonious and evidence-based model for considering the diffusion of innovations in health service organizations, (2) clear knowledge gaps where further research should be focused, and (3) a robust and transferable methodology for systematically reviewing health service policy and management. Both the model and the method should be tested more widely in a range of contexts.

Publication Type: Academic Journal

Source: HEALTH BUSINESS ELITE

Full Text: Available from *EBSCOhost* in *Milbank Quarterly*
Available from *EBSCOhost* in *Milbank Quarterly*
Available from *EBSCOhost* in *Milbank Quarterly*

58. Innovation Diffusion.

Citation: Technology Review, 01 December 2004, vol./is. 107/10(18-18), 1099274X

Author(s): Schrage, Michael

Language: English

Abstract: This article discusses things the author learned and unlearned about innovation. My convictions about what innovation can and should mean have changed dramatically. Simply put: innovation is not what innovators do; it is what customers, clients, and people adopt. Innovation is not about crafting brilliant ideas that change minds; it is about the distribution of usable artifacts that change behavior. Innovators do not change the world; the users of their innovations do. That is not a subtle distinction. That is also why I now believe that the dominant global issue of our time is the accelerating diffusion of innovation. The diffusion of innovation is the dynamic driving today's world and tomorrow's. Whether you care about nuclear-weapons proliferation, the specter of bioterrorism, global warming, the digital divide, or the prospect that new sources of potable water and cheap energy will better the lives of billions, you are concerned about the risk/reward rivalry that drives the diffusion of innovation. Every significant issue of our time is increasingly shaped by the ebb and flow of technical innovation. In fact, the quality of global life and the standard of local living have come to be defined by the diffusion of technology. We are not going to escape this essential truth; it is dishonest to try. The Big Lie of the Information Age is that nothing is more powerful than an idea whose time has come. What nonsense. In reality, nothing in this world is more powerful than an innovation that has diffused to the point where it enjoys both global reach and global impact. Ready access to ideas promotes awareness, but ready access to innovation promotes empowerment and opportunity.

Publication Type: Periodical

Source: HEALTH BUSINESS ELITE

Full Text: Available from *EBSCOhost* in *Technology Review*
Available from *EBSCOhost* in *Technology Review*

59. Innovation Diffusion.

Citation: Business Communications Review, 01 September 2004, vol./is. 34/9(8-10), 01623885

Author(s): Sevcik, Peter

Language: English

Abstract: The article presents the author's views on diffusion of technological innovations. According to the author, not all innovations, even very good ones, get adopted. Or if they do, it may take an extraordinarily long time to take hold. The Dvorak typewriter keyboard is a good example of an improvement that was successfully fought off by incumbent interests. Resistance to change may not stop an innovation, but can slow it down. The most striking example is how it took the British Navy 194 years to adopt the use of citrus as a cure for scurvy. The relative advantage of many new technologies is improved performance or reduced cost. Interestingly, the actual complexity of the new devices is much higher. The reason is that the new device often performs subtle, complicated changes to the way that the network or application operates in order to accomplish the relative advantage. As network innovations move from obvious connectivity to more subtle features, vendors will have to pay closer attention to the adoption process. There needs to be a commensurate change in how a new technology is introduced and promulgated within the marketplace.

Publication Type: Trade Publication

Source: HEALTH BUSINESS ELITE

Full Text: Available from *EBSCOhost* in *Business Communications Review*

60. The Effect of New Product Radicality and Scope on the Extent and Speed of Innovation Diffusion.

Citation: Journal of Management, 01 October 2003, vol./is. 29/5(753-768), 01492063

Author(s): Lee, Hun; Smith, Ken G.; Grimm, Curtis M.

Language: English

Abstract: Drawing from institutional and bandwagon theories, we develop and examine how characteristics of an innovation—radicality and scope—affect diffusion rates—the extent and speed of diffusion. The hypotheses are empirically tested with a sample of 82 new product innovations in three separate industries over a sixteen-year time span. We find that: (1) the greater the radicality of innovation, the higher the extent and faster the speed of diffusion and (2) the greater the scope of innovation, the faster the speed of diffusion. We advance the innovation diffusion literature by using the institutional and bandwagon literature to explain how micro-characteristics of each innovation influence diffusion rates.

Publication Type: Academic Journal

Source: HEALTH BUSINESS ELITE

61. Innovation, Diffusion, and Institutional Change.

Citation: Journal of Economic Issues (Association for Evolutionary Economics), 01 September 2003, vol./is. 37/3(665-679), 00213624

Author(s): Redmond, William H.

Language: English

Abstract: The present paper focuses on the demand side of innovation, that is, an analysis of institutional change resulting from the spreading acceptance of innovations. Central to this perspective is an evaluation of potential adopters' cognitive processes and adaptive responses. Building upon diffusion theory, the institutional perspective differs from received diffusion theory in the categorization of adopters, emphasis on prestige of newness, attention to destruction, and the importance of nonadopters. While economist Thorstein Veblen was identified with a supply-side orientation to institutional change, it should be noted that the supply/demand dichotomy was largely an artificial one in his time. In Veblen's formulation, the inventor of new ways and means was also presumed to be the user of same. The setting for idle curiosity was not an R&D lab but the farm or the machine shop. For this reason the supply of newness was closely directed by demand, and innovations could reasonably be assumed to have a progressive character. In contrast, the spheres of production and consumption have now become widely separated.

Publication Type: Academic Journal

Source: HEALTH BUSINESS ELITE

Full Text: Available from *EBSCOhost* in *Journal of Economic Issues (Association for Evolutionary Economics)*