Clinical Information Systems for Nursing Homes: the requirements of General Practitioners

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Document History

Date	Version	Author(s)	Change History
04/09/2017	0.1	Brian O'Mahony	First draft
02/10/2017	0.2	Brian Meade	Entries on access control and audit trails, patient summaries, clinical images, medication reviews and need for system to be accessed remotely,
23/10/2017	0.3	Brian Blake	Ability to print drug Kardex,
09/01/2018	0.4	Brian O'Mahony	Change in Requirement 10 to support secure remote access to the record

Document Review

Date	Version	Reviewer(s)
21/09/2017	0.1	Dr Brian Meade, Dr Tim Gleeson,
20/10/2017	0.2	GPIT Management Group and GPIT Advisors, Dr Mel Gates, Dr Pat O'Dwyer, Dr Orla Halfpenny, Dr Rita Doyle,

Introduction

The National General Practice Information Technology (GPIT) Group is made up of representatives from the Irish College of General Practitioners, the Health Service Executive and the Department of Health. The aim of the GPIT Group is to promote the eHealth agenda in Ireland, in particular electronic communications and interoperability between GP and health service information systems.

Based on HIQA data from the end of 2014, there are approximately 450 private nursing homes, i.e. private and voluntary (Section 39) operators. These facilities can provide accommodation for 22,232 residents. This gives an average of 50 residents per private nursing home. There are also 6,810 long term residential care beds in the public system, provided by the HSE and by agencies under Section 38 arrangements.

Over 90% of GP practices use an electronic patient record. GPs find it difficult and inefficient to switch to paper records when they attend to patients in nursing homes. A number of nursing homes are beginning to adopt electronic records, but the initial implementations tend to concentrate on nursing care records and supporting HIQA standards. GPs have requirements for nursing home systems that are not being fulfilled.

Created with GPs who have an interest in nursing home care, this document details the GP requirements for a nursing home information system. The aim is to share this GP requirements document with all the nursing home software vendors to encourage them to consider developing these requirements in their systems. The intention is to start with important requirements that are achievable from a development perspective. With this in mind the document confines itself to ten requirements.

This is a voluntary exercise; the National GPIT Group will not be accrediting nursing home systems. And, the nursing home system vendors will not be paid by the GPIT Group to develop GP requirements. This document is for information purposes. It is written to help the vendors of nursing home information systems understand what is important from a GP perspective. If a nursing home information system can achieve some or all of these GP requirements, it will improve their systems from a GP and patient care perspective.

There needs to be clarity around the information governance of nursing home information systems. This should include identification of the data controller for the electronic records and compliance with the General Data Protection Regulation.

The GPIT Group accredits GP practice software management systems. Details of the Requirements for Certification of GP systems can be found at https://www.icgp.ie/go/in_the_practice/information_technology/software_companies.

Requirements

Here are the top ten GP requirements for nursing home clinical information systems.

1. Support Clinical Notes

Overview

Identify and maintain a single clinical patient record for each resident.

Description

It is important to support the ability to enter a clinical note. This is a requirement for doctors, nurses, care assistants, physiotherapists, occupational therapists and other clinicians. The clinical note should be separate from administrative and financial data. The clinical note should have access controls to restrict the ability to view the note to clinicians and should maintain an audit trail of users who access the clinical record.

The ability to capture and store photographs can be helpful. A picture paints a thousand words. A photo of a rash taken by a nurse can allow the GP to confidently manage over the phone without the need for an onsite visit.

Criteria

1. The system should support a clinical note.
2. The system should control access to the clinical note.
3. The system should maintain an audit trail of access to the clinical note.
4. The system should support the sharing of the clinical note via Healthmail, secure clinical email.
5. The audit trail for clinical notes should report on inappropriate access to GP notes.
6. The system should capture and display clinical images.

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2. Facilitate a Summary of the Patient's Medical Problems

Overview

The clinician needs to be able to readily view a summary of the patient's physical, psychological and social problems.

Description

Nursing home residents often have multiple health problems. It is important to get a rapid overview of the patient's problems when carrying out a clinical review or medical consultation. A summary of problems is linked to the ability to code diseases.

The summary should be flexible enough to include key indicators of a patient's health status and resuscitation status. This is important for an on call GP who is not familiar with the patient. Which exact indices to include would be up for discussion but a frailty index score or Barthel scale would seem possible options here to give a quick picture of the patient's baseline level of function.

Criteria

1. The system should present summary views of the patient's clinical record.
2. The system should include the following in the summary view: problem list, medication list, allergy and adverse reactions, immunisation status, resuscitation status, frailty index score.

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3. Provide the Ability to Code Diseases

Overview

Coding and classification is necessary to provide overviews at individual patient and nursing home population levels.

Description

Coding of conditions and diseases allows for summaries of individual records and supports review of patients with particular diseases.

Criteria

1. The system should provide the ability to use ICPC-2 and SNOMED-CT to code elements of consultations and clinical care.
2. The system should provide a user friendly interface to facilitate coding.
3. The system should be able to search and report on individual codes and terms.

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4. Support the Ability to Scan and View Previous Letters and Records

Overview

Hybrid paper and electronic records should be avoided.

Description

Where patients transfer between GPs when they enter a nursing home, or where there is important hospital correspondence about a resident, it is important that the previous records be available for review by the clinician. This may mean scanning and importing paper records or importing PDF or Word documents.

Criteria

1. The system should be able to import electronic records in PDF format from the previous general practice.
2. The system should be able to scan and import paper records as searchable PDF documents.
3. The system should be able to make available to clinicians previous GP or hospital records as searchable PDF documents.

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5. Hold information on Current Medication

Overview

Information on prescribed drugs must be available.

Description

Sometimes the consultation note is in the nursing home information system and the prescription is in the GP practice software system and the pharmacy system. There is a need to share information on medication prescribed with the GP practice software system or medication dispensed by the pharmacy system. The GP practice software system should be the system of record for prescribing and the nursing home system should take a feed from the GP practice record.

Criteria

1. The system should have up to date information on current medications.
2. The system should be able to search for patients on a particular medication.
3. The system should be able to generate and print a drug Kardex of current medications.

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6. Support the Management of Immunisation

Overview

Nursing home residents are at risk from Influenza and other infectious diseases.

Description

Immunisation lists are managed over time, whether over the course of a consultation, or the lifetime of a patient. Details of immunisations administered are captured as discrete data elements including date, type, batch number, manufacturer, expiry date, site given, method of administration and dose. The entire immunisation history is viewable

Criteria

1. The system should capture, display and report all immunisations associated with an individual patient and with the nursing home population.
2. The system should be able to search for patients who have not been immunised with particular vaccines.

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7. Support Medication Reviews

Overview

Drugs save and drugs harm. Medication needs to be reviewed on a regular basis.

Description

Multiple medical problems often leads to multiple medications. There is a need to display, report and extract a medication list for each individual patient. The idea is to support medication reviews by doctors, nurses or pharmacists.

Medication Review should be shared with pharmacy so that entries from both pharmacist and GP can be made. This would support a dialogue on various medications and support more rational prescribing. This would also dispense with the need for paper forms to be signed by GPs that medication reviews have been done.

Criteria

1. The system should display and report medication lists for individual patients.
2. The system should display and report prescribing across the nursing home population for particular medications.
3. The system should report on patients who are due a medication review.
4. The medication review should be a shared activity between pharmacist and GP.

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8. Integrate Laboratory and Radiology Reports

Overview

Laboratory and radiology test results should form part of the electronic patient record.

Description

Integrating laboratory and radiology results into the electronic patient record is important to provide a comprehensive medical record. Electronic reports are available via Healthlink, the National Message Broker, in Health Level Seven (HL7) version 2.4 XML format.

Criteria

1. The system should import electronic laboratory results into the individual patient record.
2. The system should import electronic radiology results into the individual patient record.
3. The system should display laboratory results and radiology reports within the individual patient record.

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9. Support an End of Life Care Plan

Overview

Everyone needs to be on the same page when it comes to End of Life planning.

Description

The views of the patient and their family in relation to end of life care needs to be captured in the electronic patient record.

Criteria

1. The system should support the capture of an End of Life Care Plan in a structured format.
2. The system should support the maintenance and updating of End of Life Care Plans.

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10. Ensure Nursing Home Systems Can Be Accessed Remotely

Overview

Nursing Home systems need to be accessed remotely to support use from Nursing Home, GP Surgery, GP Out of Hours Coop and GP Home.

Description

Lots of different clinicians, in lots of different locations will have a duty of care to nursing home residents and a need to view the nursing home record. This can only be supported by a system designed with appropriate security and access controls for remote access.

Criteria

1. The system architecture should allow secure remote access.
2. It should be possible for the GP to access the nursing home information system securely from any location with an Internet connection.