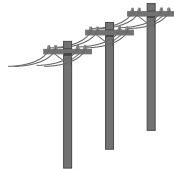


## La comunicazione in differita: il supporto informatico e telematico

Marco Pradella  
Castelfranco Veneto



## attenti al fax

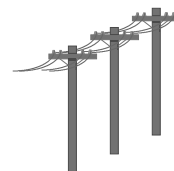
- Printed copies after fax report  
Medical Laboratory Observer, March, 2005 by Daniel M. Baer
  - *Q Our laboratory follows up every faxed lab report with a printed hard copy. Some doctors, however, do not like receiving multiple copies of the same report. Are your experts aware of any requirements for sending printed copies in addition to faxed reports?*
- A I am not aware of any requirement for sending a printed hard copy of a report after sending a fax report. There are several things you should keep in mind about faxed reports, however.

First, the fax machine must be secure; in order to comply with HIPAA requirements, only persons authorized to see patients' confidential medical information should have access to faxed reports. Second, your laboratory should have a method for confirming that faxed reports are received. Most fax machines have the ability to send error messages if the fax is not received correctly. Finally, the lab should have a procedure for investigating any reports of faxes that were not received.

--Daniel M. Baer, MD  
Professor Emeritus, Department of Pathology  
Oregon Health and Science University, Portland, OR

## sommario

- stakeholders
- posta elettronica
- ciclo richiesta risposta
  - standard della comunicazione informatica
  - applicazione standard: IHE
- programma UK informatizzazione NHS
- deragliamenti del ciclo



## Counselling

- Ore 17.15-18.15 “La comunicazione in Sanita’: stili di comunicazione”  
**Giovanni Casiraghi**
- Ore 18.15-19.15 “La comunicazione in differita: il supporto informatico e telematico”  
**Marco Pradella**
- Ore 11.15-12.15 “La relazione con il paziente nella comunicazione della diagnosi”  
**Lara Bancheri**

... per saperne di più ...



[www.LABMEDICO.it](http://www.LABMEDICO.it)

BITMEDICO LABSTATISTICA

LABSITI LABGOVERNO LABLIBRI

LABRISCHIO



[www.CISMEL.it](http://www.CISMEL.it)

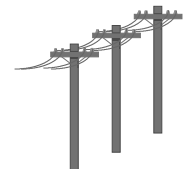
[www.SIMEL.it](http://www.SIMEL.it)

- gruppo Informatica
- gruppo Risk Management
- news: standard - linee guida



## sommario

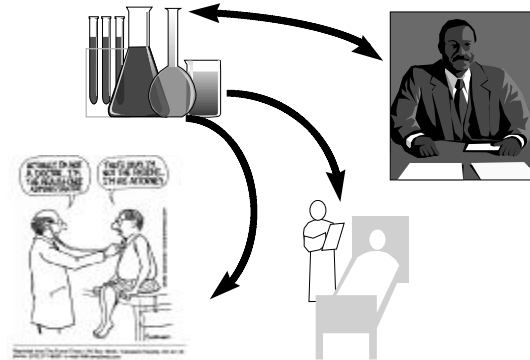
- stakeholders
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## stakeholder

- chi tiene la posta di due scommettitori e deve consegnarla al vincitore
- chi sarà influenzato dal progetto o può influenzarlo ma non è coinvolto direttamente
- promotori di etica nel servizio e di rispetto delle regole

## scienza, clienti, stakeholders



## laboratori e contratto dei medici di famiglia

- P J Twomey<sup>1</sup>, A S Wierzbicki<sup>2</sup> and T M Reynolds, Chemical pathology and the new contract for GPs. *Journal of Clinical Pathology* 2004;57:1022-1024
- **Clinical quality indicators comprise 550 of the 1050 points and 91 directly involve results of tests carried out in chemical pathology**
- **at least 33 points indirectly involve chemical pathology laboratories**
- **preanalytical, analytical, and postanalytical phases. Increased general practice requesting will present challenges at all three levels**

**Table 1 Clinical indicators, targets, maximum thresholds, and points for achieving targets that directly affect chemical pathology laboratories**  
Annex A code Clinical indicator and target Maximum threshold Points  
(P J Twomey<sup>1</sup>, A S Wierzbicki<sup>2</sup> and T M Reynolds, Chemical pathology and the new contract for GPs. *Journal of Clinical Pathology* 2004;57:1022-1024)

CHD 7	The percentage of patients with CHD whose notes have a record of total cholesterol in the previous 15 months	90%	7
CHD 8	The percentage of patients with CHD whose last measured total cholesterol (measured in the last 15 months) is 5 mmol/l or less	60%	16
Stroke 7	The percentage of patients with TIA or stroke who have a record of total cholesterol in the past 15 months	90%	2
Stroke 8	The percentage of patients with TIA or stroke whose last measured total cholesterol (measured in the past 15 months) is 5 mmol/l or less	60%	5
DM 5	The percentage of patients with diabetes who have a record of HbA1C or equivalent in the past 15 months	90%	3
DM 6	The percentage of patients with diabetes in whom the last HbA1C was 7.4 or less in the past 15 months	50%	16
DM 7	The percentage of patients with diabetes in whom the last HbA1C was 10.0 or less in the past 15 months	85%	11
DM 13	The percentage of patients with diabetes who have a record of microalbuminuria testing in the past 15 months (exception, reporting for patients with proteinuria)	90%	3
DM 14	The percentage of patients with diabetes who have a record of serum creatinine testing in the past 15 months	90%	3
DM 16	The percentage of patients with diabetes who have a record of total cholesterol in the past 15 months	90%	3
DM 17	The percentage of patients with diabetes whose last measured total cholesterol within the past 15 months was 5 or less	60%	6
Thyroid 2	The percentage of patients with hypothyroidism with thyroid function tests recorded in the past 15 months	90%	6
MH 3	The percentage of patients on lithium treatment with a record of lithium concentrations checked within the past 6 months	90%	3
MH 4	The percentage of patients on lithium treatment with a record of serum creatinine and TSH in the preceding 15 months	90%	3
MH 5	The percentage of patients on lithium treatment with a record of lithium concentrations in the therapeutic range within the past 6 months	70%	5

**Table 2 Clinical indicators, targets, maximum thresholds, and points for achieving targets that will probably indirectly affect chemical pathology laboratories**

Annex A code Clinical indicator and target Maximum threshold Points  
(P J Twomey<sup>1</sup>, A S Wierzbicki<sup>2</sup> and T M Reynolds, Chemical pathology and the new contract for GPs. *Journal of Clinical Pathology* 2004;57:1022-1024)

CHD 11	The percentage of patients with a history of myocardial infarction (diagnosed after 1 April 2003) who are currently treated with an ACE inhibitor	70%	7
LVD 3	The percentage of patients with a diagnosis of CHD and left ventricular dysfunction who are currently treated with ACE inhibitors (or A2 antagonists)	70%	10
BP 1	The practice can produce a register of patients with established hypertension	9	
DM 15	The percentage of patients with diabetes with proteinuria or microalbuminuria who are treated with ACE inhibitors (or A2 antagonists)	70%	3
Epilepsy 3	The percentage of patients aged 16 and over on drug treatment for epilepsy who have a record of medication review in the previous 15 months	90%	4

## GPs e fase pre-analitica

• P J Twomey<sup>1</sup>, A S Wierzbicki<sup>2</sup> and T M Reynolds, Chemical pathology and the new contract for GPs. *Journal of Clinical Pathology* 2004;57:1022-1024

- Multidiscipline forms
- document what tests have been requested
- reduce the number of errors, produce an audit trail,
- frequency of collections
- weekday delivery after 16:00

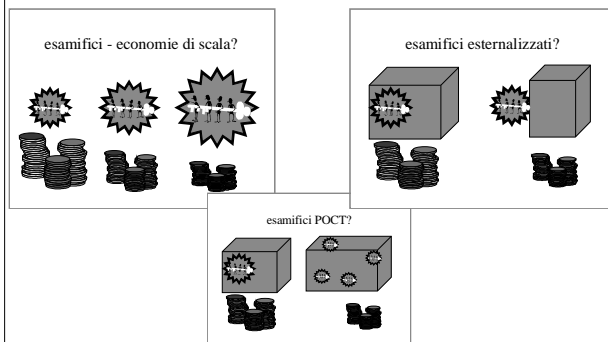
## GPs e fase post-analitica

- P J Twomey1, A S Wierzbicki2 and T M Reynolds. Chemical pathology and the new contract for GPs. *Journal of Clinical Pathology* 2004;57:1022-1024
- recording within primary care of specific results
- Lack of patient compliance for phlebotomy and medication
- call/recall systems in advance of the required time span
- results from secondary care transferred to primary care
- encryption of personal information
- reporting of grossly abnormal results
- reporting of results after 17:00
- out of hours service (after 18:30)
- increased requirement for clinical liaison, clinical advice, and clinical audit

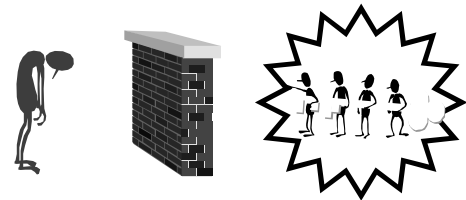
## contratto GPs: le conseguenze

- P J Twomey1, A S Wierzbicki2 and T M Reynolds. Chemical pathology and the new contract for GPs. *Journal of Clinical Pathology* 2004;57:1022-1024
- chemical pathology will probably have a large **increase in workload** as a result of the new GMS contract. ... important consequences on **staffing levels, instrumentation, and the financial requirements** involved. ... financial implications for chemical pathology laboratories and it is not clear where this **extra funding** will come from.
- ... ensure that **excellent IT links** exist between laboratory information system and general practitioner IT systems. ... However, technological advances also cost money and, as with the increased requesting, it is not clear whether **extra money** will be available to pay for this, especially because some see laboratories as already being "awash with modern IT systems".

## laboratori o esami?!

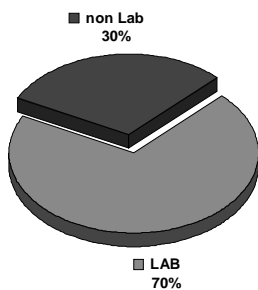


## esamifici: sindrome non-non?



*Pradella M. Italian laboratories - neither one thing, nor the other. The neither-nor syndrome. Acp news 2003;Spring:13-4*

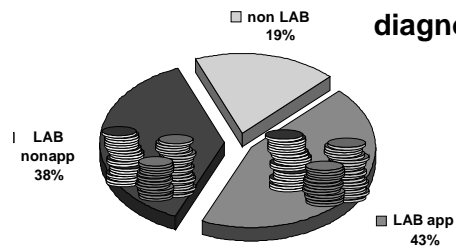
## dimensioni del fenomeno



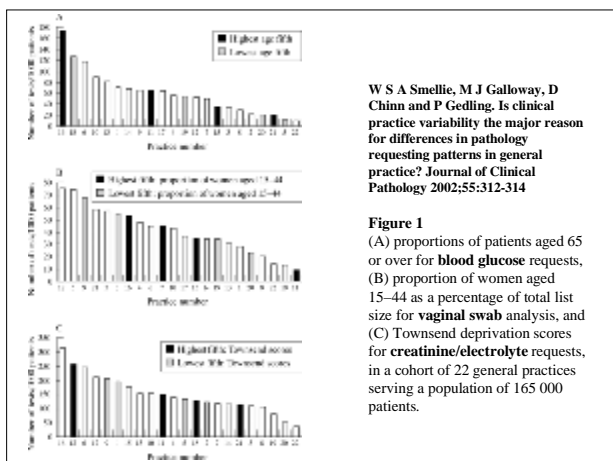
### diagnosi

The role of the private sector in the NHS. Paragraph 141. <http://www.parliament.thestatestationary-office.co.uk/pa/cm200102/cmselect/cmhealth/308/30802.htm>.

## dimensioni del fenomeno

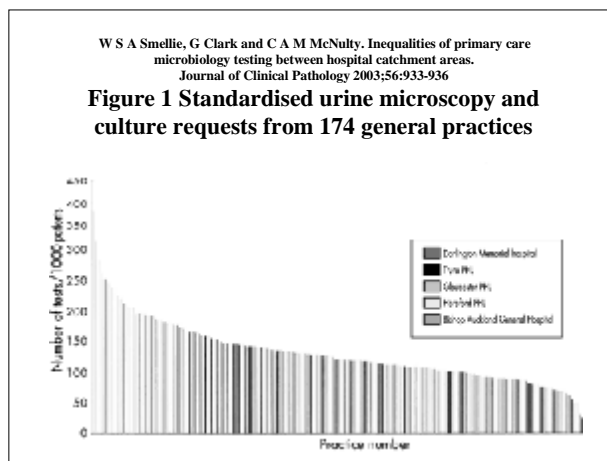


### diagnosi



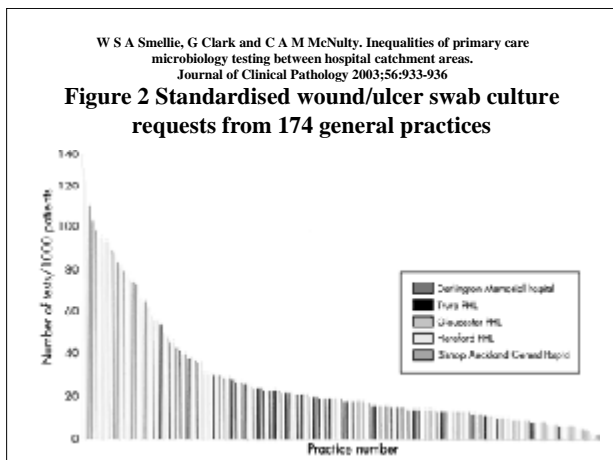
W S A Smellie, M J Galloway, D Chinn and P Gedling. Is clinical practice variability the major reason for differences in pathology requesting patterns in general practice? *Journal of Clinical Pathology* 2002;55:312-314

**Figure 1**  
(A) proportions of patients aged 65 or over for **blood glucose** requests, (B) proportion of women aged 15-44 as a percentage of total list size for **vaginal swab** analysis, and (C) Townsend deprivation scores for **creatinine/electrolyte** requests, in a cohort of 22 general practices serving a population of 165 000 patients.



W S A Smellie, G Clark and C A M McNulty. Inequalities of primary care microbiology testing between hospital catchment areas. *Journal of Clinical Pathology* 2003;56:933-936

**Figure 2** Standardised wound/ulcer swab culture requests from 174 general practices



W S A Smellie, G Clark and C A M McNulty. Inequalities of primary care microbiology testing between hospital catchment areas. *Journal of Clinical Pathology* 2003;56:933-936

**Figure 3** Standardised wound/ulcer swab culture requests from 174 general practices

Wound	Hospital	Ulcer	Hospital	Overall	Hospital
150 (25-254)	Hensford	76 (24-110)	Darlington	226 (21-499)	Hensford
149 (45-222)	B Auck b	50 (14-121)	Tynemouth	99 (33-165)	B Auck b
123 (21-194)	B Auck b	21 (2-52)	Tynemouth	22 (21-23)	B Auck b
100 (19-194)	Darlington	16 (5-31)	B Auck b	95 (11-338)	Gateshead
117 (25-160)	Tynemouth	6 (2-23)	B Auck b	21 (2-48)	Tynemouth
114 (20-173)	Gateshead	11 (6-22)	Gateshead	19 (12-29)	Gateshead
87 (30-121)	Gateshead	10 (2-21)	Gateshead	17 (4-25)	Darlington
92 (32-121)	Gateshead	8 (3-29)	Gateshead	15 (5-25)	Gateshead
$p=0.000001$		$p=0.000001$		$p=0.000001$	
Throat	Hospital	Spots	Hospital	Faeces	Hospital
61 (10-106)	B Auck b	8 (2-27)	Hensford	25 (10-52)	Hensford
10 (1-54)	Hensford	7 (3-17)	Gateshead	10 (10-51)	B Auck b
4 (0-20)	B Auck b	7 (2-17)	B Auck b	14 (11-17)	B Auck b
7 (0-21)	Tynemouth	5 (3-23)	Tynemouth	15 (3-25)	Tynemouth
N/A	Darlington	5 (3-10)	Darlington	18 (8-22)	Darlington
N/A	Gateshead	4 (1-12)	Gateshead	10 (4-17)	Gateshead
N/A	Gateshead	3 (0-20)	Gateshead	8 (4-21)	Gateshead
N/A	Gateshead	2 (0-7)	Gateshead	7 (2-12)	Gateshead
$p=0.04$		$p=0.0001$		$p=0.000001$	

W S A Smellie, G Clark and C A M McNulty. Inequalities of primary care microbiology testing between hospital catchment areas. *Journal of Clinical Pathology* 2003;56:933-936.

**Figure 3** Median numbers of tests for each 1000 general practice list patients

W S A Smellie, M J Galloway, D Chinn and P Gedling. Is clinical practice variability the major reason for differences in pathology requesting patterns in general practice? *Journal of Clinical Pathology* 2002;55:312-314

**Take home messages**

- The large differences observed in general practice pathology requesting probably result mostly from individual variation in clinical practice
- Thus, peer review within the clinical governance framework of the primary care groups has the potential to modulate requesting, improve appropriateness, and target available resources more effectively, given suitable means of intervention

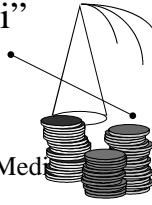
W S A Smellie, G Clark and C A M McNulty. Inequalities of primary care microbiology testing between hospital catchment areas. *Journal of Clinical Pathology* 2003;56:933-936

**Take home messages**

- There were large differences in the numbers of microbiology tests requested both within individual trust catchment areas in primary care and also between trusts
- Large and significant differences were found between hospitals, irrespective of whether they belonged to the same trust, and irrespective of their geographical location
- These inequalities may introduce a selection bias into epidemiological and antibiotic resistance surveillance
- The reasons for these differences should be investigated and dealt with

## esami “esoterici”

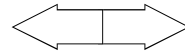
- St. John’s Health System
- NYU Medical Center
- Rush-Presbyterian St. Luke’s Medical Center
- Polly Ryon Memorial Hospital, Richmond, Texas



*Karen Lusky. Esoteric tests lighten hospital labs’ wallets. CAP Today July 2003*

## filtro per esami “esoterici”

- sospetto diagnostico e motivi urgenza indispensabilità - codice tariffario
- verifica dati disponibili
- richiesta al prescrittore
- verifica finale

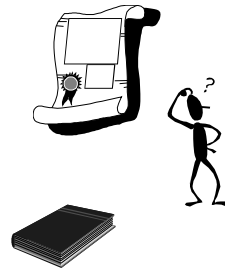


## esami “esoterici” frequenti

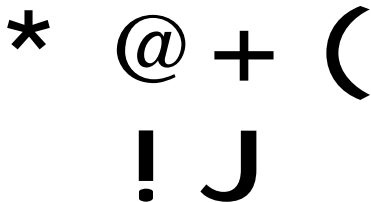
- anticorpi anti virus (pneumotropi, neurotropi, cardiotropi) e anti legionella
- sottoclassi delle IgG
- nuovi antiepilettici
- sali biliari
- lipoproteina (a)
- epatite delta
- catecolamine plasmatiche
- IgE per farmaci
- n-acetilglucosaminidasi
- CA-50
- SHBG
- estrone
- diidrotestosterone
- lipidogramma
- Waaler-Rose
- ACE
- BNP
- ADH
- acido sialico

## base di conoscenza

- linee guida
- clinici specialisti
- letteratura

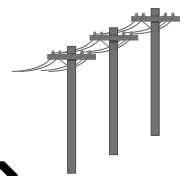


## risposte del prescrittore



## sommario

- stakeholders
- **posta elettronica in medicina**
- ciclo richiesta risposta
  - standard della comunicazione informatica
  - applicazione standard: IHE
- programma UK informatizzazione NHS
- deragliamenti del ciclo



## medicina in posta elettronica

- **...We find e-mail enquiries useful, since test results can be presented efficiently, saving clinical time and allowing a prompt, appropriate response...**

*Gordon C, Krimholtz M. E-mail and patients: a medicolegal minefield. Lancet 2003;362:1768*

## comunicazioni in medicina

- GPs welcome feedback
  - Jiwa M, Walters S, Mathers N. Referral letters to colorectal surgeons: the impact of peer-mediated feedback. *Br J Gen Pract.* 2004 Feb;54(499):123-6.
- GP satisfaction was high. Forty four per cent of the neurologist's time was saved compared with conventional consultation.
  - Patterson V, Humphreys J, Chua R. Email triage of new neurological outpatient referrals from general practice. *J Neurol Neurosurg Psychiatry.* 2004 Apr;75(4):617-20.
- ... digital camera ... transmitted by email ... Referral was judged to be beneficial in 24 cases (89%)
  - Vassallo DJ, Hoque F, Roberts MF, Patterson V, Swinfen P, Swinfen R. An evaluation of the first year's experience with a low-cost telemedicine link. in Bangladesh. *J Telemed Telecare.* 2001;7(3):125-38

## email in medicina

- once physicians and patients become comfortable with it, mutual satisfaction seems inevitable
  - Joseph E. Scherger, MD, MPH. Online Communication With Patients: Making It Work. *Fam Pract Manag* 11(4):73-74, 2004. <http://www.medscape.com/viewarticle/473693>
- asynchronous medium, email enables correspondents to respond at their own convenience in a time effective manner, averaging four minutes per email in one study... avoids the need to return missed telephone calls... cost effective ... less intimidating
  - R Al-Shahi, M Sadler, G Rees and D Bateman. The internet. *Journal of Neurology Neurosurgery and Psychiatry* 2002;73:619-628

## email e liste di attesa?

- consulenza specialistica
- consulto incrociato, verifica informazioni
- efficacia



## linee guida posta elettronica in medicina

- BEVERLEY KANE, MD, AND DANIEL Z. SANDS, MD, MPH, for the AMIA Internet Working Group, Task Force on Guidelines for the Use of Clinic--Patient Electronic Mail. **Guidelines for the Clinical Use of Electronic Mail with Patients. Journal of the American Medical Informatics Association, Volume 5, Number 1, Jan/Feb 1998**
- [http://www.amia.org/pubs/other/email\\_guidelines.html](http://www.amia.org/pubs/other/email_guidelines.html)

## Electronic Mail - Joint responsibilities

- Establish what the purpose(s) of email exchanges will be
- Establish the turnaround time expected of both doctor and patient (possibly depending on context)
- Avoid anger, sarcasm, criticism, and libellous references to third parties
- Use encryption to protect the privacy of email content

### Electronic Mail - responsabilità condivise

- stabilire scopo scambio email
- stabilire tempo di risposta (medico e paziente)
- evitare ira, sarcasmo, critiche, riferimenti ironici a terzi
- crittografia per proteggere privacy

### Electronic Mail - The doctor's responsibilities

- Ensure the patient is aware of security and confidentiality issues
- Obtain the patient's informed consent for the use of email, specifying your terms
- Protect access to your email inbox and your screensaver with passwords
- Do not distribute a patient's email to third parties, unless they have agreed to it
- Use an electronic signature and a header to warn about privacy issues
- Set up an automatic reply to confirm receipt of patient's email
- File printouts of all email correspondence in the medical record
- Back up your email folders weekly
- Maintain an address book of patients who can be (anonymously) mass mailed in the event of technical problems

### Electronic Mail - responsabilità medico

- consapevolezza paziente elementi sicurezza e riservatezza
- consenso informato
- protezione email posta in arrivo e screensaver con pw
- non distribuire indirizzo email a terzi
- usare marchio-firma elettronica e testatina con avviso privacy
- risposta automatica per conferma ricezione-lettura
- allegare stampa email in cartella
- back-up settimanale
- mantenere mailing list per annunci collettivi (problemi tecnici)

### Electronic Mail - The patient's responsibilities

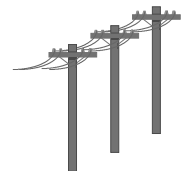
- Categorise the email in its subject heading
- Use identifying information (such as a hospital number) in the body of the email
- Use an electronic signature
- Acknowledge receipt of doctor's reply

### Electronic Mail - responsabilità paziente

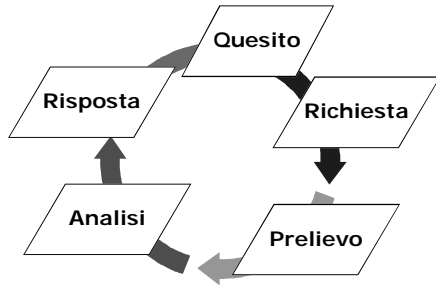
- classificare messaggio con oggetto
- usare informazioni identificative (tessera sanitaria, numero ricovero) nel corpo
- usare marchio-firma elettronica
- comunicare ricezione della risposta del medico

### sommario

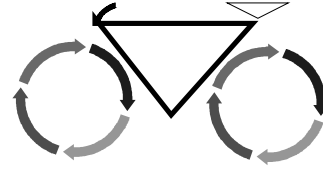
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- deragliamenti del ciclo



## il ciclo richiesta-risposta



## il ciclo richiesta-risposta



## The Request-Report Cycle

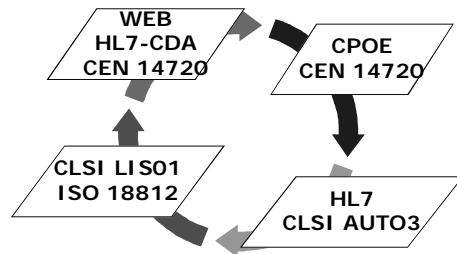
## The Request-Report Cycle: Are the wheels coming off?



*Dr Jonathan Kay*  
*jonathan.kay@ndcls.ox.ac.uk*

CPD4IT 'Getting ahead of the IT Curve'  
Monday, 18 October 2004

## “... connettività ...”



?... chiavi in mano ...?



## geografia della normazione

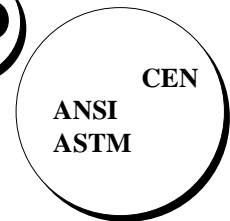
[www.ANSI.org](http://www.ANSI.org)

[www.ASTM.org](http://www.ASTM.org)

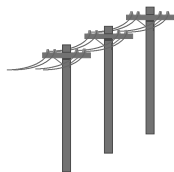
[www.ISO.org](http://www.ISO.org)

[www.CENORM.be](http://www.CENORM.be)

[www.UNI.com](http://www.UNI.com)



## sommario



- stakeholders
- posta elettronica in medicina
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- deragliamenti del ciclo

## Recenti per Informatica

- prEN 14720:2003 service request report
- prEN 12251:2003 password
- ISO/IEC 17113:2003 sviluppo messaggi
- ISO/IEC 18812:2003 interfaccia analizzatore
- ISO/DIS 17115:2005 vocabulary
- ISO/IEC 17799:2005 security
- prEN 12264:2005 strutture concetti
- prEN 1614:2005 nomenclatura laboratorio

## CLSI-NCCLS - Laboratory automation

- AUTO1 contenitore carrier
- AUTO2 codice barre
- AUTO3 comunicazioni strumenti
- AUTO4 cruscotto sistemi
- AUTO5 interfacce elettromeccaniche
- AUTO6 poct (ora POCT01)
- AUTO7 identificazione campione
- AUTO8 validazione LIS
- AUTO9 accesso remoto internet
- LIS01 interfaccia strumento
- POCT01 connettività point-of-care

## ISO/IS 17113:2004

### Method for Development of Messages *ISO TC215 WG2 methodology break out group*



- basato su
  - ISO 1087 “Terminology Vocabulary”
  - ENV 12264 “. . . representation of semantics”
- definizioni
  - actor . . . association . . . class . . . domain . . .
  - object . . . reference information model . . .

## CEN-TC 251: prEN 1614:2004



Health informatics - Structure for nomenclature, classification, and coding of properties in clinical laboratory sciences (*novembre 2004*)

- “. . . The need . . . increasing need for reliable communication between laboratory information systems and between laboratory and other health information systems. Previous work . . . motivated by restricted purposes such as reimbursement . . . not included critical analysis of the basic concepts and their relationships to existing standards and recommendations . . .”

## CEN-TC 251: prEN 1614:2004



Health informatics - Structure for nomenclature, classification, and coding of properties in clinical laboratory sciences (*novembre 2004*)

- “. . . bisogno di comunicazioni affidabili tra sistemi informatici di laboratorio e altri sistemi informatici. Gli strumenti precedenti . . . finalizzati a scopi specifici come il ~~tariffario~~ mancano di una analisi critica dei concetti base e delle relazioni con gli standard esistenti e le raccomandazioni . . .”

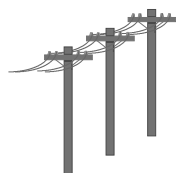
## prEN 1614: nomenclatura sistemática, ponte tra dialetti locali



## prEN 1614: nomenclatura

- NO
    - “test” “dosaggio”
    - “procedura di laboratorio”
  - SI
    - concetti metrologici
      - proprietà - caratteristica
      - quantità
      - sistema
      - componente
      - supersistema
- altri contenuti:*
- formato XML
  - Appendice A: IUPAC/IFCC - CQU(CC) Quantità e unità
  - Appendice B: nome sistemático di una proprietà
    - sistema
    - componente
    - proprietà / quantità
  - Appendice C: vocabolario terminologico
    - Es: scala nominale, ordinale, differenza, rapporto

## sommario



- stakeholders
- posta elettronica in medicina
- ciclo richiesta risposta
  - standard della comunicazione informatica
  - applicazione standard: IHE
- programma UK informatizzazione NHS
- deragliamento del ciclo

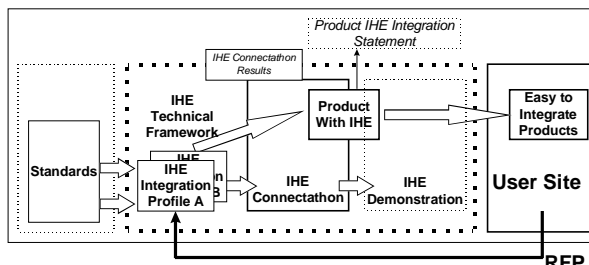


*Integrating the Laboratory into the Healthcare Enterprise*

## IHE norma guida

- iniziativa per promuovere l'integrazione dei sistemi informativi sanitari
- progetto sponsorizzato da RSNA, Radiological Society of North America e da HIMSS, Healthcare Information and Management Systems Society
- raccoglie gli sforzi congiunti di professionisti della sanità e produttori di apparecchiature diagnostiche, tesi **all'individuazione, alla documentazione ed alla dimostrazione di metodi standard di condivisione delle informazioni**, a supporto di una migliore assistenza sanitaria per il paziente.

## Un processo sperimentato per l'adozione di standard



- I profili di integrazione al cuore di IHE
- Selezione puntuale di standard ed opzioni per risolvere specifici problemi di integrazione
  - numero crescente di soluzioni efficaci concordate con i fornitori
  - Garanzie per fornitori e utilizzatori



## National Programme for IT

Julie Clifton  
Head of Stakeholder  
Engagement  
October 04

### In 2003-2004:

- there were **325 million** consultations with GPs or nurses in primary care
- **13.3 million** people attended a first outpatient appointment with a consultant
- nearly **13.9 million** people attended A&E and there were **4.2 million** emergency admissions
- over **5.4 million** people were admitted to hospital for planned treatment
- over **649 million** prescription items were dispensed in the community
- **6.4 million** calls were made to NHS Direct
- **6.5 million** hits to NHS Direct Online
- over **1.5 million** patients visited walk-in centres

Source: Chief Executive's Report to the NHS, May 2004

### Looking forward

2006

- Support for all doctors and nurses to help with decisions
- Electronic prescribing
- Care at home helped by remote links to healthcare professionals anywhere in the community
- Better healthcare planning by using the facts and figures held on NHS CRS
- Electronic Transmission of Prescriptions fully implemented

2008

### Looking forward

2008

- Final phase of NHS CRS - full integration between health and social care systems across England

2010

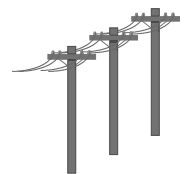
## NP4IT - Position paper on Pathology needs

- |   |  |
|---|--|
| @ valori di riferimento                         | @ tessera sanitaria in tutte le richieste      |
| @ medico curante                                | @ ricerche per contesto conservazione archivio |
| @ valori numerici e alfanumerici                | @ KB scopo e utilità esami                     |
| @ errori anagrafiche                            | @ codici per contenitori e per profili         |
| @ codice a barre richieste, risposte e campioni | @ . . .  |

Rick Jones, Leeds, & ACB-IT workgroup, maggio 2005

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## The Request-Report Cycle: Are the wheels coming off?



Dr Jonathan Kay

jonathan.kay@ndcls.ox.ac.uk

CPD4IT 'Getting ahead of the IT Curve'  
Monday, 18 October 2004

Jonathan Kay

## *Inevitable changes beyond our control*

### Increased discontinuities

- New models of healthcare provision
- Shorter working hours
- From doctors to nurses...

### Clinicians will have less experience...

- ... but more formal accreditation
- ... and a need for lifelong learning

### From clinicians to protocols...

- ... some of which might be evidence-based

### More investigations/ patient/ year

Jonathan Kay

## *Cambiamenti ineluttabili fuori dal nostro controllo*

### Discontinuità

- nuovi modelli assistenza
- riduzione ore di lavoro
- da medici a infermieri...

### Clinici con meno esperienza...

- ... ma più accreditamento formale
- ... e necessità di apprendimento continuo

### Dai clinici ai protocolli...

- ... solo alcuni basati su evidenza

### Più esami per paziente e per anno

Jonathan Kay

## *Problems with reports*

Do they get to the **right person** at the **right time**?

- Responsibility
- Choice of medium
- Timeliness (and QC of timeliness)

Are they **interpreted** appropriately?

Jonathan Kay

## *Problemi con risposte*

Alla persona giusta nel tempo giusto?

- Responsabilità
- Mezzo di trasmissione
- Tempestività e QC della tempestività

Sono interpretate correttamente?

Jonathan Kay

## *Reports*

- Results and **knowledge**

### • access

- Paper
- Computer access
- Browser access

- “Push” and “pull” (and **continuity** of care)

- Escalation (and **continuity** of care)

- **Mobile** devices

Jonathan Kay

## Risposte

- risultati e conoscenza
- **accesso**
  - carta
  - computer
  - browser (intranet)
- “spedizione” o “scarico” (==> **continuità assistenziale**)
- parziali e aggiunte (==> **continuità assistenziale**)
- **dispositivi mobili**

Jonathan Kay

## Hyperlinking knowledge to reports

- Can deliver **content appropriate** to task
- Can deliver **volume** of information appropriate to task
- Web technology
- Browser access to reports
- Databases of knowledge
- Hyperlinking from the current process to the knowledge
- Compare canned comments and hyperlinking

Jonathan Kay

## iper-collegamento conoscenza-risposta

- contenuto appropriato per utilizzo
- volume appropriato per utilizzo
- tecnologia Web
- risposte via Browser
- banche dati conoscenza
- collegamento dal flusso corrente alla conoscenza
- comparazione commenti allegati e hyperlink

Test	Results	Units	Range	Help	Cum
GLUCOSE	13.0	MMOL/L	3.0-5.5	✓	<input type="checkbox"/>
CALCIUM	1.85	MMOL/L	2.12-2.62	✓	<input type="checkbox"/>

This button produces a table of the results for the selected analytes

**Glucose**

**Critically Appraised Topics**

- [Glycated related to the hyperbolic](#)
- [Search the RCT database](#)

**Numbers Needed to Treat**

**Other Information**

- [Diabetic control](#)
- [Web site for diabetes of DR](#)

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**Handbook details**

**Causes of high glucose results**

**Causes of low glucose results**

Increased cellular glucose uptake  
 • Insulin, insulin resistance, and long-term diabetes control  
 • Insulin, Thiazolidinediones (TZDs)

Decreased insulin response (type 2 diabetes, long-term diabetes)  
 • Insulin resistance, plasma lipoprotein levels, especially  
 • HDL cholesterol, and triglyceride levels

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Jonathan Kay

## Oxford Clinical Intranet

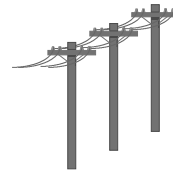
- Provides both support information and components of the patient record
- User experiences
- Current development issues:
  - Extension to primary care
  - Handheld wireless-networked computers
  - Automated linkage of advice to the patient record
- <http://oxmedinfo.jr2.ox.ac.uk/>

... risultati e conoscenza ...

- immunologia infezioni materno-fetali
- autoanticorpi
- antibiogrammi
- germi sentinella
- emocitometria
- sodio/acqua - acido/base
- esami esoterici
- non-conformità
- ...

riepilogo

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... per saperne di più ...



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- gruppo Informatica
- gruppo Risk Management
- news: standard - linee guida

