

# **The role of standards in improving data quality**

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**Health Information and Quality Authority**

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**Ensuring consistent data quality  
is not easy!**





***Healthcare is  
information intensive***

<p>Barcode: [Barcode]</p> <p>Allergies/Intolerances: <i>None</i></p>		<p>DRUG</p>	<p>REACTION</p>	
<p>Admission Date: <i>10/06/12</i></p> <p>Consultant: <i>Hyndman</i></p> <p>Reason for Admission: <i>Liquid AF</i></p>		<p>Weight: <i>106kg</i></p> <p>Ward: <i>703</i></p>		
<p>Relevant PMH</p> <p><i>Chol</i> <i>GAH</i> <i>Ch Bladder</i></p> <p><i>Rev. admiss - 26/04</i> <i>→ treated w/ Dig</i> <i>- surgery due</i> <i>Surv.</i></p>		<p>Relevant Drug History</p> <p><i>Recently ↓ Digoxin</i> <i>↑ increased fildene</i> <i>Didn't take Dig upon</i> <i>leaving last admission!</i></p>		
<p>INITIAL MEDICAL PLAN</p> <p><i>Digoxin / 0.125</i> (to Digoxin) <i>I for Warfarin - Yes ✓</i></p>		<p>Drug-related Admission: (details)</p>		
<p>Social Circumstances: <i>Indep</i></p>		<p>Compliance Aid: <i>N/A</i></p>		
PATIENT CARE PROFILE				
No	Problems	Action Plan	Outcome	Completed Y/N
1	<i>Dig -</i> <i>(low dose → 0.125)</i>	<i>levels (monitor)</i>		
2	<i>Warfarin</i>	<i>educate</i> <i>book</i> <i>Monitor INR</i>		
ACTIVITIES				
Medication History	Medication Order Review	Clinical Review	ADR	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
TDM	Drug Information	Patient Drug Counselling	Community Liaison	

## Pharmacist notes

*Based on pre-printed  
template filled in for  
each patient*



Wed 27/4/00

<p>F.</p> <p>18</p> <p>18/4/00</p> <p>18/4/00</p>	<p>18/4/00 (C) peridol - 20 min/mob (1) night, 20 min/mob 20 min/mob 18/4/00</p> <p>PH: CVA, IHD, HT, osteoporosis #18/4/00</p>	<p>- assist 1 for bed mob - set to st &amp; assist 1-2 - mob on paper &amp; assist 1-2 - at balance with.</p> <p>Physiotherapy</p>	<p>✓</p> <p>✓</p> <p>✓</p>
<p>1 "18/4/00" 86</p> <p>(18/4/00)</p>	<p>21/4/00 (C) peridol - 20 min/mob (1) night, 20 min/mob 20 min/mob 18/4/00</p> <p>PH: CVA, IHD, HT, osteoporosis #18/4/00</p>	<p>assisted - active strengthening in (1) Vm + 2 sit to stand &amp; assist 1-2 the patient</p> <p>on going CP (Angela)</p>	<p>✓</p> <p>✓</p> <p>✓</p>
<p>U</p> <p>70</p>	<p>18/4/00 (C) peridol - 20 min/mob (1) night, 20 min/mob 20 min/mob 18/4/00</p> <p>PH: CVA, IHD, HT, osteoporosis #18/4/00</p>	<p>chest check st to st = assist 1 mob &amp; light assist 1-2 (residual (1) 18/4/00)</p> <p>PTA</p>	<p>✓</p> <p>✓</p> <p>✓</p>
<p>Ad Care</p> <p>Vik</p>	<p>30/3 (C) Vm (1) chronic osteoporosis (1) night, 20 min/mob 20 min/mob 18/4/00</p> <p>PH: CVA, IHD, HT, osteoporosis #18/4/00</p>	<p>CHLST - effective good angle; per gog (1) 18/4/00 No falls only.</p> <p>- set to st pins - mob on assist roller &amp; assist 1-2 - assisted active (1) Vm exp.</p> <p>PTA</p>	<p>✓</p> <p>✓</p> <p>✓</p>
<p>(Angela)</p>	<p>18/4/00 (C) peridol - 20 min/mob (1) night, 20 min/mob 20 min/mob 18/4/00</p> <p>PH: CVA, IHD, HT, osteoporosis #18/4/00</p>	<p>mob on assist 1-2 (1) 18/4/00 set to st &amp; assist 1-2 (1) 18/4/00 better on floor oblique tubing up</p>	<p>✓</p> <p>✓</p> <p>✓</p>

# Physio ward-book

Ticks indicate tasks to be performed;  
Crosses tasks completed

# Management plan

## POST TAKE WARD ROUND

### MANAGEMENT PLAN

Date 9/5/00 Time 0810  
 Diagnosis community acquired pneumonia : myeloma  
 Active Medical Problems not applicable

#### Investigations and Management Plan

Anticipated Date of Discharge 14-15/5

Signature: \_\_\_\_\_ Print: \_\_\_\_\_

Nursing Management Plan		Allergies:	
Date	<u>9.5.00</u>	Time	<u>0145</u>
		Shift	<u>NI</u>
Observations:	Temp <u>4/24</u>	BP	HR
	Other: <u>On sat 9/24</u>		
Diet:	<u>Normal</u>	Mobility:	<u>Assist</u>
Venous Access: IVC - No <input checked="" type="checkbox"/> Yes <input type="checkbox"/>		Date Inserted:	<u>9.5.00</u>
		Sites:	<u>R arm</u>
Other:	<u>MSU. Needs repeat wt. <input checked="" type="checkbox"/> WTV <input checked="" type="checkbox"/></u>		
Signature: _____		Print: _____	

## PROGRESS NOTES

U.R. ? how many to 36  
 Surname \_\_\_\_\_  
 Given Name 785  
 Date of Birth \_\_\_\_\_ M ☐ F ☐

DL Pro Bleeds resp M-Thur  
85 F 1915  
Su hankan lady  
trachoma, lachrym  
amb acid heart  
Myeloma Cx WTV MRI  
P.M. other distal disease  
causes to constipation, urinary retention, acidotic on metop  
Good chaw TTK physio when 1 sig black offensive stool  
better. > surgery  
(5) P. confusion WA ? TIA on EEG MRI ?  
unradiation for ? tumour anticonvulsant  
dissecting aortic arch 12 mths MMSE  
Ritalinic CII astrocytic glioma ? WAT  
(3) RII pneumonia 9/6 pod cough IVC  
lygout, AF LUF.

(M) ? epilepsy falls fx unable to open W15  
base lines 1/2 wife this train multifactorial fall 3/18  
1/2 CVA 95 hypothyroid don't DC fac SIW physio  
haematologist to RIV

(2) L sided weakness base 1/2 wife drove  
1/2 input by ego MI strep apnea diagnosis T.B.  
1/2 CVA 95 hypothyroid don't DC fac SIW physio  
1/2 CVA 95 hypothyroid don't DC fac SIW physio

(2) RUC man banden CIA causing respirat  
side completely unresponsive monitored  
need of comp measures NAC WTV

C198

## Case manager notes



- ***Individuals with views***
- *Integrating multiple working forms*
- *Transformations between forms*

	DIAGNOSIS	AGE	IV	GENERAL NOTES
1	<del>HTN</del> AF	78	<del>IVC</del>	IVC physio r/v HTN OA dxn
2	Imob UTI falls back pain	88		stool spec.
3	Imob 2° Crack Pain	81		HTN demulsiom. hearing
4	R/CVA mlt CP UTI	86		ACAT CA bowel HTN OA Arthritis
5	1. <del>HTN</del> 2. <del>HTN</del> 3. <del>HTN</del>	26	IVC 10/24 AB	HTN HTN dem CA breast graft initially imp
6	<del>HTN</del> <del>HTN</del> <del>HTN</del>	39	dep	Scoliosis congenital hypertonic pelvic U/S 10/24 stomach pain feet transfusion AAHase. 10/24
7	NFR DLOC UTI + skinnum fibros	73		oculomotor 100 sic 10/24 oligod CA hyperalbumin
8	S/S R/CVA 10/24	71		GAIRU shuttle veh
9	\$300.00 in OD cuphead	90		UTI walker ordered
10	R facial weakness trigeminal neuralgia	80		shingles over the face stomach
11	L/CVA	80		HTN body picemaker
12	UTI conf dep	91		CCF HTN OA dxn
13	DXV PA skin grafts Vacuum Ok	19		metronidazole
14	NFR Hacerabium mi multi lobe pne sepsis	78	picc 10/24	Sevin Munch PD D2 6L 10L BNO'S
15	P falls supranuclear palsy	76		dysphasia facial o/s 100
16	PR CVA TIA in ex brown med basis	87		DIC OT assess HTN TIA's hypothyroidism
17	in a COAD esm bowel obstruct	81	NEM 24/24 10/24	D2 1.5L vom 10/24 COAD c const HTN AF
18	Up video test	30	IVC	



## Ward overview

### Nurse's changeover report



# *Flexibility & adaptability...*

GAL

## NURSES WORK SHEET

NAME: .....

0900 SPONGING	1000 TOILET	1100 FEEDING	1200 P.A.C.	1300 OBSERVATION	M
	1DC 950ML		1DC		

*Tailorable - supports individual preferences*

# FOOD/FLUID CHART

Ward .

TRIAL  
DOCUMENT

Patient Details Sticker

Mrs [redacted]

Day: FRIDAY	Date: 5-5-00
Breakfast: All egg - All porridge All juice.	
Lunch:	
Dinner: Thick juice 200mls / Thick juice 200mls Mustard 100mls main meals 4 deserts	
Day: SAT	Date: 6-5-00
Breakfast: All porridge, all pureed fruit, 2 tabs <sup>2</sup> yoghurt.	
Lunch: <sup>3</sup> / <sub>4</sub> main meal 150ml Thick milk, all dessert mustard + 75mls Thick juice	
Dinner: Thick juice 200mls 200mls thick cordial, 1/2 main meal	
Day: SUNDAY	Date: 7-5-00
Breakfast: All thick milk Refused rest	

*Supports local practice & rapid prototyping*

ITEM CODE: 10825

<h1>STOOL CHART</h1> <p>PROGRESS NOTES</p>	U.R.
	Surname
	Given Names
	Date of Birth    /    /    M <input type="checkbox"/> F <input type="checkbox"/>

NOTES BY CLINICAL STAFF			
Date	Time	Description	+ve/-ve
26-4-00.	0915.	Moderate amt Black Semi Formed Stool.	not tested
	1350.	Large Amt. Black Semi Formed. not tested Stool.	
	1700	Large amt. Black Semi formed Stool	+ blood
27-4-00	00 <sup>00</sup>	Soft - unformed stool Black - small	
	1330		

PROGRESS

*Adaptable - supports local responsiveness*



[illegible]

# Information flow from point of care to national database



## **Hospital Doctors**

*When a patient is discharged, hospital doctor completes discharge summary with details of patient's condition and care and sends to GP*



## **Patient's GP**

*The main aim of the discharge letter is to communicate with the GP, and is also available to the coder.*



## **Coder**

*Coder translates details in discharge summary into ICD-10 for HIPE*



## **Statisticians**

*Information in HIPE is used for case mix, research, epidemiology, planning,.....*

# Overview

- The role of the Health Information and Quality Authority
- National Standards for Safer Better Healthcare
  - Information Governance
- Data quality
  - Definition
  - Dimensions
  - Seven essentials for improving data quality
- Concluding remarks



# Remit

**To drive continuous improvements  
in the quality and safety of health  
and social care in Ireland**

# Background

- Interim Authority
- Health Act 2007, establishment 15 May 2007
- Independent - reporting to Ministers for Health and for Children and Youth Affairs
- Person-centred ethos of “working with” not “doing to”

# Our role

- Setting Standards
- Monitoring Quality and Safety in Healthcare
- Inspecting Social Services
- Health Technology Assessment
- Health Information



# The Health Information function

- Develop standards for the collection and sharing of information across the health and social services
- Develop standards for interoperability of information systems
- Identify gaps in the collection and sharing of information and make recommendations on the corrective action to be taken
- Collaborate with key stakeholders to co-drive the development and implementation of ICT across the health system
- Evaluate, interpret and publish available information on our health and social care services and on population health

# Standards and Guidance completed

- Draft Standards for National Health Information Resources
- Identifiers for individuals, professionals and organisations
- Key performance indicators
- Privacy Impact Assessment
- Technical Standards
  - GP referrals, GP messaging, eHealth interoperability standards
- Information Governance (IG)
  - Guidance on IG, booklet on IG and data quality

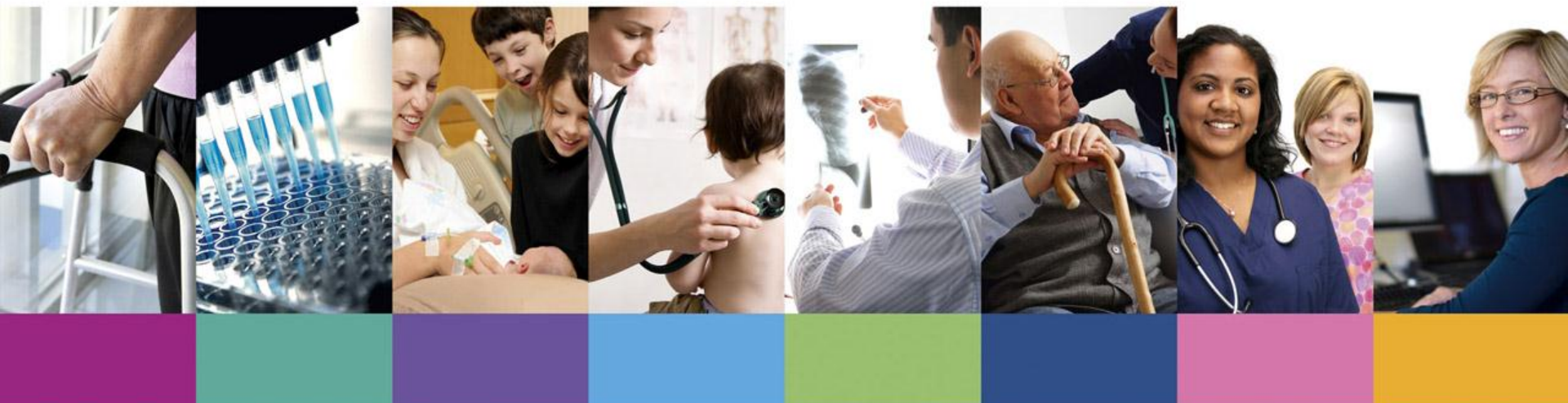
## Key information principles

- Create once, use many times
- Trust and confidence
- Ensure that information shared can be mutually understood



# Standards and data quality

- National Standards for Safer Better Healthcare
- Data dictionary/standard data sets
- Terminology and coding standards
- Messaging standards



# National Standards for **Safer Better Healthcare**

Effective June 2012

## Background

- In Ireland, like other countries, there are many examples of good healthcare
- However there are also some examples of services users being let down by the quality and safety of the service they receive
- Internationally standards are recognised as important in driving the quality and safety of healthcare services

# Quality Dimensions

A quality service focuses on:

*Person-Centred Care and Support*

*Effective Care and Support*

*Safe Care and Support*

*Better Health and Wellbeing*



# Delivering the Quality Dimensions

Delivering improvements within the quality dimensions depends on **capability and capacity** in four key areas:

Leadership, Governance and Management

Workforce

Use of Resources

**Use of Information**

# Scope of the National Standards

- The National Standards have been designed so that they can apply to all healthcare services
- The Health Act 2007 provides for monitoring of all services provided by or funded by the HSE
- Private providers voluntarily adopting the National Standards for Safer Better Healthcare
- Future basis of licensing



**National  
Standards for  
Safer Better  
Healthcare**

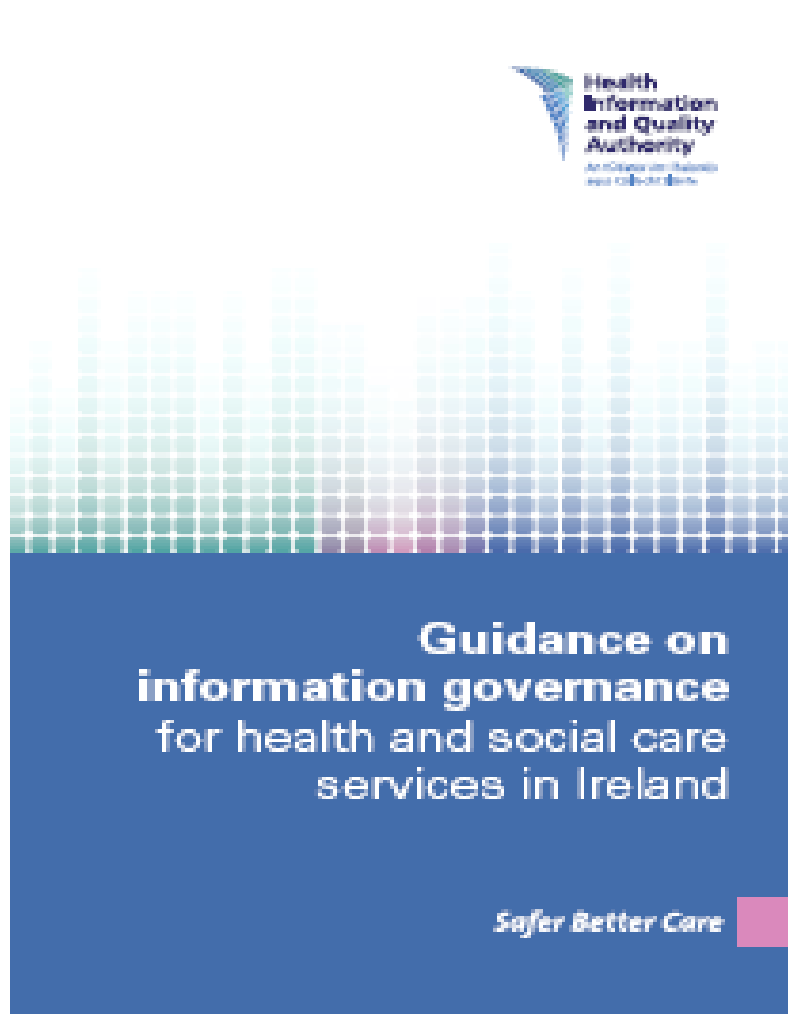
## Theme 8: Use of Information

Services meeting these standards:

- use quality information in managing and delivering healthcare
- have effective information governance
- manage their healthcare records effectively



# Guidance on information governance for health and social care services in Ireland



Published in September 2012

# What is information governance?

- IG provides a means of bringing together all the relevant legislation, guidance and evidence based practice that apply to the handling of information in order to facilitate
  - the collection of high quality data
  - the maintenance of privacy and confidentiality of service users
  - information being held securely
  - the appropriate safeguards for the secondary use of information

# Different users of data



GP



Hospital  
Consultant



Hospital  
Management



Multidisciplinary  
Team



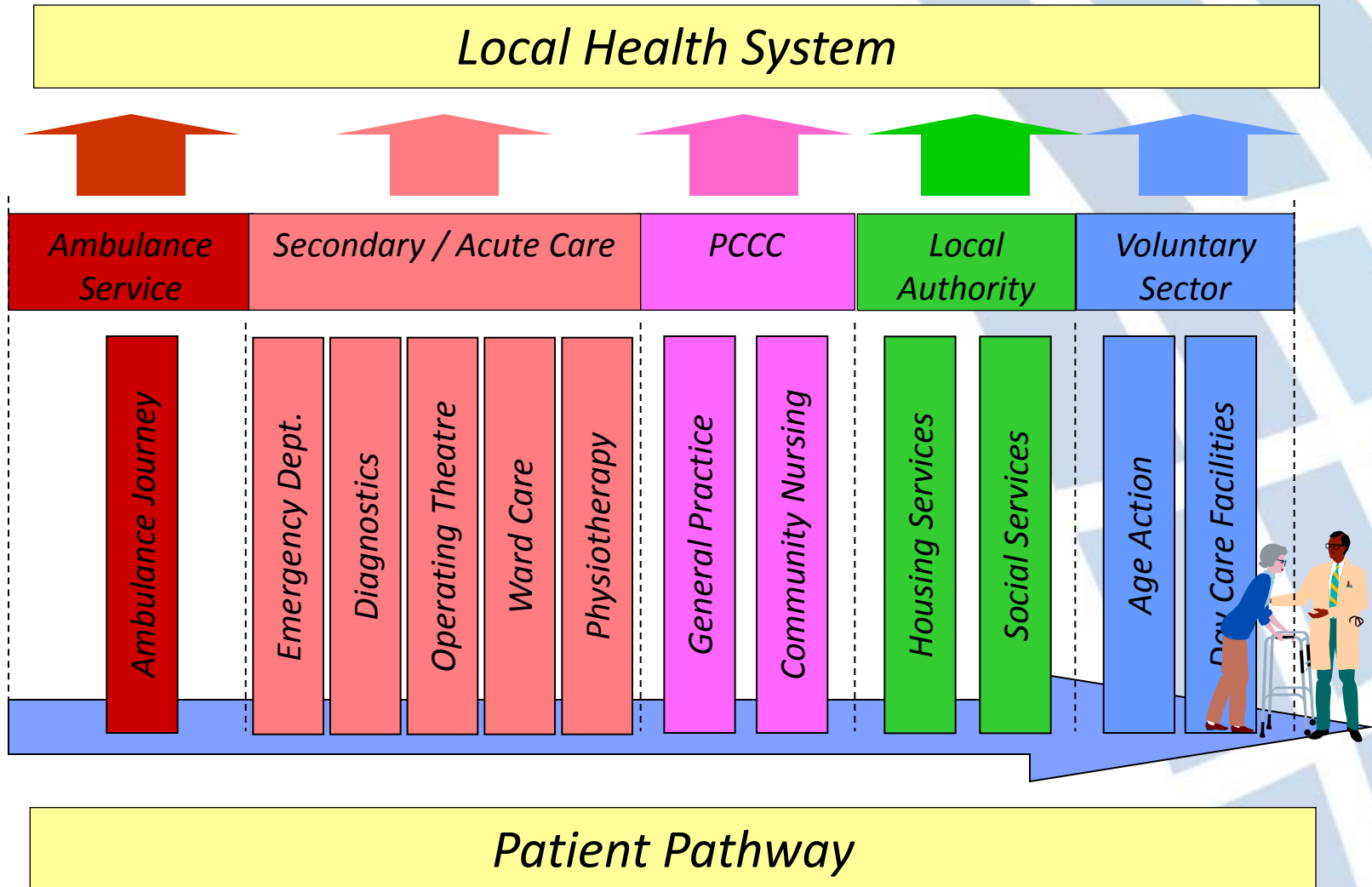
HIPE

Department  
of Health

Primary Data Use

Secondary  
Data Use

# Information flows the wrong way





## Purpose of the IG guidance

- To support senior managers working in health and social care to collect, analyse, use and share personal health information legally, securely, effectively and efficiently
- To assist service providers in achieving compliance with the National Standards for Safer Better Healthcare
- Provide examples of what good information governance looks like in practice and provide guidance for implementing the structures necessary to support information governance

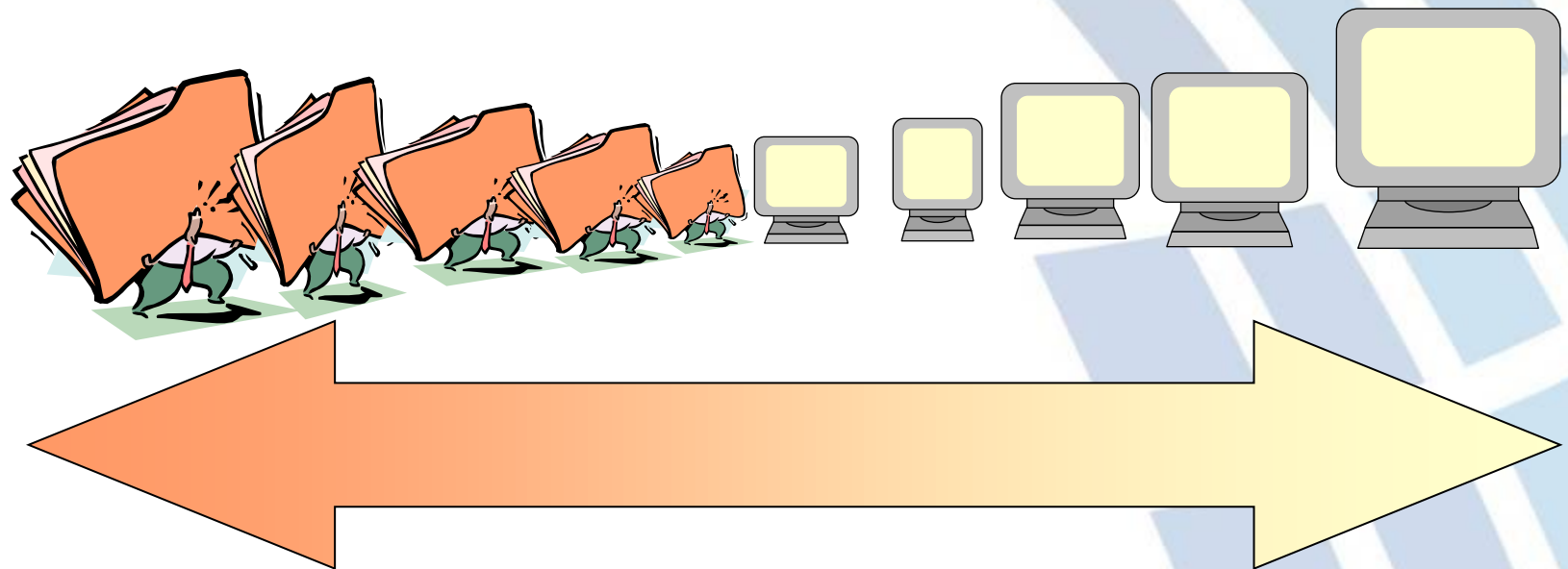
## What the guidance covers contd.

- Privacy and confidentiality
  - Statement of Information Practices
- Information security
  - ISO standards
- Secondary use of information
  - Types of secondary use
  - Consent

- **Data quality**

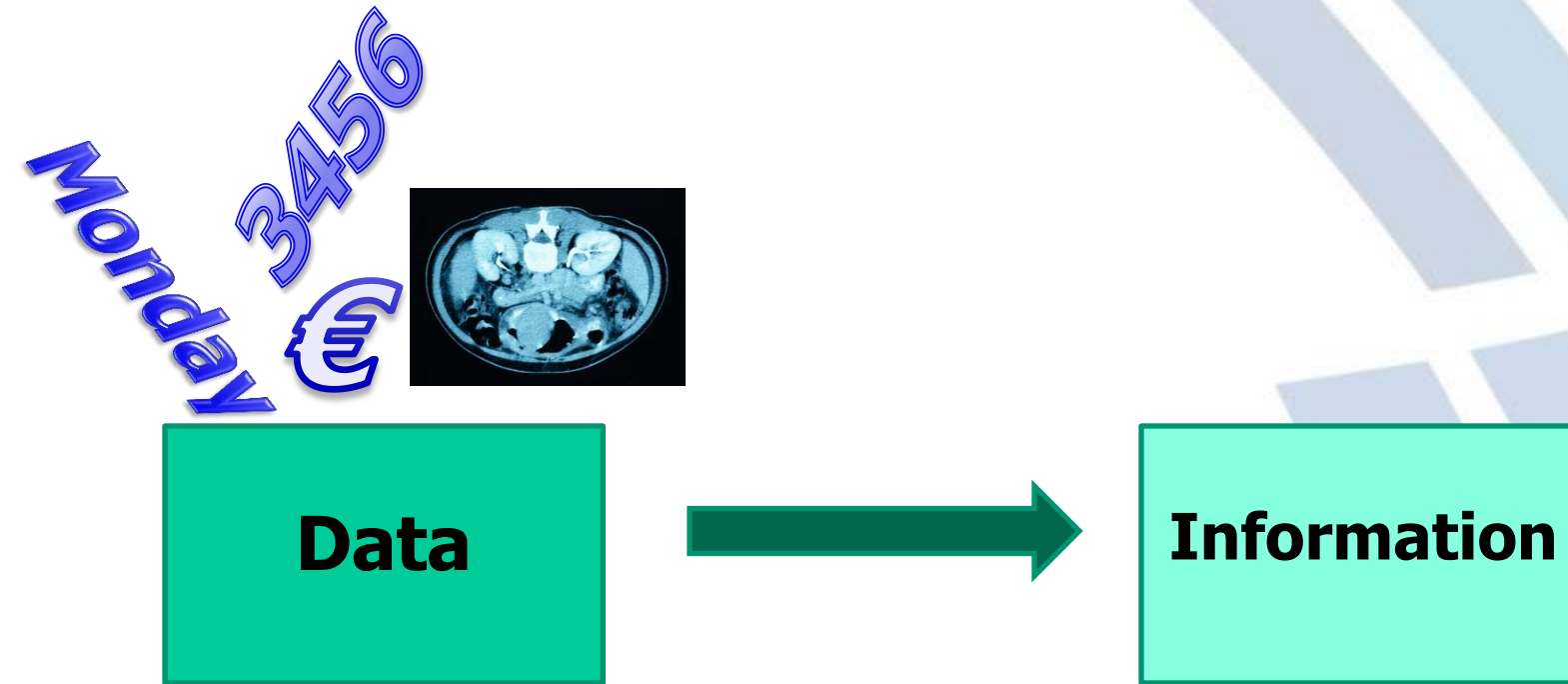
**Ensuring consistent data quality  
is not easy!**

# Paper vs electronic: a continuum





# What is data quality?



**Data quality is about having confidence in the quality of the data you record and the data you use.**

## Definition of data quality

- the totality of features and characteristics of a data set that bear on its ability to satisfy the needs that result from the intended use of the data (Arts et al, 2002)
- data that is fit for purpose or fit for use
- depends on context

# Dimensions of Data Quality



# Seven essentials for improving data quality





# Make data available





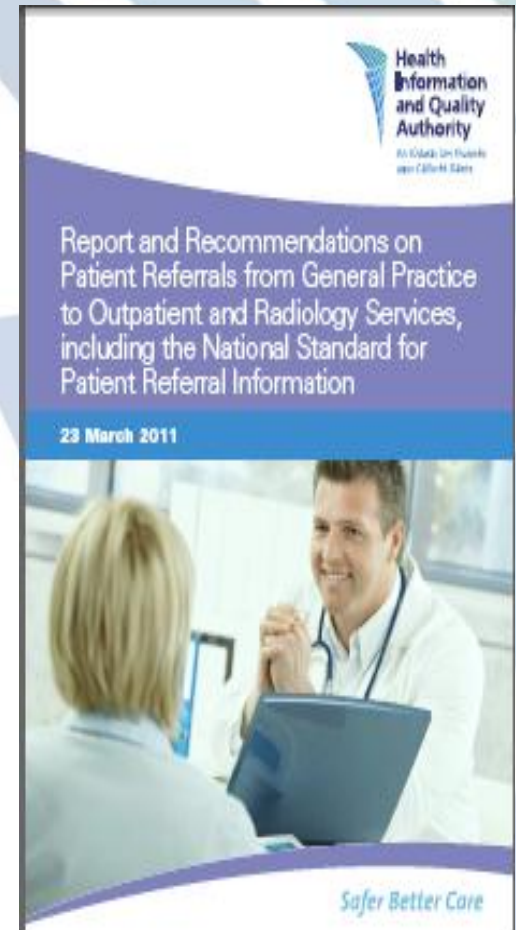
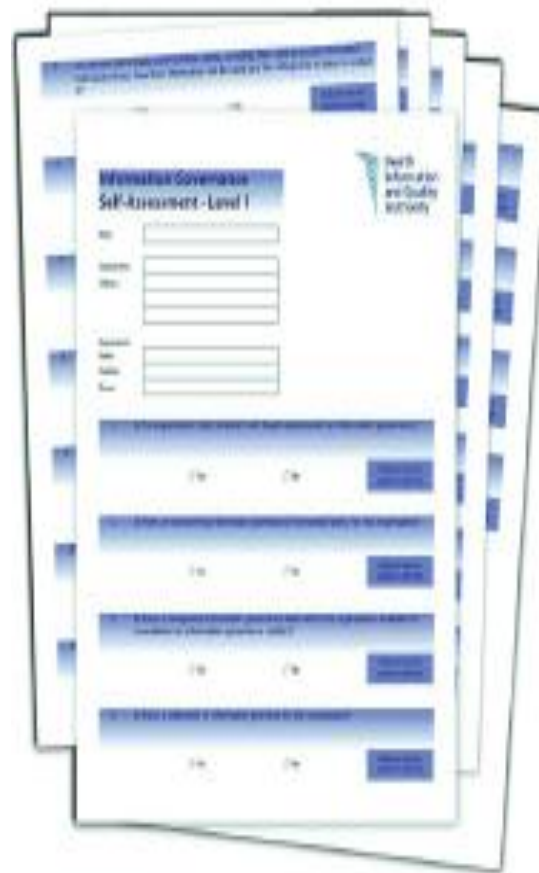
# Make data quality a success

- complete record of care
- comply with data definitions
- legible, permanent, retrievable, confidential, service user-focussed and non-judgmental
- avoid duplication
- be timely
- include details of person providing care and person documenting (signatures, printed name etc)
- minimise transcription of data

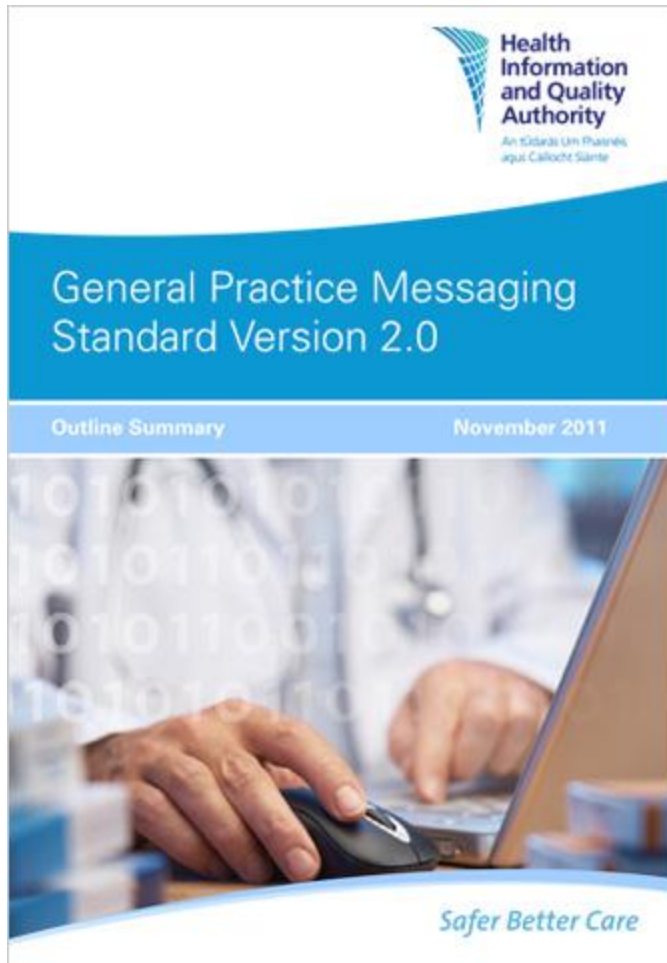
# How can you assess data quality?

- assign responsibility
- identify important aspects of data quality
- determine indicators of data quality
- identify the most appropriate method for measuring the indicators
- use the developed indicators of data quality to create an organised method for collecting data
- share results of assessment
- take action

# Other HIQA work to support data quality



## Other HIQA work to support data quality cont.





## Future work planned to support data quality

- Guidance on messaging standards
- Discharge Summary Dataset (currently subject of public consultation)
- Technical standards for electronic prescribing and electronic transfer of prescriptions
- Guidance on clinical coding and terminologies



Improving data quality will drive safer better care  
for all people using our health and social care  
services.

Everyone working in health and social care has a  
role to play