



The Hospital of the Future

A new role for leading hospitals in Europe



- was founded in 1958
- has campuses in Barcelona, Madrid, New York, Munich and Sao Paulo
- focuses on Executive Education,
 "developing and inspiring business leaders"
- has an alumni network of +40.000 professionals
- has +160 professors of +25 nationalities
- has a strong research activity, through its International Research Centers



Since 2000, IESE has developed and offered programs in Brazil including the Advanced Management Program (AMP) and the Program for Management Development (PMD). This growth has continued with August 2012 seeing the launch of the Executive MBA Brazil program.

In addition, the IESE-Wharton-CEIBS Global CEO Program holds one module in São Paulo. IESE's programs are hosted by ISE, located in São Paulo.



IESE Ranked 1st in World for Executive Education by *FT* for 3rd Straight Year

Global programs for professionals going from strength to strength

Two leading European hospitals







- Inaugurated in 1940, it is the Stockholm County Council university hospital
- 15,000 employees
- 1,700 beds
- 109,000 inpatient admissions
- >2,200 scientific articles per year



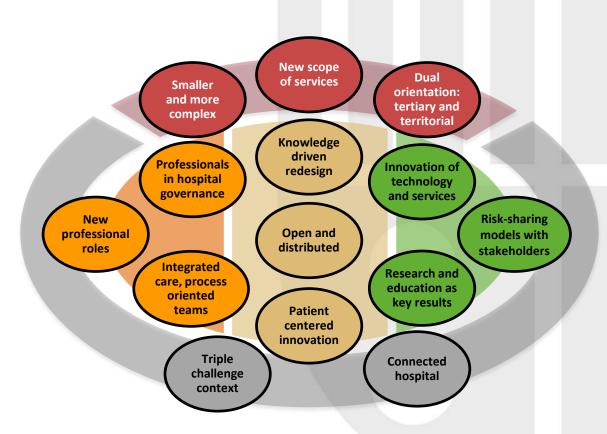


- Founded in 1906, community hospital for 300,000 inhabitants in Barcelona
- 4,500 employees
- 850 beds
- 46,000 inpatient admissions
- >1,000 scientific articles per year

Source: Karolinska University Hospital and Hospital Clinic Barcelona, data from several years

14 Key Messages that describe a new role for leading hospitals in Europe

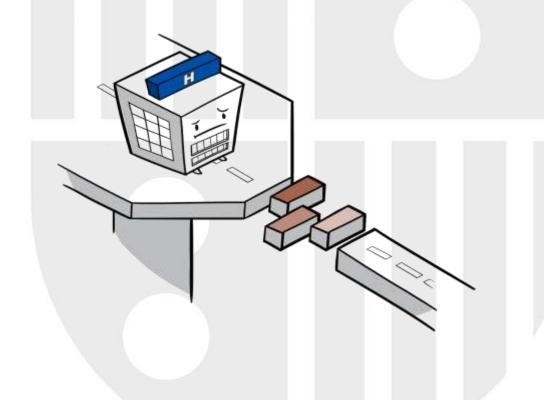




Key Message 1:A triple-challenge context for hospitals



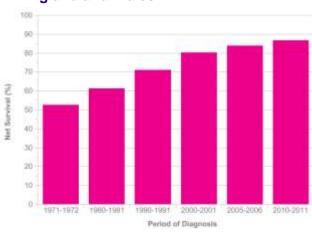
Leading hospitals will strive in a challenging context with a combination of an increase in healthcare needs, a decrease in resources, and changing social values.



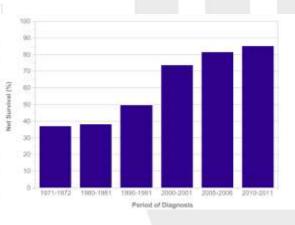




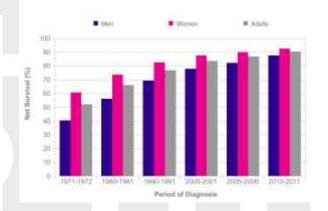
Breast Cancer (C50): 1971-2011 Age-Standardised Five-Year Net Survival, England and Wales



Prostate Cancer (C61): 1971-2011
Age-Standardised Five-Year Net Survival,
England and Wales



Malignant Melanoma (C43): 1971-2011 Age-Standardised Five-Year Net Survival, England and Wales

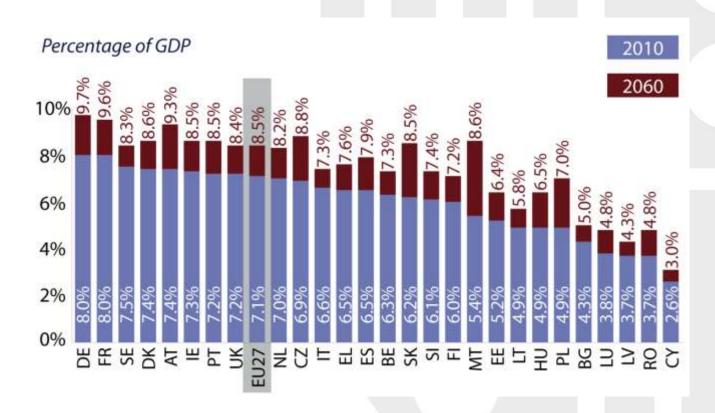


Prepared by Cancer Research UK Original data sources:

Survival estimates were provided on request by the Cancer Research UK Cancer Survival Group at the London School of Hygiene and Tropical Medicine. http://www.lshtm.ac.uk/eph/ncde/cancersurvival/http://www.lshtm.ac.uk/eph/ncde/cancersurvival/

Public spending on Health



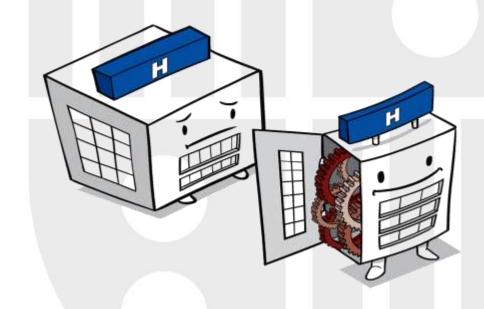


Source: Statistical Spotlight: European Parliamentary Research Service, 28/01/2014

Key Message 2: Smaller and more Complex hospitals



Leading hospitals will be expected to focus on high-value and highly complex services and to become highly efficient organizations.





First with new 3D technology

NEWS 2017-08-22

Karolinska University Hospital is the first in the world to use new, advanced three-dimensional navigation technology in spinal surgery. A team within neurosurgery, orthopaedics and neuroradiology has now carried out back operations using the new, advanced 3D navigation technology with successful results.







Source: CBS News



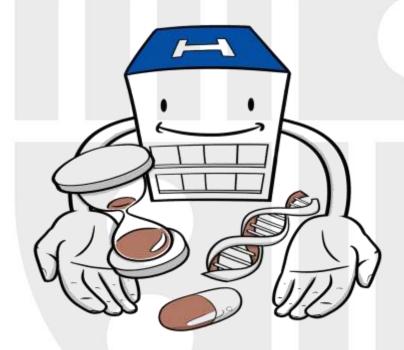


Source: <u>www.nyakarolinskasolna.se</u>

Key Message 3: New scope of services

Leading hospitals will embrace new services such as personalized medicine and genome-based diagnosis, with a broader scope of services, which may include chronic care management.









GENOME.ONE NEWS: AUSTRALIA'S FIRST WHOLE GENOME AND HEALTH ASSESSMENT SERVICE TO PROVIDE AN UNPRECEDENTED INSIGHT INTO OUR CURRENT AND FUTURE HEALTH

Genome. One has today launched Australia's first clinical service that combines whole genome sequencing with a comprehensive health assessment to enable a more precise approach to managing health.

Media Release: 20 June 2017

Today marks a significant step towards the next generation of healthcare with the launch of the country's first clinical service that combines whole genome sequencing with a comprehensive health assessment to enable a more precise approach to managing health.

The cutting-edge personal health management service, launched by Genome. One and Life First, uses genomic, health and lifestyle information to provide a comprehensive picture of an individual's health today together with insight into health risks for their future. The service is delivered by a team of healthcare professionals who can offer information, expert interpretation to understand what this information means, and support and advice on what can be done to reduce identified risks.



Source: www.genome.one

Account

What will your DNA tell you?









What's coming next



Cardio Scout

by Admera Health Get a head start on your heart health. with Cardio Scout, and learn your risk of developing significant, and often unknown; genetic cardiovascular conditions. This extensive heart condition panel checks genes associated with conditions like cardiomyopathy and arrhythmia, which can lead to sudden-cardiac arrest. Knowing your risk of developing these conditions can help you and your doctor keep your heart healthy.

Gert updates



PGx Drug Response Test

by Admera Health Pharmacogenomics (PGx) combines the study of genetics with the science of therapeutics. This PGx response test can help predict how you will respond to drug therapy based on your individual genetic makeup. This can help you and your doctor choose which drug is right for you as well as aid in deciding which dose is right for you.

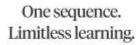


Precision Health Panel

by Geisinger

Geisinger is committed to helping people identify life-threatening medical conditions early and improve health outcomes. Geisinger's Precision Health Panel will provide actionable genomic results where clear clinical recommendations are available if a pathogenic variant is found. The Precision Health Panel will be backed by Geisinger's leading expertise in genomic medicine and will include the option to speak with a genetic counsilor.

Get updates



Order any product and we'll sequence your DNA with just a small saliva sample. Once your initial sequence is complete, your data will be securely stored, and will be available to share with any Helix partner of your choosing, for as long as you wish.

Learn more >

Our investors

From acclaimed venture capital firms to the leading sequencing company in the world, Helix is backed by the very best.







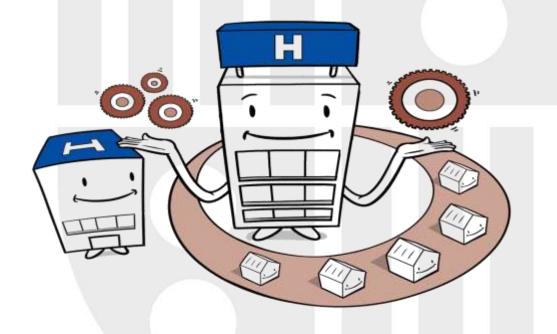




Key Message 4: "Dual Orientation" Tertiary and Territory



Leading hospitals will provide complex services to referred patients and also manage the provision of acute services in a catchment area.



Primary Care

- Institut Català de la Salut: 13 teams
- CAPSE: 3 teams
- EAP Poble Sec: 1 team
- EAP Sarrià-Vallplasa: 2 teams

Specialty Care

- Hospital Clínic
- Hospital Plató
- Hospital Sant Joan de Déu
- Hospital Sagrat Cor

Mental Health and Addictions

- Hospital Clínic
- · Hospital Sant Joan de Déu SSM
- Hospital Sant Pere Claver
- · Associació Centre Higiene Mental Les Corts
- Agència Salut Pública de Barcelona

Social Health Care

- Parc Sanitari Pere Virgili
- Centre BlauClínic
- Clínica Sant Antoni de Barcelona
- · Fundació Sociosanitària Barcelona
- · 33 Community Pharmacies
- 4 Rehabilitation Centres
- Emergency Services (Servel d'Emergèncles Mèdiques de Catalunya SEM)



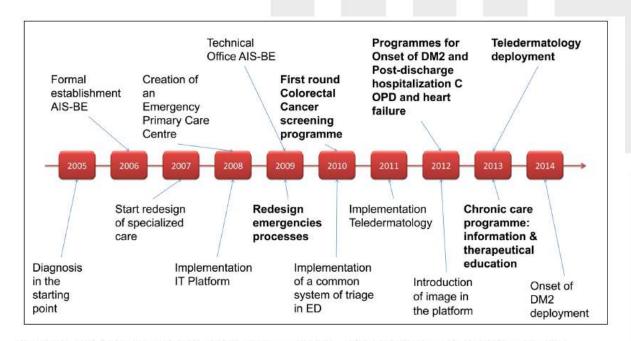


565.000 inhabitants

23 Primary Care Centers from 6 different provider organizations

Hospitals (different provider organizations)





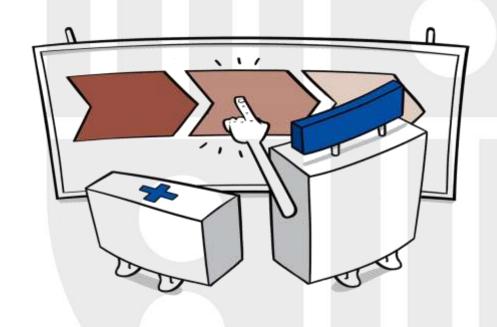


Font, D et al 2016 Integrated Health Care Barcelona Esquerra (Ais-Be): A Global View of Organisational Development, Re-Engineering of Processes and Improvement of the Information Systems. The Role of the Tertiary University Hospital in the Transformation. International Journal of Integrated Care, 16(2): 8, pp.1–10, DOI: http://dx.doi.org/10.5334/ijic.2476

Key Message 5: Knowledge-Driven redesign of services



Leading hospitals' knowledge will play a central role in the knowledge-driven redesign and planning of healthcare services.

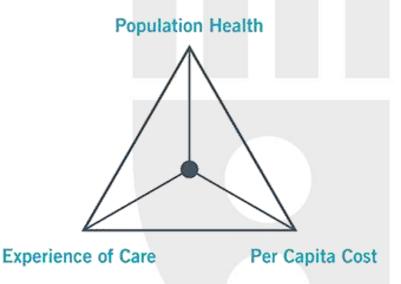






The IHI Triple Aim

The Triple Aim is a framework developed by the Institute for Healthcare Improvement (IHI).

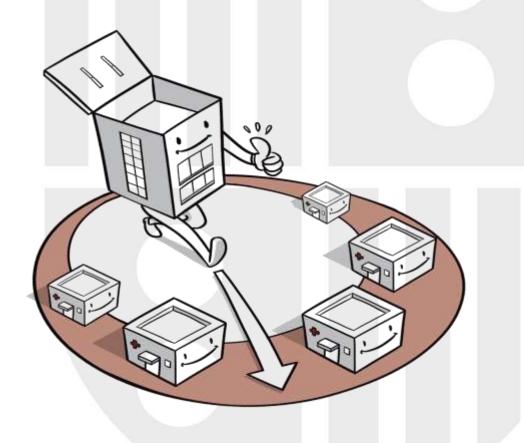


Key Message 6: Open and Distributed Organizations

Business School
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Center for Research
in Healthcare
Innovation
Management

Leading hospitals will not be defined by physical structures and will be organized so they deliver services at different locations.



Emergency Services of the Barcelona Esquerra Health Area, (AISBE)

HOSPITAL CLÍNIC OF BARCELONA

The AISBE Emergency Services (ES) innovation project involved the restructuring of facilities and healthcare resources aimed at addressing emergencies in the Barcelona Esquerra Health Area (AISBE), and changing patient flows in accordance with these resources, with the aim that each case be treated at the most appropriate center.

The Barcelona Esquerra area covers a population of 540,000 inhabitants with three hospitals and 19 primary health care centers.

The AISBE ES project has been successful in having 35% of emergencies treated in non-hospital centers, where cost per activity is lower than in hospitals.

This reorganization of ES processes in AIS-BE has also freed availability of ER services at the Hospital Clínic by lowering its inpatient volume by 10% and by reducing the arrival of non-critical patients by 25%. This has allowed them to focus on more complex cases.





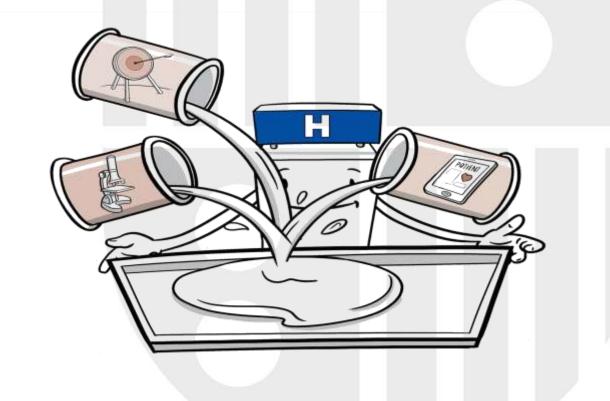
Box d'emergència

Source: IESE CRHIM InnPACT Study

Key Message 7: Innovation Centers of Technology and Services

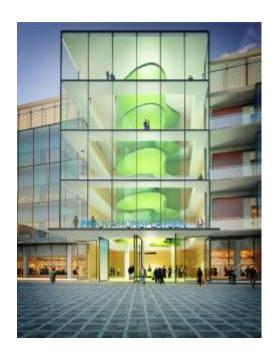


Leading hospitals will be reference centers for process/technology innovation and healthcare service design.











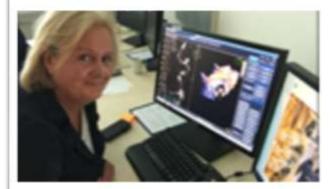
Source: Karolinska

7 November: Information meeting for companies interested in joint Al development

News 2017-10-18

The I-AID project welcomes organizations with AI development expertise to participate in an open information and Q&A seminar on the 7th of November. This is an opportunity to discuss joint development of AI solutions for selected clinical needs, within the field of imaging diagnostics at Karolinska University Hospital and Stockholm County Council.





We are seeking partners interested in innovative methods to meet the need of University Hospital and Stockholm City Council.

The I-AID project aims to accelerate the development and implementation of AI in to policies and processes in legal, regulatory, IT and procurement, as well as to general for clinical validation and implementation in clinical practice.

Tuesday May 02nd, 2017

FreeOx Biotech acquires the rights of two compounds to treat neurological and cardiovascular diseases



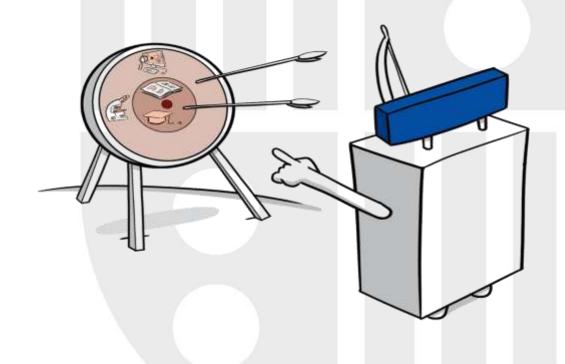
Dr. Angel Chamorro, Head of the Functional Unit of Cerebral Vascular Pathology at Hospital Clínic de Barcelona, has developed two compounds with neuroprotective properties based on reducing the effects of oxidative stress on the body. Hospital Clínic and the Clínic Foundation for Biomedical Research, with the support of the IDIBAPS's KTT office (Knowledge and Technology Transfer), have signed an exclusive license agreement with FreeOx Biotech for the development and exploitation of this technology.

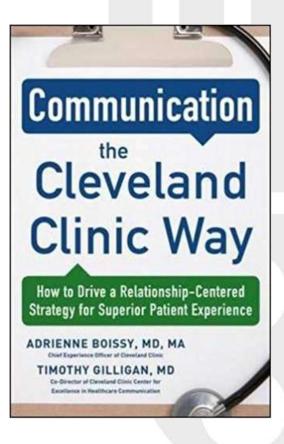
Source: Karolinska and HCB web pages

Key Message 8: Research and Education as key results



Leading hospitals will continue to be the main centers for research and for the education of new professionals, which means generating knowledge and capabilities.







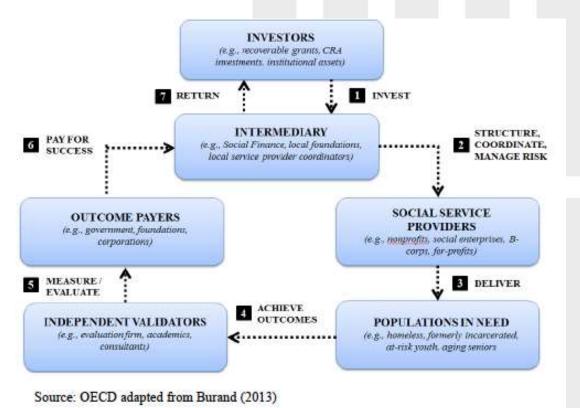
Key Message 9: Risk-sharing models involving all stakeholders



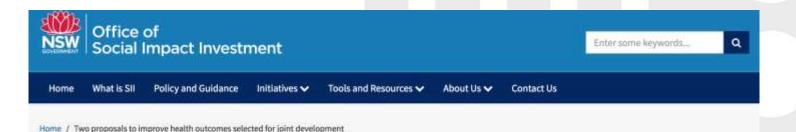
Leading hospitals will develop new risk-sharing models with insurers, industry and/or other providers.











Two proposals to improve health outcomes selected for joint development

The NSW Government will work with two proponents to develop new social impact investments, following a request for proposals (RFP) that closed on 15 February 2016.

A proposal for each of the priority areas identified in the RFP was selected:

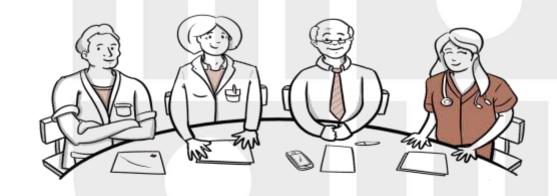
- Managing mental health hospitalisations RichmondPRA and Social Ventures Australia.
- . Managing chronic health conditions Silver Chain Group.

Over the coming months, the Government will work with each proponent to further develop and negotiate the details of their proposals. Depending on the outcome of these negotiations, the Government may then seek to enter into social impact investments with the proponents. We anticipate joint development will take about six months.

Key Message 10: Professionals in Hospital Governance



Hospital professionals will actively participate in the strategy and leadership of the organization.







Dr. Melvin Samsom





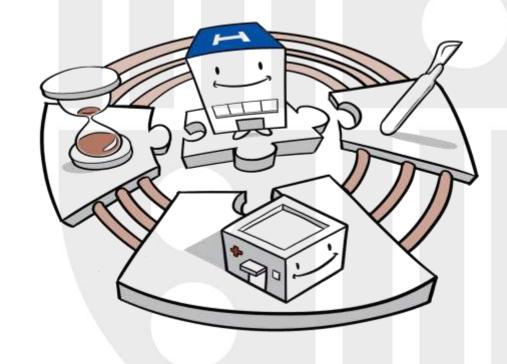


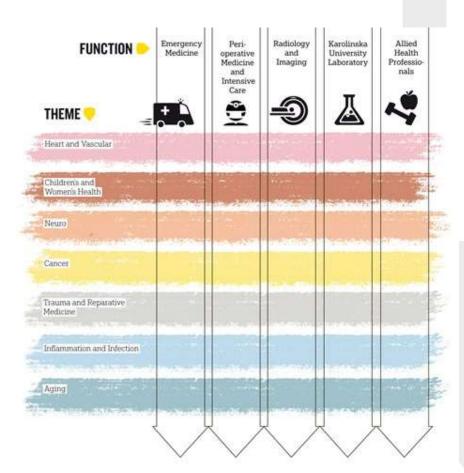
Dr. Josep. M. Campístol

Key Message 11: Integrated Care and Process-Oriented Teams



Leading hospitals will be organized into process-oriented teams and seek to create integrated care models (either virtually or through M&A)







Organización en Institutos y Centros

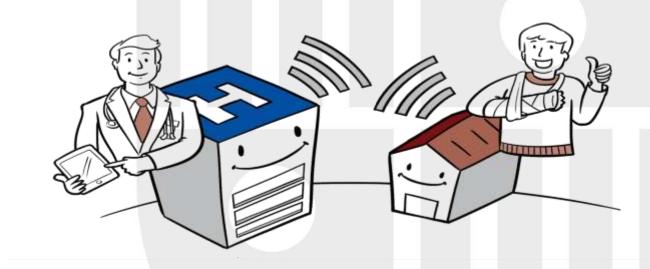
ICR Instituto Clinico Respiratorio	ICNU Instituto C Nefrologia	Urología	ICEMEQ Instituto Clinico de Especialidades Médicas
- Chagla Torácica	Netralogia y Trasplante Renal Urologia		y Quirùrgicas Cingle Ottopetka y Trannatologia
- Presenticipa			
ICCV	ICOF Instituto Clinico de Oftalmología		+ Cirugia Plástica y Maritefacial
Instituto Clinico Cardiovascular			Otorrisolaringologia Retubilitoción Neurostologia
- Cardiologia			
Chugis Cardiovascular			
ICN Instituto Clinico de Neurociencias	Dirección ((Urgencias Area Quiri	1000	ICMID Instituto Clinico de Medicina y Dermatologia
- Neurocingia	Area Sociosanitaria, UASP)		+ Detratologie
+ Neurologia	r Arenfenia		+ Entermedades Autoimmanes
- Psicososia	+ Evaluación y Apoyo Metodológico		Sisteman
- Psiguiatria	+ Farmacia		+ Enfermedades infacciosas
- Palguratria Infantojuventi	Redicina Preventiva		Avelicina Interna General.
			Salod Internacional
ICMDM Instituto Clinico de Enfermedades Digestivas y Metabólicas	ICGON Instituto Clinico de Ginecoloia, Obstetricia y Neonatología • Girecología • Medicho Meterocifosal • Resistología		ICMHO Instituto Clinico de Enfermedades Hematológicas y Oncológicas - rerestocia
- Chagte Germantestines			
- Chagla General y Digistina			
- Diesetica y Endocrinologie			+ Oncologia Médica
Godyarderobyte			Oncologia flutioterápica
- Hepatologia			
CDB Centro de Diagnóstico Biomédico		CDI Centro de Diagnóstico por la Imagen	
Anatomia Patológica		+ Medicina Nuclea	1)
Bioquimica y Genetica Voletular		+ Buddops	
 Hersoteropia y Hersostasia 			
- Inmunologia			

Source: Karolinska and HCB web pages

Key Message 12: Connected Hospitals

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Universidad de Rivana
Business School
Universidad de Rivana
Management

Patients will spend less time in hospitals and on healthcare premises. Health professionals will increasingly manage patients remotely or at their home. Improved information technology will lead to connected hospitals



Mercy Virtual













Source: POLITICO, A Hospital Without Patients and <u>www.mercy.net</u>

Key Message 13: New Professional Roles

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New professional roles will emerge that will blur the existing discipline boundaries between physicians, nurses and other health professionals. These roles will be a result of the new models of care and emerging technologies.











Key Message 14: Patient-centered innovation

Business School
Italiantidad & Navarra

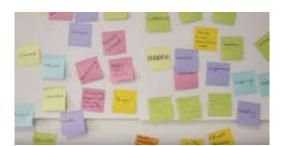
Center for Research
in Healthcare
Innovation
Management

Leading hospitals will systematically redesign the service experience to become really patient-centered.







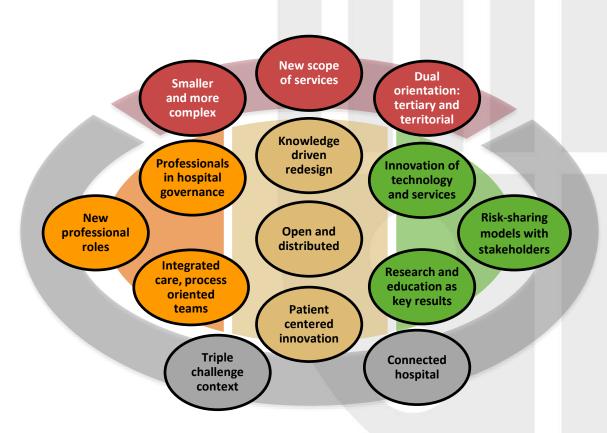




Source: The Bright Alliance & Fjord, Design and Innovation from Accenture Interactive

A new role for leading hospitals in Europe ... shaping increasingly networked health eco-systems







The full study and abridged versions can be found in the publications section at: www.iese.edu/crhim

Pablo Borras

email: PBorrasJ@iese.edu