IHE Pharmacy Domain (PHARM)

White Paper

Hospital Pharmacy and Community Pharmacy –

Cross-domain use cases

Draft for Public Comment

Date: September 20, 2012
Author: IHE Pharmacy Technical Committee
Email: pharmacy@ihe.net

Copyright © 2012: IHE International, Inc.
## Hospital Pharmacy and Community Pharmacy – Cross-domain use cases

<table>
<thead>
<tr>
<th>Document version</th>
<th>Date</th>
<th>Editor</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3</td>
<td></td>
<td>Orlando Rodrigues, Glintt</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>José Costa Teixeira, Agfa Healthcare</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Leonidas Tzimis, EAHP</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sebastiao Ferreira Silva, HUC/APFH</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Viktor Hafner, Linden-Apotheke</td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td></td>
<td>Orlando Rodrigues, Glintt</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>José Costa Teixeira, Agfa Healthcare</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Leonidas Tzimis, EAHP</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sebastiao Ferreira Silva, HUC/APFH</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Viktor Hafner, Linden-Apotheke</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>2012-09-20</td>
<td>IHE Documentation Specialist</td>
<td>Published for Public Comment</td>
</tr>
</tbody>
</table>
Contents

INTRODUCTION ....................................................................................................................................................... 4

OUTPATIENTS GETTING MEDICATION DISPENSED BY HOSPITAL PHARMACY ............................................. 5
  PURPOSE .................................................................................................................................................................... 5
  STORYBOARD ............................................................................................................................................................ 5

HOSPITAL ADMINISTRATION OF MEDICATION FOR OUTPATIENTS ..................................................... 6
  PURPOSE .................................................................................................................................................................... 6
  STORYBOARD ............................................................................................................................................................ 6

HOSPITAL ADMINISTRATION RESULTING IN THE CHANGE OF THE MEDICATION PROFILE .... 7
  PURPOSE .................................................................................................................................................................... 7
  STORYBOARD ............................................................................................................................................................ 7
Introduction

One of the concerns in the planning and documentation of IHE Pharmacy – Community and Hospital Pharmacy was the possible transition between both domains.

The common transition between domains is at the time of admission and/or discharge. This is documented in the Pharmacy white paper in cases:

10.1 Admission-Discharge with Continuity of Treatment

10.2 Admission/discharge with hospital taking over medications during stay

10.3 Hospital Dispense for Outpatients

This document presents additional use cases that indicate the need for a smooth transition between domains.
Outpatients getting medication dispensed by Hospital Pharmacy

Purpose

This use case shows the hospital dispensing specific medications to a patient as an inpatient and then as an outpatient, in fulfillment of a prescription that has been produced in the hospital setting and then the pharmacotherapy continues as an outpatient. Tracleer (bosentan) is in the official list of medications, as orphan drug.

Storyboard

A young woman was hospitalized in the cardiology clinic of the hospital near her residence for chest pain. The cardiologist refers her to the pulmonary ward of a big university hospital 150 km from her home where she is diagnosed pulmonary arterial hypertension.

The physician asks for an examination from a gynecologist that the patient is not pregnant. Then he prescribes bosentan (Tracleer®), an orphan drug that can be supplied either by hospital or community pharmacies, two tablets per day, for all the days the patient remains in the clinic.1

Cross-domain part of the story: Finally, the female patient is discharged on the third day, so no more bosentan was needed. The physician discharging the patient prescribes Tracleer that the patient will have to get delivered from the hospital pharmacy, near her residence, as an outpatient.

The patient is given a paper document describing the prescribed medicine and informing her of all the intake instructions, as well as the conditions on how to store the medication. The prescription is recorded in the hospital information system as well as in the community prescription repository.

The patient now goes to the hospital pharmacy two blocks from her home in order to retrieve her medication, prescribed in the community prescription repository. The hospital pharmacist queries the community prescription repository, retrieves the prescription and dispenses the medication.

Since then the patient, in order to continue her therapy, visits each month her family doctor, receives a prescription valid for one month and goes to a local community pharmacy to get her medication. The community pharmacist dispenses the medication and attaches the verification document from the specialized physician, that the patient needs the specific drug for her illness, to the prescription.

1 Depending on the local law
Hospital Administration of medication for outpatients

Purpose

This use case shows how a prescription that has been produced in the hospital setting is divided into two branches. One that is going to be dispensed in the community pharmacy and the other that is going to result in the administration of the medication in the day hospital Remicade® (Infliximab).

Storyboard

A patient with Rheumatoid Arthritis goes to the hospital and the physician prescribes Remicade® (infliximab) 3 mg/kg (200 mg) at 0, 2 and 6 weeks, then every 8 weeks, in a total of 5 administrations (about half a year) with methotrexate once a week, and Ibuprofen 200 mg in case of pain.

The administration of infliximab must be performed in the hospital, so the day hospital department is also notified that the patient will be visiting at the specified times for administration.

The Hospital Pharmacy prepares the first dose of infliximab which will be administered in the day hospital department. The hospital pharmacist accesses the hospital information system to validate the prescription, emit the preparation guide and labels. The medication is packaged and labeled with a bar-coded label identifying the number of the preparation. This medication is given to the nurse, who scans the drug barcode and the patient’s wristband barcode to check if this medication is destined for this particular patient. The medication is administered and the nurse records the administration in the hospital information system.

Cross-domain part of the story: The patient is given a paper prescription describing the medicine prescribed (ibuprofen and methotrexate) containing all the intake instructions. It is recorded in the hospital information system as well as in the community prescription repository. The patient gets medication treatment both in Hospital and Community domain at the same time.

A couple of days later the patient goes to a community pharmacy to get some OTC-Aspirin (acetylsalicylic acid) because she has headache. Infliximab interacts with the ingredient of Aspirin.

The community pharmacist looks into the patient’s medication profile and sees that the patient is treated with infliximab (and others) and therefore refuses the dispensation of Aspirin. Instead he advises the patient to take Paracetamol 500 mg and recommends her to talk to the physician if the headache continues or gets stronger.
Hospital Administration resulting in the change of the medication profile

Purpose

This use case shows a patient being admitted to a hospital in result of a heart attack and the changes this event had on the patient’s medication profile.

Storyboard

A 65 year old diabetic patient is suffering from a left arm sudden pain and tingles in the left hand. He goes to the emergency room where he is admitted with suspect of a heart attack.

An emergency room pharmacist records the medicines the patient is currently on by checking with the patient and the family or by querying the medication profile system. The information he gathers is that the patient is taking metformin 500 mg id bid, captopril 25 mg bid, furosemide 40 mg id. He records this information in the hospital information system.

The patient is then transferred to the coronary intensive care unit. At this unit, the cardiologist goes to the hospital information system to make the patient’s prescription, based upon the information the pharmacist recorded. He re-prescribes some of the former medication (metformin 500 mg id bid, furosemide 40 mg id). He also prescribes enoxaparin 70 mg bid, tirofiban 12.5 mg continuous for 24 hours, pravastatine 40 mg id, clopidogrel 75 mg id, carvedilol 6.25 mg bid, and perindopril 5 mg id.

Cross-domain part of the story: Five days later the patient is discharged with an electronic outpatient prescription for metformin 500 mg id bid, pravastatine 40 mg id, clopidogrel 75 mg id, carvedilol 6.25 mg bid, perindopril 5 mg id and warfarin 5 mg id. This information is recorded in the hospital information system as well as the community prescription repository. The medication profile of the patient is updated with the medication administered during inpatient stay.

Since then the patient visits his family doctor every three months in order to receive a three month valid electronic prescription. The prescription is validated by the community pharmacist who dispenses the medication for one month, recording in the system the amount of medication dispensed, and checking the medication left to be dispensed.