RECHERCHE, DÉVELOPPEMENT

ÉVALUATION DES SYSTÈMES D'INFORMATION

Pr Pascal STACCINI

Centre
Hospitalier
Universitaire
de Nice

Déclaration d'activité

- PH DIIM, CHU de Nice

- PU UNS

- Projet ANR TECSAN 2013 déposé avec les éditeurs Intersystems, Web100T, Vidal

- Trésorier de la SOFIME (société savante francophone d'information médicale)

Objectifs

- Etat des lieux de l'informatisation des ES
  - démarche française (oSIS)
  - démarche US/EU (EMRAM)
- Méthodes d'évaluation
  - Choix de la comparaison
  - Choix des variables
- Résultats
- Conclusion

4

Démarche française

Etat des lieux - oSIS

- Observatoire des Systèmes d'Information hospitaliers des établissements de santé du champ sanitaire :
  - collecter et historiser de l'information sur les SIH auprès des établissements de santé du champ sanitaire, notamment :
    - données décrivant l'équipement (en matériel et en logiciel) des ES,
    - données décrivant l'usage du SIH (couverture fonctionnelle du SIH, indicateurs d'usage),
    - données de suivi d'instruction nationale (urgences, prescription, …)
  - agréger ces données pour obtenir des tableaux de bord régionaux, nationaux, par type d'établissement, par type d'outil informatique…
- Système déclaratif mis à jour par semestre / DGOS et ATIH / Médecin DIM de votre établissement pour accéder aux données
- Registre miroir : RELIMS (référencement des éditeurs de logiciels et des intégrateurs du monde de la santé)

Charges SIH (2010)

Données exploitables pour 689 établissements
(dont 461 publics) sur 3384 établissements au total

	Médiane	CHU Nice
Total charges exploitation SIH	155 381	7 192 050
Total charges exploitation ES	15 027 484	569 298 496
Part charges exploitation SIH	**1,03%**	**1,26%**
Budget charges investissement SIH	48 138	3 094 956
Budget charges investissement ES	863 327	72 224 560
Part Budget charges investissement SIH	**5,58%**	**4,29%**

Gestion administrative patient

Fonction	Nice	NA	%	Non Inf.	%	Achevé	%	Nb rep.
Gestion identité et identitovigilance	**Achevé**	**10**	**1%**	**86**	**7%**	**970**	**79%**	**1230**
Gestion des mouvements	**Achevé**	**6**	**0%**	**44**	**4%**	**1141**	**92%**	**1236**
Gestion des pré-admissions	**Achevé**	**100**	**8%**	**167**	**14%**	**901**	**74%**	**1221**
Création DMP	**Non Inf.**	**107**	**9%**	**673**	**58%**	**131**	**11%**	**1158**
Gestion de l'INS-C	**En cours**	**167**	**16%**	**476**	**45%**	**208**	**20%**	**1060**
Gestion des tutelles	Non Inf.	338	31%	404	37%	324	30%	1087
Gestion actes et Cs externes	Achevé	348	30%	177	15%	594	51%	1167
Facturation (séjours, ACE)	**Achevé**	**22**	**2%**	**6**	**0%**	**1195**	**97%**	**1237**

Données cliniques

Fonction	NA	%	Non Inf.	%	Achevé	%	Nb Rep.
Bureautique médicale	**72**	**6%**	**149**	**12%**	**771**	**64%**	**1196**
Gestion du dossier médical	9	1%	159	13%	679	56%	1220
Intégration dans dossier patient résultats lab.	37	3%	322	27%	557	46%	1210
Intégration dans dossier patient des résultats exam. compl.	68	6%	581	49%	266	22%	1186
Alimentation DMP	**130**	**11%**	**682**	**60%**	**74**	**6%**	**1144**
Consultation DMP	**139**	**12%**	**683**	**61%**	**66**	**6%**	**1128**
Gestion des dossiers d'anesthésie	728	61%	255	21%	114	10%	1189
Gestion des dossiers de réanimation	918	77%	190	16%	42	4%	1189
Gestion des dossiers transfusionnels	636	54%	244	21%	244	21%	1177
Gestion des dossiers RCP	752	66%	208	18%	142	13%	1132
Gestion des dossiers de dialyse	980	83%	60	5%	115	10%	1174
Gestion des dossiers HAD	988	84%	68	6%	102	9%	1172
Autres dossiers de spécialités	709	67%	159	15%	112	11%	1066
Service d'Archivage (Demande de dossiers, ...)	**93**	**8%**	**602**	**52%**	**389**	**33%**	**1163**
Gestion du dossier de soins (notes, prescriptions,…)	17	1%	230	19%	549	46%	1197
Gestion du plan de soins (admin., prélèv., surveillance,...)	**20**	**2%**	**219**	**18%**	**569**	**48%**	**1194**
Alimentation du plan de soins par les prescriptions	**19**	**2%**	**212**	**18%**	**618**	**52%**	**1198**
Gestion du dossier Social	69	6%	427	38%	458	40%	1138

Prescriptions

Fonction	NA	%	Non Inf.	%	Achevé	%	Nb Rep.
Prescription de Médicaments	**26**	**2%**	**132**	**11%**	**719**	**59%**	**1218**
Médicaments - BDM	**60**	**5%**	**109**	**10%**	**823**	**73%**	**1133**
Prescription de Produits Sanguins Labiles	557	49%	293	26%	185	16%	1133
Prescription de Chimiothérapies	826	71%	52	4%	259	22%	1168
Prescription d'Analyses médicales (Biologie, Hématologie, Bactériologie,?)	72	6%	394	34%	449	39%	1162
Prescription d'Examens d'Imagerie	**83**	**7%**	**461**	**40%**	**401**	**34%**	**1163**
Prescription de Soins	20	2%	274	23%	549	46%	1183
Prescription d'Examens complémentaires (Kiné, consultation, ?)	40	3%	391	34%	458	39%	1164

Gestion activités médico-techniques

Fonction	NA	%	Non Inf.	%	Achevé	%	Nb Rep.
Gestion des blocs	737	62%	179	15%	190	16%	1191
Traçabilités des instruments	693	61%	250	22%	144	13%	1139
Gestion de laboratoire de biologie (stocks, ?)	921	79%	40	3%	178	15%	1165
Serveur de résultats - biologie	625	53%	78	7%	425	36%	1180
Gestion de Laboratoire d'anatomocytopathologie	1002	87%	63	5%	82	7%	1151
Validation pharmaceutique	92	8%	147	13%	634	54%	1164
Dispensation et traçabilité des médicaments (dont MDS, MO)	**82**	**7%**	**163**	**14%**	**677**	**60%**	**1125**
Rétrocession des médicaments	550	50%	144	13%	370	34%	1099
Traçabilité des DMI (saisie, suivi)	477	43%	165	15%	377	34%	1104
Armoire Rotative Robotisée	852	76%	201	18%	47	4%	1122
Gestion des commandes de la pharmacie	**60**	**5%**	**111**	**10%**	**921**	**79%**	**1163**
Gestion des Stocks de la pharmacie	**76**	**6%**	**78**	**7%**	**983**	**83%**	**1180**
Gestion des Stocks de médicaments des unités de soins	**107**	**10%**	**476**	**43%**	**414**	**37%**	**1116**
Stérilisation (Gestion et suivi de traçabilité)	668	59%	192	17%	232	21%	1127
Gestion des Chimiothérapies	**864**	**75%**	**30**	**3%**	**239**	**21%**	**1157**
Médecine Nucléaire	1068	92%	26	2%	60	5%	1157
Imagerie Médicale - SIR	805	70%	106	9%	208	18%	1150
Imagerie Médicale - PACS	767	67%	148	13%	171	15%	1152
Gestion du dépôt de produit sanguins labiles	783	69%	110	10%	227	20%	1141
Hémovigilance	489	44%	326	29%	268	24%	1121

Prescriptions med. exécutées en ville

Identification du prescripteur	entre 0 et 20%	%	entre 21 et 40%	%	entre 41 et 60%	%	entre 61 et 80%	%	entre 81 et 100%	%	Nb Rep.
Pourcentage de Services qui disposent du dispositif transitoire (étiquettes collées sur l'ordonnance)	556	77%	6	1%	10	1%	9	1%	138	19%	719
Pourcentage de Services qui disposent du dispositif de prescription cible, avec des ordonnances pré-imprimées	489	66%	14	2%	26	4%	16	2%	194	26%	739
Pourcentage de Services qui disposent du dispositif de prescription cible avec un logiciel pour la production des ordonnances	**337**	**41%**	24	3%	38	5%	26	3%	**401**	**49%**	826

Identités PS

Fonction	NA	%	Non Inf.	%	Achevé	%	Nb Rep.
Annuaire des PS de l'ES Gestion des identités	71	7%	**398**	**40%**	**437**	**44%**	1004
SSO	164	17%	**585**	**60%**	89	9%	975

Démarche US / EU

13

Meaningful use

- The EHR **Incentive Programs from Medicare and Medicaid** are part of the 2009 American Recovery and Reinvestment Act, and provide payments to eligible hospitals (EH) and eligible professionals (EP) for implementing electronic health records (EHR).

- **EHs and EPs must demonstrate that they have not just installed Certified EHR Technology (CEHRT), but that they have been using it in a "meaningful" way.**

- If an EH or EP does not qualify as a meaningful user by 2015, Medicare payments to the provider will be reduced.

Electronic Medical Record Adoption (EMRAM)

United States EMR Adoption Model [SM]

Stage	Cumulative Capabilities	2012 Q3	2012 Q4
Stage 7	Complete EMR; CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP	1.8%	1.9%
Stage 6	Physician documentation (structured templates), full CDSS (variance & compliance), full R-PACS	7.3%	8.2%
Stage 5	Closed loop medication administration	12.0%	14.0%
Stage 4	CPOE, Clinical Decision Support (clinical protocols)	14.2%	14.2%
Stage 3	Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology	41.3%	38.3%
Stage 2	CDR, Controlled Medical Vocabulary, CDS, may have Document Imaging; HIE capable	11.2%	10.7%
Stage 1	Ancillaries - Lab, Rad, Pharmacy - All Installed	4.8%	4.3%
Stage 0	All Three Ancillaries Not Installed	7.4%	8.4%

Data from HIMSS Analytics® Database ©2012   N = 5319   N = 5458

Thomson Reuteurs survey

- 100 Top Hospitals
- Selection methodology: scoring hospitals on a balanced scorecard of performance measures centered on:
  - Clinical **outcomes** – including patient survival and complications
  - Clinical **process** – following accepted care protocols
  - **Efficiency** – including average length of stay and costs
  - Hospital **financial** health
  - **Consumer** assessment of care

Thomson Reuters survey

2009		
	All US	100 Top
Stage 0	11.50%	2.00%
Stage 1	7.20%	1.00%
Stage 2	16.90%	5.00%
Stage 3	50.90%	66.00%
Stage 4	7.40%	12.00%
Stage 5	3.80%	8.00%
Stage 6	1.60%	5.00%
Stage 7	0.70%	1.00%
Total	5235	100

Table Three. EMRAM Model 2009

CDSS, Nurse doc, Rad

CPOE

Full CDSS

2010		
	All US	100 Top
Stage 0	10.10%	0.00%
Stage 1	7.10%	1.00%
Stage 2	14.60%	10.00%
Stage 3	49.00%	50.00%
Stage 4	10.50%	18.00%
Stage 5	4.50%	7.00%
Stage 6	3.20%	13.00%
Stage 7	1.00%	1.00%
Total	5281	100

Table Four. EMRAM Model 2010

Méthodes d'évaluation

Objectifs et méthodes d'évaluation

Joseph L Y Liu, Jeremy C Wyatt. The case for randomized controlled trials to assess the impact of clinical information systems. J Am Med Inform Assoc (2011) doi:10.1136/jamia.2010.010306

Table 1 Study designs to answer different questions about clinical information systems

Question	Appropriate study design
What do people feel about the system?	In-depth interview (which refers to a 'face to face conversation with the purpose of exploring issues or topics in detail'[24])
How many people like the system?	Descriptive survey (survey that describes a population of interest[14])
What do people like about the system?	Focus group ('method of group interview which explicitly includes and uses the group interaction to generate data'[24])
How accurate is the advice given when compared with a gold standard?	Cross-sectional study (study of a defined group of people at one point in time)[14]
What is the cost-effectiveness of the system?	Cost-effectiveness analysis (an economic evaluation that compares the costs and effects of alternative interventions where the effects are measured in natural units, such as life years gained and cases of illness avoided[25])
Does the system improve the desired outcome?	Randomized controlled trial,[26—28] which also allows the investigator to measure improvements in outcomes and unexpected side effects
How can the system be improved?	In-depth interview,[24] focus group,[24] and expert review (which refers to a review of the system by expert(s)[14])

John R. Krobock. A Taxonomy: Hospital Information Systems Evaluation Methodologies. Journal of Medical Systems, 1984;8(5):419-29
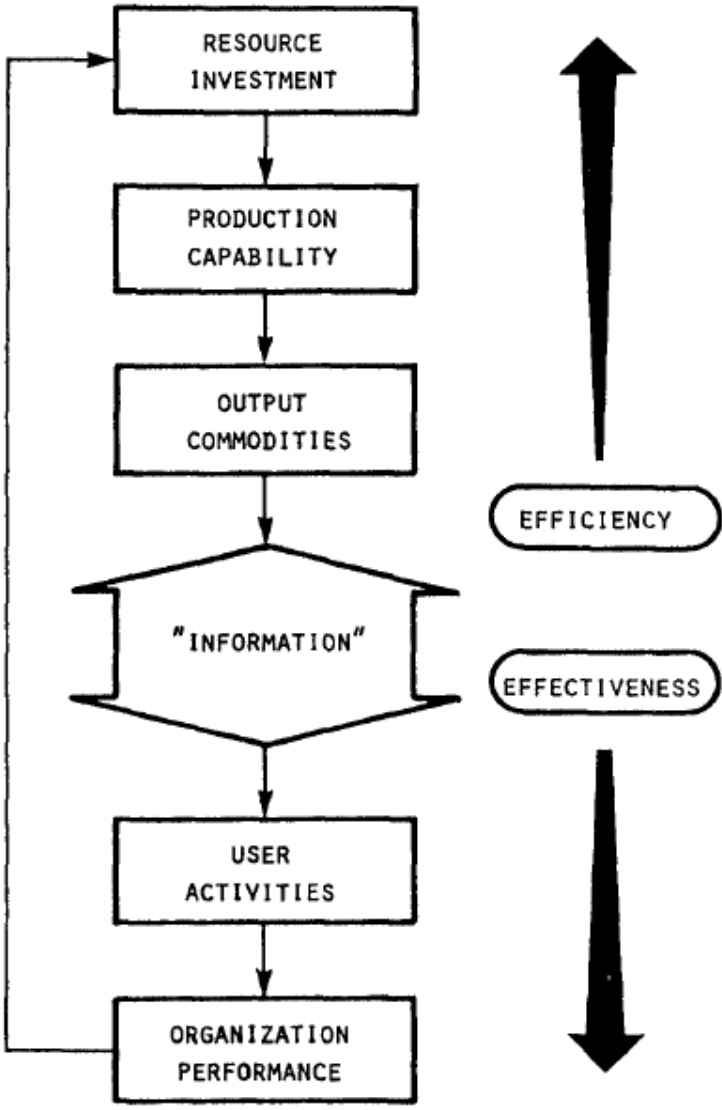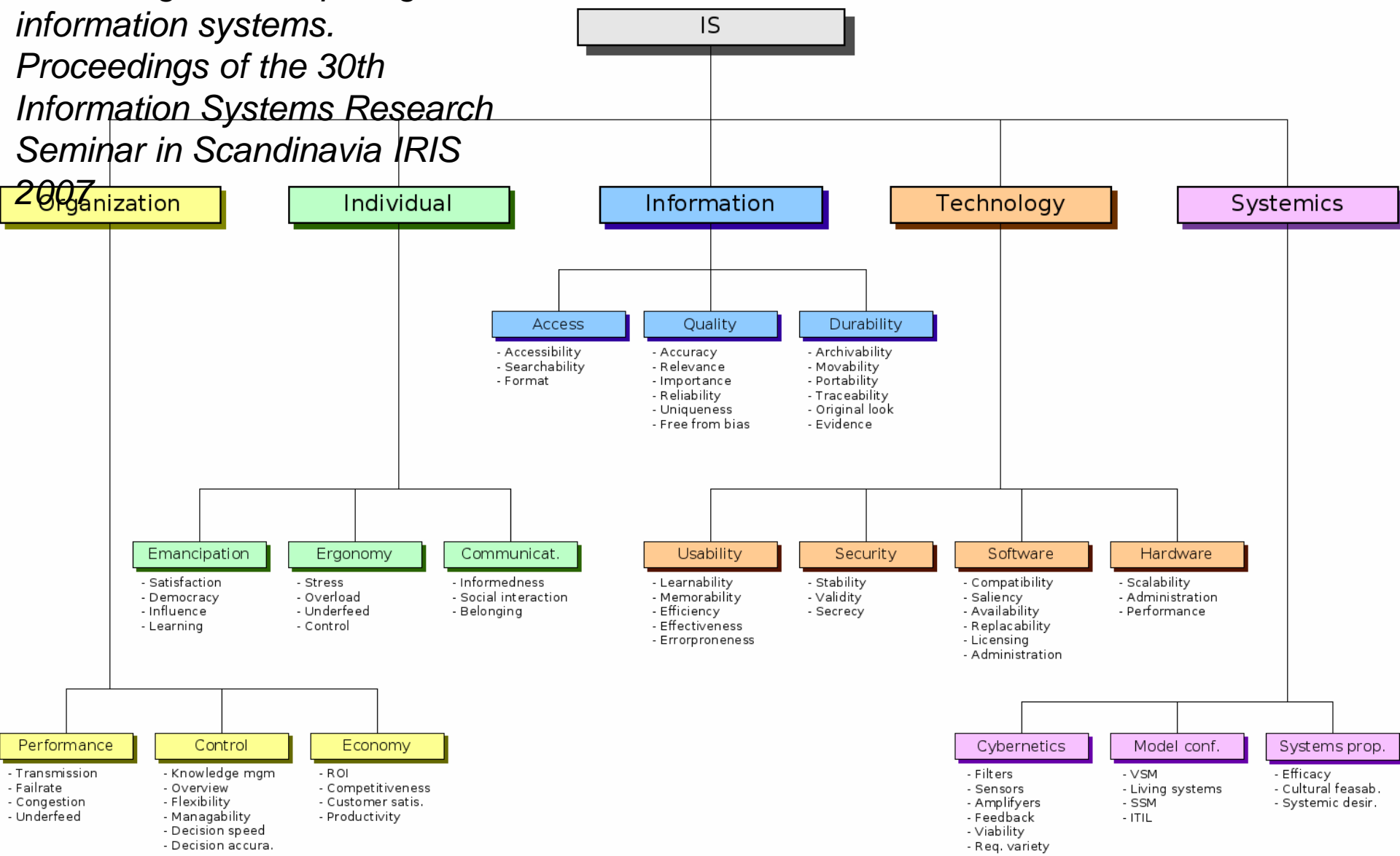

Figure 1. Conceptual framework of productivity model.

Joel Palmius. Criteria for measuring and comparing information systems. Proceedings of the 30th Information Systems Research Seminar in Scandinavia IRIS 2007
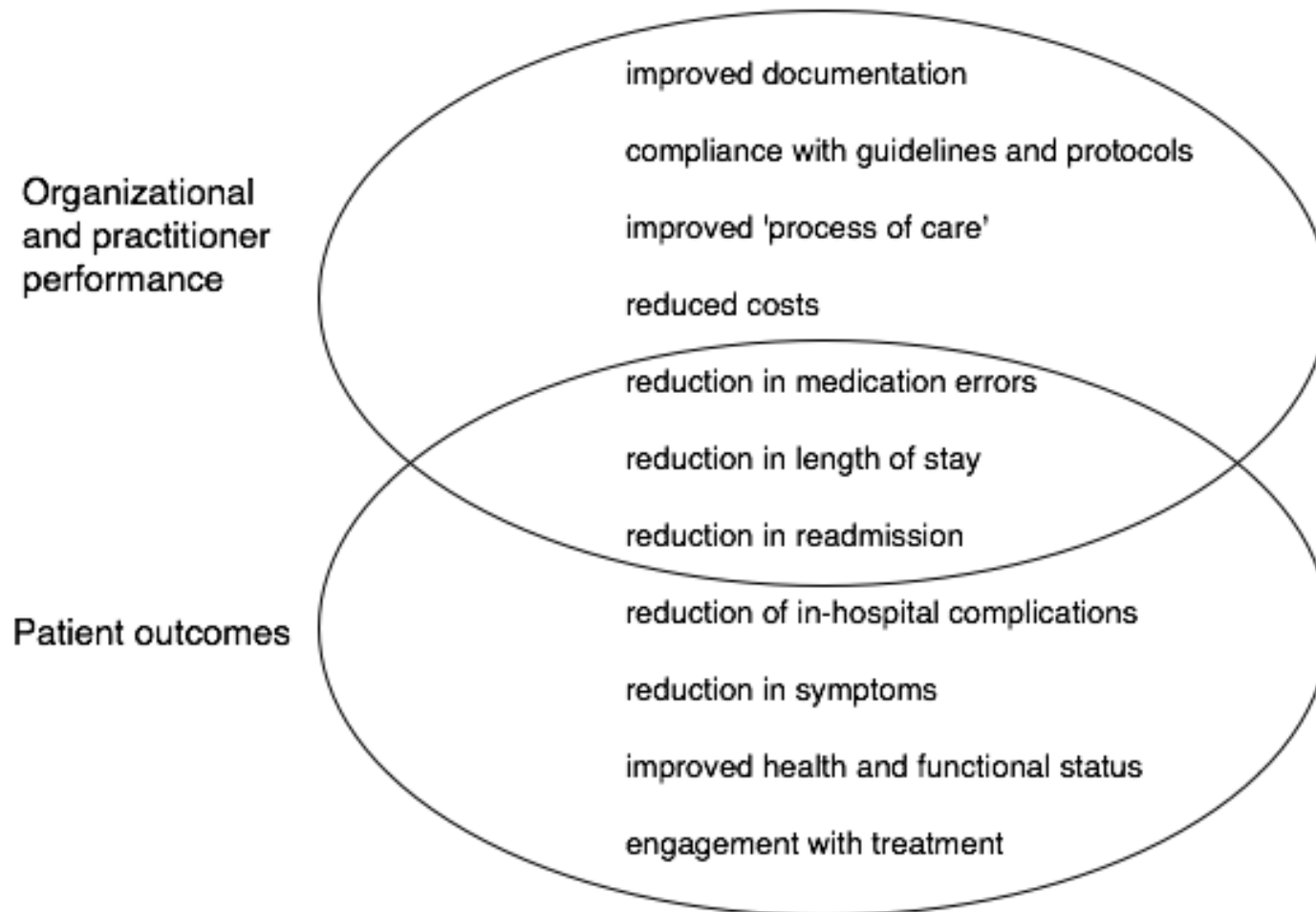
Criteria model

IS

- **Organization**
  - Performance
    - Transmission
    - Failrate
    - Congestion
    - Underfeed
  - Control
    - Knowledge mgm
    - Overview
    - Flexibility
    - Managability
    - Decision speed
    - Decision accura.
  - Economy
    - ROI
    - Competitiveness
    - Customer satis.
    - Productivity

- **Individual**
  - Emancipation
    - Satisfaction
    - Democracy
    - Influence
    - Learning
  - Ergonomy
    - Stress
    - Overload
    - Underfeed
    - Control
  - Communicat.
    - Informedness
    - Social interaction
    - Belonging

- **Information**
  - Access
    - Accessibility
    - Searchability
    - Format
  - Quality
    - Accuracy
    - Relevance
    - Importance
    - Reliability
    - Uniqueness
    - Free from bias
  - Durability
    - Archivability
    - Movability
    - Portability
    - Traceability
    - Original look
    - Evidence

- **Technology**
  - Usability
    - Learnability
    - Memorability
    - Efficiency
    - Effectiveness
    - Errorproneness
  - Security
    - Stability
    - Validity
    - Secrecy
  - Software
    - Compatibility
    - Saliency
    - Availability
    - Replacability
    - Licensing
    - Administration
  - Hardware
    - Scalability
    - Administration
    - Performance

- **Systemics**
  - Cybernetics
    - Filters
    - Sensors
    - Amplifyers
    - Feedback
    - Viability
    - Req. variety
  - Model conf.
    - VSM
    - Living systems
    - SSM
    - ITIL
  - Systems prop.
    - Efficacy
    - Cultural feasab.
    - Systemic desir.

21

P. Staccini - Congrès SFPC ANEPC 2013 - Lyon, 11 avril 2013

Critères de choix des variables

- Those **likely to be affected** by the HIS
- Those which could **feasibly be measured** without the HIS in place (for baseline measures in all hospitals and follow up measurements in late implementation sites).
- Those which would **reflect a key** hospital or health care **process**.
- Criteria associated with **improved or worsened patient experience** (total time in the hospital) or outcome (e.g. unintended re-admission rate).
- Those **associated with availability of improved** administrative, managerial or policy **information**.
- Criteria which could be **measured repeatedly without** exerting a strong **Hawthorne effect**.
- Those criteria which could be **measured repeatedly using routine data** to allow changes over time to be studied.

Indicateurs de résultats

Organizational and practitioner performance
- improved documentation
- compliance with guidelines and protocols
- improved 'process of care'
- reduced costs
- reduction in medication errors
- reduction in length of stay
- reduction in readmission

Patient outcomes
- reduction of in-hospital complications
- reduction in symptoms
- improved health and functional status
- engagement with treatment

Résultats

Recommandations informatisées

- Deux revues systématiques : Shiffman (1999) et Damiani (2010)
  - **Meilleure documentation** du dossier et de **compliance** à l'utilisation des recommandations (Shiffman) mais pas de méta-analyse car grande hétérogénéité des mesures et des types d'études
  - **Amélioration du processus de soins** (Damiani) – interprétation binaire effectuée a posteriori sur les variables de la conclusion de chaque étude
  - Aucune des revues n'a fait la part entre les systèmes qui présentent simplement les recommandations sur un ordinateur (pour des décisions cliniques individuelles) et les systèmes qui modélisent et accompagnent le processus clinique de façon longitudinale

Aide à la décision

- Pratique clinique (réduction des erreurs, qualité de la documentation clinique, résultats "patient") est plus améliorée par un **CDSS actif (alerte)** que passif (système critique)

  - Facteurs de succès d'un CDSS comportent : recommandations informatisées disponibles au lit du patient (point of care) et intégrées dans un workflow clinique (Kawamoto et al. 2005)

- Compliance aux recommandations améliorée lorsque le CDSS est fondé sur une **base de connaissances** (Garg et al 2005)

- Peu d'effet sur les résultats "patient" mais impact positif sur la performance des praticiens (Jaspers 2011)

Communications internes

- Agarwal R, Sands DZ, Schneider JD. **Quantifying the economic impact of communication inefficiencies in U.S. hospitals**. *J Healthc Manag*. 2010;55(4):265-81

- They developed a conceptual model of the effects of poor communications in hospitals that isolates four outcomes: (1) efficiency of resource utilization, (2) effectiveness of core operations, (3) quality of work life, and (4) service quality, identifying specific metrics for each outcome. We developed estimates of costs associated with wasted physician time, wasted nurse time, and increase in length of stay caused by communication inefficiencies across all U.S. hospitals, using primary data collected from interviews in seven hospitals and secondary data from a literature review. U.S. hospitals waste over **$12 billion annually as a result of communication inefficiency among care providers**. **Increase in length of stay accounts for 53 percent** of the annual economic burden. A 500-bed hospital **loses over $4 million annually as a result of communication inefficiencies**. The estimates did not include all dimensions of economic waste arising from poor communications. Information technologies and process redesign may help alleviate some of this burden.

Sortie du patient

- Kripalani S, LeFevre F, Phillips CO, Williams MV, Basaviah P, Baker DW. **Deficits in communication and information transfer between hospital-based and primary care physicians: implications for patient safety and continuity of care**. *JAMA*. 2007;297(8):831-41.

- A review of 73 studies :

- Direct communication (hospital physicians and primary care physicians) occurred **infrequently** (3%-20%).

- The **availability** of a discharge summary at the first postdischarge visit was **low** (12%-34%) and remained **poor** at 4 weeks (51%-77%), affecting the quality of care in approximately 25% of follow-up visits and contributing to primary care **physician dissatisfaction**.

- **Discharge summaries often lacked important information such as diagnostic test results (missing from 33%-63%), treatment or hospital course (7%-22%), discharge medications (2%-40%), test results pending at discharge (65%), patient or family counseling (90%-92%), and follow-up plans (2%-43%).**

- Several interventions, including computer-generated discharge summaries and using patients as couriers, shortened the delivery time of discharge communications. Use of standardized formats to highlight the most pertinent information improved the perceived quality of documents.

Sortie du patient

- Callen J, McIntosh J, Li J. **Accuracy of medication documentation in hospital discharge summaries: A retrospective analysis of medication transcription errors in manual and electronic discharge summaries**. *Int J Med Inform*. 2010 Jan;79(1):58-64.

- Quantify and compare the medication transcription error rate from handwritten medications on manual discharge summaries to typed medications on electronic discharge summaries.

- A **retrospective** examination of 966 handwritten and 842 electronically generated discharge summaries was conducted in an Australian metropolitan hospital.

- **12.1% of handwritten and 13.3% of electronic summaries contained medication errors.** The highest number of errors occurred with **cardiovascular drugs**. **Medication omission** was the commonest error. The confidence intervals of all odds ratios indicate handwritten and electronic summaries were similar for all areas of medication error. **Error rates** regarding all 13,566 individual medications for the 1808 summaries were **similar by doctor medical training level** (intern, resident, and registrar).

- Similar medication error rates in handwritten and electronic summaries may be due to the **common factor of transcription**, either handwritten or typed, known to be associated with medication errors. Clinical information systems evolve and often in the early stages of implementation electronic discharge summaries are integrated with existing paper-based patient record systems. **Automatic transfer of medications** from an electronic medication management system to the electronic discharge summary holds the potential to reduce medication errors through the elimination of the transcription process.

Sortie du patient

- Motamedi SM, Posadas-Calleja J, Straus S, Bates DW, Lorenzetti DL, Baylis B, Gilmour J, Kimpton S, Ghali WA. **The efficacy of computer-enabled discharge communication interventions: a systematic review**. *BMJ Qual Saf*. 2011;20(5):403-15.

- A review study identified 12 unique studies : eight randomised controlled trials and four quasi-experimental studies. Pooling/meta-analysis was not possible, given the heterogeneity of measures and outcomes reported. The primary outcomes of mortality and readmission were inconsistently reported. There was no significant difference in mortality, and one study reported reduced long-term readmission. Intervention groups experienced **reductions in perceived medical errors/adverse events, and improvements in timeliness and physician/patient satisfaction.**

- Computer-enabled discharge communications appear beneficial with respect to a number of important secondary outcomes. **Primary outcomes of mortality and readmission are less commonly reported** in this literature and require further study.

Sortie du patient

- Okoniewska BM, Santana MJ, Holroyd-Leduc J, Flemons W, O'Beirne M, White D, Clement F, Forster A, Ghali WA. **The Seamless Transfer-of-Care Protocol: a randomized controlled trial assessing the efficacy of an electronic transfer-of-care communication tool**. *BMC Health Serv Res.* 2012;12:414

- Etude en cours jusqu'en 2014.

- A randomized controlled trial will evaluate the efficacy and cost-effectiveness of a TOC communication tool. A total of 1400 patients will be randomized. The control group's acute care stay will be summarized using a traditional dictated summary, while the intervention group will have a **summary generated using the TOC communication tool**. The primary outcome will be a composite, at 3 months, of **death or readmission**. Secondary outcomes will be the **occurrence of post-discharge adverse events and adverse drug events at 1 month post discharge**. An accompanying economic evaluation will assess the cost per life saved, cost per readmission avoided and cost per QALY gained with the TOC communication tool compared to traditional dictation summaries.

Sortie du patient

- Maloney CG, Wolfe D, Gesteland PH, Hales JW, Nkoy FL. **A tool for improving patient discharge process and hospital communication practices: the "Patient Tracker »**. *AMIA Annu Symp Proc.* 2007;11:493-7.

- A web-based software application called "Patient Tracker" managed the discharge process, minimize delays in admission and reduce surgical procedure cancellations. They tested the effectiveness of the software on the work flow by comparing outcomes between the **pre**-implementation control group (2002-2003) and the **post**-implementation experimental group (2003-2006). Following the implementation of the software, the **number of cancelled surgical procedures decreased** (120 vs. 12, $p<0.01$). During the same period, the average number of inpatient admissions increased (5725 vs. 6120), and the median emergency department LOS decreased (247 vs. 232, $p<0.01$).

Sortie du patient

- Afilalo M, Lang E, Léger R, Xue X, Colacone A, Soucy N, Vandal A, Boivin JF, Unger B. **Impact of a standardized communication system on continuity of care between family physicians and the emergency department**. *CJEM* 2007;9(2):79-86.

- A cluster-randomized controlled trial. We analyzed a total of **2022 emergency department** (ED) visits. The intervention group received information regarding the ED visit **more often** (odds ratio [OR] 3.14, 95% confidence interval [CI] 2.6-3.79), found the information **more useful** (OR 5.1, 95% CI 3.49-7.46), possessed a **better knowledge** of the ED visit (OR 6.28, 95% CI 5.12-7.71), felt they could **better manage** patients (OR 2.46, 95% CI 2.02-2.99) and initiated actions **more often following receipt** of information (OR 1.62, 95% CI 1.36-1.93). However, there was **no significant difference in the follow-up rate** (OR 1.25, 95% CI 0.97-1.61). The use of SCS between an ED and family physicians led to significant improvements in continuity of care by increasing the usefulness of transferred information and by **improving FPs' perceived patient knowledge and patient management.**

34 Conclusions

- Bases nationales déclaratives (FR, US, EU) : suivi de la montée en charge, centrage sur l'hospitalisation, guidance d'une forme de stratégie (alignement), benchmark entre établissements

- Grande hétérogénéité des approches évaluatives (descriptif, explicatif), études adhoc, RCT ou Avant-Après

- On évalue souvent des systèmes « industriels » installés :
  - facteurs de confusion difficiles à appréhender
    - difficulté de généraliser : différences culturelles et d'incitatifs au sein du système de santé
  - les variables utiles pour l'évaluation sont-elles tracées ?
  - le traitement informatisé des données (calculs, alertes, chiffrement) est différent du système d'information, en tout ou partie informatisé, qui subit l'influence de l'organisation du travail (flux, stockage, communication)

- Oui il faut évaluer, mais quoi : le fonctionnement, l'impact patient, l'impact l'organisation
  - Mouvement EBM (evidence based management)
  - Mais cette recherche d'impact ne dispense pas de tout mettre en œuvre pour permettre l'accès à la connaissance du patient (structurée ou non)

- Les PS arguent une charge supplémentaire et dans leur travail singulier acceptent mal des résultats globaux (et pourtant ils instruisent une décision clinique en partie fondée sur les preuves…)

- Les financeurs sont plus réticents (existe-t-il un ROI ?), les éditeurs veulent être le plus générique possible (bénéfices…), les patients restent difficiles à convaincre (développement du quantify-self, mais peu d'engouement au DMP, rôle pédagogique du PS ?)

- Concernant les PS, la qualité et l'exhaustivité de la trace sont les seuls garants d'une évaluation en routine (mais nécessite une structuration forte des données par rapport au texte libre…)

- Problèmes liés à l'étude d'un composant fonctionnel / un composant métier / une étape du processus versus un système intégré

- Approche processus / indicateurs fonctionnement – indicateurs production (impact du système), indicateurs résultats (impact sur patient)
  - Intérêt des approches orientées processus / workflow : place des chemins cliniques traversant les dossiers « métier » et de « spécialité »
  - Nécessité d'une trace de qualité et exhaustive
  - Analyses type RCT complexes, privilégier analyses tendances

- Travaux à engager aux interfaces, plus propices à pouvoir étudier un composant / une activité / un outil
  - Facteurs de succès ≠ facteurs de pérennité

Merci de votre attention

staccini.p@chu-nice.fr
pascal.staccini@unice.fr