COMPLETE ICT INFO ARCHITECTURE REF MODEL

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1. General Questions

Please indicate whether you agree with the following general statements?

- Data Integrity including its validity, structure, standardisation and shareability are critical characteristics for the data associated with my function.

		Answer Percent	Answer Total
Yes		100%	17
No		0%	0
	Total	answers	17
	Unique Resp	pondents	17
	Responde	nt Reach	94.44%
		Mean	1

1. General Questions

Please indicate whether you agree with the following general statements?

- Consistency and equivalence of related information stored or used in various data systems is critical to my work function.

		Answer Percent	Answer Total
Yes		100%	17
No		0%	0
	Total	answers	17
	Unique Resp	pondents	17
	Responder	nt Reach	94.44%
		Mean	1

1. General Questions

Please indicate whether you agree with the following general statements?

- I need an authoritative source of reference to assure the correctness of the content of the data I use in my daily work.

	Answer Percent	
Yes	87.5%	14
No	12.5%	2

Total answers	16
Unique Respondents	16
Respondent Reach	88.89%
Mean	1.13

1. General Questions

Please indicate whether you agree with the following general statements?

- Data standards and structure are important dimensions in ensuring my data is usable and fit for purpose.

	Answer Percent	
Yes	94.12%	16
No	5.88%	1
	Total answers	17
	Unique Respondents	17
	Respondent Reach	94.44%
	Mean	1.06

1. General Questions

Please indicate whether you agree with the following general statements?

- Common data standards and structure with shared governance must be applied to all of our ICT systems and technologies.

	Answer Percent	Answer Total
Yes	88.24%	15
No	11.76%	2
	Total answers	17
	Unique Respondents	17
	Respondent Reach	94.44%
	Mean	1.12

2. Additional Comments

- This is a key research interest of mine as opposed to clinical practice
- These are very important and I agree with all of the statements.
- I do not agree with shared governance for ALL ICT data standards. Some data is sectoral. The common standards and structures need to apply to shared data only.
- Cannot disagree with all of this
- As the regulator of medicinal procucts, my organisation is required to receive/distribute data using standards established under EU legislation & guidance.
- As a GP I interact with HSE systems but control my own data. I feel standardisation is critical but would be slow to share governence.
- As a GP I can manage most patient care without much systems interoperability but the administrative functions and

3. DATA DICTIONARY

Please indicate whether you agree with the following statements about a common Data Dictionary?

- I need better availability and greater comprehensiveness of data compared to that currently available.

	Answer Percent	
Yes	81.25%	13
No	18.75%	3
	Total answers	16
	Unique Respondents	16
	Respondent Reach	88.89%
	Mean	1.19

3. DATA DICTIONARY

Please indicate whether you agree with the following statements about a common Data Dictionary?

- In my work role, I need structured data that is defined unambiguously using a central point of reference.

	Answer Percent	1
Yes	87.5%	14
No	12.5%	2
	Total answers	16
	Unique Respondents	16
	Respondent Reach	88.89%
	Mean	1.13

3. DATA DICTIONARY

Please indicate whether you agree with the following statements about a common Data Dictionary?

- A Data Dictionary providing me with standardised, shareable and unambiguously defined data is critical to my role.

	Answ Perce		Answer Total
Yes	87.5	%	14
No	12.5	%	2
	Total answ	ers	16
	Unique Responde	ıts	16
	Respondent Rea	ch	88.89%
	Me	an	1.13

3. DATA DICTIONARY

Please indicate whether you agree with the following statements about a common Data Dictionary?

- The Data Dictionary must be able to facilitate standardised and structured data exchange both internally and with external agencies.

		Answer Percent	
Yes		100%	17
No		0%	0
	Total	answers	17
	Unique Resp	ondents	17
	Responden	nt Reach	94.44%
		Mean	1

4. Additional comments

- The development of data dictionaries in Ireland is a key priority
- These are very important and I agree with all of the statements.
- My organisation uses data dictionaries extensively. We have our own medicinal product data dictionary based on the ISO IDMP standard(s)
- I would like all of the above but do not necessarily "need" them or find them "critical"
- I am unsure whether you are referring to metadata or actual data.
 - For instance, the second question, are you referring to data structure or the contents.
- Dictionary must be active i.e accessible by developers / applications to check conformance to definitions etc.

5. Please tick the boxes which apply;		
	Answer Percent	
The HSE ICT Systems and technologies occasionally limit my ability to enter the data that I need	28.57%	4
I regularly encounter data entry problems with HSE ICT Systems and technologies	50%	7
I am satisfied with the current data input capability of HSE ICT systems and technologies	21.43%	3
	Total answers	14
	Unique Respondents	12
	Respondent Reach	66.67%
	Mean	1.93

6. With respect to the HSE ICT systems that you are familiar with, please outline below your most pressing data entry requirements for these systems.

Each single bullet represents one respondent' opinion:

- Unique Health Identifier is most pressing need
 Agreed standard for geocoding local areas also urgently needed- this supports epidemiological mapping but is also
 essential for correct return of results to responsible authority (e.g. newborn screening results) to avoid missed cases etc
- Translational research completed last year

and support failsafe processes

- With community care encountered a number of data entry problems
- There is a great need to share data which is consistent and coherent. At present this can generally only be achieved by once off work arounds.
- Most of the limitations/issues are identified but have more to do with inertia on the HSE side
- I operate outside the HSE
- I do not use |HS|E ICT systems directly at present
- At present the IMB has no direct access to HSE systems, though we would wish to have greater automation of adverse reaction reports, or quality defect notifications from the HSE systems. Additionally access to HSE contact/distribution lists or communication channels would be extremely valuable.
- I'm not engaged personally in data entry
 - We have one ICT system which our department uses all the time called CIDR (computerised infectious disease reporting) It needs a major revision in my view in relation to data entry as it is far too cumbersome
- There are no data entry issues other than lack of staffing resources and an overdependence on drop down lists and a
 lack of use of bar code scanning and electronic signature scanning

7. Please tick the box below which best represents the restrictions you encounter with data search and presentation using HSE ICT Systems. Answer Percent Total

	Percent	Total
I encounter significant limitations in searching and viewing relevant data already entered in the system	28.57%	4
I encounter some limitations in searching and viewing relevant data already entered in the system	57.14%	8
I have no problem searching and viewing relevant data already entered in the system	14.29%	2
	Total answers	14
	Unique Respondents	12
	Respondent Reach	66.67%
	Mean	1.86

8. Please list in the box below your most pressing challenges with respect to data search and presentation capabilities when using HSE ICT Systems. (Please list these in order of priority).

- Searches are generally system specific- so not that had to do. But it's very difficult to search for data e.g. patient specific over multiple systems.
- One of the most obvious difficulties is the variation in practice and standards of ICT statements used in child health information systems in certain areas data is easily accessible to the general user but in most it is not available without expert ICT request

- Most systems in HSE ICT have been established as closed systems and do not accommodate homogenous searches to present views or summaries of health records.
 - Network infrastructure whilst well established in some organisations is limited to this organisation so shared record views and summaries across and between institutions is not possible with the exception of Healthlink
- Includes the incident data on the State Claims Agency's system
- IMB has no access to HSE ICT Systems. IMB is a data provider to HSE (licensed medicines and generic interchangeability data)
- I work outside the HSE
- I use Hospital INpatient Enquiry data (HIPE system)
 - This is one of the better HSE ICT systems my limitations in finding what I want are more related to the infrequency with which I use it
- I find the PCRS system difficult to use for some functions such as new GMS registrations for babies
- Lack of structured discharge prescriptions from the HSE hospitals and clinics Lack of detailed electronic returns from PCRS arm of HSE

9. The purpose of this question is to establish the usage and type of data processing requirements undertaken by the HSE ICT Systems and technologies that you use. In the boxes below please tick all that apply.

	Answer Percent	Answer Total
Finding the data needed	16.88%	13
Documenting healthcare delivery	15.58%	12
Reporting to management	12.99%	10
Reporting to National registries	10.39%	8
Clinical Audits	11.69%	9
Own research/analysis	15.58%	12
Research/analysis for third parties	11.69%	9
Billing	5.19%	4
	Total answers	77
	Unique Respondents	15
	Respondent Reach	83.33%
	Mean	4.04

10. Other (Please Specify)

- There is an urgent need to devise systems for integrated care particularly for documenting clinical referral and discharge
- Providing data on medication.
- Prescriptions
- Approval to supply
- No relevance to me
- I work outside the HSE but have ticked the boxes that are relevant to my work. I interact with referrals from within the HSE
- I am my own boss but do need to generate data for internal analysis and management purposes.
- all of above + maintaining patient owned/focused data repository

11. Please tick the boxes below that are relevant to your data exchange requirements. - I need capabilities for importing (without problems) data from other internal systems:

	Answer Percent	Answer Total
Patient Records	14.29%	8
Patient Summary	16.07%	9
Patient Medication List	16.07%	9
Patient Prescription	16.07%	9
Referral Letter	12.5%	7
Discharge Letter	12.5%	7
Research data	12.5%	7
	Total answers	56
	Unique Respondents	13
	Respondent Reach	72.22%
	Mean	3.84

Other

Each single bullet represents one respondent' opinion:

- Problem summary.
- Outcome measures, Incident and risk data, Performance reporting including Quality indicators

11. Please tick the boxes below that are relevant to your data exchange requirements. - I need capabilities for importing (without problems) data from other external systems:

importing (without problems) data from other exten	inti systems.	
	Answer Percent	Answer Total
Patient Records	18.52%	10
Patient Summary	18.52%	10
Patient Medication List	14.81%	8
Patient Prescription	14.81%	8
Referral Letter	11.11%	6
Discharge Letter	11.11%	6
Research data	11.11%	6
,	Total answers	54
	Unique Respondents	13
	Respondent Reach	72.22%
	Mean	3.59

Other

Each single bullet represents one respondent' opinion:

- Vaccines
- Outcome measures, Incident and risk data, Performance reporting including Quality indicators
- Ideally reports of Adverse Drug Reactions could be sent automatically from HSE systems.

11. Please tick the boxes below that are relevant to your data exchange requirements. - I need capabilities for exporting (without problems) data to other internal systems:

	Answer Percent	Answer Total
Patient Records	14.71%	5
Patient Summary	17.65%	6
Patient Medication List	14.71%	5
Patient Prescription	8.82%	3
Referral Letter	8.82%	3
Discharge Letter	8.82%	3
Research data	26.47%	9
	Total answers	34
	Unique Respondents	10
	Respondent Reach	55.56%
	Mean	4.12

Other

Each single bullet represents one respondent' opinion:

• Outcome measures, Incident and risk data, Performance reporting including Quality indicators

11. Please tick the boxes below that are relevant to your data exchange requirements. - I need capabilities for exporting (without problems) data to other external systems:

exporting (without problems) data to other external systems:		
	Answer Percent	Answer Total
Patient Records	16.22%	6
Patient Summary	18.92%	7
Patient Medication List	13.51%	5
Patient Prescription	10.81%	4
Referral Letter	13.51%	5
Discharge Letter	13.51%	5
Research data	13.51%	5
'	Total answers	37
	Unique Respondents	10
	Respondent Reach	55.56%

Mean	3.81	1
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Other

Each single bullet represents one respondent' opinion:

- Vaccines
- Outcome measures, Incident and risk data, Performance reporting including Quality indicators
- Note I operate outside HSE so I need to send info into HSE system. For me, external = HSE

11. Please tick the boxes below that are relevant to your data exchange requirements I need capabili find view and use the data:		lities to
	Answer Percent	Answer Total
Patient Records	22.22%	12
Patient Summary	16.67%	9
Patient Medication List	14.81%	8
Patient Prescription	11.11%	6
Referral Letter	9.26%	5
Discharge Letter	11.11%	6
Research data	14.81%	8
·	Total answers	54
	Unique Respondents	14
	Respondent Reach	77.78%
	Mean	3.61

Other

Each single bullet represents one respondent' opinion:

- Outcome measures, Incident and risk data, Performance reporting including Quality indicators
- Ideally we could review this information in the context of assessing medication safety issues.

12. Other (please Specify).

- Please note that my organisation is a data provider to HSE. We provide HSE with the listing of licensed medicines (ISO std) together with the interchangeability indicators for generic medication. Ideally we could also receive quality defect reports; adverse events with medical devices; etc. directly from the HSE systems.
- Patient summary records as opposed to patient records are more urgent at this time
- Currently GP computerised records are usually the most extensive up to date and accurate patient record thus we end up
 providing information for multiple agencies such as daycare, nursing homes, social workers, PHNs, PCT members,
 hospitals etc this should really be the HSEs responsibility and creates huge workload for GPs a central repository
 which could be automatically updated might eliminate this.

13. Please tick the boxes below that best identify the problems you encounter with the import and export of digital data from the HSE Health ICT systems that you regularly use - My IT-system is not capable of importing data from other internal systems:

	Answer Percent	Answer Total
Patient Records	20.45%	9
Patient Summary	15.91%	7
Patient Medication list	13.64%	6
Patient Prescription	13.64%	6
Referral Letter	11.36%	5
Discharge letter	11.36%	5
Research data	13.64%	6
	Total answers	44
Unique Respondents		11
	Respondent Reach	61.11%
	Mean	3.68

Other

Each single bullet represents one respondent' opinion:

- Outcome measures, Incident and risk data, Performance reporting including Quality indicators.
- I don't yet have an IT system for patient records.
- As described, I am commenting at a national level on child health systems and this capacity is only available in pockets.

13. Please tick the boxes below that best identify the problems you encounter with the import and export of digital data from the HSE Health ICT systems that you regularly use - My IT-system is not capable of importing data from other external systems:

·		
	Answer Percent	Answer Total
Patient Records	19.57%	9
Patient Summary	17.39%	8
Patient Medication list	15.22%	7
Patient Prescription	10.87%	5
Referral Letter	13.04%	6
Discharge letter	13.04%	6
Research data	10.87%	5
	Total answers	46
	Unique Respondents	11
	Respondent Reach	61.11%
	Mean	3.63

Each single bullet represents one respondent' opinion:

- Outcome measures, Incident and risk data, Performance reporting including Quality indicators
- As described, I am commenting at a national level on child health systems and this capacity is only available in pockets.

13. Please tick the boxes below that best identify the problems you encounter with the import and export of digital data from the HSE Health ICT systems that you regularly use - My IT-system is not capable of exporting data from other internal systems:

	Answer Percent	Answer Total
Patient Records	22.86%	8
Patient Summary	17.14%	6
Patient Medication list	14.29%	5
Patient Prescription	11.43%	4
Referral Letter	11.43%	4
Discharge letter	14.29%	5
Research data	8.57%	3
	Total answers	35
	Unique Respondents	9
	Respondent Reach	50%
	Mean	3.49

Other

Each single bullet represents one respondent' opinion:

- Outcome measures, Incident and risk data, Performance reporting including Quality indicators
- As described, I am commenting at a national level on child health systems and this capacity is only available in pockets.

13. Please tick the boxes below that best identify the problems you encounter with the import and export of digital data from the HSE Health ICT systems that you regularly use - My IT-system is not capable of exporting data to external systems:

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	Answer Percent	Answer Total
Patient Records	24.24%	8
Patient Summary	15.15%	5
Patient Medication list	15.15%	5
Patient Prescription	12.12%	4
Referral Letter	12.12%	4
Discharge letter	12.12%	4
Research data	9.09%	3
	Total answers	33
	Unique Respondents	9

Respondent Reach	50%
Mean	3.45

Other

Each single bullet represents one respondent' opinion:

- Outcome measures, Incident and risk data, Performance reporting including Quality indicators
- As described, I am commenting at a national level on child health systems and this capacity is only available in pockets.

14. Other (Please Indicate)

Each single bullet represents one respondent' opinion:

- Yes
- With the exception of established registries, GP systems and Health link there is little opportunity to export or import data across the HSE. Nursing and midwifery records are primarily paper based.
- Note I am external to HSE and do not yet have an electronic patient record system
- No relevance to me
- Internal Practice management system very capable of importing and exporting extracted data as a PDF or Word document but limited capability in exporting data that can be directly integrate in to other systems.
- Importing/ exporting can only be done via HL:7 in the most part
- I do not directly use any HSE ICT system. I exchange data with them.
- GP systems are capable of importing multiple structured messages in HL7 v2.4 format and also capable of generating electronic referrals in HL7 v2.4.

15. What are your most pressing problems with respect to data import and export capabilities? Please list your problem below in order of priority.

Each single bullet represents one respondent' opinion:

- We need secure e-mail to allow secure transfer of patient information to/from HSE and in the longer term need structured messages and interrogation facilities so that the information we obtain can be integrated directly in to the patient record and so that referrals can be made from within the PMS for all specialities and community resources.
- Sharing patient data between on-site system silos e.g. lab data to diabetes system etc.
- Patient Demographics, Referrals, and Medications import. Patient Summary export.
- Organisation structure constantly changing so comparisons and aggregation of data a constant problem.
- Note I am external to HSE and do not yet have an electronic patient record system.
- Lack of uniformity and a national standard.
- I have done a lot of work on patients with diabetes over the years, no clinical management IT system in hospital. Need integrated IT systems which link all services required by these complex patients, similarly need these IT systems for all patients with chronic disease. Need to move towards Electronic Health Records for patients
- Electronic transfer /referral of core patient data on discharge across and between services.

 View patient health outcome status data to inform care planning which is patient centred to manage/ target effective use of existing resources and services.
- Import prescriptions
 Import payment information for drugs supplied
 Export vaccination records

16. Please tick the boxes below which you deem are of importance to your future business and systems requirements.

	swer	Answer Total
Flexible arrangements so that healthcare providers and other users of the IT Systems can define and change information needs quickly	61%	13

Adoption of a 'Big Bang' revolutionary scenario to Information Architecture development	2.25%	2
Adoption of a stepwise evolutionary approach to Information Architecture development	15.73%	14
Structured standardised data for information exchange between systems	17.98%	16
The adoption of ICT and Information Standards early in the procurement process to ensure data alignment across all core systems and technologies	15.73%	14
Data Standards for faster and cheaper integration time for Information systems	15.73%	14
Improved Data Quality	17.98%	16
	Total answers	89
	Unique Respondents	
	Respondent Reach	
	Mean	4.37

17. If you regularly use systems outside of the HSE ICT portfolio please provide a list of these systems and any standards you are aware of that they use. These may include:

	Answer Percent	Answer Total		
Message standards such as: Edifact, HL7v2, HL7 v3 etc.	43.48%	10		
Coding systems such as: SNOMED, ICD, ICPC, national, local classifications, etc.	56.52%	13		
Total answers		23		
Unique Respondents		13		
Respondent Reach		72.22%		

Mean 1

18. Other Technical Standards

Each single bullet represents one respondent' opinion:

- Recommending uptake and use of HISA for nursing and midwifery service delivery reporting
- Note I am external to HSE and do not yet have an electronic patient record system
- MedDRA; HL7 E2B; ISO IDMP; WHO ATC/DDD; WHO INN;

Please find attached document outlining details of standard utilised by the Irish Medicines Board

- Loinc (Lab) and ICPC2
- I have been involved with GP It systems which use ICPC or Snomed
- Healthlink messaging -HL7v2, XML
 - ICPC 2 and ICD10 and LOINC and Health One dictionary
- Community Pharmacists/HSE: Message standards based on PICNIC, a child of the PCRS and a few other EU based bodies. This is loosely based on HL7 V1.

We also use a derived Edifact message for ordering, which is in the process of being replaced by ebXML. Drug coding based three separate codes: IPU codes/ATC/GMS -IPU product file is drug/product file used in 90% community pharmacies and many hospitals. ATC codes are only international standard but the file is normalised and could readily incorporate Snomed CT coding.

CIS data in State Claims Agency.
 Data in funded organisations

19. Please tick as appropriate					
	Answer Percent	Answer Total			
I am an employee of the HSE and use HSE ICT systems	42.11%	8			
I am not an employee of the HSE but I use HSE ICT systems	15.79%	3			
I am not an employee of the HSE but my agency's ICT systems interface with the HSE's ICT systems	21.05%	4			
I am not an employee of the HSE but I am familiar with HSE ICT systems	21.05%	4			
	Total answers Unique Respondents Respondent Reach				
Mea		2.21			

20. Optional

Your name:

Tony Kenny Tessa Greally Suzanne McDonald Sarah Craig Pamela Hussey Mai Mannix Lesley Smith John Kenny Jack Shanahan Frank Hill Dr. Kieran Murphy Dr Noel McCaffrey Brian O'Mahony

Organisation:

Irish Pharmacy Union
Irish Medicines Board
HSE - Health and Well Being Division
HSE
HSE
HRB
GPIT
GP IT ICGP
DCU HISINM
DCU

Email Address:

Connolly Hospital

tmpkenny@gmail.com tessa.greally@hse.ie suzanne.mcdonald@imb.ie shanahan.jack@gmail.com scraig@hrb.ie pamela.hussey@dcu.ie omahonyb@gmail.com noel.mccaffrey@dcu.ie mai.mannix@hse.ie lesley.smith@live.ie john.kenny@hse.ie info@westburymc.com drfrankhill@gmail.com

21. General Comments

- We need a revolution in ICT in HSE to bring us up to speed. Really need to include clinicians in the design of the systems. We also need unique identifier straight away. Data protection need to be won around on this. The current situation is completely crazy
 - PS some of this questionnaire tricky for non ICT people like myself was it piloted? Many thanks good to see some movement anyway
- This survey is a good example of what can happen when data integrity is not designed in from the beginning. Systems must be constructed to make sure quality data input. Many times in this survey you can enter contradictory information. This is just like the ICT systems we use. It was clever for you to think of doing this in this survey.
- One of the biggest advantages of a nationwide technology solution is to enable rapid communication between health stakeholders. It is currently very difficult to contact the correct individuals or logical groupings quickly. Thank you.
- I am the project manager for the planned HSE National Immunisation and Childhealth Information System and the system administrator for the current National HPV Immunisation System. I am also responsible for all the local immunisation systems in use in the HSE and for the interfaces with them to the Primary Care Reimbursement Services (PCRS). A lot of these system require integration with birth information, birth registrations, schools, department of education, practice management systems to name but a few. If further workshops are taking place I would appreciate being informed and invited.
- Delighted to see progress in Standards and national Information Architecture.
- Brian O'Mahoney asked us to comment on this survey and is the direct representative of GP IT at the meetings.
- Best wishes for this work. It's important.
 - Personal opinions expressed only not that of organisation.
- A key issue for pharmacists will be some type of electronic prescription repository or hub where prescriptions will be temporarily stored prior to retrieval/cancellation/return. We have reached this position because trials with direct to pharmacy transmission have been largely unviable, presenting major deficiencies. The introduction of national identifiers for patients, professionals and locations are also important issues.
- A IHTSDO national license and institution to manage data is I believe a priority for 2014
- A workshop on the requirement to integrate Child Health Information Systems in the HSE and linked partner

organisations was held on February 18 2013. The proceedings and recommendations are available.