An Exploration of Discharge Summaries of Psychiatric Patients

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Declaration

I declare that the work in this dissertation is, where otherwise stated, is entirely my own work, and has not been submitted as an exercise for a degree at this or any other university.

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Dedication

This work is dedicated to

Sunil Kumar Deo and Mrs Kalpana Poddar,

my Parents

"Success is not final,

Failure is not fatal: it is the courage to continue that counts."

Winston Churchill

Acknowledgement

Abstract

The discharge summary is an important document of communication between the hospital and community team. In 2013, HIQA (Health Information and Quality Authority) developed the "National standard for patient discharge summary information" which highlighted the standard for general discharge summaries. However, there is evidence that a gap of communication between the hospital and primary care team still exists in specialities like psychiatric care. The aim of this study is to develop the minimum dataset for psychiatric discharge summaries. Poor information content of psychiatric discharge summaries and the requirements of the primary healthcare team led the researcher to conduct this study to identify the contents need of GPs.

This study was conducted in a Dublin hospital and with a survey of Dublin based GPs (General Practitioners). A mixed design was used to develop the minimum data set for psychiatric discharge summaries. One hundred random reviewing charts were selected from the total discharge summaries of the Mater psychiatric ward for 2015. Then a survey was done of 50 GPs selected from the GP list on the HSE (Health and Safety Authority) website. Data was collected through a structured questionnaire of these GPs. The researcher only received 12 completed questionnaires. Data set definitions were identified from HIQA guidelines and literature.

The analysis of discharge summaries identified a significant gap of communication between the hospital and primary care team. Important contents were missing from the discharge summary such as the patient's address, nationality, next of kin, GP details, admission, and source of admission, address the patient is discharged to, clinical information such as mental state examination (MSE) at discharge, past psychiatric history, social history and risk factor. A survey of GPs suggested that there is a gap between GPs' expectations and current discharge summary contents. GPs expect full details of discharge summaries matching the *National Standard on Information of Discharge Summary* (HIQA 2013).

This researcher suggests improvement of the minimum data set for psychiatric discharge summaries. The researcher also suggests conducting the same study on larger sample size to increase generalisation.

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Abbreviations

ACSQHC	Australian Commission on Safety & Quality in Health Care
AIHW	Australian Institute of Health & Welfare
CCTP	Community-based Care Transition Programme
CIA	Central Intelligence Agency
DOB	Date of Birth
DS	Discharge Summary
EDS	Electronic Discharge Summary
epSOS	European Patient Smart Open Service
GP	General Practitioner
HIPE	Hospital In-Patient Enquiry
HIQA	Health Information & Quality Authority
HIT	Hospital Information Technology
HSE	Health Service Executive
ICD	International Classification of Disease
ICS	Irish Coding System
ICT	Information & Communication Technology
ID	Identification
IEEE	Institute of Electrical and Electronics Engineers
IOM	Institute of Medicine
ISF	Integrated Services Framework
LIS	Laboratory Information System
MSE	Mental State Examination
MDS	Minimum Data Set
NEHTA	National E-Health Transition Authority
NHS	National Health Service
NICE	National Institute for Health Care & Excellence
NPSA	National Patient Safety Agency
NSA	National Security Agency
PAS	Patient Administrative System
RCOPI	Royal College of Physicians of Ireland
SNOMED-CT	Systematized Nomenclature of Medicine-Clinical Terms
UKCC	United Kingdom Central Council for Nursing and Midwifery

<center>**Glossary of Terms**</center>

Confidentiality	The statutorily protected right and duty of health professionals not to disclose information acquired during consultation with a patient (Craig et al 2007).
Data	Data is raw unorganised facts that need to be processed or organised. It can be numbers, symbols, words, images and graphics that have to be analysed (AIHW 2007).
Discharge Summary	Discharge summary is "information required in a generic clinical discharge summary produced at the time of discharge from secondary or tertiary care" (HIQA 2013).
Electronic Health Record	A longitudinal electronic record of patient's health information across multiple care settings. It contains multiple EMR (Electronic Medical Record) and EPR (Electronic patient record) which is shared across settings (HIQA 2013).
Encrypting	Encryption is the conversion of electronic data into another form, called cipher text, which cannot be easily understood by anyone except authorized parties (Fernandez-Aleman 2013).
HIQA	HIQA is an independent authority formed by the government and is responsible for maintaining quality, safety and accountability in health and social care services in Ireland. They develop the standard, inspect the health service, monitor the compliance with standard, publish the health care delivery performance statistics, and perform investigations (HIQA 2013).
ICD	The International Classification of Diseases (ICD) is the standard diagnostic tool for epidemiology, health management, and clinical purposes (WHO 2015).
Minimum data set	The minimum data set (MDS) is a set of nationally agreed data items that are collected in relation to clients, the services they receive, and the outlets that provide these services (ADHC 2015).

Mixed method   Mixed method is a combination of qualitative and quantitative research methodologies (Burns & Grove 2005).

SNOMED-CT   SNOMED-CT is a standardised, multilingual vocabulary of terms relating to the care of the individual. It enables the representation of care information consistently, reliably and comprehensively as an integral part of the electronic care record (International Health Terminology Standards Development Organisation 2013).

Chapter 1
Introduction

1.1 Background

It is estimated that one out of four people will experience mental health problems in their lifetime. These can range from minor to severe depression, with a small number of people experiencing severe mental health issues. Most people with mental illness can be treated by their GP or can be referred to a psychiatric service (Health Research Board 2011).

There are various categories of mental health service in Ireland which have seen dramatic changes in development over the past 20 years. These changes contributed to the movement of services from hospitals to the community and in the patient's own home (HIQA 2013).

In Ireland in 2010, 19,614 patients were discharged from psychiatric hospitals. Almost half of the discharges occurred within two weeks of admission, whereas 26% took place within a month and 90% occurred within three months of admission. The average length of stay for admissions is 26 days (Health Research Board 2011).

Sharing information should be accurate, valid, timely, relevant, and legible. When information sharing is needed then patients' privacy and confidentiality should be respected. Improperly shared information leads to risking both the safety and quality of care. (HIQA 2013).

Hospital discharge summaries are basic documents for sharing information between primary and secondary care providers. A discharge summary is the form which will go with the patient to their primary care team. The psychiatric discharge letter has two main purposes: one is internal, that is, for future reference in continuity of care in a secondary care setting, and the second is to communicate with primary care (Kripanali et al 2007; Val Walraven et al 1995).

The discharge process is the transfer of information from secondary care to primary care, and a discharge summary is needed to transfer the information. It can be in any form, such as a letter (hand written or typed) but in some cases it can be produced electronically (CIHI 2009; Kripanali et al 2007).

Mentally-ill patients are more vulnerable than other patients discharged from hospital. The first two weeks after discharge are the most critical time. This is the time when problems arise and more support is needed; drugs run out, and default from follow-up is most likely (Kripanali et al 2007).An effective discharge summary could assist in providing continuity of care during this vulnerable period. Not all acute psychiatric units send timely discharge

summary. There is always a delay in sending summary sheets from primary care settings. Even when this is done, there is little agreement about what information is of most value to the GP. Previous studies have shown that vital information about management, follow-up plans and responsibilities is often omitted. Junior hospital staff are rarely taught how to write discharge summaries that are relevant to GP's needs. Another important factor is that few psychiatric discharge summaries are designed to meet the specific information needs of those responsible for follow-up care in the community (Val Walraven et al 1995; Olfson et al 1997).

The aim of this dissertation is to review the information needs of primary care health professionals in relation to the discharge of mentally ill patients. From this study, the researcher aims to produce an appropriate psychiatric discharge summary that meets the needs of health care professionals and mentally-ill patients. In this study the researcher will also investigate the current contents of discharge summaries in order to develop templates for an electronic version of the discharge summary.

1.2 Study Significance

Hospital discharge summaries act as basic documents for sharing information about patient care plans to the primary care team (CIHI 2009; Kripanali et al 2007). The discharge summary is also shared with follow-up teams in the community (CIHI 2009). High quality discharge summaries are needed to preserve patient safety during transfer of care from tertiary care to the community team (CIHI 2009; Val Walraven et al 1995, 1999, 2002). Poor care is associated with a shortcoming of shared information between the tertiary care and primary care team. In 2008, the UK National Prescribing Centre (NPC) published a guideline about the minimum data set to be communicated between the hospital and any other agency upon discharge (Coleman EA, 2003). The NPC recommended eleven headings as the minimum data set for the discharge summary such as patient details, diagnosis in current condition, procedure carried out, medication details, medication dose and route, medicine start and stopped with reason, details of dose lowering and increasing details, drug allergy details, anticoagulant details log book, and deadlines for sending discharge summary to GP. Patient safety depends on the communication of clinical information within health care settings. Despite NPC (2008) guidelines on discharge summaries, there is plenty of evidence to show that omissions of content from the discharge summaries are frequent. The content of the discharge summary can be improved by using the electronic discharge templates (Eman et al 2014).

There is evidence of quality discharge summary content compromise due to delay, content omissions and formatting but the completion rate of the discharge summaries are good. Digital research is available in rich datasets contained in GP records to find out the discharge summary receipt rate and timing (Belleli et al 2013).

The HSE conducted an e-Health consultation process between December 2011 and January 2012 which highlighted an area of priority for the improvement of standards. E-prescription was reviewed by the Health Information Directorate and the results suggested the development of a plan of action for the newly structured e-Health Standards Advisory Group (eSAG). The action plan was agreed with eSAG and this provided the basis for the development of a minimum dataset for clinical discharge summaries and complements the *National Standard for Patient Referral Information* previously developed by HIQA (HIQA 2011).

In 2013, HIQA drafted the *National Standard of Patient Discharge Summary Information* and submitted it to Dr James Reilly, Minister of Health, for approval. This draft contains seven headings to be included in the discharge summary which are: patient details, primary healthcare professional details, admission and discharge information, clinical information, medication information, follow-up and future management, and details of the person completing discharge summary (HIQA 2013).

Mentally-ill patients are the most vulnerable group amongst discharged patients. The first two weeks after discharge are critical to mentally-ill patients as this is when problems arise such as drugs running out and defaulting from follow-up care (Abbas et al 2015).

1.3 Rationale for the Study

Routinely, the printed discharge summary, which is generated by computer, is posted to GPs as part of the discharge process. However, GPs and clinic staff always need to call the secondary care centre for further information about follow-up care. This indicates that the current discharge summary is lacking the appropriate information for continuity of care at primary care level and furthermore suggests that there is a gap in sharing information between hospital and GPs. Modern clinical practice seeks to minimise hospitalization and decrease the number of readmissions. The researcher reviewed studies which revealed similar problems and this suggests the need for standardised discharge summaries across the hospital especially for the psychiatric service.

HIQA (2013) published the *National Standard of Patient Discharge Summary Information* which highlights the contents to be included in the discharge summary yet there is still a need

to improve the implementation of national standardised discharge summaries in hospitals. This study will find out how far hospital discharge summaries comply with the HIQA guidelines outlined in this publication.

1.4 Research Objectives

Research objectives are:

1. To determine compliance in the discharge summary with HIQA guidelines for its content.
2. To identify omitted contents.
3. To develop a minimal data set for contents of discharge summaries.
4. To develop a template for an electronic version of the discharge summary.

1.5. Research Questions

The aim of this dissertation is to identify to what extent is the study hospital's discharge summary complying with HIQA guidelines and to develop the ideal discharge summary. The researcher aims to answer the following research questions:

1. What proportions of discharge summaries at the Department of Psychiatry conform to the standard guidelines?
2. To what extent are contents of the discharge summary omitted?
3. What do primary care health professionals need in a discharge summary?
4. Design a paper discharge summary form.

1.6. Outline of Research Dissertation

Chapter 1   This chapter discuss the background and significance of this study, the rationale for the research, the research objectives and questions, and an outline of dissertation.

Chapter 2   Discusses the literature review to provide background information on discharge summaries and its role in psychiatric care in Ireland. It also elaborates on how generic and psychiatric discharge summary are different. The development of the minimum data set is also discussed.

Chapter 3   Identifies the research design and methodology for research, tool development, participant recruitment methods, data collection process, ethical approach, and analysis plan.

Chapter 4	Presents the results and an analysis of the research findings, analysis and finding of chart reviews and GP survey. This chapter also includes graphical presentation of results.
Chapter 5	Presents key findings, achievement of study objectives, recommendations for future work and limitations of the study.
Chapter 6	Presents the summary of research study.

1.7 Summary

There is a problem in sharing information between hospitals and primary care teams and this interferes with continuity of care. Although the *National Standard of Patient Discharge Summary Information* may appear to manage the problems, there is need for a separate standard minimum data set for the psychiatric discharge summary.

<center>**Chapter 2**</center>
<center>**Literature Review**</center>

2.1 Introduction

The developments of discharge summaries during the past 17 years have indicated an improvement in quality. There were various measure introduced to improve the quality. (Maserat 2008). There has been a recent move in psychiatry to introduce an electronic discharge summary to improve communication between the hospital and the primary care team (Abbas et al 2015).

Mental Health Commission (2007) recommends that there is an expectation that mental health service is delivered with full participation of patient acknowledging the role of primary care team in clinical care, informational, and educational support of family. The number of readmission of psychiatric patient is high in Ireland. Readmission is occurred due to lack of proper sharing of information between hospital and primary care team.

In this chapter in-depth literature review is discussed. Literature review is carried out from 1999 to 2016. In literature search, discharge summary, psychiatric discharge summary, minimum data set were used as term for searching. Qualitative, quantitative and mixed all type of studies were included in literature review. This section includes psychiatric care in Ireland, psychiatric discharge summary, minimum data set development process, EU & International view on discharge summary and its privacy.

2.2 Psychiatry Discharge Summary and the Minimum Data Set; Definitions

The *National Standard for Discharge Summary* defines a discharge summary as the "information required in a generic clinical discharge summary produced at the time of discharge from secondary care or tertiary care." (HIQA 2013, p.9)

A discharge summary is a "collection of information about events during care by a provider or organisation." (AS4700.6 (Int) 2007)

Psychiatric care refers to care given to mentally-ill patients throughout the illness until recovery (Nice 2014).

Psychiatric discharge summaries are the communication tool between the hospital and primary care team. Discharge summaries facilitate information sharing for continuity of care of mentally-ill patients.

<center>6</center>

A data set is a set of information which is gathered for certain reasons. The minimum data set (MDS) is a set of nationally agreed data items that are collected in relation to clients, the services they receive, and the outlets that provide these services (ADHC, 2015).

2.3 Psychiatric care in Ireland

The history of Irish mental health services is well-documented. Mental health service was hospital based and there were demands for hospital beds for psychiatric illness (Finanne 1988; Robins 1986; Reynolds 1992; Walsh & Daly 2005). Reports from the *Commission of Inquiry on Mental Illness and Planning for the Future* suggested some recommendations for the improvement of mental health care especially a reduction in in-patient care (Department of Health, 1966; 1986). Most of the mental health service is carried out in the community; the majority of patients are seen at outpatient settings such as day hospitals, day centres and in the home. Only a minority of patients are admitted to hospital. Unfortunately, the figures show that we have more information about in-patient mental health services than community services. Patients were unaware of information about in-patient services related to intervention and the treatment they were receiving. Though, there is some information available about the mental health service in Ireland as can be seen in Table 2.1, there is also a lack of information on the number of people with mental health problems in the Irish population.

Table 2.1 **Key parameters in Irish Mental Health Services: 1984 & 2004**

	1983/1984*		2004	
	Number	Rate	Number	Rate
Activity				
In-patients in psychiatric hospitals and units at end of year	12,484	362.5	3,556	90.8
Long-stay patients (in hospital for more than 5 years)	7,086	205.8	1,242	31.7
New long-stay patients (in hospital for more than 1 year but less than 5 years)	2,083	60.5	615	15.7
Admissions to psychiatric hospitals and units	28,830	837.3	22,279	568.7
First admissions to psychiatric hospitals and units	8,746	254.0	6,134	156.6
Outpatient clinic attendances	200,321	5,817.5	212,644	5,428.5
Day hospital attendances	--	--	162,233	4,141.6
Day centre attendances	--	--	413,771	10,562.9
Facilities				
Psychiatric beds (number of in-patients for 1984 used as a proxy)	12,484	362.5	4,121	105.2
General Hospital Psychiatric Units	8	--	22	--
Persons in community residences (a proxy for number of places)	942	27.4	3,065	78.2
Day hospital places	--	--	1,022	26.1
Day centre places	--	--	2,486	63.5
Total day places	1,180	34.3	3,508	89.6

*Figures for 1983 or 1984 are used depending on availability.
Note: All rates are calculated from the **total** population for the 1981 and 2002 census respectively. Therefore, some rates will differ from the rates in source publications.
Sources: Activities of Irish Psychiatric Services 2004[86]
Mental Health Commission Annual Report 2004[79]
Community mental health services in Ireland 2004[87]
Planning for the Future[78]

Source: A Vision for Change: Report of the Expert Group on Mental Health Policy, 2006 (The Stationery Office of Dublin, 2006)

Mental health services are governed by legislation and policy. The Irish mental health service is regulated by the *Mental Treatment Act 1945* which was then extended to 1970. A third act followed namely the *Mental Health Act 2001* which provides a basis for the formation of the Mental Health Commission (MHC). This is an independent statuary body which is empowered by the *Mental Health Act 2001*. The MHC will foster and promote high standards in the delivering of mental health services and ensuring the rights of detained patients are taken care of.

The central recommendation of the planning for the future model focused on a multidisciplinary approach to effectively co-ordinate continuity of care. This model of care emphasises community-based care extending to the individual home. When patients are discharged from hospital, they are referred to a GP for follow-up care (Vision for Change

2006). A clinical discharge summary is generated after the patient's stay. This provides a basis for communication between health care professionals from the hospital to the primary care team. An incomplete and delayed clinical discharge summary puts the patient at risk and reduces the quality of aftercare (HIQA 2013).

2.4 Difference between Generic & Psychiatric Discharge Summaries

The standard discharge summary contains demographic details, primary health care professional's details, admission discharge details, the clinical narrative, medications, and follow-ups. The NHS has published guidelines about the contents of psychiatric discharge summaries. It contains demographic details, the name of the consultant, GP details, admission and discharge details, legal status, reason for admission, history of present illness, past medical history, past psychiatric history, family history, social history, occupational history, pre-morbid personality, mental state examination, physical examination, results of investigations, progress and treatment during admission, final diagnosis, discharge medication, follow-up arrangement, name of key workers, and number of pages.

The studies on discharge summaries relating to communication from secondary to primary care showed the importance of accuracy and quality of information (Kazmi 2008), errors (Crosson et al 2004) and GP preference (Serfontein et al 2011). Review studies found that there was little availability of discharge summaries during the first visit to the primary care team after discharge. There were wide differences in the contents of discharge summaries which directly affected patient care (Kripalani et al 2007; Knai et al 2013). Various details were absent from the discharge summary such as details on medication, follow-up care, mental state examination and the physical examination carried out during the patient's stay. These details are an important part of follow-up care for the primary care team and transition of care from hospital to the community (Shashtri et al 2014).

2.5 Contents of the Discharge Summary

Hospital discharge summaries act as important tools for sharing information to the community care team. Discharge summaries are often used as a form of communication to the next care setting (Kripalani et al 2007; Van Walraven 1995). The Joint Commission International (JCI) is an organisation which measures and share best practices in quality and patient safety worldwide. The JCI highlighted six components in the discharge summary: the reason for hospitalization, significant findings, procedures and treatment provided, patient's discharge condition, patient and family instructions (as appropriate), and attending

physician's signature (Joint Commission USA 2008). However, there no clear and specific definition exists in report of JCI. The contents of discharge summaries approved by the NEHTA include diagnosis, diagnostic procedures performed, the prognosis, medications prescribed and follow-up actions recommended (NEHTA 2014). There are various view points on the important components of the discharge summary. Studies conducted by Carey and Hall (1999), Archbold et al (1998), and Crosswhite et al (1997) highlight admission and discharge details, diagnosis, advice to the patient, details of medication, investigation details, and follow-up as the important components of a discharge summary. Solomon et al (1995) identifies diagnosis, drugs at discharge, investigations and follow-up as the important components of discharge summaries. However, according to Kripanali et al (2007) and O'Leary (2006) the main components of the discharge summary are diagnosis, physical examination, past medical history, in-patient treatment, procedure results, laboratory results, any recommendation by consultant, advice to patient and family, condition at discharge, details of medication and any changes, indication for newly prescribed medication and follow-up.

HIQA (2013) guidelines on the *National Standard on Discharge Summary* have similar components which other agencies and studies mentioned. Appendix 10 describes about the contents of discharge summaries suggested by HIQA (2013).A survey by Walvaren and Rokesh (1999) on hospital and community care physicians suggested that high quality discharge summaries should be short, contains appropriate information, and should be delivered quickly.

2.6 Discharge Summary Guidelines in Ireland

In Ireland, HIQA is the independent body who maintains high standards in relation to health and personal care. Under section (8)(1)(K) of the Health Act 2007, HIQA has responsibility in establishing standards and maintaining that standard of care. The main standards on the discharge summary are outlined in HIQA's 2013 publication, *National Standard for Patient Discharge Summary Information.*

Other national guidelines related to discharge summaries are:

- *Guiding Principle for National Health and Social Care Data Collection* (HIQA 2013),
- *National Standard Demographic Data Set and Guidance for use in Health and Social Care Settings in Ireland Version 1.0* (HIQA 2013),

- *Recommendation Regarding the Adoption of SNOWMED Clinical Terminology for Ireland* (HIQA 2014),

- *What You Should Know About Data Quality: A guide for health and social care staff* (HIQA 2012).

In 2015, the Chief Information Officer, Richard Corbridge, published the document, *Knowledge and Information Strategy: Delivering the Benefits of eHealth in Ireland*, which focuses on the need for standard requirements in electronic patient records and integrating different organisation records at a national level. The three documents are:

- HSE Design Authority (2015) – ISF program ICT Asset base work stream 2.2 - Application and Technological "T Be" Logical Architecture,

- HSE design authority (2015) – ISF program ICT Asset base work stream 2.4 - Standard Catalogue,

- HSE Design Authority (2015) – ISF program ICT Asset base work stream 2.4 - Classification Asset Model.

2.7 Legal Requirements for Data Management in Ireland

HIQA (2013) suggests that each organisation should ensure that standardised procedures are in place for data collection. The legislation which is in place for discharge summary are:

- *Data Protection (Access Modification)(Health) Regulation 1989*,

- *Data Protection Act 1988*, *Data Protection Act Amendment 2003* and subsequent legislation,

- *European Statistics Code of Practice* (2011),

- *Freedom of Information Act 1997*, *2003* and subsequent regulation,

- *Health (Provision of Information) Act 1997*,

- *Health Act 2007*,

- *Health Information Bill 2014*,

2.8 Implications of the Discharge Summary

Discharge summaries are a vital document which gives full information about in-patient staying, patient's details, admission and discharge details, treatment plan and follow-up care. Discharge summaries can be used for retrospective and epidemiological study and research.

High quality discharge summaries provide assurances regarding patient safety by sharing important pieces of information among health care settings (Yemm et al 2014).

2.9 Challenges of the Discharge Summary

There are many studies which show that there is poor communication between hospital and community care (Tulloch et al 1972; Roy et al 2005). Family physicians prefer a high quality discharge summary (Van Walraven & Rokosh 1999). There are a number of studies which suggest ideas to improve the content's quality.

The Australian Commission on Safety and Quality in Health Care (ACSQHC) conducted a study and found the pertinent challenges of discharge summaries are a delay in communication, inclusion of inaccurate and unnecessary information, and omission of important contents (ACSQHC 2010). A study by Moore et al (2007) reported that one third of all post-discharge workup procedures were incomplete.

Kripalani et al (2007) identified that availability of the discharge summary for GP visits during the first two weeks were very low, that is 12–20%. Similar findings are reported by Moore et al (2003) where they discovered that a significant number of patients had medical errors due to failure to communicate between two providers of care. The risk of readmission was increased by 50% or more due to delayed discharge (Van Walraven et al 2002; Li JYZ et al 2013). Lack of proper communication and inadequate information transfer during discharge is the main cause of errors and near misses (Forster et al 2004, 2003; Kripalani et al 2007). O'Leary et al (2006) reported that 41% of general interns felt one patient in six months had a preventable reaction due to inadequate transfer of information.

Were et al (2009) reported that only 16% of the pending tests at discharge were reported in the discharge summary whereas only 67% of discharge summaries can be identified by an outpatient provider to whom lab results could be sent. Walz et al (2011) found that one third of discharge patients had pending test results but only one third of the pending test results were mentioned on the discharge summary. A study by Roy et al (2005) found that 41% of test results were pending and 61.6% of primary care providers have no knowledge of outstanding results.

A study by McMillan et al (2006) found that 222 medication errors occurred in 100 discharge summaries. Out of 222 medication errors, 13% of errors were harmful and that could lead to readmissions. Another study by Perren et al (2008) on 622 discharge summaries discovered an omission of medication on 40% of the discharge summaries, of which 35% of patients were in a harmful situation. NICE (2008) reported that there were errors, 30–70%, of

unintentional changes to medication when the patient was discharged from one care to another care facility. The risk of readmission is increased due to lack of care, monitoring and treatment by the GP as there is always delayed communication through the discharge summary. (Walraven et al 2002). Uncoordinated and inadequate contents in the discharge summary were reported by Russell et al (2013). Other problems associated with discharge summaries are an increased death rate (O'Brien 2006), increased physical illness (Wong et al 2008; Scott 2010), adverse incidents such as fall, infection and medication errors (Bywood et al 2011), delay in medication dispensing (McDonald 2007; Elliot et al 2012), additional phone call and visit to emergency and primary care (McDonald 2007; Wong 2008), and risk of repeat test (Wong 2008: Global et al 2012). There is no study that researches the increased cost due to issues with the discharge summary (Rigby et al 2012; Richardson & McKie 2007). Few studies were conducted on the pain and emotional suffering of the family due to improper discharge information between primary care and secondary care (Wong 2008; Bywood et al 2011). Eighteen percent of patients felt that this is a waste of time because their care is disorganised during discharge process (Wong et al 2008; Schoen et al 2008).

There are few studies which show that there are no proper standard guidelines for evaluating a good quality discharge summary. Therefore, different methods need to be adopted to evaluate the discharge summary. There is a lack of uniformity about the completeness of the discharge summary because different doctors complete the discharge summaries differently. To overcome this problem, Stainkey et al (2010) suggests the need of a minimum data set. A study by Lauden (2009) suggests that summaries contain inadequate and unimportant information and fail to reach discharge summary to GPs on time. It can be concluded that there is problem with the delay in delivering the discharge summary to the GP, and a lack of appropriate information and omissions are the main reasons for poor quality discharge summaries.

2.10 European & International Initiatives Related to the Discharge Summary

There are many initiatives done throughout the world to overcome problems with discharge summaries. In the UK, the Royal College of Physicians (RCP) started a project on how to improve clinical handover and developed a standardised format for medication information, discharge summary templates and a safe system to transfer information. This important information generated by the RCP and the Royal Pharmaceutical Society for the NHS in 2012 (Russell et al 2013).

A safety program started in Scotland, in conjunction with GP surgeries, to find out the key areas of transferring the patients within the health care organisation. These initiatives sorted mainly the medication reconciliation and communication between the GP surgery and hospital outpatients. This process of safeguards guarantees that discharge summaries are in use on the day of receiving and medication reconciliation is applied on the second day. It is also ensured that any changes in medication are discussed with patients and their relatives (Health Improvement Scotland 2011).

In Australia, the ACSQHC (2009) suggested a standard which ensures timely, relevant, and clinical handover. The ACSQHC developed the guideline OSSIE, an electronic resource for clinical handover and electronic discharge summaries. The Australian Government and its state territories launched the program which focused on improving communication between primary care and hospital. The New South Wales (NSW) programme showed the best practice of sharing information between hospital and primary care (Russell 2013). The NSW program provides support in technology development for E-health, advanced manufacturing, energy technology, online interactive education, transport, logistic and infrastructure.

In the US, a number of projects such as Re-Engineered Discharge (RED), Better Outcomes for Older Adults through Safe Transitions (BOOST), Partnership for Patients Safety Campaign (PfP), and community-based Care Transitions Program, were implemented to improve communication between hospital and community care. These projects were implemented after a report by the Institute of Management was published in 2009. In Colorado, the number of readmissions was reduced by 30 % after implementation of a RED project programme and cost was reduced by 20 % (Coleman et al 2007). In 2011, the community-based care transition program (CCTP) was launched to improve sharing of information from hospital to community. The 2013 annual report showed that there was a reduction of readmission but it was hard to generalise because it was too early to evaluate the programme (CCTP 2014).

A study on discharge summaries by Glonti et al (2013) found that there was no standard or guideline on discharge summaries in the EU. Poland and Lithuania proposed a national guideline on standard discharge summaries. Spain and Scotland proposed a minimum data set whereas Denmark proposed electronic standard discharge summaries. In England, Standard structure and contents headings were suggested. France and Finland initiated standard discharge summaries proposed by hospital accreditation bodies (Glonti et al 2013). This same study also revealed that there were extensive differences in the quality of discharge

summaries. Lack of information, missing contents and a lack of ICD classification were key issues with discharge summaries in the EU.

European hospital discharge summaries contain inadequate information for follow-up care. The guidance for discharge summaries is available in seven EU member states. There were wide variations in the contents of discharge summaries among EU countries. In the EU, there are core components to the discharge summary but in there is wide variation in the total contents of discharge summaries among member states hospitals alone, not to mention the entire EU. A study by Glonti et al (2013) revealed that there is a need for a common minimum data set for better quality discharge summaries. Cross Border Health Care in Europe (Footman et al 2014) suggests that follow-up care is the weakest point in discharge summaries within cross border care. The European Patients - Smart Open Services (epSOS) developed a minimum data set for discharge summaries applicable to the EU. Table 2.2 shows the omitted contents in discharge summaries.

Table 2.2 **List of Contents Omitted or can be Omitted**

No.	Basic mandatory information	Extended optional section*
1.	Header information to identify the patient, date and document creator, signature	Insurance information, contact information
2	Allergies and medical alert	Vaccines
3	Active problems	Resolved problems
4	Recent surgical procedures	Surgical procedures not older than 6 months
5	List of current medicines	Treatment recommendation
6	Medical device and implants	Social history – smoking, alcohol.
7	Allergies and medical alert	Pregnancy /Date of expected delivery
8		Physical findings…. Vital signs
9		Diagnostic tests

*Extended sections can be omitted if it is not relevant.

Source: e-Health Network 2013

The European Union launched a project called "Trillium" which aims to deliver transatlantic exchange of patient information. In the US, there was programme launched which allows patients to download their medical records. A study by Esteilrich et al (2014) which compared discharge summaries from the EU with US continuity care documents, found that there was a similarity in the standard of format but variations in the terminology used which made exchange of information difficult.

Table 2.3 **Contents Deficits when Transferring Information**

Type of information missing	Missing the information (%)
Diagnostic test results	63%
Treatment or hospital course	7- 22%
Discharge medication	2 - 40%
Test result pending at discharge	65%
Patient family counselling	90-92%
Follow up plans	2-43%

Source: Kripalani et al (2007) *JAMA*, 8, p.836
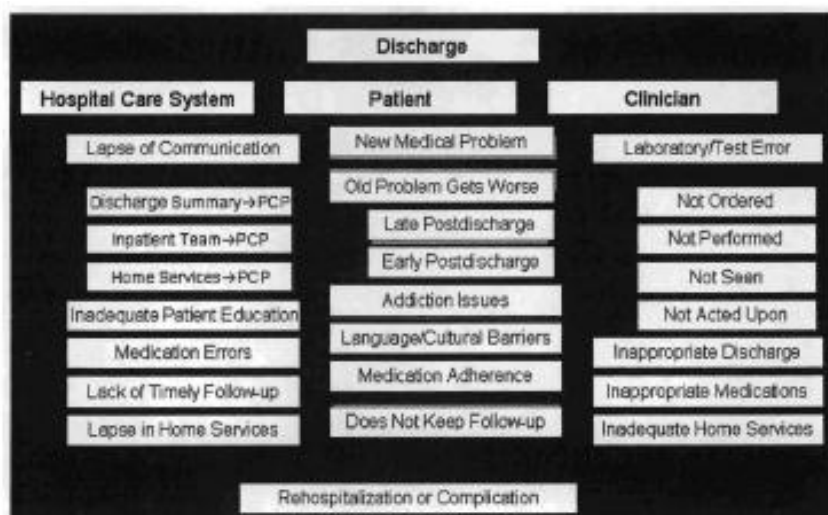

Figure 2.1 Discharge process and factors that lead to rehospitalisation and/or complications
Source: Jeffrey et al (2003). Patient Saf Volume 3, Number 2:97-106.

2.11 Electronic Discharge Summary

Traditionally, discharge summaries are handwritten or computerised. Over time, discharge summaries have improved as a standard format was introduced. To improve the quality of

discharge summaries, computerised versions are introduced. Presently, the advancement of information technology encourages the use of electronic discharge summaries.

The electronic discharge summary (EDS) is a perfect document in the context of comprehensiveness, clarity, time and relevant information for the continuity of care (Reinki et al 2014). Regarding the timely sharing of information, the EDS is well prepared on the day on or before the discharge date. A further advantage of EDS is the easy ability to change and update from resources. However, Callen et al (2010) evaluated the documentation of EDS. This study found that it is debatable whether the quality of the EDS is better in comparison to handwritten summaries.

2.12 Minimum Data Set

A data set is a collection of information for assigned objectives and minimum data set (MDS) is important data required as the minimum acceptable for the assigned purpose (AIHW 2012; HIQA 2013). The main aim of health care standards is to improve quality of care, patient safety and a reduction of incident and errors (HIQA 2012). The National E-Health Transition Authority (NEHTA) (2006) in Australia proposes the use of standard clinical language to communicate transition care to different health sectors. Studies by Chea et al (2005) and Pagliary et al (2004) advocate the need for a minimum data set to communicate information. Standardisation will improve the quality of discharge summary and saves time. A study by Quin et al (2009) evaluated the process of handover of patients at four different organisations. It reported that the availability of standard tools helps to maintain useful information which could be useful to all organisations.

In Scotland, the immediate Scottish discharge summary was found to have deficits in content, structure and production. These issues could be sorted by developing a minimum data set for the maximum number of patients and these could be used as templates for discharge summaries. The minimum data set can be used for system specification with a view to electronic data transfer (Scottish Intercollegiate Guideline Network, 2008).

2.13 Benefit of Minimum Data Sets for Discharge Summary

In current situations, the minimum data set has drawn attention from health care professionals due to improvement of technology and clinical terminology (Bean 2005; Butler 2006; Palases et al 2013). In descriptive discharge summaries, the proper application of a minimum data set is important for easy reading, comprehension and completeness. The structure design of the discharge summary can be generated any time with a computer. Kripanali et al (2007)

discovered that GPs prefer a structured rather than a narrative format in the discharge summary. AIHW (2014) recognised the requirement of nationally agreed, reliable and standardised data for the discharge summary.

2.13.1 Benefit for Patients

The minimum data set will improve efficiency and safety of care (HIQA, 2013). It will provide clarity about the meaning of each word on the discharge summary. It will improve the accuracy and interpretation of data which can be shared safely with the primary care team. It also reduces repetition, administrative costs and time (Rahaman 2014).

2.13.2 Benefits for the Primary Care Team

An ideal discharge summary contains high-standard minimum data which contributes to better and safer care. It reduces cost and time by avoiding duplication of tests and identification errors (HIQA 2013). The standard data set will improve communication between hospital and the primary care team by speeding up the time it takes to share information (Ahmadi 2015).

2.13.3 Benefits for the Hospital

The main benefit of the minimum data set is that it improves communication between the hospital and primary care team. This will also provide accurate information sharing which will ultimately reduce the number of readmissions (AIHW, 2011).

2.13.4 Other Benefits

The minimum data set facilitates consistency in content and data. The minimum data set has international medical terminology which is beneficial for various purposes like decision making, audit epidemiology, research, and policy making (Sermeus 2005). The minimum data set also helps in conducting comparative studies on patient care, interventions, and outcome.

2.14 Principle of Developing a Minimum Data Set

According to the Australian Institute of Health and Welfare (AIHW) (2011) the following principles are applicable for the development of minimum data set:

- **Create the data standard.** The data standard improves quality, consistency and comparable data. Therefore, the development of a standard should follow the operational procedure.

- **Application of national and international standard**. The data set should be based on a single agreed definition to ensure consistency and a reduction in cost and time for data development.

- **Fulfil the aims of collecting data.** The objective of data collection should be well formulated ahead of developing the standard on the data set. Once the purpose is well established, the objectives of data collection should be fulfilled to minimise the expenses on generating, collecting, making the standard, and reporting of data.

- **Formulate once and use again.** The data should be collected as a primary data set which can be used as a secondary data set in policy making, governance, and research purpose.

- **Awareness of limitation of data**. Data can be used for one purpose but the same data cannot be used for other purposes. For example, information about the number of children is important for maternity settings but cannot be applicable for psychiatric settings.

- **Development of data is autonomous.** The data set should be well formulated and standardised and generating of data should not be influenced by any means. There should be agreement regarding privacy and security policy and its standard and legislation. The developer should be familiar with national, international and health related legislation.

- **Minimise the data collector's workload. Development of data should reflect the practice.** The collection of data should be focused on feasibility, business needs, scientific evidence and guideline of the subjects.

2.15 Development Process of the Minimum Data Set

Many organisations have roles in developing minimum data sets. Electronic health records are necessary due to the advancements of ICT (Information Communication Technology) and HIT (Health Information Technology). To fulfil the requirement of EHR (Electronic Health Record) we need standard data. As per the principle of create once, use often, the objectives of information management, development of data sets and standards require nationally agreed guidelines and procedures to capture high quality data (Svensson-Ranello 2011). The

literature review suggested that there were various approaches used by many other researchers for developing minimal data sets such as:

- consultant hiring (Bean 2005),

- making a team of experts or representatives (Ireland et al 2001),

- committee of stakeholders (Evan et al 2010),

- interview stakeholders (Evan et al 2010),

- method of surveying (Mistry et al 2010),

- Delphi technique (Bagley et al 2010),

- literature review (Ireland et al 2001),

- use of data collection tool (Chan et al 2010).

The framework and standard tool developed by Svensson-Ranello (2010) used for developing minimum data sets with multimode methods include reviewing patient records, literature review, and expert opinion.

International guidelines recommended the use of a data dictionary worldwide. The main aim of the data directory is to regulate the definition of data for reliability. In the UK, the NHS developed an information centre to define the data. In Australia, the National Health Data Dictionary is another source of information for data definition. Ireland uses HIPE (Hospital Inpatient enquiry 2015) data dictionary and ICS (Irish Coding standard 2015) version 7.0 Editing ICD-10 for data definition.

HIPE (Hospital Inpatient enquiry) is designed to collect information about patient demographic details, clinical, and administrative information on discharge and death from in-patient service nationally.

The development of MDS should follow appropriate methodology to get quality data by engagement with stakeholders. Svensson-Ranallo et al. (2011) proposed that clinical MDS is developed through critical evaluation of the data elements (DEs) identified from literature and patient chart. The domain expert evaluates the DEs through formal or informal process. The proposed methodology for development of MDS is described in figure 2.2.
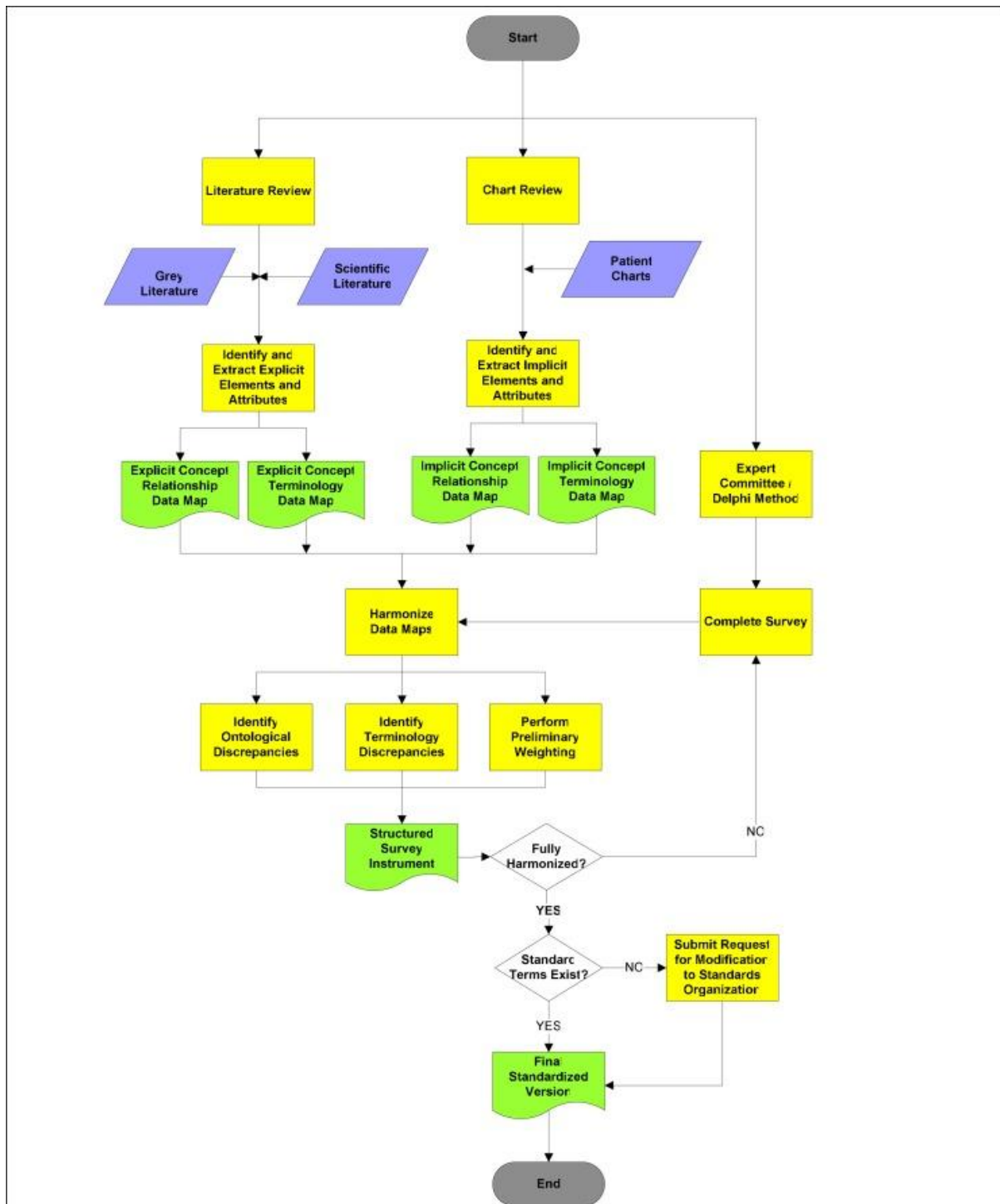
Figure 2.2: **Development process of Minimum Data Set**
Sources: Svensson-Ranallo et al. (2011)

"ICD-10 AM (Australian Modification) is combined with the Australian Classification of Health interventions (ACHI), and the Australian Coding standard (ACS) to show the exact symptoms of illness" (HIPE 2015; ICS 2015). AIHW (2007) published *A Guide to Data Development* which provides "a body of expertise in data development."

2.16 Privacy, Confidentiality, and Security

Privacy is the right of a person to keep the information about them, to disclose that to others when the person so chooses, and for the person be free from interference from another person, organisation or government (Rognehaugh 1999). Confidentiality refers to the "treatment of information that an individual has disclosed in a relationship of trust and with the expectation that it will not be divulged to others without permission in ways that are inconsistent with the understanding of the original disclosure" (FDA 2013).

Security is defined as the extent to which personal data can be kept or shared among authorized persons (Brander 2003).

Discharge summaries contain personal information therefore it needs to be kept private and confidential. Every document involving research needs to be private and confidential. There are various studies concerning privacy and confidentiality (Craig et al 2007). In a study conducted in Austria by Schabetsberger et al (2006) it was reported that some health care professions were apprehensive about the electronic transfer of documents and four GPs refused to accept electronic documents at all. One psychiatric hospital refused to accept discharge summaries due to the highly sensitive information relating to the patient. Paper-based records may generate an extensive paper trail. Considering the developments in IT, there is need to move discharge summaries from paper to electronic based system. Though, electronic based records have many advantages, they need to be protected from a breach in security. The main obstacle to the implementation of electronic health records are funding, security, and privacy threat. The privacy and security of patient's information is critical in the health service sector. Studies conducted in various countries showed concerns regarding privacy and security. In the US, there are 25 million cases of compelled authorization of health records each year (Rothstein & Tolbot 2007). According to studies conducted in Denmark, Germany, and New Zealand, respondents were concerned about data related to EHR (Zurita et al 2004, Kirchner et al 2009, and Chhanabhai & Holt, 2007).

The biggest threats to e-health are accidental disclosure, abuse of health care privileges, and access to information by an unauthorized third party.

Privacy, confidentiality and security should be maintained for discharge summaries whether it is in a handwritten or electronic form. The paper discharge summaries should be kept in a secure and confidential place which cannot be accessed by unauthorized people. Discharge summaries can be sent by fax or email and even then its privacy and confidentiality should be

maintained. When discharge summaries are shared among health professionals, they should be encrypted with strong passwords.

2.16.1 Encryption

Encryption is a method of protecting electronic information with a decryption key or password. In Ireland the HSE Design Authority (2015) published a standard directory outlining privacy, confidentiality and the security of data.

2.17 SNOMED-CT

SNOMED-CT is a guide of clinical terms used for documentation and reporting. It is useful for coding, retrieving and analysing the data (International Health Terminology Standards Development Organisation, SNOMED-CT® User Guide 2013).

In Ireland, health care link data is fragmented and stored in unconnected silos in various systems. SNOMED-CT is the most inclusive nomenclature used in healthcare records. It is a system of cross mapping with ICD-10 code which improves various areas such as epidemiology, statistics, and administration work to international standards. SNOMED-CT will minimise repeating requests for the same information.

2.18 Findings from Literature Review

After in-depth literature review, the researcher found the following findings:

- **Psychiatry care in Ireland**-Most of the mental health service is carried out in community. When patient is discharged, they refer to GPs for follow-up care. When patient is discharged from hospital, discharge summary is generated whether in paper form or electronic form.
- **Difference between generic and psychiatric discharge summary**: There is wide variation in contents of discharge summaries among different hospital which affecting the continuity of care. Various details were omitted such as details on medication, follow up care, physical examination and mental state examination.
- **Contents of discharge summaries**: There are various organisations such as JCI, NEHTA, and studies by various authors which highlighted the contents of discharge summaries. There were variations in contents of discharge summary. HIQA published an article o *National Standard on Discharge Summary* which provides guideline on contents of discharge summary.

- **Discharge summary guideline in Ireland:** HIQA is an independent body who monitor quality care in Ireland provided the guideline for contents of discharge summaries.

- **Challenges of the Discharge summary:** The main challenges for discharge summaries were delayed communication to primary care team, inclusion of inaccurate and unnecessary information, omission of important contents, lack of information about test conducted ,lack of information about outstanding results, and lack of information about changes on medication. These challenges lead to readmission to hospital, poor quality care, and increased risk of morbidity. There is need of timely sharing of information to primary care team and minimum data set for discharge summaries.

- **EU and International initiative related to discharge summary:** Many countries conducted various project to improve timely communication between hospital and primary care team. In UK, Royal college of Physician, safety program in Scotland, ACSQHC in Australia, various program in US were launched to improve the discharge summary and its process. There is need of common discharge summary within EU to improve the quality care.

- **Electronic Discharge summary:** Electronic discharge summary (EDS) is developed with advancement of Information technology. It is still debatable about quality of EDS in comparison to handwritten summaries.

- **Development of Minimum data set:** MDS is developed by using principle of data development process. Various approaches were used by various researchers such as hiring expert, making team of expert, committee of stakeholders, interview of stakeholders, method of surveying, Delphi technique, literature review, and data collection tool.

In literature review there is lack of standard content of discharge summary which is important aspect of sharing information between hospital and primary care team. In Ireland, there is no study done on GPs expectation in psychiatric discharge summaries.

2.19 Summary

Psychiatric care is the care given to mental health disorder patients during in-patient or outpatient treatment. Psychiatric discharge summaries are the documents containing

information needed by the primary care team when the patient is discharged from hospital. This transfer of information helps to support continuity of care. HIQA (2013) published the *National Standard for Patient Discharge Summary Information* which outlines contents to be included in discharge summary. Vital information is still lacking in the discharge summary of psychiatric patients. National and International agencies took the initiative to standardise the discharge summaries which will maintain quality, privacy, confidentiality, and security. The development of MDS for the psychiatric discharge summary will improve the communication gap and using information technology will improve the quality and timing of transferring the information to the primary care team. The following chapter will outline the research methodology.

<h1 style="text-align:center">Chapter 3</h1>
<h1 style="text-align:center">Research Design and Methodology</h1>

3.1 Introduction

This chapter includes details about the research design and methodology employed for this study. It provides the rationale for choosing this particular research approach and design, and the process applied to collect information for the study.

3.2 Research Approach & Design

The main aim of this dissertation is to explore the minimum dataset required for psychiatric discharge summaries.
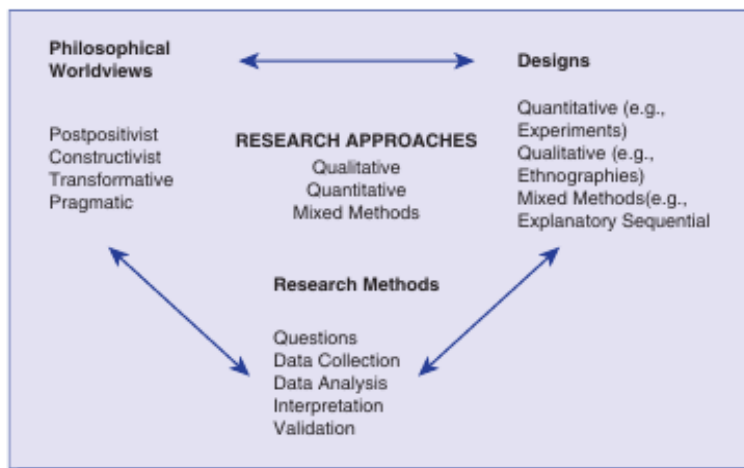
Figure 3.1 **Conceptual framework for research design adapted from Crosswell (2013)**

A research approach is defined as the "plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation" (Crosswell 2013). In this study, the researcher used three approaches, qualitative, quantitative, and mixed, to answer the research question.

Creswell (1994) defines quantitative research as "explaining phenomena by collecting numerical data that is analysed using mathematically based methods (in particular statistics)" Therefore, it is essential to collect numerical data to explain the phenomenon by using

quantitative methods. Qualitative research is way of understanding underlying reasons, opinion, and motivations.

The proposed research question is to investigate compliance with standard HIQA guidelines for discharge summaries within an Irish hospital. In order to investigate this objective, a thorough review of a wide range of resources is required. The researcher undertook an exploratory method to identify the most common contents omitted from discharge summaries. Considering the type of research needed to meet this study's objectives, a mixed research methodology including qualitative, quantitative and exploratory methods is required. Mixed research is a mixture of both quantitative and qualitative research and it is better than qualitative or quantitative alone. Mixed research works under the assumption of pragmatism. The benefit of the mixed method is in comparing quantitative and qualitative (Creswell 2007). Many terms such as "integrating," "synthesis," "multi-method," and, "mixed method" are mentioned as synonyms in the literature. Recently, most researchers use the term "mixed method" (Bryman 2006). Researchers used a sequential exploratory design which integrates both qualitative and quantitative research. This type of design applies qualitative analysis followed by collection and analysis of quantitative data.

After a detailed literature review on different types of research design, the researcher decided that a mixed method with sequential explanatory design was the most appropriate method to use in this study.

3.3 Research Methodology

Research methodology is the way of data collection, be it quantitative or qualitative, and the analysed data helps us understand the study issues and allows the reader to critically evaluate a study's validity and reliability (Kallet Richard, 2004). As the researcher has chosen the mixed method, the qualitative data is collected by reviewing the discharge summaries. Then qualitative data is collected by using HIQA guidelines. After analysis, a minimum dataset will be developed. The qualitative analysis is completed by gathering expert opinion on discharge summaries. All of this will help to formulate the requirements for the discharge summary.

Finally, the mixed methodology is used to collect the data for the MDS. After analysis of the qualitative and quantitative data, a closed- and open-ended questionnaire and data collection tool are then developed. Data is collected by survey method on GPs and a review of discharge summaries against the standard minimum data set. Analysis was completed after collecting data.

3.4 Research Design

The research design provides a plan of approach for a study (Creswell 2012) in helping to identifying a problem, form research objectives, and set a framework on data collection, analysis, interpretation, and reporting (Bogdan & Taylor 1975; Creswell 2012). The research design for this study is mixed, a combination of quantitative and qualitative methods.

For this dissertation, the user requirement process consists of three components:

- Context of use
- User requirement specification
- Prototype development

The following diagram describes the user requirement process; the arrow shows the next step of process.

Context of use

User Requirement Specification

Template Development
& Evaluation
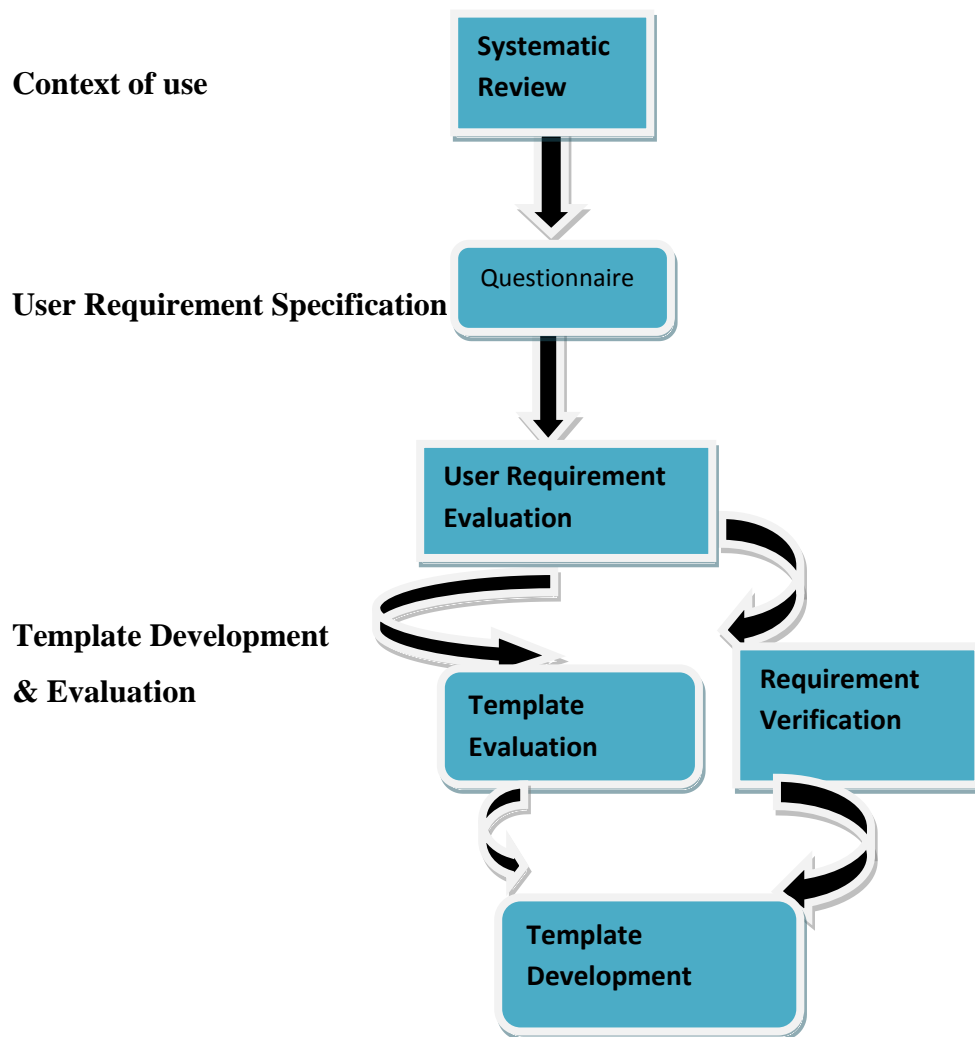
Figure 3.1 **Schematic of user's requirement process. Adapted from Brownsweel et al 2012.**

3.4.1 Context of Use

There is a need for a systematic review of various studies to identify the initial minimum data set. The researcher conducted an extensive literature review in relation to the formation of a MDS for psychiatric patient discharge summaries.

3.4.1.1 Systematic Review

The researcher collected data for a comprehensive literature review on available databases including PubMed, Wiley Online Library, Springer Link, Science Direct, Google, IEEE and Scholars. During the search processes, a combination of different words was used. Figure 3.2 describes the research review process.
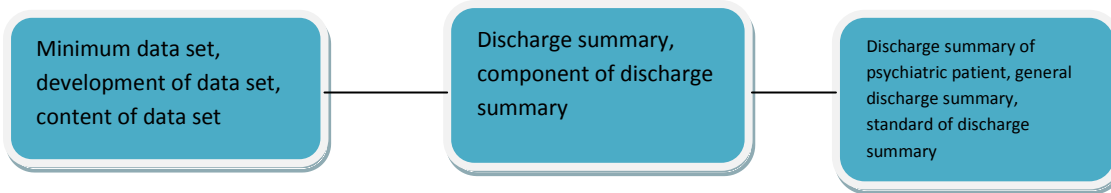
Figure 3.2 **Research Review Process**

The researcher searched the articles which met the search criteria. Once the criteria were met, the researcher followed the references list and applied a snowball search strategy which is a technique for finding research subjects. One subject gives the researcher the name of another subject, who in turn provides the name of a third, and so on (Vogt, 1999).The snowball search approach identified new articles not found in the initial search (Jalali & Wohlin 2012).

3.4.2 User Requirement Specification

Data collection requires the appropriate tool to help identify the minimum data set; a combined method of data collection was used.

3.4.3 Template Development & Evaluation

A minimum data set for the collecting tool was developed by consultation with a consultant psychiatrist, registrar of mental health service, community mental health nurse, and a psychiatric nurse. These consultations were done during the researcher's work experience in the study hospital.

3.5 Tool Development Process

The draft of the MDS for the discharge summary was prepared and consists of demographic details, primary care professional details, admission and discharge details, clinical details, and follow-up care. The first draft was formed by following HIQA guideline and consulting literature. Dr Eugene Breen, Consultant Psychiatrist gave his opinion on the MDS first draft. The tool was developed based on the expert opinion and literature review, survey questionnaire and chart review.

After the consultation process for tool development and a pilot study with a colleague, the researcher changed the wording, rearranged some items, and provided more space to write comments on each item. The results of the pilot study were not included in the research study to avoid misleading results.

3.6 Questionnaire

A questionnaire is a data collection tool comprising of a list of questions with advice on how to complete the form (European Statistical System 2006). It gives freedom to the participant to answer the questions and to provide an independent opinion without interference from the researcher. The main benefit of a questionnaire is consistency and anonymity (Giesen 2012). This study used a survey method where the participant completed the questionnaire and then returned it to the researcher. The aim of the questionnaire was to collect information on the surveyor's opinion of the discharge summary contents, and feedback on data to be included in future discharge summaries. The questionnaire was developed by using a STEPS conceptual framework. This framework focuses on obtaining core data at each level on the established risk factor. The STEPS approach has three levels and within each level, risk assessment is categorised into core, expanded, and optional modules. Step 1 describes the questionnaire based assessment or the core or minimum set (WHO 2016).

The questionnaire contains closed-ended questions to collect the participant's opinion on semi-structured data. Once developed, testing was carried out among working colleagues to test possible mistakes in the questionnaire's design and phrasing of questions. To test the ease of completion and usability of the questionnaire, it was reviewed by the research supervisor and a psychiatric expert. In the questionnaire, questions were asked on an "agree" or "disagree" basis. When the participant agreed, they go on to choose a "mandatory", "optional" or "conditional" statement on each question.

3.7 Data Collection Tool

The collection tool for reviewing the data was developed after the questionnaire. The number of items in the collection of tool was the same as the questionnaire. The data was collected in terms of "yes" or "no" answers.

3.8 Participant Recruitment Methods

In this dissertation, there are two sample categories. Firstly, 100 psychiatric patient discharge summaries were selected randomly from the total amount of patient discharges in 2015. The sample size was selected from the total discharge summaries of patients admitted in 2015, of which there were 205. The sample was chosen by a random sampling technique. Secondly, 50 GPs were specifically selected from the list of GPs on the HSE website. Participants were invited to take part in the research study by sending questionnaires attached with a cover

letter (Appendix 7), participant's consent forms (Appendix 5) and information leaflets (Appendix 6). The participant information sheet included the aims of the study and a request for participants. The information sheet included the statement "All participants have the right to take part or to pull out from the study at any time without any compensation."

In total 50 questionnaires were posted to GPs working in North Dublin City. An envelope containing research questionnaires with instructions, consent forms, participant information sheets, and a return envelope with stamp were posted to the GPs' addresses.

A cover letter and consent form (Appendix 7 & 5) informed the participants that answers were confidential and they would be non-identifiable during the study and their data would keep confidential under the Data Protection Act, 1988 and Data Protection Act Amended 2003.

3.8.1 Inclusion Criteria

The study included all discharge summaries as planned discharges in 2015.GP working in Dublin North were included as participants.

3.8.2 Exclusion Criteria

Discharge summaries which are difficult to read and written of paper were excluded from study. Patients re-admitted in the same year of patients' discharge summary were excluded. Patient who left hospital against medical advice (DAMA) were not included in study. GPs not giving consent for participation were excluded from study.

3.9 Validation

The validation was done with the standard developed by HIQA (2013) and a review of literature.

3.10 Ethical Approval

This study was approved by the research ethical committee of MMUH (Appendix 2) and the School of Computer Science and Statistics of Trinity College (Appendix 1). The researcher was assured compliance with the principles of autonomy, beneficence, and maleficence, justice and the Data Protection Act, 2003. Written consent was obtained from participants involved in the research study.

3.11 Data Analysis

Descriptive analysis and Microsoft Excel spread sheets were used to analyse the collected data. The researcher followed the HIQA (2013) data analysis guidelines in analysing the collected data. The data was recoded on an Excel workbook. The agreed mandatory, optional, or conditional responses from participants were also recorded in a database. A data set with 80% or more agreed mandatory responses were considered as the mandatory data set for discharge summary. A data set with 80% or more disagreed were considered as disagree.

3.12 Summary

This chapter outlines the methodology of developing the MDS for the psychiatric discharge summary. This research study uses the mixed method of sequential explanatory research design. The national and international standard was used to develop the MDS. The study was categorised into two parts, the first part is a collection of data from 100 discharge summaries at the study hospital, which were selected at random from 205 discharge summaries in 2015. In the second phase, 50 GPs were specifically selected from the HSE website to collect data by sending a questionnaire by post. Data analysis was done by using descriptive analysis and the ethical process was applied throughout the data collection.

Chapter 4 outlines the findings of this study. Chapter 4A describes the findings of reviewing the hospital discharge summaries and Chapter 4B describes the results of GP opinion on the minimum data set.

Chapter 4
Results, Analysis, & Discussion

4.1 Introduction

The mental health service is a vital part of a country's health care system as it is needed at some time or another through a person's life. All mentally-ill people should have access to high quality and high standards in the mental health care system. An ideal mental health care system depends on high quality information sharing. The discharge summary is an important way of sharing information between the hospital and the primary care team. In the process of developing the minimum data set for the discharge summary, this study reviewed the discharge summaries of mentally-ill patients admitted to the psychiatric ward of MMUH, Dublin. A survey of GPs' opinions on the discharge summary was also conducted for this study. This chapter discusses the findings of the discharge summary review. Each discharge summary was studied for its content and entered into a Microsoft Excel sheet for descriptive analysis. The results are illustrated in the form charts, graphs, and tables. Section 4.3 describes the GPs' views on the discharge summary content and their responses are analysed in a descriptive frequency. The results describe the contents to be included in the discharge summary shown in form of a graph, chart, and table.

Of the 50 questionnaires sent out to GPs in the North Dublin City area, only 12 questionnaires were returned. All returned questionnaires were included in the research study as all met the study criteria.

4.2 Contents of Discharge Summary
4.2.1 Patient Details

Most of the discharge summaries included important patient details such as name, address, date of birth and individual health identifier whereas few details were omitted from the majority of the discharge summaries. The patient's name was present in all discharge summaries. The length of stay in the patient's current address was missing in all summaries. The discharge destination, length of stay in current address, nationality and next of kin were identified as missing contents in the majority of discharge summaries. Figure 4.1 describes the frequency of patient details in the discharge summaries.
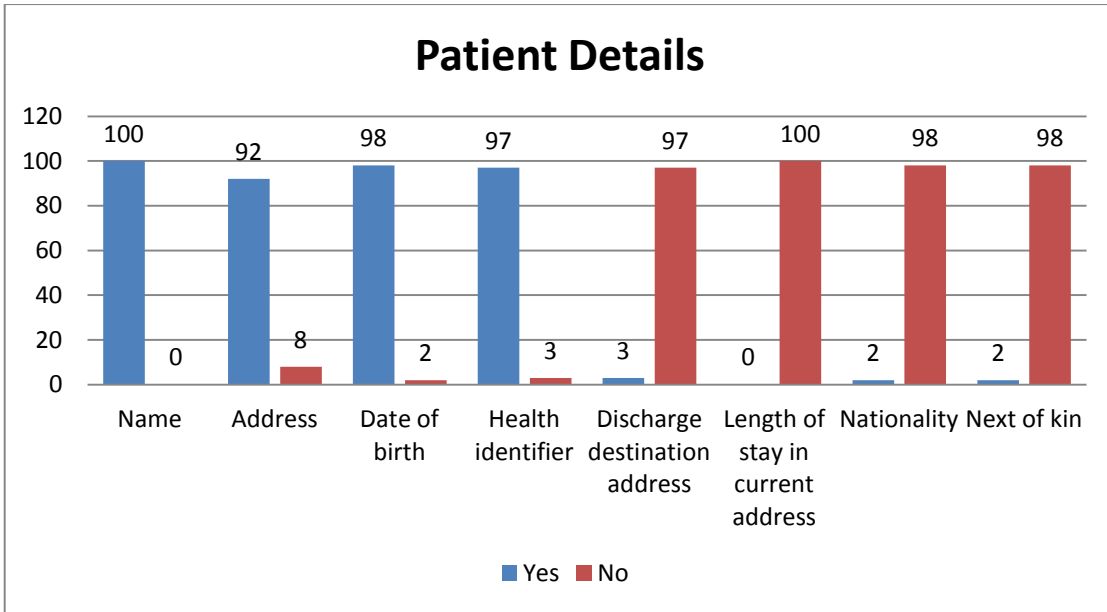
Figure 4.1 **Frequency of Contents of Patient Details in Discharge Summaries**

4.2.2 Primary Healthcare Professional Details

The majority of discharge summaries (66%) contained the name, address, and phone number of GPs whereas email, community care service, and GP ID number were missing in almost all discharge summaries. Figure 4.2 shows the primary health care details included and omitted from discharge summaries.
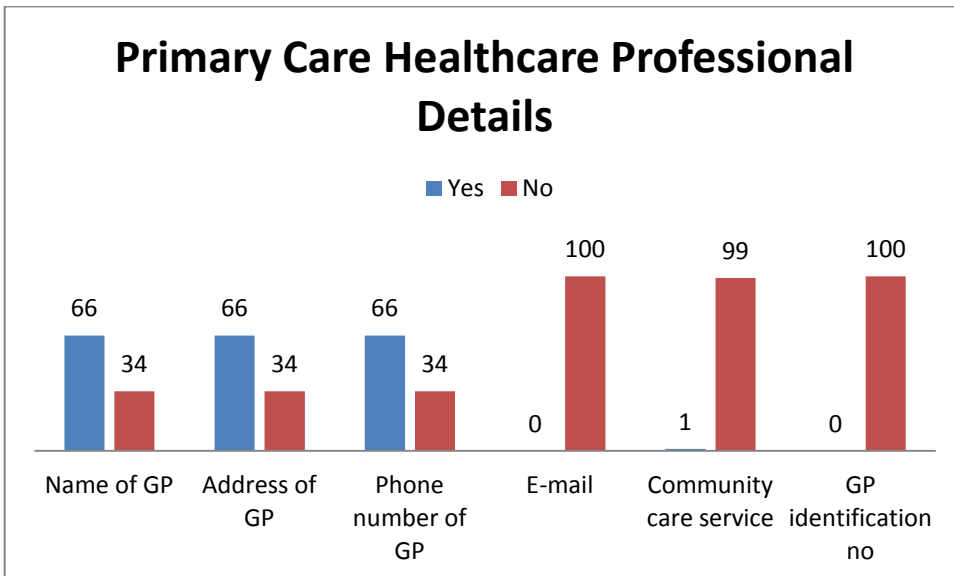

Figure 4.2 **Frequency of Primary Healthcare Professional Details**

4.2.3 Admission & Discharge Details

The majority (80%) of discharge summaries contained the date of admission and the date of discharge. About 9% of discharge summaries contained the discharge method. The source of referral, method of admission, and reason for admission was present in 64% of discharge summaries. The date of death and post-mortem flag were omitted from all discharge summaries. Almost half of the discharge summaries noted the treating consultant. Only 14% of discharge summaries showed the legal status for psychiatric patients. Figure 4.3 shows the admission and discharge details.
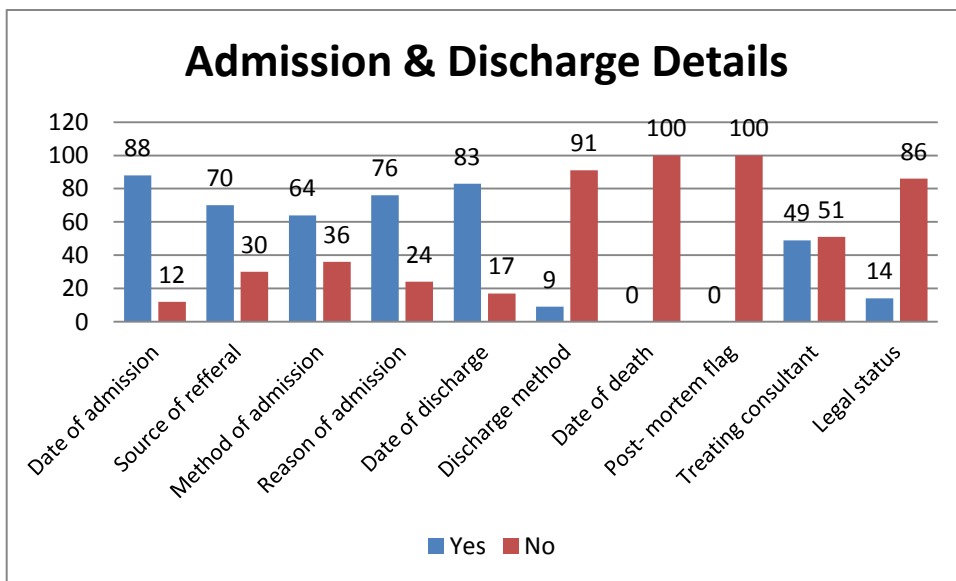
Figure 4.3 **Frequency Percentages of Admission & Discharge Details**

4.2.4 Clinical Information

Almost 75% of discharge summaries contained presenting complaints, ICD diagnosis, progress, treatment during admission, and discharge medication. Most of the discharge summaries, that is more than 90%, were missing past medical history, pre-morbid personality, physical examination, and risk factor. Only less than 50% of discharge summaries were missing past psychiatric history. Family history and social history were omitted from 88% percent of discharge summaries. Figure 4.4 describes the clinical information present or absent from the discharge summary.
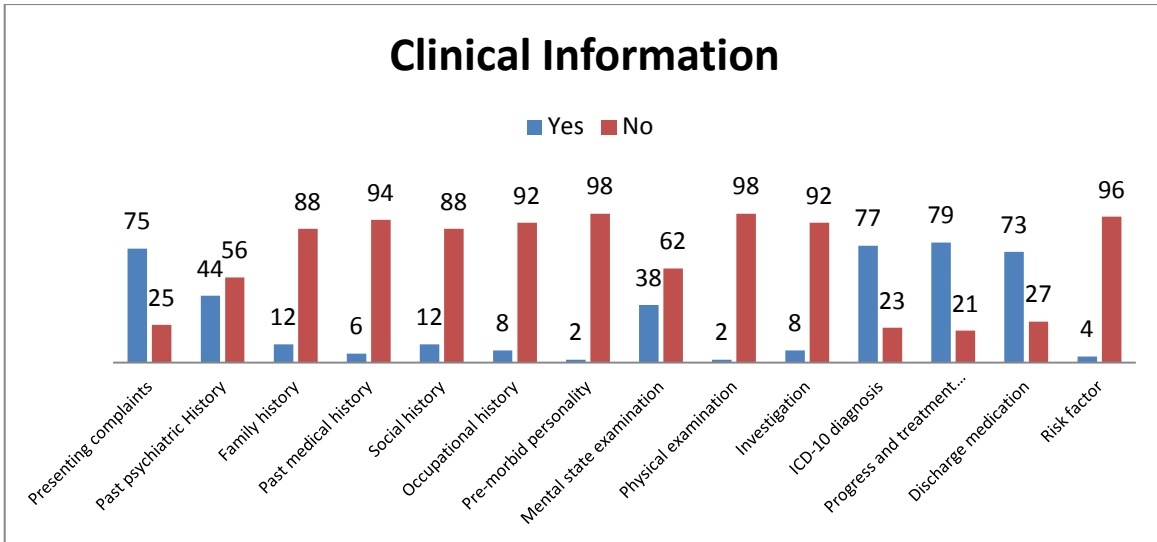
Figure 4.4 **Frequency Percentages of Clinical Information Details**

4.2.5 Future Management

Out of 100 discharge summaries, only 40% of discharge summaries showed future management as hospital action. Most of the discharge summaries (about 90%) presented no future management plan after discharge. The contents which were omitted from discharge summaries include GPs' action, social care action, information given to patient, advice and recommendations, number of pages, place the patient was discharged to, and consultant details. Figure 4.5 describes future management details included and omitted from the discharge summary.
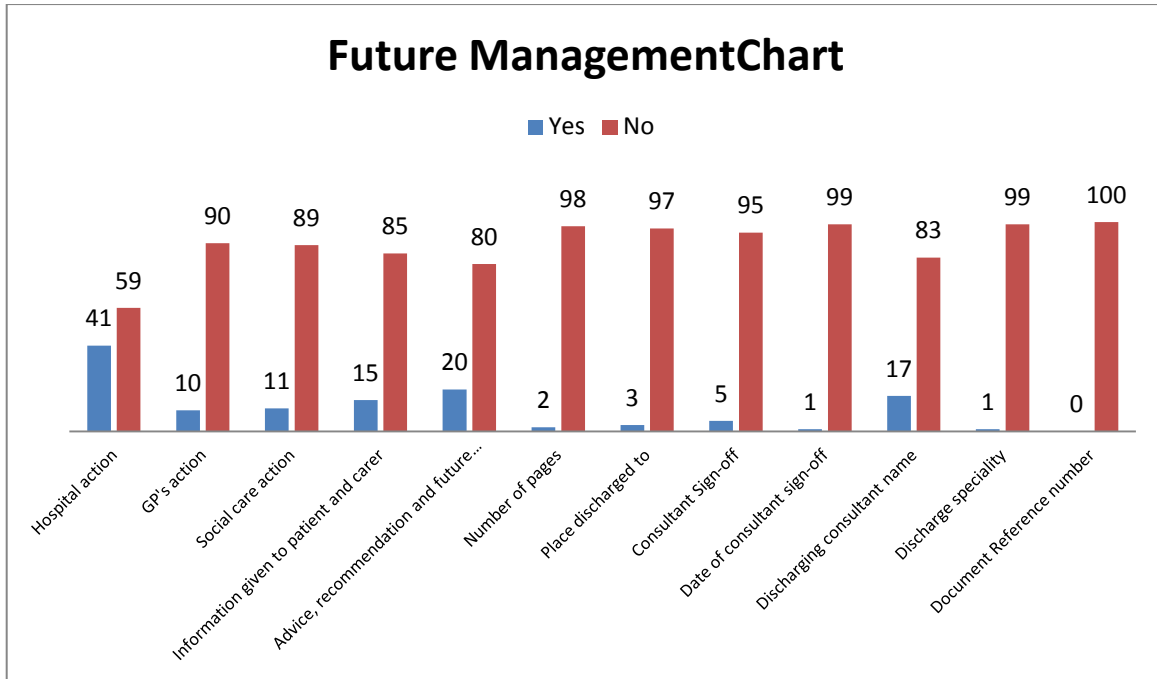
Figure 4.5 **Frequency percentage of future management details included in or omitted from discharge summaries.**

4.2.6 Details of the Person Completing the Discharge Summary

The discharge summaries typically include three details of the people completing the discharge summary such as the name of person completing the discharge summaries, their job title, and their signature. Contact numbers and 'copy to' were missing from almost all discharge summaries. Only 80% of discharge summaries contained the signature of person completing discharge summaries while 84% of discharge summaries were missing the date of completion.
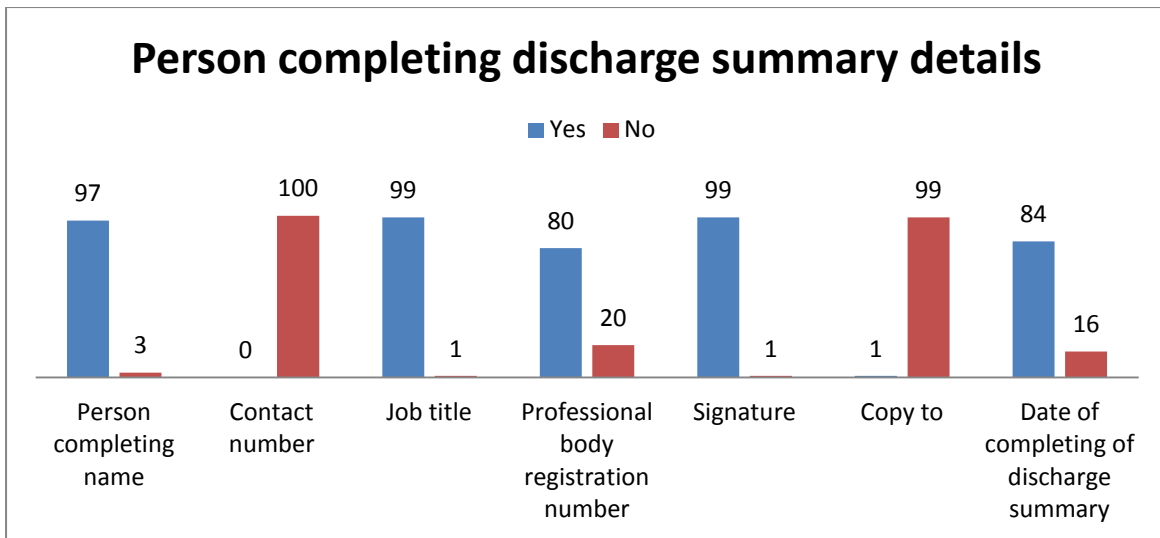
Figure 4.6 **Frequency of details of the person completing the discharge summary**

4.2.7 Review of Discharge Summary in Hospital

The chart review was conducted on 100 discharge summaries. The contents of the discharge summaries were calculated based on the findings of study. The contents which were omitted 80% or more times in 80% of the discharge summaries were considered as omitted contents. This study suggested that there were various contents which were omitted from summaries. In patient's details, the omitted contents were discharge destination address, length of stay in current address, nationality, and next of kin. However, the *National Standard for Patient Discharge Summary Information (*HIQA 2013) suggested that discharge destination address can be kept as optional in the patient details section of discharge summaries. The patient details section fully complied with HIQA (2013) guideline. The discharge destination address is important as it can affect the patient's rehabilitation. The primary healthcare professional's details were present in all discharge summaries. Regarding admission and discharge details, the discharge method was missing in most of the charts. However, the HIQA (2013) guidelines state that the discharge method is mandatory where applicable. In a similar way, there were few contents missing in discharge summaries such as date of death, and post-mortem flag. These are mandatory (where applicable) components of discharge summaries, but these are not applicable for reviewing chart.

Most of the clinical information contents omitted from discharge summaries included family history, past medical history, social history, occupational history, pre-morbid personality, physical examination, investigation, and risk factors. These contents are important details. Future management was missing in all discharge summaries except hospital actions although, future management contents are mandatory but only where applicable according to HIQA

(2013) guidelines. The future management plan for mentally-ill patients is important for continuity of care. The omitted contents for details of the person completing the discharge summary included the contact number and copy to. The contact number is mandatory whereas copy to is optional as per HIQA (2013) guidelines for discharge summaries. Table 4.1 describes the omitted contents in discharge summaries.

Table 4.1 **Omitted Contents of the Discharge Summary**

	A. **Patients details (Omitted in discharge summary)**		**B.** **Primary healthcare professional details (Omitted in discharge summary)**
1.	Discharge destination address	1.	Email
2.	Length of stay in current address	2.	Community care service
3.	Nationality	3.	GP Identification
4.	Next of kin		
	C. **Admission and discharge details omitted from discharge summary**		**D.** **Clinical information details omitted from discharge summary**
1.	Discharge methods	1.	Family history
2.	Date of death	2.	Past medical history
3.	Post-mortem	3.	Social history
4.	Legal status	4.	Occupational history
		5.	Pre-morbid personality

		6.	Physical examination
		7.	Investigation
		8.	Risk factor
	E. **Future management details omitted in discharge summary**		**F.** **Person completing summary details omitted in discharge summary**
1.	GP's action	1.	Contact number
2.	Social care action	2.	Copy to
3.	Information given to patients and carer		
4.	Advice, recommendation, and future plan		
5.	Number of pages		
6.	Place discharged to		
7.	Consultant sign-off		
8.	Date of consultant sign-off		
9.	Discharge speciality		
10.	Document reference number		

4.3 GP Opinion on Discharge Summary

4.3.1 GPs Opinion on Demographic Details

According to the survey on GPs regarding discharge summaries all participants agreed that the name, address, DOB, individual health identifier, discharge destination address, and next of kin should be included as part of the demographic details in discharge summaries. About

91% of participants agreed on nationality to be included in discharge summary. Only 75% of GPs agreed on length of stay in current address to be part of discharge summaries. All participants agreed on name, address and DOB as mandatory components of demographic details in discharge summaries. Half of the participants agreed on the individual health identifier and nationality as optional components of the discharge summary. The majority of participants (83%) agreed on the discharge destination address as a mandatory component. There was mixed agreement as to mandatory, optional, or conditional on contents such as length of stay at current address and next of kin. Figure 4.7a and Figure 4.7b describe the frequency percentage of GP's opinions on demographic details.
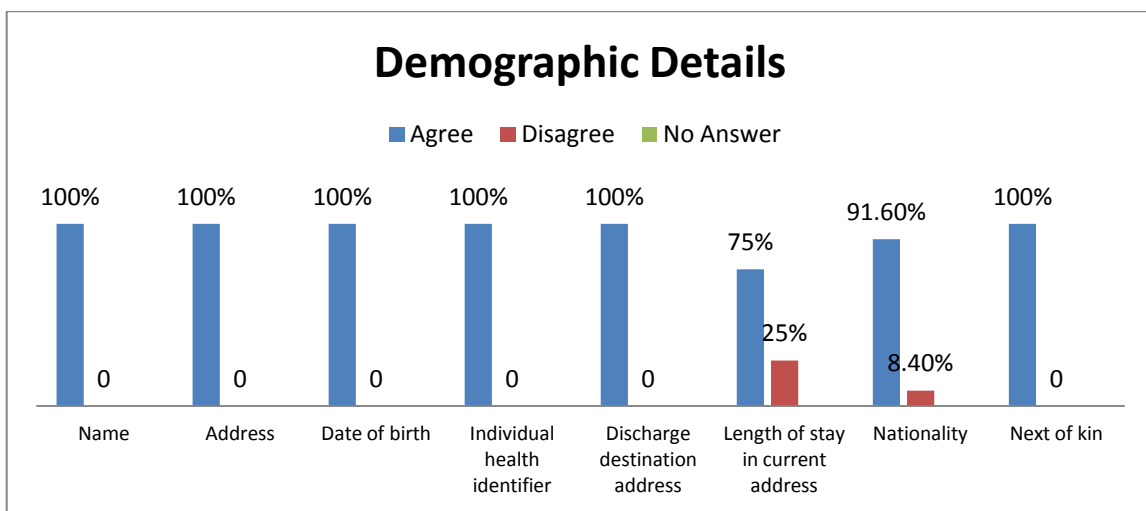
Figure 4.7a **Frequency of GPs' Opinions on Demographic Details**
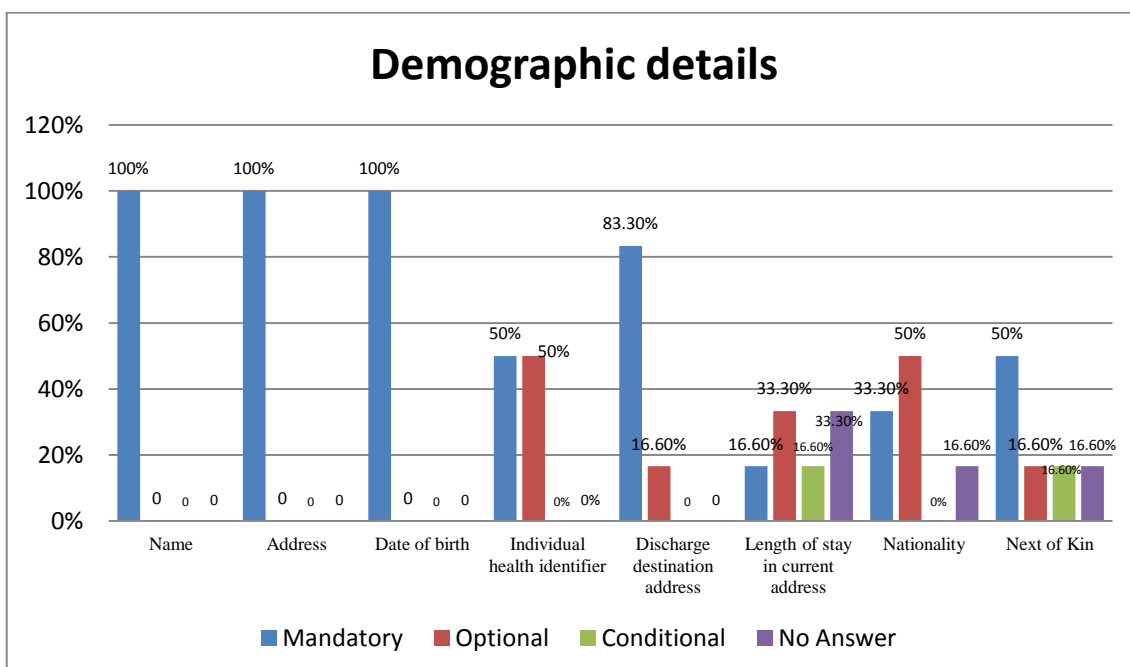
Figure 4.7b **Frequency of GPs' Opinions on Demographic Details**

4.3.2 GP's Opinion on Primary Healthcare Professional Details

All GPs agreed that the name and address of GPs should be included in discharge summaries. It is evident from Figure 4.9 that only 75% of participants were in favour of the GP's phone number to be included. About 58% of participants were not in favour of email and GP ID to be included in the discharge summary. Out 83% of participants said that the name and address of the GP should be a mandatory component of the discharge summary. About 16% of participants agreed that the email address should be optional and conditional components of discharge summary. One third of participants agreed that the GP's phone number should be included as mandatory and optional.
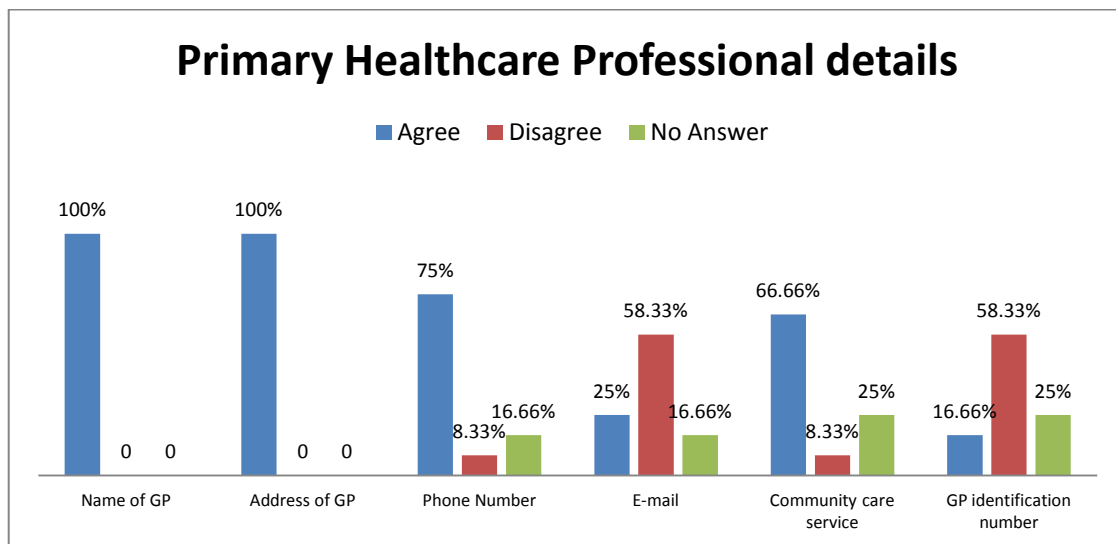
Figure 4.8a **Frequency of GPs' Opinions on Primary Healthcare Professional Details**

Primary Healthcare professionals Details
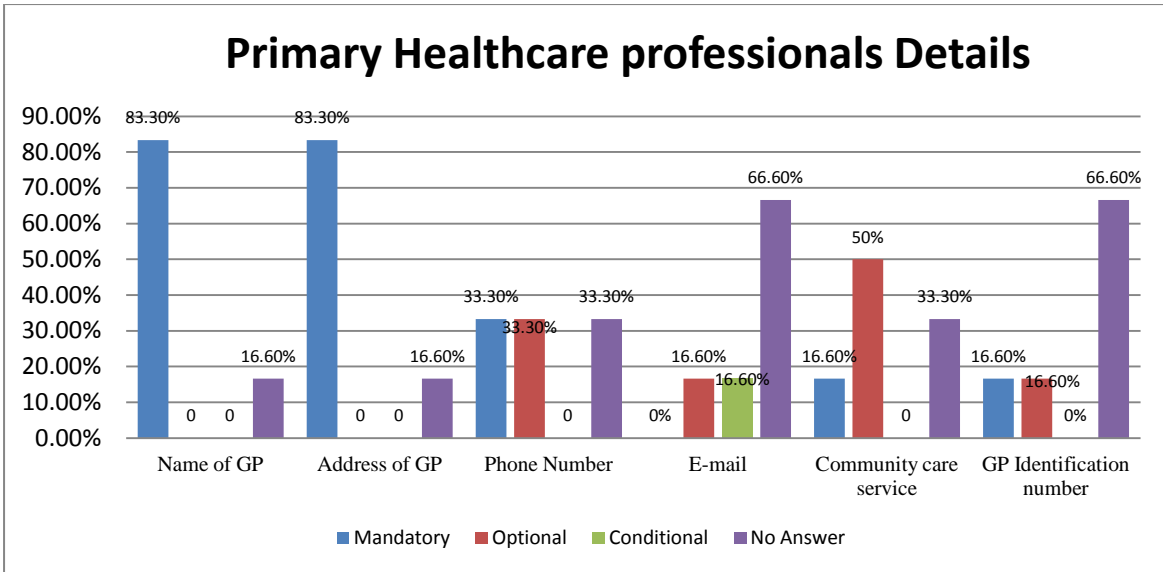
Figure 4.8b **Frequency of GP's Opinions on Primary Healthcare Professional Details**

4.3.3 GP's Opinions on Admission & Discharge Details

All participants were agreed on the date of admission, source of referral, method of admission, reason for admission, date of discharge, place to discharge, date of death (where applicable), and treating consultant to be components of the admission and discharge details on the discharge summary. Only 75% of participants were in favour of the post-mortem to be included in discharge summaries. The mandatory component of discharge summaries were date of admission, source of referral, method of admission, reason of admission, date of discharge, and treating consultant was agreed by all participants.

Admission & Discharge Details
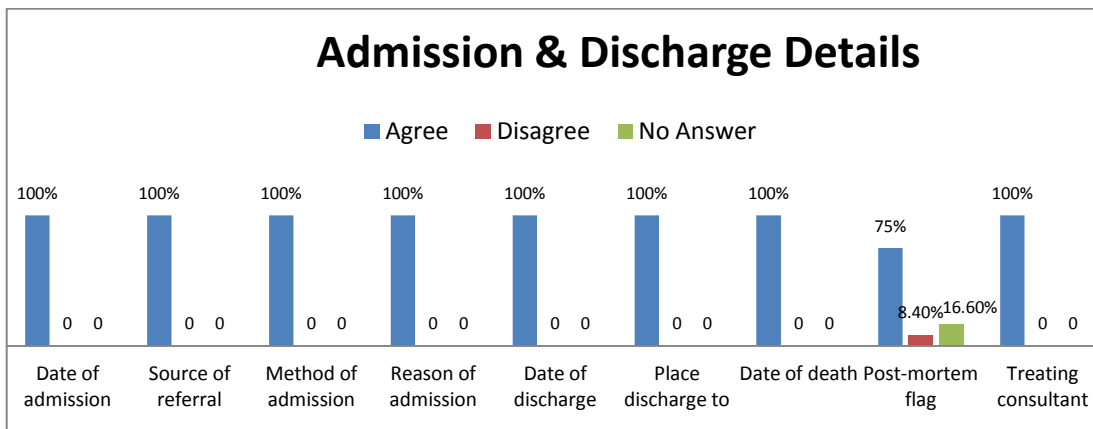
Figure 4.9a **Frequency of GPs' Opinions on Admission and Discharge Details**
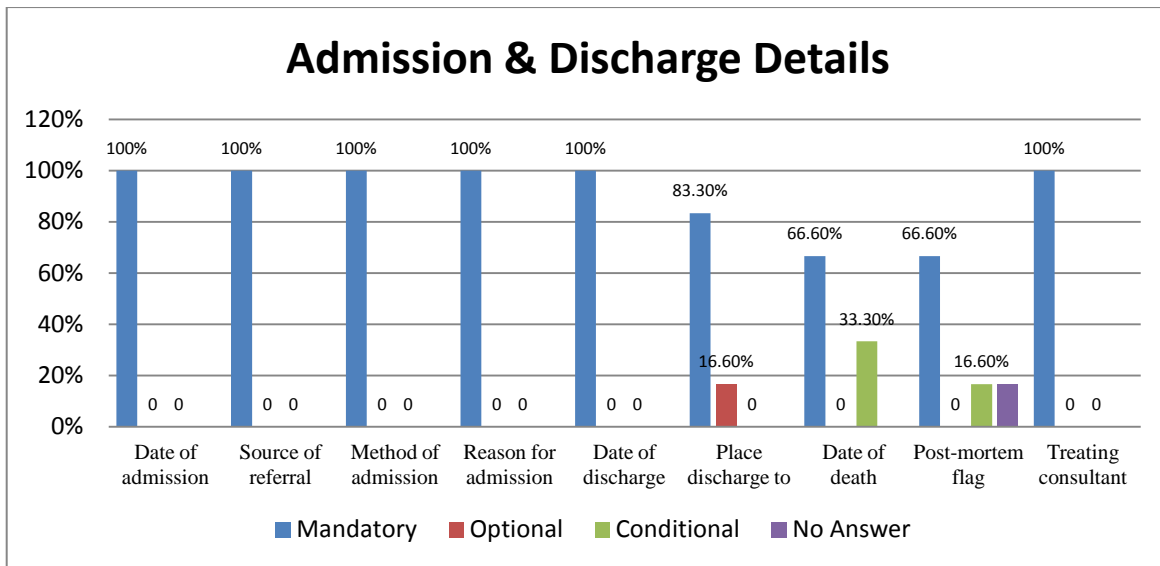
Figure 4.9b **Frequency of GPs' Opinions on Admission and Discharge Details**

4.3.4 GPs' Opinions on Clinical Information

In this section eighteen data sets were included in draft discharge summaries. Out of 18 components, 8 data sets were agreed upon by all participants. The agreed data sets were presenting complaints, past psychiatric history, family history, pre-morbid personality, mental state examination, discharge medication, patient follow-up plan, and advice to GP. It is evident from figure 4.10a that just more than 80% of participants were agreed on past medical history, social history, occupational history, physical examination, ICD-10 diagnosis, progress and treatment during admission, place discharge to, and number of pages were to be included in the discharge summary. Figure 4.10b shows that all participants were agreed on presenting complaints, discharge medication, and patient follow-up plan as mandatory components of the discharge summary. The same numbers of participants were agreed on family history as an optional component of discharge summaries. There were mixed responses on the data set regarding occupational history, pre-morbid personality, and investigation as mandatory, optional, or conditional components of the discharge summary.
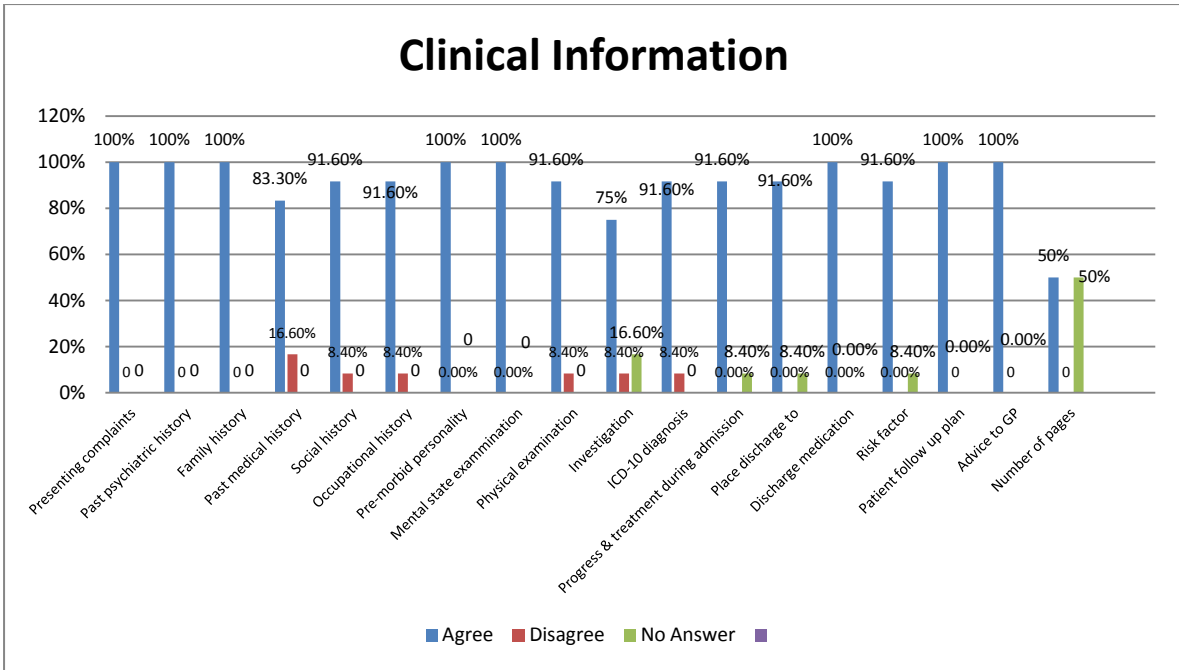
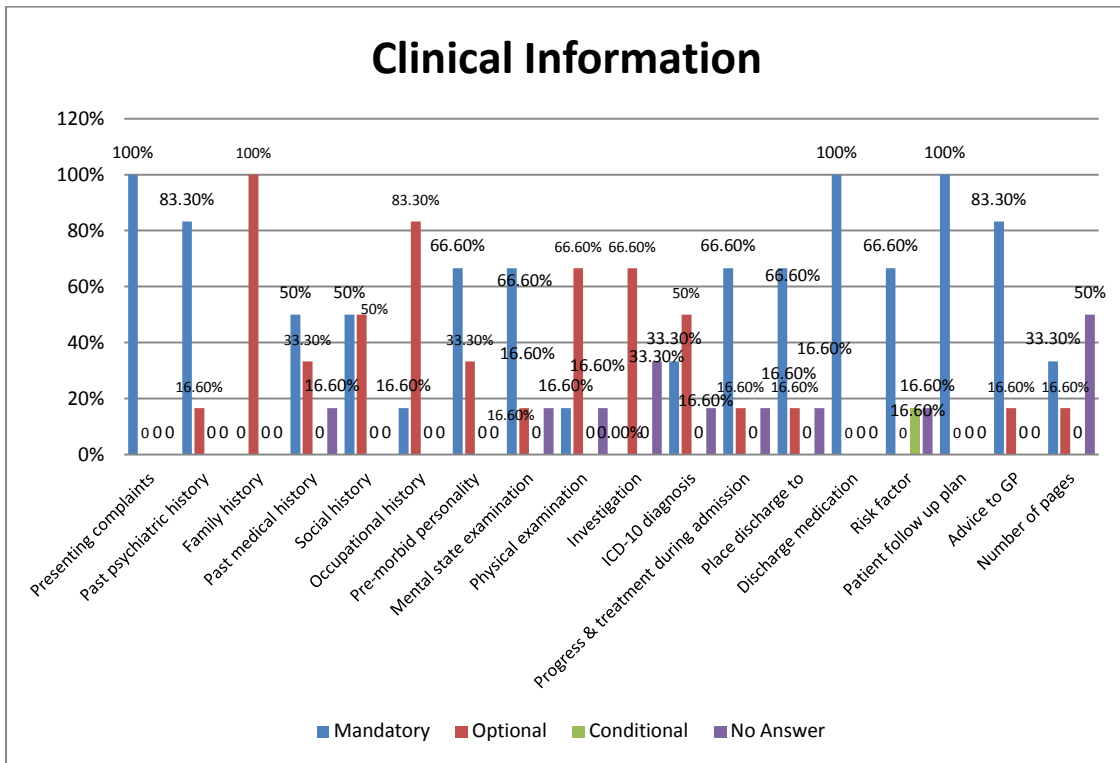Figure 4.10a **Frequency of GPs' Opinions on Clinical Information**

Figure 4.10b **Frequency of GPs' Opinions on Clinical Information**

4.4 Minimum Dataset for Psychiatric Discharge Summaries

The minimum data set is developed from the research findings. The data set is selected from the analysed results of the GP survey. The data sets commonly used in hospitals are not data

dictionaries. The data set agreed upon by more than or equal to 75% of the participants were included in the minimum data sets.

The data definitions for this study are formed based on the HIQA (2013) *National Standard for Discharge Summary Information*. It is evident that psychiatric discharge summaries need to include various data sets to complete an ideal psychiatric discharge summary. These data sets need to be improved periodically based on internationally used data definitions.

The optionality column describes the recommendation for inclusion of data. The participant's choice to choose the data to be mandatory, optional, or conditional depends on their information needs. The mandatory data is the important piece of information and cannot be completed without this data set. The optional data is not mandatory but can be included as per local policy.

This study suggests the need for SNOMED-CT in the minimum data set. The discharge summary is described in headings such as demographic details, primary healthcare professional details, admission and discharge details, and clinical information. The table 4.2 below describes the minimum dataset for psychiatric discharge summary.

Table 4.2 **Minimum Dataset for Demographic Details**

No.	Data Set	Definition & Source of Definition	Optionality	SNOMED-CT Name and Concept ID
1.	Name (Forename and Surname) (HIQA 2013)	A patient's first name or given name as per birth certificate. The second part of name which denotes their family or marital name.	Mandatory	Demographic History details (Observable entry) Concept ID: 703503000
1.	Address (HIQA 2013)	The particular of the place used to correspond with the patient's primary healthcare professional.	Mandatory	Patient address (observable entry) Concept ID 184097001
2.	Date of birth (HIQA 2013)	Date of birth indicating the day, month, and year when the patient was born.	Mandatory	Date of Birth (Observable entry) Concept ID: 184099003
3.	Discharge Destination address (HIQA, 2013)	The place the patient is discharged to	Mandatory	Not available

Table 4.3 **Minimum Dataset for Primary Healthcare Professional Details**

No.	Data Set	Definition & Source of Definition	Optionality	SNOWMED-CT Name and Concept ID
1	Name of the primary care professional (HIQA 2013)	First name and surname of the primary healthcare professional	Mandatory	Concept ID:703978000
2	Address (HIQA 2013)	The particular of the place used to correspond with the patient's primary healthcare professional	Mandatory	Not Available

Table 4.4 **Minimum Data Set for Admission & Discharge Details**

No.	Data Set	Definition & Source of Definition	Optionality	SNOMED-CT Name and Concept ID
1	Date of admission (HIQA 2013)	The date at which patient was admitted to hospital ward	Mandatory	Concept ID 399423000
2	Source of referral (HIQA 2013)	This describes who made the decision to refer the patient to the hospital	Mandatory	Not available
3	Method of admission	The circumstances under which a patient was admitted to the hospital	Mandatory	Not available
4	Reason of admission	The diagnosis established after study to be chiefly responsible for occasioning an episode of admitted patient care & conditions or complaints either coexisting with the principal diagnosis or arising during the episode of admitted patient care	Mandatory	Reason for admission (record are fact) Concept ID:886861000000108 This is a UK specific concept
5	Date of discharge	The circumstances	Mandatory	Date of discharge

		under which a patient left the hospital		(Observable entity) Concept ID:442864001
	(HIQA 2013)			
6	Place discharge to	The place discharge to indicate address when patient left the hospital	Optional	Not available
7	Treating consultant	The name of consultant under whom patient was admitted	Mandatory	Not available

Table 4.5 **Minimum Data Set for Clinical Information**

No.	Data Set	Definition & Source of Definition	Optionality	SNOMED-CT Name and Concept ID
1	Presenting complaints	The reason for which patient was admitted to hospital	Mandatory	
2	Past psychiatric history	Psychiatric problem occurred in past before present problem	Mandatory	
3	Family history	If the result reported in this field affects the management of the mental illness	Optional	Family history of clinical findings Concept ID:416471007
4	Occupational History	If the result reported in this field affects the management of the mental illness	Optional	Not Available
5	Discharge Medication (HIQA)	The medication the patient is intended to take after they have been discharged	Mandatory	Not available
6	Patient follow-up plan	Any plan of care needed by treating team when discharging patient	Mandatory	Not available
7	Advice to GP	Any advice related to patient care decided by treating team when discharging patients	Mandatory	Not Available

4.5 Summary

This chapter discussed the results of the reviewed discharge summaries in the study hospital and the GP views on the contents of discharge summaries. While most of the data was agreed upon, many more contents were not presented and not agreed by GPs. It was clear from this study that not all components of discharge summaries are needed as per the opinion of GPs in comparison to HIQA guidelines.

Chapter 5
Conclusion & Future Work

5.1 Introduction

The aim of this research was to investigate compliance in regards to the contents of discharge summaries with HIQA guideline. The literature review identified the most frequent omitted contents in discharge summaries such as GP information, admission details, and clinical information gaps in communication between hospital and community service team. A methodology for developing the ideal discharge summary was identified to answer such research questions as to what extent discharge summaries are complying HIQA guidelines, what are the deficit areas in the discharge summary, and what do GPs want in discharge summary.

5.2 Key Findings

- The data set currently available for psychiatric discharge summaries has to be further developed to provide adequate information for continuity of care.
- The developed discharge summary data sets need further research in relation to SNOMED-CT.
- The research findings suggest that there is a need for a separate psychiatric discharge summary which has a unique dataset.
- The research has the potential to contribute to the future development of a minimum data set for a psychiatric discharge summary which will ultimately become a national psychiatric discharge summary.
- The research findings also showed that there is need for a standard data set for psychiatric discharge summaries.

5.3 Achievement of the Objective & Research Question

- The first objective was to determine compliance HIQA guidelines regarding the contents of discharge summaries and its results are described in Chapter 4, section 4.2.
- The second objective was to identify the omitted contents in discharge summary. This is discussed in Chapter 4, section 4.2.7.

- The third objective was survey GP's expectations in regards to the contents of discharge summaries and these findings are described in Chapter 4, section 4.3.
- The fourth objective was to develop a paper-based discharge summary template and its results and templates is discussed in Chapter 4, section 4.4.

5.4 Recommendations for Future Work

This study found a lack of adequate data sets for discharge summaries for psychiatric patients, therefore, there is need for further exploration of psychiatric data sets and developments in psychiatric data dictionaries are suggested.

There is not much literature on psychiatric discharge communication in Irish publications and there is need of further study to find out the efficacy of minimum data sets for a better understanding of the information requirements of all teams involved in psychiatric care service.

The current study found that psychiatric datasets is an under-researched area which needs further exploration.

This study, conducted in accordance with HIQA guidelines, also shows a need for further exploration of SNOWMED-CT and how it can assist in the Irish psychiatric service.

A research into the accuracy or completeness of existing discharge summaries is beyond the scope of this study but future studies in this area should be encouraged.

5.5 Limitations of the Study

This study is dependent on the current data set which is drawn from various national and international sources which may lack authenticity. Based on the available data set, there was a long list of contents for the questionnaire.

This study was limited to one hospital and consequently may not be representative of other hospitals in Ireland. Similarly, as only GPs from North Dublin City were surveyed, these findings may not be applicable on a national scale.

The sampling technique was deliberate; however, samples could be selected randomly from total sample size. It also lacks generalisation.

There was limited number to the sample size which is not representative of Ireland's entire population.

Chapter 6
Summary

The primary care team is an important aspect of the Irish health care system in caring for mentally-ill patients. This is well-documented in literature but a rarely researched area is the contents of discharge summaries which is important aspect in transfer of care. The literature review suggests that psychiatric discharge summaries are an under-researched area. This study showed that there is a lack of content and quality data sets in the psychiatric discharge summary and expectation of GPs of discharge summaries.

The main objective of the research was to develop a minimum data set for psychiatric discharge summaries. The study objectives were to determine compliance with HIQA guidelines for content, to identify the specific areas of deficit in the discharge summaries, to develop a minimum data set for contents of discharge summaries from GPs and develop a template for an electronic version of the discharge summary.

To fulfil these aim and objectives, a mixed methodology of sequential, descriptive, and exploratory research design was applied for development of the minimum data set. The phase system was used to develop the minimum data set. Firstly, discharge summaries were collected from the study hospital and quantitative data was analysed to discover the existing data. Secondly, the draft of the minimum data set was developed according to findings of the literature review and HIQA guidelines. Thirdly, a survey questionnaire was posted to 50 GPs and an extensive review was done on 100 patient's charts. Finally, the collected data was analysed to develop a final minimum data set.

The analysis of the chart review showed that there were various contents omitted from discharge summaries especially in clinical information section and the admission and discharge details section. There were mixed responses on primary healthcare professional detail contents. This study found major gaps between hospital and community care as GPs expect more information, but hospitals give little information which calls into question the quality of follow-up care.

The final template for the minimum data set was developed based on the findings of the chart audit and GP survey. The minimum data set is classified under four sections such as demographic details, primary healthcare professional details, admission and discharge details, and clinical information.

One of the biggest challenges was defining the data sets using current data available in Ireland therefore data from another source had to be included. In this study, the researcher

found the need to inclusion SNOMED-CT in minimum data set. It will help to achieve the aim of interoperability. This study also found that the standardisation of data across Ireland will resolve the information inequalities. The main limitation of study was:

- Small number of sample size
- Sampling technique was deliberate
- Sample was selected from one study hospital and GPs of North Dublin City

This study also found that there is need for further study on a national scale.

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Appendix 1

Research Ethical Committee Approval Letter, TCD

Appendix 2

Research Ethical Committee Approval Letter, MMUH

University Hospital | Mater Misericordiae
Sisters of Mercy | Siúracha na Trócaire
Eccles Street, Dublin 7, Ireland | Sráid Eccles, Balle Átha Cliath 7, Éire

Tel: +353 1 8032000 Fax: +353 1 8032404 Email: mmh@mater.ie Web: www.mater.ie

Not for prescription purposes

Dr Eugene Breen
Consultant Psychiatrist
Department of Psychiatry
Mater Misericordiae University Hospital
Eccles Street
Dublin 7

20th May 2016

Our Ref: 1/378/1832 TMR

RE: An exploration of discharge summary of psychiatric patient
     Standard Application Form
     Research Proposal

Dear Dr Breen
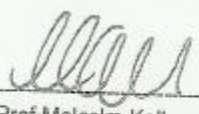
I acknowledge receipt of your correspondence dated 21st April 2016 enclosing the Standard Application Form and Research Proposal for the above research study/audit to be carried out at the Mater Misericordiae University Hospital (MMUH).

Approval for this research study to proceed at the MMUH is granted. This approval is valid until 21st April 2018.

It is your responsibility to adhere to the approved study protocol and ensure that all investigators involved with the research only use the approved documents without deviation (unless they have been approved by the Research Ethics Committee), and to notify the Research Ethics Committee when the research is concluded.

The Mater Misericordiae University Hospital and Mater Private Hospital Research Ethics Committee would like to remind all investigators involved in research of their legal obligations under the law on Data Protection.

Yours sincerely

Prof Malcolm Kell
Chairman
Research Ethics Committee

c.c.   Mr Anil Kumar Deo, Clinical Nurse Manager 2, St Aloysius Ward, Mater Misericordiae University Hospital
       Ms Ruth Buckley, Quality Manager & Health Promotion Manager, MMUH

'Commitment to Excellence'

Directors: Mr. Thomas Lynch (Chairman), Sr. Margherita Rock, Prof. Tim Lynch, Prof. Brendan Kinsley, Ms. Mary Day, Sr. Eugene Nolan, Ms. Caroline Pigott,
Mrs Tanya King, Dr. Mary Carmel Burke, Mr. Eddie Shaw, Mr. Kevin O'Malley, Professor Desmond Fitzgerald

Registered in Ireland No. 351402 Charity No. CHY203 Registered Office: Eccles Street, Dublin 7

Appendix 3

Research Ethical Committee Application Cover Letter, MMUH

Mater Misericordiae University Hospital
Sisters of Mercy

Ospidéal Ollscoile Mater Misericordiae
Siúracha na Trócaire

Eccles Street, Dublin 7, Ireland.
Tel: +353 1 8032000   Fax: +353 1 8032404   Email: mmh@mater.ie   Web: www.mater.ie

Not for prescription purposes

To,
Prof. Malcolm Kell
The Chairperson,
Ethical Committee
Mater Misericordiae University Hospital
Eccles Street
Dublin7

Date: - 21st April 2016

To Whom It May Concern

This is to inform you that I have accepted as principal investigator for **Anil Kumar Deo**, Clinical Nurse Manager at St Aloysius Ward, Mater Misericordiae University Hospital. **Mr Deo** is doing a Masters in Health Informatics degree. As per requirement of degree programme he is conducting research on **"Exploration of discharge summary of psychiatry patients."** under supervision of **Prof. Gaye Stephens**, Professor in Trinity College, Dublin.

The total number of charts to be reviewed, that is proposed to be enrolled is 142 over 15 days which is feasible at the Mater Misericordiae University Hospital, Dublin 7, if granted permission by, the hospital ethical committee. I will be the principal investigator for this project. This study is not sponsored by any organization and totally for course requirement.

Please find enclosed herein application form and CVs.

I would be happy to offer any other information or clarification as may be required by you thanking you.

Dr Eugene Breen
Consultant psychiatrist
Dept. of Psychiatry
Mater Misericordiae University Hospital
Eccles Street
Dublin7
018034725

'Commitment to Excellence'

Appendix 4a

Permission Letter from Consultant Psychiatrist, MMUH

Mater Misericordiae University Hospital
Sisters of Mercy

Ospidéal Ollscoile Mater Misericordiae
Siúracha na Trócaire

Eccles Street, Dublin 7, Ireland.
Tel: +353 1 8032000   Fax: +353 1 8032404   Email: mmh@mater.ie   Web: www.mater.ie

Not for prescription purposes

To   Date: - 1st April 2016

Anil Kumar Deo

St. Aloysius ward

I grant permission to review sector patients' charts, provided you achieve ethics approval.

Regards,

Dr. Haytham El Hassan

Consultant psychiatry

Sector Team

018034474

'Commitment to Excellence'

Appendix 4b

Permission Letter from Consultant Psychiatrist, MMUH

Mater Misericordiae | *Ospidéal Ollscoile*
University Hospital | *Mater Misericordiae*
Sisters of Mercy | Siúracha na Trócaire
Eccles Street, Dublin 7, Ireland | **Sráid Eccles, Baile Átha Cliath 7, Éire**

Tel: +353 1 8032000 Fax: +353 1 8032404 Email: mmh@mater.ie Web: www.mater.ie

Not for prescription purposes

Our reference: JDS/DOR   March 30th, 2016

Private & Confidential
Mr. Anil Kumar Dao,
CNM 2 St. Aloysius Ward,
Mater Hospital,
Dublin 7

Dear Anil,

Thank you for your letter of the 29th March, 2016 which appears to seek my consent to do a review of charts of patients who were under my care in 2015. I have no objection to you doing this.

With best wishes,

Yours sincerely,

Dr. John Sheehan
Consultant in Liaison Psychiatry
IMCRN 09102

—————————— 'Commitment to Excellence' ——————————

Appendix 4c

Permission Letter from Consultant Psychiatrist, MMUH

Research study request

Geraldine Byrne

Thu 31/03/2016 13:45

To:Mr Anil Kumar Deo <adeo@mater.ie>;

Dear Anil
Thank you for your letter dated 29th March. Prof Patricia Casey grants permission to review charts, provided you achieve ethics approval
Regards
Geraldine

Ms. Geraldine Byrne,
Academic Executive Assistant,
UCD School of Medicine,
College of Health and Agricultural Sciences,
63 Eccles Street,
Dublin 7.

Tel 00 3531 803 2881 Wed, Thurs, Fri
Fax 00 3531 803 4606/830 9323
Email gbyrne1@ucd.ie

Participant's Consent Form

TRINITY COLLEGE DUBLIN

INFORMED CONSENT FORM

LEAD RESEARCHER: Anil Kumar Deo

Supervisor   Prof. Gaye Stephens

BACKGROUND OF RESEARCH

Discharge summaries are an important tool of sharing information between hospital and primary care team. Low quality of discharge summary is a principal cause of poor communication which has negative impact on patients care. Although, HIQA (2013) have developed National standard for discharge summary, psychiatric discharge summary need specific requirements regarding information they need to share between hospital and primary care team. This study is being conducted to contribute to developing a minimum dataset for an ideal psychiatric discharge summary.

In Ireland, HIQA developed a National standard for discharge summary information. This document aims tobe a generic data set and some clinical specialties such as psychiatric care settings, require additional specific requirements regarding the information they need to share with primary care team.

PUBLICATION:

Once analysed, the information will be used in preparing a final dissertation and will be submitted to a university (Trinity College- Dublin).. A poster presentation will be prepared to disseminate the findings from this study.

DECLARATION

❖ I am 18 years or older and am competent to provide consent.

❖ I have read, or had read to me, a document providing information about this research and this consent form. I have had the opportunity to ask questions and all my questions have been answered to my satisfaction and understand the description of the research that is being provided to me.

❖ Individual results may be aggregated anonymously and research reported on aggregate results.

❖ I agree that my data is used for scientific purposes and I have no objection that my data is published in scientific publications in a way that does not reveal my identity.

❖ I understand that if I make illicit activities known, these will be reported to appropriate authorities.

❖ I freely and voluntarily agree to be part of this research study, though without prejudice to my legal and ethical rights.

❖ I understand that I may refuse to answer any question and that I may withdraw at any time without penalty.

❖ I understand that my participation is fully anonymous and that no personal details about me will be recorded.

❖ I have received a copy of this agreement.

------------------------------------   -----------------------------   ------------
----
   Participant Name   Participant's Signature
      Date

Statement of investigator's responsibility: I have explained the nature and purpose of this research study, the procedures to be undertaken and any risks that may be involved. I have offered to answer any questions and fully answered such questions. I believe that the participant understands my explanation and has freely given informed consent. If participant has any query can contact me as details below.

RESEARCHERS CONTACT DETAILS:

Anil Kumar Deo, Clinical Nurse Manager, St Aloysius Ward, Mater Misericordiae University Hospital, Dublin-7.

E-mail   deoa@tcd.ie   Phone No. 0876773075

 INVESTIGATOR'S SIGNATURE:

 Date:

Participant's Information Leaflet

Participant's Information Leaflet.

You are being invited to take part in a research study. Before you decide whether or not you wish to take part, you should read the information provided below carefully. You should clearly understand the risks and benefits of taking part in this study so that you can make a decision that is right for you. You should be 18 years old and should be competent to provide consent. You do not have to participate in this research if you do not wish to do so. Your participation is fully anonymous and that no personal details about you will be recorded.

Study Title:

Exploration of discharge summary of Psychiatric patient admitted.

Researcher Name: Anil Kumar Deo

Course: Second year M.Sc. Health Informatics, Trinity College, Dublin

Research Supervisor Name: Prof. Gaye Stephens, Trinity College, and Dublin.

Principal Investigator: Dr Eugene Breen, Consultant Psychiatrist, Mater Misericordiae University Hospital, and Dublin 7.

Introduction

This study is intended to develop minimum data set for psychiatric discharge summary from study hospital. In Ireland, HIQA developed a National standard for discharge summary information. This document aims to be a generic data set and some clinical specialties such as psychiatric care settings, requires additional specific requirement regarding the information they need to share with primary care team. This study intends to define high quality discharge summary for discharging patients to primary care team.

Who is organizing and funding this study?

A Second Year M.Sc. Health Informatics TCD student is carrying out this research. This research is not being funded by any third party and will not yield any financial gain for the researcher.

How can you contribute?

As a part of the study the researcher seeks to get expert opinion from health professionals involved in mental health service services to develop a minimum data set for psychiatric discharge summaries. The responses to the questionnaire are sought from General Practitioners. You can contribute by agreeing to take part and answering the questionnaire.

What do you have to do?

If you agree to take part in this study, you will be asked to sign a consent form prior to participation. You will be given a questionnaire to complete. You will not be required to provide any personal data and all questionnaires will be anonymous. The expected duration of time to complete the questionnaire is 20 to 30 minutes.

Who will be conducting the data collection?

A Health Informatics student, who is a clinical Nurse Manager, under the supervision of Prof. Gaye Stephens from Trinity College, Dublin.

What are the possible risks taking part in this research study?

There are no foreseeable risks to you in taking part in this study.

What are the benefits in taking part in this study?

While there are no immediate benefits to you, your participation will provide important information on discharge summaries in psychiatric service in Ireland. Other benefits are,

1. The minimum data set could improve the efficiency of discharge process, and assist the coders in ensuring high quality data for hospital inpatient enquiry system
2. Minimum data sets are the basis for electronic discharge summaries, which will lead to a more timely transmission of information between secondary/tertiary care and primary care and reduce the need for duplicate data entry.
3. National Benefit - The developed minimum data set from this study could be used as a national standard for psychiatric discharge summaries in Ireland.

What measures will be taken to ensure confidentiality?

You will not be required to provide any personal data and all questionnaires will be anonymous.

What will happen after the data collection is completed?

The researcher will analyze the data in order to provide a descriptive understanding of the data. Anonymity will be preserved all through analysis, publication, and presentation of resulting data and findings.

How will be the information stored and used?

The information will be stored in digital form in a password-protected computer and as a written transcript in a locked filing cabinet in psychiatric ward.

How will be the information reported?

Once analysed, the information will be used in preparing a final dissertation and will be submitted to a university (Trinity College- Dublin). A full report will be submitted to the study Hospital. A poster presentation will be prepared to disseminate the findings from this study.

Has the study been approved by an ethical committee?

Yes , researcher got ethical approval from Trinity College Dublin

Declaration of Conflicts of Interest

This study involves no conflicts of interest that would affect the participant's decision to take part or withdraw from the study at any time.

Is there provision for debriefing after participation for this study?

If the participants wish to obtain further information, please contact: Anil Kumar Deo E-mail: deoa@tcd.ie

Appendix 7

Cover Letter for General Practitioners

Anil Kumar Deo   Date: -

71 Adamstown Way

Adamstown

Co. Dublin

0876773075

GP Name

GP address

Dear Doctor,

I am a final year student in Trinity College, Dublin, completing an MSc in Health Informatics. My research Dissertation is **"An Exploration of Discharge Summary of Psychiatric Patient."** This is driven by the poor quality information sharing between hospital and primary care team i.e. General practitioner which will compromise follow-up care after discharge. Hence, there is need of a study which will provide an idea about expectation from primary care team. I enclose a survey that will help me profile quality contents of discharge summary.

I would be most grateful if you could oblige me by completing this survey, and then return it to me in the enclosed envelope. If you could return it to me by the (01/06/2016) it would allow me time to analyse the results before my thesis submission due date. I have obtained ethics approval from Trinity College Ethics committee. An information sheet is enclosed for your perusal. If you require any further information or clarification, please do not hesitate to ring me on the above number.

Thank you for your assistance

Yours sincerely

Anil Kumar Deo

Survey Questionnaire

Questionnaire for General Practitioner

Please find the survey questionnaire for developing a minimum data set for psychiatric discharge summary. **"Each question is optional. Feel free to omit a response to any question; however the researcher would be grateful if all questions are responded to."**

A. **Demographic details:**

	Item for discharge Summary	Do you think this information should to be included in the discharge summary? Please tick	If you agree, please indicate the priority for this item	Additional Comment
1.	Name	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
2.	Address	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
3.	Date of Birth	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
4.	Health Identifier	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
5.	Discharge Destination	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional	

	address		☐ Conditional	
6.	Length of stay in current address	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
7.	Nationality	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
8.	Next of Kin	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	

With regard to section (A) demographic Details, do you suggest any item that should be excluded or additional information that should be included?

"Each question is optional. Feel free to omit a response to any question; however the researcher would be grateful if all questions are responded to."

B. Primary Healthcare Professionals Details

	Item for discharge Summary	Do you think this information should to be included in the discharge summary? Please tick	If you agree, please indicate the priority for this item	Additional Comment
1.	Name of general practitioner	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
2.	Address	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
3.	Phone Number	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
4.	E-mail	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
5.	Community care service	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
6.	G. P. Identification Number	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	

With regard to section **(B) Primary Healthcare Professional**, do you suggest any item that should be excluded or additional information that should be included?

"Each question is optional. Feel free to omit a response to any

question; however the researcher would be grateful if all questions are responded to.

C. Admission and discharge details

	Item for discharge Summary	Do you think this information should to be included in the discharge summary? Please tick	If you agree, please indicate the priority for this item	Additional Comment
1.	Date of admission	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
2.	Source of referral	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
3.	Method of admission	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
4.	Reason of admission	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
5.	Date of discharge	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	

6.	Place discharge to	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
7.	Date of death	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
8.	Post-mortem flag	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
9.	Treating Consultant	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	

With regard to section **(c) Admission and discharge details**, do you suggest any item that should be excluded or additional information that should be included?

Appendix 8 (contd.)

"Each question is optional. Feel free to omit a response to any question; however the researcher would be grateful if all questions are responded to."

D. Clinical Information

S.N.	Item for discharge Summary	Do you think this information should to be included in the discharge summary? Please tick	If you agree, please indicate the priority for this item	**Additional Comments**
1.	Presenting complaint	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
2.	Past Psychiatric History	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
3.	Family History	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
4.	Past Medical History	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
5.	Social History	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	

6.	Occupational History	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
7.	Pre-morbid personality	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
8.	Mental State Examination	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
9.	Physical Examination	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
10.	Investigation	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
11.	ICD-10 diagnosis	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
12.	Progress and treatment during admission	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
13.	Place discharged to	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	

14.	Discharge Medications	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
15.	Risk Factor	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
16.	Patient Follow-Up plan	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
17.	Advice to GP	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	
18.	Number of Pages	☐ Agree ☐ Disagree	☐ Mandatory ☐ Optional ☐ Conditional	

Appendix 8 (contd.)

With regard to section **(d) Clinical Information**, do you suggest any item that should be excluded or additional information that should be included?

Appendix 9

Data Collection Tool for Reviewing Chart

DATA COLLECTION TOOL for reviewing chart

Date of Discharge   **Date of Dictation**

Date of typed

	Data Set	Yes /No		Data Set	Yes/No
	A. Patient Details (HIQA, 2013)			**B. Primary Care Healthcare Professional Details**	
1.	Name (HIQA, 20130	☐ **Yes** ☐ **No**	**1.**	Name of general practitioner (HIQA, 2013)	☐ **Yes** ☐ **No**
2.	Address(HIQA 2013)	☐ **Yes** ☐ **No**	**2.**	Address (HIQA, 2013)	☐ **Yes** ☐ **No**
3.	Date of Birth (HIQA, 2013)	☐ **Yes** ☐ **No**	**3.**	Phone Number	☐ **Yes** ☐ **No**
4.	Health Identifier(HIQA 2013)	☐ **Yes** ☐ **No**	**4.**	E-mail	☐ **Yes** ☐ **No**
5.	Discharge Destination address (HIQA, 2013)	☐ **Yes** ☐ **No**	**5.**	Community care service	☐ **Yes** ☐ **No**
6.	Length of stay in current address	☐ **Yes** ☐ **No**	**6.**	G.P. identification No.	☐ **Yes** ☐ **No**

7.	Nationality	☐ **Yes** ☐ **No**	**C. Admission and discharge details**		
8.	Next of Kin	☐ **Yes** ☐ **No**	**1.**	Date of admission (HIQA,2013)	☐ **Yes** ☐ **No**
D. Clinical Information			**2.**	Source of referral(HIQA, 2013)	☐ **Yes** ☐ **No**
1.	Presenting complaint (Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**	**3.**	Method of admission (HIQA, 2013)	☐ **Yes** ☐ **No**
2.	Past Psychiatric History(Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**	**4.**	Reason of admission(Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**
3.	Family History(Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**	**5.**	Date of discharge(HIQA, 2013)	☐ **Yes** ☐ **No**
4.	Past Medical History(Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**	**6.**	Discharge Method(HIQA 2013)	☐ **Yes** ☐ **No**
5.	Social History (Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**	**7.**	Date of death (HIQA, 2013)	☐ **Yes** ☐ **No**
6.	Occupational History(Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**	**8.**	Post-mortem flag(HIQA, 2013)	☐ **Yes** ☐ **No**
7.	Pre-morbid personality(Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**	**9.**	Treating Consultant(Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**

8.	Mental State (Jaco Serfontein et.al. 2011)Examination	☐ **Yes** ☐ **No**	**10.**	Legal Status	☐ **Yes** ☐ **No**
9.	Physical Examination(Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**			
10.	Investigation(Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**	**E. Future Management**		
11.	ICD-10 diagnosis(Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**	**1.**	Hospital Action(HIQA, 2013)	☐ **Yes** ☐ **No**
12.	Progress and treatment during admission(Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**	**2.**	GP's Action(HIQA 2013)	☐ **Yes** ☐ **No**
13.	Discharge Medications(Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**	**3.**	Social Care Action (HIQA, 2013)	☐ **Yes** ☐ **No**
14.	Risk Factor(Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**	**4.**	Information Given to patient and carer(HIQA 2013)	☐ **Yes** ☐ **No**
F. Person completing discharge summary details			**5.**	Advice, recommendation and future plan (HIQA, 2013)	☐ **Yes** ☐ **No**
1.	Name(HIQA , 2013)	☐ **Yes** ☐ **No**	**6.**	Number of Pages(Jaco	☐ **Yes** ☐ **No**

				Serfontein et.al. 2011)	
2.	Contact number(HIQA , 2013)	☐ **Yes** ☐ **No**	**7.**	Place discharged to(Jaco Serfontein et.al. 2011)	☐ **Yes** ☐ **No**
3.	Job title(HIQA , 2013)	☐ **Yes** ☐ **No**			
4.	Professional body registration number(HIQA , 2013)	☐ **Yes** ☐ **No**	**8.**	Consultant sign off(HIQA , 2013)	☐ **Yes** ☐ **No**
5.	Signature(HIQA , 2013)	☐ **Yes** ☐ **No**	**9.**	Date of consultant sign off(HIQA , 2013)	☐ **Yes** ☐ **No**
6.	Copy to(HIQA , 2013)	☐ **Yes** ☐ **No**	**10.**	Discharging consultant Name(HIQA , 2013)	☐ **Yes** ☐ **No**
7.	Date of completion of discharge summary(HIQA , 2013)	☐ **Yes** ☐ **No**	**11.**	Discharge speciality(HIQA , 2013)	☐ **Yes** ☐ **No**
			12.	Document Reference number(HIQA , 2013)	☐ **Yes** ☐ **No**

Appendix 10

Contents of Discharge Summary by HIQA (2013)

Patient Details

Name	Definition	Optionality	Usage
1.1 Forename	A patient's first name or given name (s) as per their birth certificate.	Mandatory	A patient's first name or given name (s) as per their birth certificate.
1.2 Surname	The second part of a patient's name which denotes their family or marital name.	Mandatory	The second part of a patient's name which denotes their family or marital name.
1.3 Address	The location to be used to contact or correspond with the patient. This would normally be the patient's usual home address.	Mandatory	The particulars of the place where the patient lives.
1.4 Date of birth	Date of birth indicating the day, month, and year when the patient was born.	Mandatory	The date of birth should be supplied in dd/mm/yyyy format.
1.5 Gender	Gender identity is a person's sense of identification with either the male or female sex, as manifested in appearance, behaviour and other aspects of a person's life.	Mandatory	Gender identity is a person's sense of identification with either the male or female sex, as manifested in appearance, behaviour and other aspects of a person's life.
1.6 Health identifier	A number or code assigned to an individual to uniquely identify the individual within an organisation.	Mandatory	Both the code and the code type the code relates to should be provided e.g. 0987654321 Healthcare Record Number (HcRN). When a national individual healthcare number is available this should be carried in this heading.
1.7 Discharge destination address	The location the patient was discharged to if the patient was not discharged to the usual home address.	Optional	To be included in the discharge summary if the address to which the patient is discharged is different from the address contained in the heading 1.3. Address.

Primary Care Healthcare professional details.

Name	Definition	Optionality	Usage
2.1 Forename	First name or given name of primary care healthcare professional.	Mandatory	Where the primary care healthcare professional is registered with a professional body, the forename should be the forename registered with the professional body.
2.2 Surname	The second part of a primary care healthcare professional's name which denotes their family or marital name.	Mandatory	Where the primary care healthcare professional is registered with a professional body the surname should be the forename registered with the professional body.
2.3 Address	The particulars of the place used to correspond with the patient's primary healthcare professional.	Mandatory	The particulars of the place used to correspond with the patient's primary healthcare professional.

Admission and Discharge details

Name	Definition	Optionality	Usage
3.1 Date of admission	The date that the patient was admitted to the hospital ward.	Mandatory	The date of admission should be supplied in dd/mm/yyyy format.
3.2 Source of referral	This describes who made the decision to refer the patient to the hospital.	Mandatory	Examples would include GP/self-referral/ambulance service/out-of-hours service/other hospital/other (please specify).
3.3 Method of admission	The circumstances under which a patient was admitted to the hospital.	Mandatory	Example would include elective/emergency/transfer.
3.4 Hospital site	The hospital site the patient was discharged from.	Mandatory	The hospital site the patient was discharged from.
3.6 Date of discharge	The date the patient departed the hospital.	Mandatory where applicable	Record the date the patient departed the hospital site. The date of discharge should be supplied in dd/mm/yyyy. This heading will be blank if the patient died during the inpatient stay.[1]
3.7 Discharge method	The circumstances under which a patient left hospital.	Mandatory where applicable	This heading can be used to indicate that a patient was discharged on clinical advice or with clinical consent, that a patient discharged him/herself against clinical advice or the patient

Clinical Narrative

Name	Definition	Optionality	Usage
4.1 Pertinent clinical information	Clinically significant information relating to the patient which the discharging doctor wishes to convey to the primary care healthcare professional.	Mandatory where applicable	This heading may be used to indicate an investigation which should be undertaken, or a course of treatment which should be considered by the primary care healthcare professional or information which the healthcare professional should be aware of, e.g. blood transfusions, difficult intubations, advance care directives or pressure sores.
4.2 Diagnoses	The diagnoses established after study to be chiefly responsible for occasioning an episode of admitted patient care and conditions or complaints either coexisting with the principal diagnosis or arising during the episode of admitted patient care.	Mandatory where applicable	The principal and additional diagnoses relevant to this inpatient stay should be recorded. The principal diagnosis is the main reason why the patient was admitted to hospital on this occasion and should be identified in the discharge summary. Additional diagnoses relevant to this inpatient stay should also be documented, including any relevant co-morbidity that could have contributed to or be affected by the primary diagnosis. For example, hypertension in a patient admitted for stroke. Acronyms and abbreviations should be avoided.

Name	Definition	Optionality	Usage
			The discharge summary should indicate whether a diagnosis is confirmed or provisional. Standard code(s) for the diagnoses should be provided using the ICD-10-AM 6th edition codes as used in the Hospital In-Patient Enquiry System when these are known to the person completing the discharge summary. The healthcare practitioner responsible for the care of a diagnosis for a patient should also be identified on the discharge summary if this healthcare practitioner differs from the discharge consultant's name (item 6.3.11).
4.3 Operations and procedures	Operations and procedures performed for definitive treatment, diagnostic or exploratory purposes.	Mandatory where applicable	All significant operations and/or procedures should be described. Avoid acronyms, for example, 'CABG', and abbreviations, as these could be misunderstood or misinterpreted by the recipient. When known to the person completing the discharge summary standard code(s) for the procedures should be provided using the Australian Classification of Healthcare Interventions codes as used in the Hospital In-Patient Enquiry System.
4.4 Clinical alerts	An alert is a piece of information about a specific patient required for the management of a patient in order to minimise risk to the patient concerned, healthcare staff, other patients and the organisation. It is a warning of a medical condition or risk factor that requires consideration before treatment is initiated.	Mandatory where applicable	The status of knowledge about the patient's clinical alerts. For example 'Known', 'None known' or 'Unknown' should be documented. Significant clinical alerts should be documented.
4.5 Allergies	Include information about all allergies known	Mandatory	The status of knowledge about the patient's

Name	Definition	Optionality	Usage
	about the patient that may put the patient at risk. The allergen, reaction, date of reaction and source of information should be provided.	where applicable	allergies. For example 'Known', 'None known', 'Unknown', 'Not asked'. Known allergies must be documented in the discharge summary.
4.6 Adverse events	Include information about all hypersensitivities and/or adverse events known about the patient that may put the patient at risk.	Mandatory where applicable	Known adverse events or hypersensitivities must be documented in the discharge summary. Where there are no known adverse events or hypersensitivities this should be documented in the discharge summary.
4.7 Hospital course	Include a detailed description on the course of the patient's illness during the inpatient stay.	Mandatory	The discharge summary should include a narrative description of the inpatient stay, describing the relevant sequence of events from admission to discharge.
4.8 Relevant investigations and results	Relevant assessments, investigations and/or observations undertaken on the patient during the inpatient stay.	Mandatory where applicable	Specify the type of investigations undertaken and results received or that are awaited at the time of discharge. Describe all investigations that are pending at the time of discharge.
4.9 Relevant treatments and changes made in treatments	The relevant treatments which the patient received during the inpatient stay. Can include medications given while an inpatient.	Mandatory where applicable	Information relating to procedures undertaken and medications received during the inpatient stay.
4.10 Diet	Information on dietary interventions, special dietary requirements, use of nutritional support during stay, e.g. oral nutritional supplements, enteral tube feeding and parenteral nutrition and any problems a client might have with eating, drinking or swallowing at time of discharge need to be documented.	Mandatory where applicable	Information on dietary interventions, special dietary requirements, use of nutritional support during stay, e.g. oral nutritional supplements, enteral tube feeding and parenteral nutrition and any problems a client might have with eating, drinking or swallowing at time of discharge need to be documented.
4.11 Functional state	An assessment and description of the patient's ability to perform activities of daily living.	Mandatory where applicable	The functional state may include the results of assessment tools, for example, the Activities of Daily Living or the American Society of

Name	Definition	Optionality	Usage
			Anesthesiologists score. A history of falls should also be provided.
4.12 Immunisations	This should detail the immunisations given to the patient during this inpatient stay.	Mandatory where applicable	This should detail the immunisations given to the patient during this inpatient stay.
4.13 Infection control status	This should detail information relating to the treatment, prevention, monitoring or investigation of infections.	Mandatory where applicable	Information relating to the treatment, prevention, monitoring or investigation of infections should be communicated.

Future Management

Name	Definition	Optionality	Usage
6.1 Hospital actions	Actions required/that will be carried out by the hospital department.	Mandatory where applicable	Any pending or future actions that the hospital or department has responsibility to organise should be documented.
6.2 GP actions	Actions that are requested of the general practitioner.	Mandatory where applicable	Any actions that the general practitioner has being requested to organise should be documented.
6.3 Social Care actions	Actions relating to the person's social care that have been requested to be undertaken.	Mandatory where applicable	Actions relating to the person's social care that have been requested to be undertaken.
6.4 Information given to patient and carer	Information, both verbal, written or in any other form which has been provided to the patient, relatives or carer.	Mandatory where applicable	This can include verbal information given to the patient, relatives and their carer and written information including leaflets, letters and any other documentation.
6.5 Advice, Recommendations and future plan	This should include any advice, recommendations or actions that were requested from other healthcare professionals and health promotion activities the patient was advised to undertake. For example, a smoking cessation programme.	Mandatory where applicable	This should include any advice or actions that were requested from other healthcare professionals and health promotion activities the patient was advised to undertake. For example, a smoking cessation programme.

Person Completing discharge summary

Name	Definition	Optionality	Usage
7.1 Forename	A first name or given name of the person completing the discharge summary.	Mandatory	Where the person completing the discharge summary is registered with a professional body the forename should be the forename registered with the professional body.
7.2 Surname	The second part of a name which denotes their family or marital name of the person completing the discharge summary.	Mandatory	Where the person completing the discharge summary is registered with a professional body the surname should be the surname registered with the professional body.
7.3 Contact number	The usual contact number for the person completing the discharge summary.	Mandatory	A usual contact number for the person completing the discharge summary.
7.4 Job title	The job title of the person who completed the discharge summary.	Mandatory	The job title of the person who completed the discharge summary.
7.5 Professional body registration number	The professional registration number of the person completing the discharge summary.	Mandatory	Where the person completing the discharge summary is registered with a professional body their registration number should be included in the discharge summary, e.g. Irish Medical Council registration number, An Bord Altranais agus Cnáimhseachais na hÉireann registration number.
7.6 Signature	The signature of the person who created the discharge summary.	Mandatory	The signature of the person who created the discharge summary.
7.7 Copies to	A list of people to whom copies of the discharge summary should be sent.	Optional	A list of people to whom copies of the discharge summary should be sent.
7.8 Date of	The date the discharge summary was	Mandatory	The date of completion of discharge summary