EHR Due Diligence & Data Requirements

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Introduction

Objective

One of the primary goals of the IS4H project is to generate overviews based on a selected indicators set to Ministry of Health which they in turn use to develop new policies and advisement campaigns. The first line of healthcare information is generally speaking collected through primary care. By digitising the data collection in a structured approach with the use of internationally used data standards and quality checks MoH can rely on qualitative information.

The objective throughout this part of the project is to develop electronic health record requirements based on the consult and treatment processes primary care professionals use in Suriname. With the addition of requirements needed to collect the data for the specified indicator set.

Outline & Scope

The goal for the Electronic Health Record (EHR) is to store and track patient related information such that primarily the attending physician has all information available during consults and treatments. However, on a broader scale, information sharing for multidisciplinary care cases and nation wide health tracking is just as important in the setup of the EHR requirement set. The usage of international health standards such as ICPC coding, LOINC coding for laboratory and ICD 10 for radiology diagnostics is for sharing information critical and embedded throughout the EHR requirements. The described requirements are defined based on the following segments:

1	Calendar	7	Financial Module
2	Patient Registration	8	Diagnostics
3	Insurance Information	9	Correspondence
4	Episode Registration	10	Continuity of Care Module
5	Consult Elements	11	Prevention
6	Drug Prescription	12	Disease Management Protocols

Information Sharing

The EHR requirements and intended standards are defined with information sharing in mind, specifically sharing data with MoH concerning the defined non commutable disease (NCD) indicator set. This defined set are parameters that can be collected throughout different information sources and gives an indication on national health related to NCD's. The EHR requirements are defined to share information on the following NCD indicators:

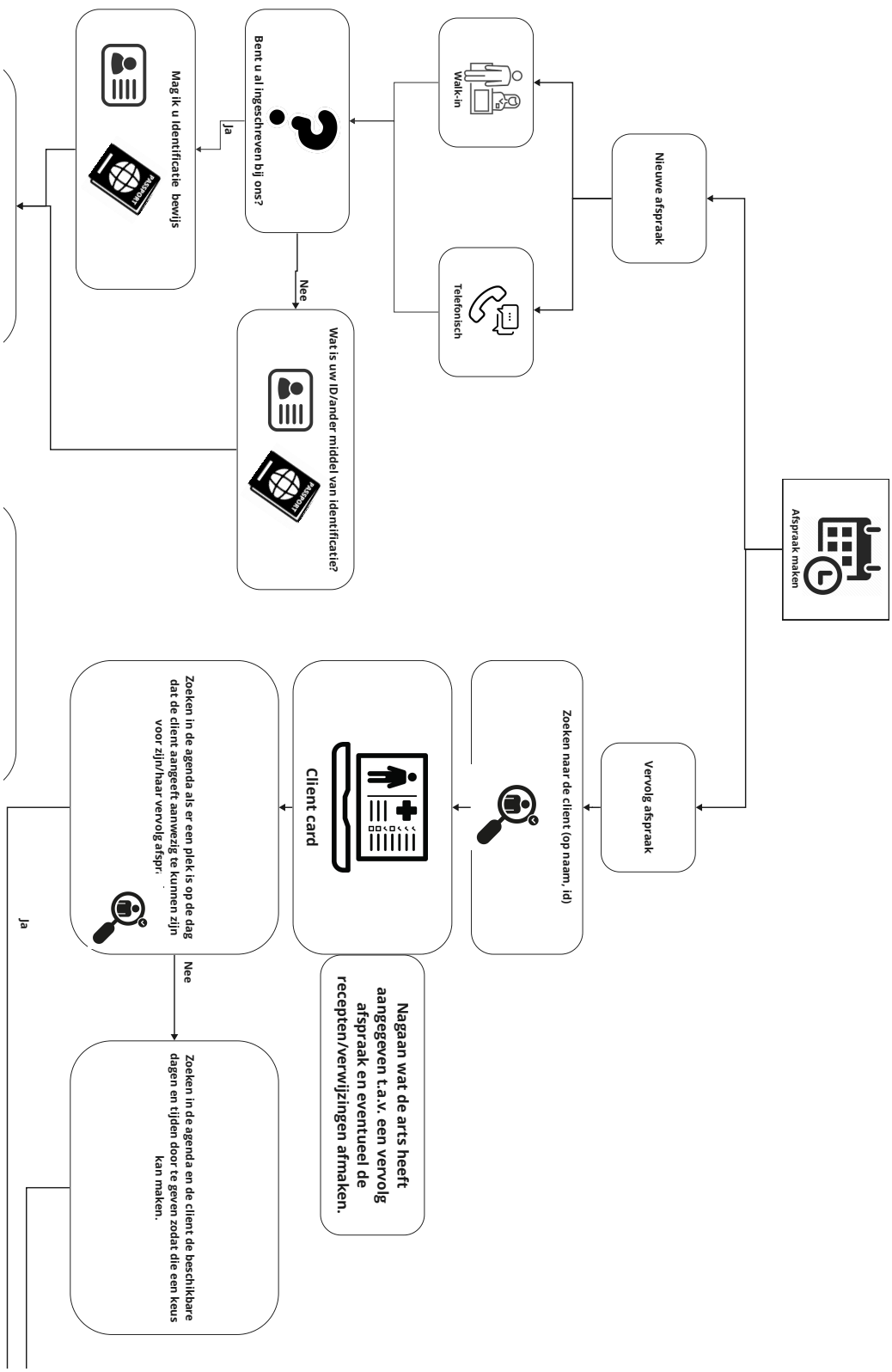
Indicator	Description	EHR Module(s)
Ischemic heart disease	Mortality rate & potential years of life lost	Episodes
Diabetes	Mortality rate & potential years of life lost	Episodes / Diagnostics
Cardiovascular disease	Age standardised mortality rate & potential years of life lost	Episodes / Diagnostics
Cerebrovascular disease	Age standardised mortality rate & potential years of life lost	Episodes / Diagnostics
Hypertension	Age standardised prevalence of raised blood pressure & Percentage of adults registered with hypertension on dialysis	Episodes / Diagnostics
Diabetes	Age standardised prevalence of raised blood glucose & population diagnosed with diabetes during last year	Episodes / Diagnostics / Prevention
Overweight and/or obesity	Age standardised prevalence of obesity in adults or adolescents	Patient Registration / Prevention
Cervical cancer screening	Proportion of woman screened for cervical cancer	Correspondence
Breast cancer screening	Proportion of woman screened for breast cancer	Correspondence
All Cancers	Age standardised mortality rate & potential years of life lost	Episodes / Diagnostics
Tobacco Use	Age standardised prevalence of tobacco use	Prevention
Respiratory diseases	Age standardised mortality rate & potential years of life lost	Episodes / Diagnostics
Sickle cell disease	Mortality rate	Episodes / Diagnostics
Vaccination for hepatitis B	Vaccination coverage	Consult

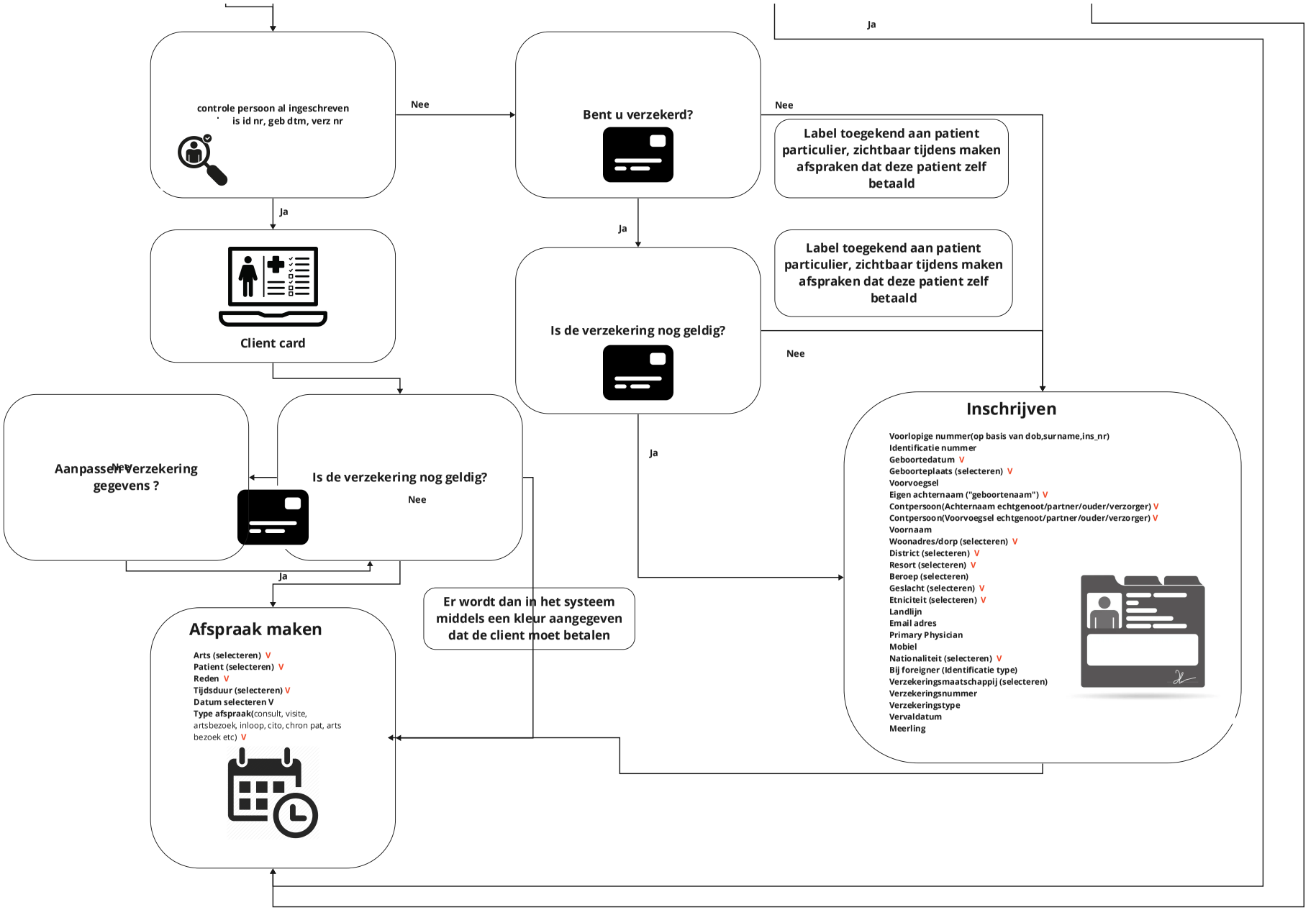
Structure & Datatypes

The structural setup of the aforementioned EHR modules should be done with the international health standards in mind. The data will be shared to the national data sharing framework through HL7 messages. Statistical analysis and proper reporting on population wide cohorts can only be done if data derived from the different healthcare systems are standardised across the board.

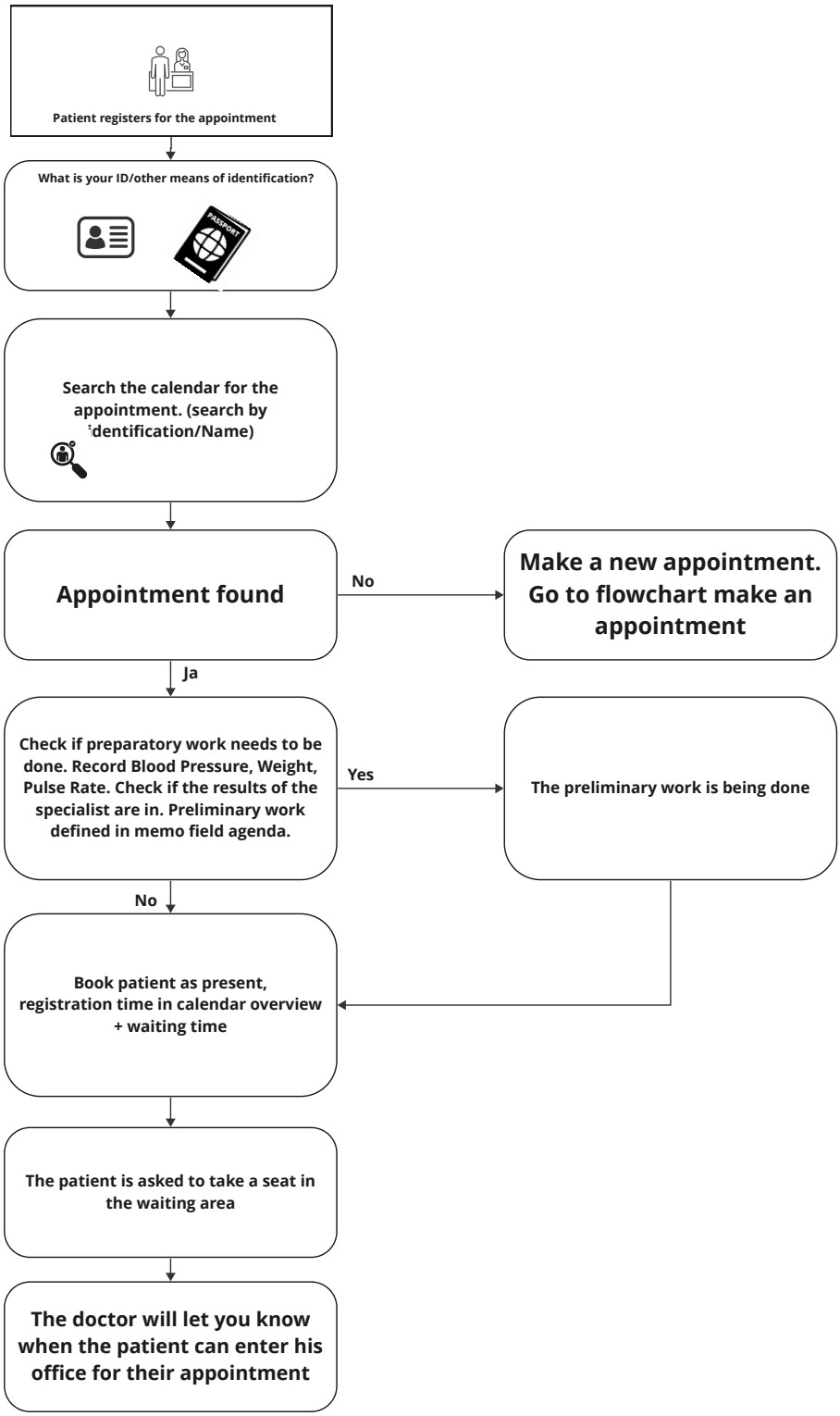
EHR Module	Healthcare Standard	Description
Episodes	ICPC	Describes diagnosis, symptoms and complaints and other healthcare elements. This coding gives an overview on the patients underlying health issue in case of death
Diagnostics	LOINC / ICD10	Certain laboratory or radiology diagnosis lead to a ICPC diagnosis of an healthcare Episode which is crucial in determining patient underlying health problems
Correspondence	ICPC	Screening on specific cancer types are done via referral, by tracking the ICPC codes for type of referrals one can track the percentages of population screening.
Consult	CVX	Immunization types are tracked via CVX coding, by embedding this information population based statistics can be done on vaccination coverage
Prevention	National Standardised lists	Specific screenings for prevention like tobacco screening should be done based on a nation wide coding list.
Patient Registration	National Standardised lists	Registration of a patients weight and height should follow similar registrations. Unit types should be defined and set in the field types.

Flow: Patient Appointment & Registration




controle persoon al ingeschreven
is id nr, geb dtm, verz nr
Nee
Bent u verzekerd?
Nee
Label toegekend aan patient particulier, zichtbaar tijdens maken afspraken dat deze patient zelf betaald
Ja
Ja
Client card
Is de verzekering nog geldig?
Label toegekend aan patient particulier, zichtbaar tijdens maken afspraken dat deze patient zelf betaald
Nee
Aanpassen Verzekering gegevens ?
Nee
Is de verzekering nog geldig?
Nee
Ja
Ja
Inschrijven
Voorlopige nummer(op basis van dob,surname,ins_nr)
Identificatie nummer
Geboortedatum V
Geboorteplaats (selecteren) V
Voorvoegsel
Eigen achternaam ("geboortenaam") V
Contpersoon(Achternaam echtgenoot/partner/ouder/verzorger) V
Contpersoon(Voorvoegsel echtgenoot/partner/ouder/verzorger) V
Voornaam
Woonadres/dorp (selecteren) V
District (selecteren) V
Resort (selecteren) V
Beroep (selecteren)
Geslacht (selecteren) V
Etniciteit (selecteren) V
Landlijn
Email adres
Primary Physician
Mobiel
Nationaliteit (selecteren) V
Bij foreigner (Identificatie type)
Verzekeringsmaatschappij (selecteren)
Verzekeringsnummer
Verzekeringstype
Vervaldatum
Meerling
Er wordt dan in het systeem middels een kleur aangegeven dat de client moet betalen
Afspraak maken
Arts (selecteren) V
Patient (selecteren) V
Reden V
Tijdsduur (selecteren) V
Datum selecteren V
Type afspraak(consult, visite, artsbezoek, inloop, cito, chron pat, arts bezoek etc) V

Flow: Patient Arriving for Appointment



Requirements: Patient Appointment

Nr	Specification	
1.1	User can setup a daily schedule in the calendar, one can set per day and or per consultation:	
1.1.1	Length of consultation	O
1.1.2	Amount of patients per hour (length of consult, standard is 10 minutes)	O
1.1.3	Block certain parts of the day	Y
1.2	The calendar function can be accessed by the administrative as well as medical modules within the system	Y
1.3	Each employee has their own agenda	Y
1.4	The length of consultation can be changed at will, also allowing to have multiple consultations planned at the same time.	Y
1.5	When a certain period in the agenda will be blocked, the system shows a warning in case of planned patient consultations in that specific period.	Y
1.6	Per appointment the following aspects can be captured	
1.6.1	Period of consultation	Y
1.6.2	Reason for appointment	Y
1.6.3	Which physician calendar is selected	Y
1.7	A free text note field is available for each patient where the clinics personnel can register data such as administrative questions that need to be asked or small procedures that should be done prior to the consult	Y
1.8	A drop down list presenting the type of appointment is shown when booking an appointment. The types it at least contains are: Consult, Phone Consult, Visit, Walkin, Cito, Chronic Patient	Y
1.9	Different agenda's can be visualised next to eachother	O
1.10	In the agenda overview specific periods for consultation are visualised with a color, open spots within this area are clearly visible.	Y
1.11	Already planned appointments can be changed in time or date through a specific designed function. All required data from the initial appointment is automatically transferred to the new slot	Y
1.12	If the memo note attached to a patient contains information (sometimes preparations that need to be done before the consult) this will be presented at time of creating the appointment and when the patient arrives for the appointment.	Y
1.13	Patients arriving for consultation can be marked (by administrative personnel) as 'present'. This marking is immediately visible for the treating employee along with the time the patient arrived.	Y
1.14	Patients finished at the treating employee are marked "treated" and get a different status/color in the agenda	Y
1.15	Patients that are a no show despite the appointment get marked with a color in the agenda, at the next appointment the administration and healthcare employee see the mark.	Y

Requirements: Patient Registration

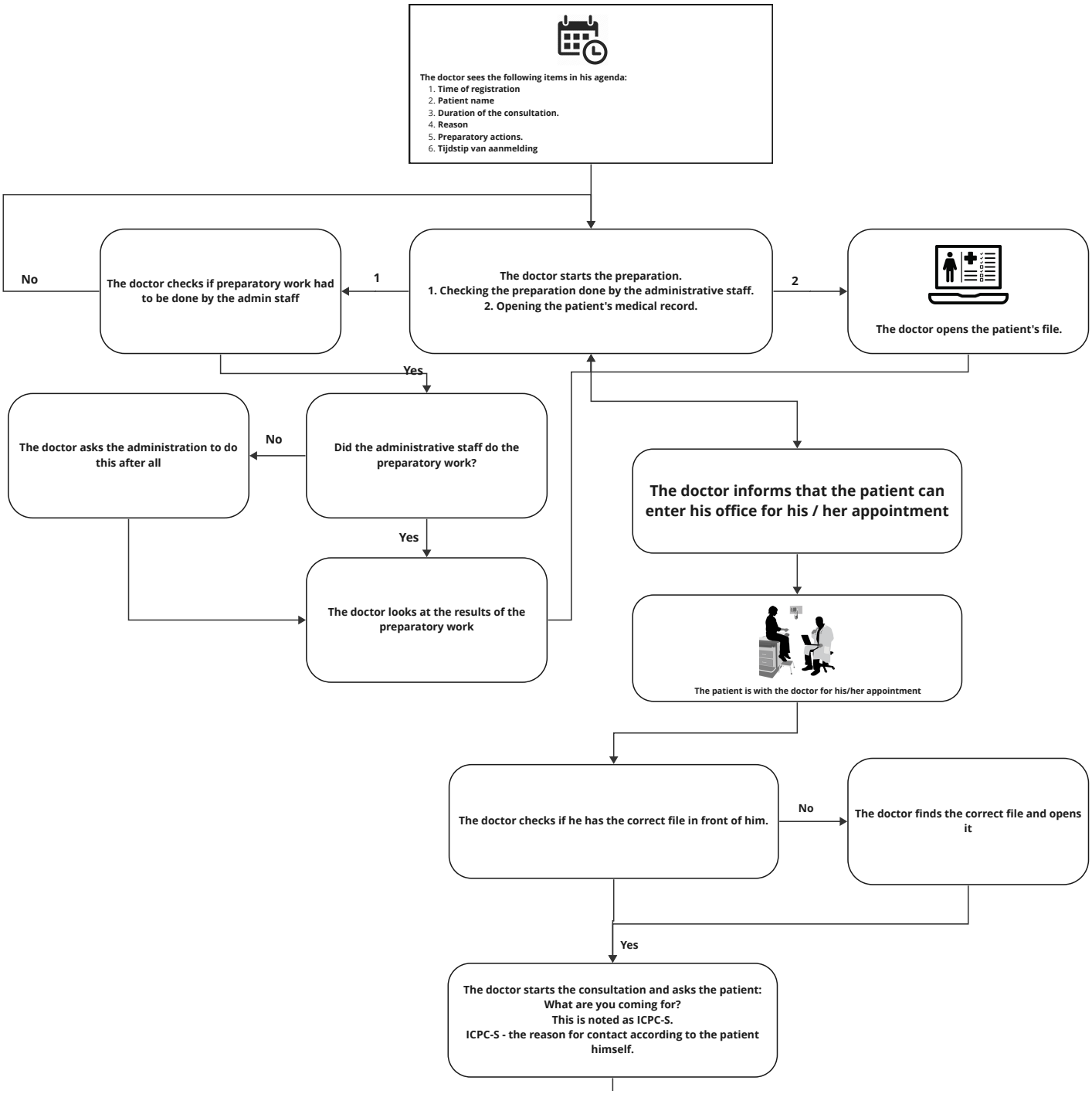
Nr	Specification	
2.1	The patient is identified within the system with their personal identification number	
2.2	In case of a temporary registration or someone didn't bring their ID a temp patient id is generated by the system based on Date of birth, surname and ins nr	
2.2.1	When a patient is registered the person is identified as local or foreigner	
2.2.2	In case of a foreigner, type of id should be registered as well (drivers license, pasport or other)	
2.3	System gives the following authorization levels in case of patient registraton	
2.3.1	View function	
2.3.2	Edit function	
2.4	The system will keep a log of all patient related editable items with date, time, username and previous version	
2.5	The following patient descriptive parameters should be registered:	
2.5.1	Patients identification number	
2.5.1.1	Local or Foreigner	
2.5.1.2	Type of ID	
2.5.2	Date of Birth	
2.5.3	Place of Bith	
2.5.4	Prefix(es)	
2.5.5	Surname (patient own)	
2.5.6	Surname husband / registered partner	
2.5.7	Prefix husband / registered partner	
2.5.8	Firstname	
2.5.9	Address + Village + City	
2.5.10	District	
2.5.11	Resort	
2.5.12	Diseased Date	
2.5.13	Profession	
2.5.14	Biological Gender	
2.5.15	Ethnicity	
2.5.16	Home phone number (landline)	
2.5.17	Email address	

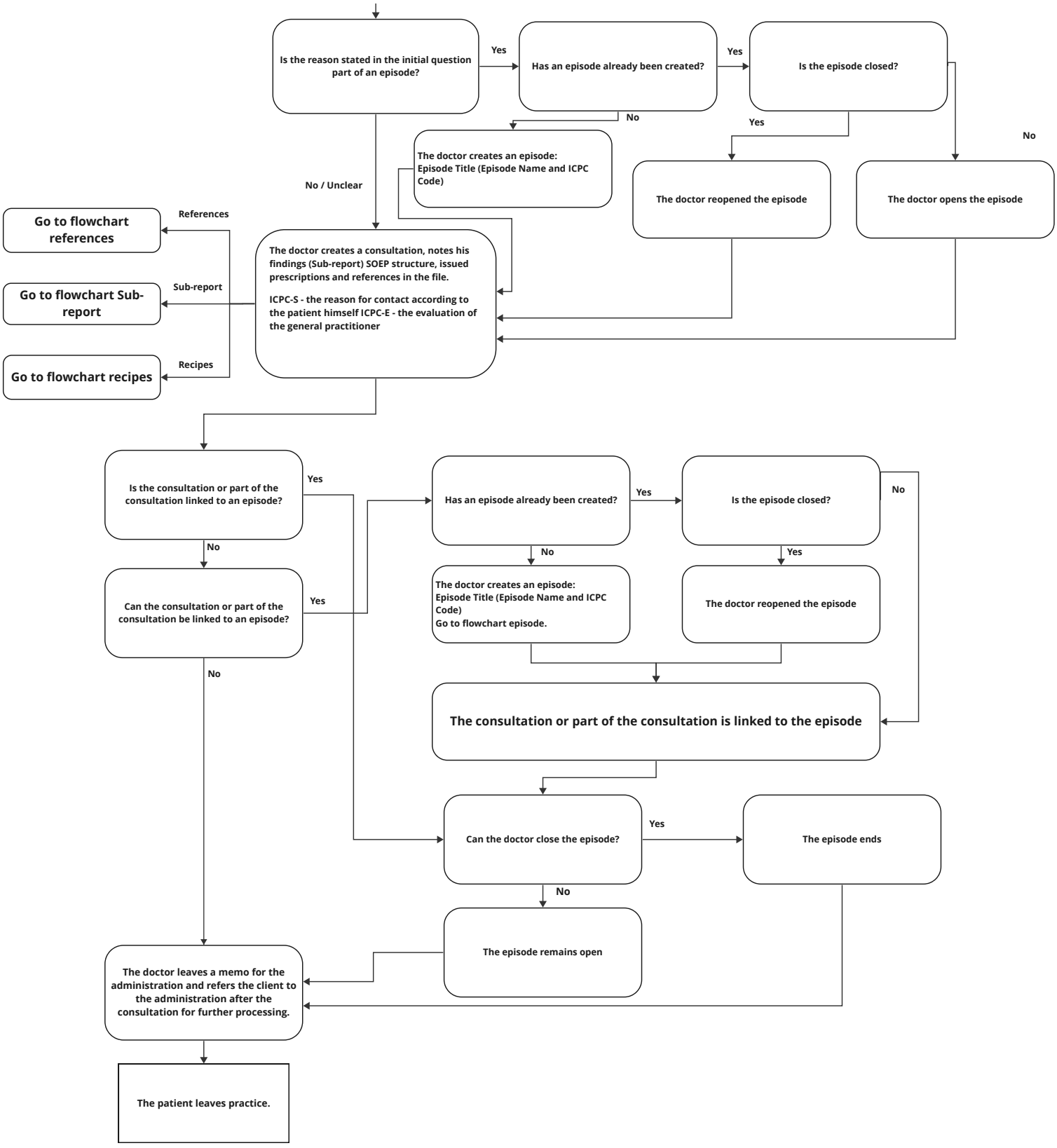
Nr	Specification	
2.5.18	Mobile number (multiple numbers allowed)	
2.5.19	Contact Person (surname, first name and relation)	
2.5.20	Country	
2.5.21	Marital Status	
2.5.22	Nationality	
2.6	Mark to identify if patient is of multiple births	
2.7	Data quality checks on at least date of birth, gender, id number and insurance number	
2.8	Mark to identify a double record with link to other record id	

Requirements: Insurance Data

Nr	Specification	
3.1	System has the possibility to register a patient insurance data	
3.2	Multiple insurances can be registered for one patient	
3.3	Insurance data to register	
3.3.1	Insurance Number	
3.3.2	Name Insurance company	
3.3.3	Insurance Type	
3.3.4	Expiration Date	
3.4	System has the possibility to check the insurance data against insurance companies automaticallly	
3.5	System has the possibility to register information from a company that covers the costs, the following information can be registered	
3.5.1	Type of company	
3.5.2	Start Date of coverage	
3.5.3	End date of coverage	

Flow: Episode / Consult




Is the reason stated in the initial question part of an episode?
Yes
Has an episode already been created?
Yes
Is the episode closed?
No
Yes
No
The doctor creates an episode: Episode Title (Episode Name and ICPC Code)
The doctor reopened the episode
The doctor opens the episode
No / Unclear
Go to flowchart references
References
Go to flowchart Sub-report
Sub-report
Go to flowchart recipes
Recipes
The doctor creates a consultation, notes his findings (Sub-report) SOEP structure, issued prescriptions and references in the file.
ICPC-S - the reason for contact according to the patient himself ICPC-E - the evaluation of the general practitioner
Is the consultation or part of the consultation linked to an episode?
Yes
No
Can the consultation or part of the consultation be linked to an episode?
Yes
No
Has an episode already been created?
Yes
Is the episode closed?
No
No
Yes
The doctor creates an episode: Episode Title (Episode Name and ICPC Code)
Go to flowchart episode.
The doctor reopened the episode
The consultation or part of the consultation is linked to the episode
Can the doctor close the episode?
Yes
The episode ends
No
The episode remains open
The doctor leaves a memo for the administration and refers the client to the administration after the consultation for further processing.
The patient leaves practice.

Requirements: Episode

Nr	Specification	
4.1	Episode titel exists out of episode name and episode ICPC code	
4.2	Additional note field (free text) for physician to give a description for the episode	
4.3	Unlimited amount of episodes can be created for a patient	
4.3.1	The same ICPC episode code is not allowed to be open twice for the same patient	
4.4	Every episode should at least contain 1 contact (for instance consult, phone consult etc)	
4.5	In the overviews policy and episode titles will always be shown along side eachother	O
4.6	Every episode will have a starting date	
4.7	An episode can be reopened	
4.8	Overviews can be created on all icpc codes or other describing parameters	
4.9	Episodes can be joined together under an existing episode titel or a new episode titel	
4.10	An episode can be closed, default end-date is date of last contact point with the patient.	
4.11	An overview can be created for a selected patient episodes, this can be filter on (all, closed, open)	
4.12	Episode with a special attention mark will be on top of the episode overview	
4.13	Within the episode overview, the primary physician can define their own order of episode titels based on icpc codes that are rendered on importance. This order supersedes the order from 1.12	
4.14	Within the episode overview a color coding or mark is added when for an open episode no data is added for more than a year. In this overview the physician can close that specific episode.,	
4.15	In the episode overview the start and end date is shown (if end date is available)	
4.16	Closed episodes with attention flag are embedded in the reporting to other health care professionals.	
4.17	Attention flag remains active when closing an episode	

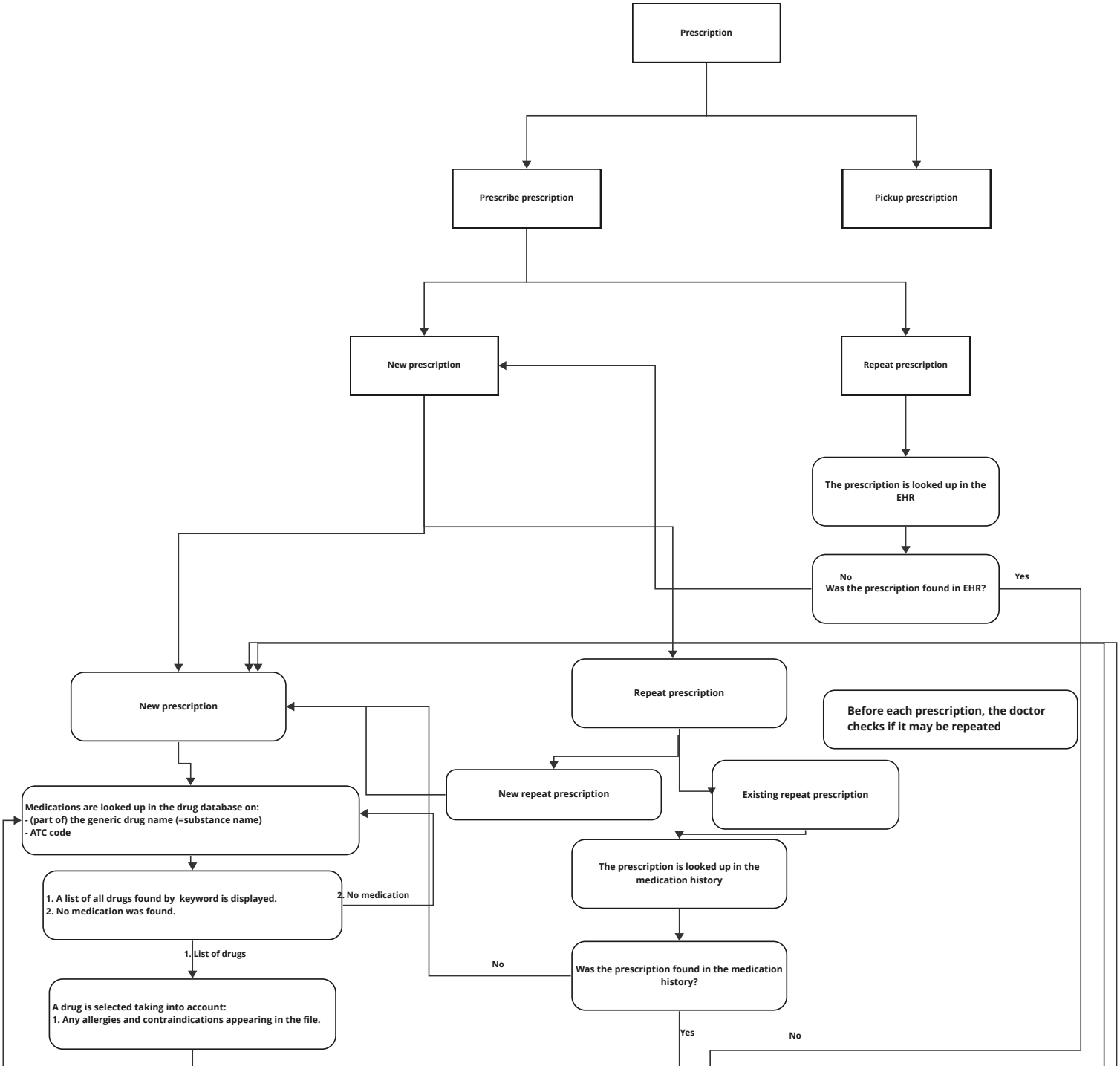
Requirements: Consult

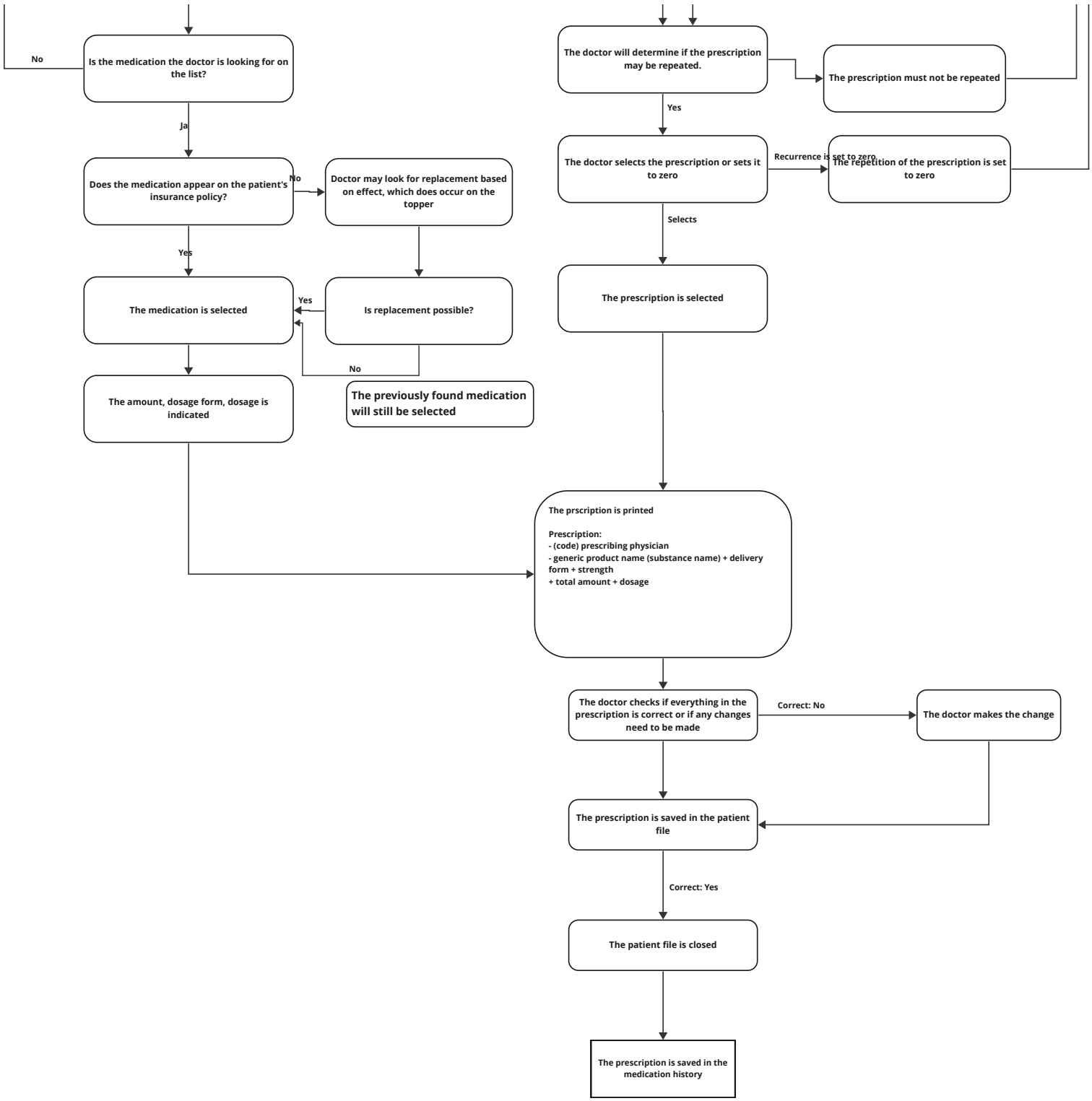
Nr	Specification	
5.1	At the creation of an appointment in the agenda, a consult is automatically rendered with the titel the specified reason of consult by the administrative staff.	
5.2	Consult can be appointed to an episode by the physician at the start of the patients consult	
5.3	Title of the consult can be changed during the consult	
5.4	Consult Visualisation Fields	
5.4.1	Firstname	
5.4.2	Surname	
5.4.3	Date of Birth	
5.4.4	Biological Gender	
5.4.5	Identifying Gender	
5.4.6	Link to Medical Record overview	
5.4.7	Allergies	
5.4.8	Medical History (free field)	
5.4.9	Appointed Episode(s)	
5.4.10	Vital functions with date	
5.4.11	Previous Consult Linked and not Linked to episode	
5.4.11.1	Date Consult + linked episode	
5.4.11.2	Anamnese date	
5.4.11.3	Reason for Encounter	
5.4.11.4	Anamnese Information	
5.4.11.5	Physical Examination	
5.4.11.6	Conclusion	
5.4.11.7	Policy	
5.4.11.8	Remarks	
5.4.11.9	Prescribed medication in consult	
5.4.11.10	Requested Diagnostics (Lab & Medical Imaging)	
5.4.11.11	Procedures performed during consult	

Nr	Specification	
5.4.11	Previous Consult Linked and not Linked to episode	
5.4.11.12	Registered ICPC Codes	
5.4.11.12.1	Body Symptom Chapter	
5.4.11.12.2	Symptoms & Complaints	
5.4.11.12.3	Medication, Screening and Preventive procedures	
5.4.11.12.4	Test Results	
5.4.11.12.5	Administration	
5.4.11.12.6	Referrals and other reasons for encounter	
5.4.12	Vaccination with date and note field	
5.5	Consult information Registration	
5.5.1	Edit Medical History	
5.5.2	Edit Allergy	
5.5.3	Edit Vital functions	
5.5.4	Reason for encounter	
5.5.5	Anamnese Information	
5.5.6	Physical Examination	
5.5.7	Conclusions	
5.5.8	Policy	
5.5.9	Remarks	
5.5.10	Prescribed medication	
5.5.11	Requested Diagnostics (lab & Medical imaging)	
5.5.12	Procedures performed during consult	
5.5.13	Registering ICPC Codes	
5.5.13.1	Body symptom chapter	
5.5.13.2	Symptoms & Complaints	
5.5.13.3	Diagnostics, Screening & preventive procedures	
5.5.13.4	Medication, Treatment and Procedures	
5.5.13.5	Test Results	

Nr	Specification	
5.5.13	Registering ICPC Codes	
5.5.13.6	Administration	
5.5.13.7	Referrals & other reasons for encounter	
5.6	Physician is able to view current and previous consult fields next to eachother	
5.7	Physician can copy elements from previous consult fields to current consult fields	
5.8	Letters can be created from within a consult based on predefined templates	
5.9	End of a consult physician has the option to connect the consult or items within the consult to an episode	
5.9.1	Connecting total consult gives an overview of open and closed episodes	
5.9.1.1	From within the consult the physician can open a closed episode to connect the consult	
5.9.2	Overview of attached ICPC codes to the consult with a mechanism to connect individual items to an episode	
5.9.2.1	Option to re-open closed episodes such that specific consult items can be connected to an episode	
5.10	Vaccination type with date	
5.10.1	Vaccination Scheme selection	O
5.10.2	Vaccination Note field	
5.11	Registration of ICPC-S code (Contact reason according to patient)	
5.12	Registration of ICPC-E code (Evaluation of Physician)	
5.13	Registration of amount of sick days	
5.14	Reason of sick leave	
5.14.1	Reporting function based on sick leave	

Flow: Drug Prescriptions



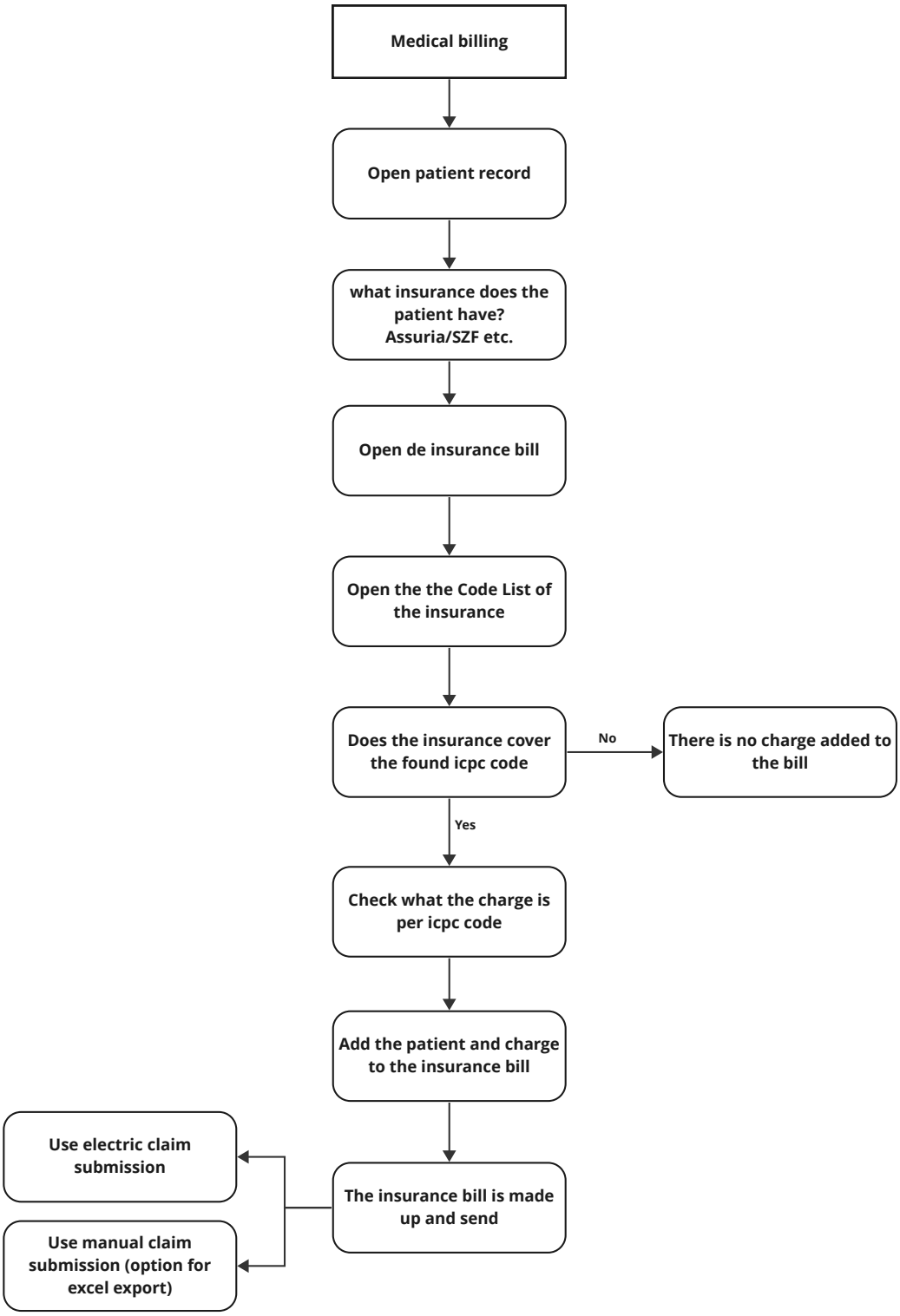

No
Is the medication the doctor is looking for on the list?
Ja
Does the medication appear on the patient's insurance policy?
No
Doctor may look for replacement based on effect, which does occur on the topper
Yes
The medication is selected
Yes
Is replacement possible?
No
The previously found medication will still be selected
The amount, dosage form, dosage is indicated
The doctor will determine if the prescription may be repeated.
The prescription must not be repeated
Yes
The doctor selects the prescription or sets it to zero
Recurrence is set to zero
The repetition of the prescription is set to zero
Selects
The prescription is selected
The prscription is printed
Prescription:
- (code) prescribing physician
- generic product name (substance name) + delivery form + strength
+ total amount + dosage
The doctor checks if everything in the prescription is correct or if any changes need to be made
Correct: No
The doctor makes the change
The prescription is saved in the patient file
Correct: Yes
The patient file is closed
The prescription is saved in the medication history

Requirements: Drug Prescriptions

Nr	Specification	
6.1	A prescription can contain multiple prescribed drug types	
6.2	A prescription can contain at least the following elements	
6.2.1	Code of prescribing physician	
6.2.2	Generic product name	
6.2.3	Delivery form	
6.2.4	Dosage	
6.2.5	Quantity	
6.2.6	Drug usage advice	O
6.2.7	Max amount prescription repetitions	
6.2.8	Dosage form	
6.3	Medication search options	
6.3.1	Generic name or part of name	
6.3.2	Memocode	
6.3.3	ATC Code	
6.4	Prescription is stored in medication history when	
6.4.1	Consult is closed where prescription is entered	
6.4.2	Prescription is printed	
6.5	Multiple prescriptions from the same consult are printed on prescription letter	
6.6	Prescription repetition can be set on zero by physician	
6.7	Prescriptions can take information from the national standardised medication list	
6.8	Prescription from other health professionals can be saved in medication history, a mechanism to enter the prescription without a obligated print function is available	
6.9	All parts of a prescription is editable until the consult is closed, prescription is finalised and saved or when the prescription is printed.	
6.10	Prescription are saved in medication history and a lookup list such that they can be selected for other prescriptions	
6.11	Repeat prescriptions	
6.11.1	The primary prescriber is maintained	
6.11.2	Option to create repeat prescriptions	
6.11.3	Overview of all active repeat prescriptions	
6.11.4	Option to stop a repeat prescription	

Nr	Specification	
6.11	Repeat prescriptions	
6.11.5	Repeat prescription can not be editted	
6.11.6	Amount of initial set of repetitions can not be exceeded	
6.11.7	Physician is able to write the same prescription multiple times	
6.11.8	There is a clear view on how often the prescription was repeated	
6.11.9	There is a clear view on how often the prescription can still be repeated	
6.12	Overviews (shown in chronological order)	
6.12.1	All patients using a specific drug type	
6.12.2	All patient using a specific drug group type based on ATC codes	
6.12.3	Prescribed medication per episode based on	
6.12.3.1	Patient	
6.12.3.2	ICPC 2 code for complete patient group	
6.12.4	Active medication of a patient	
6.12.5	Expired medication of a patient	
6.12.6	Stopped medication of a patient	
6.13	Stoppage of prescribed medication should have the following options	
6.13.1	Memo field to describe the reason	
6.13.2	Switch from active to stopped medication	
6.13.3	Repetitions are stopped automatically	
6.14	The medication search should show all available medications underneath the search bar based on the letters such that the prescribed can select quicker from that list.	
6.15	Option to create a drug preference list, visible during prescriptions	
6.16	Printed prescription shows wether it's a repeated prescription	

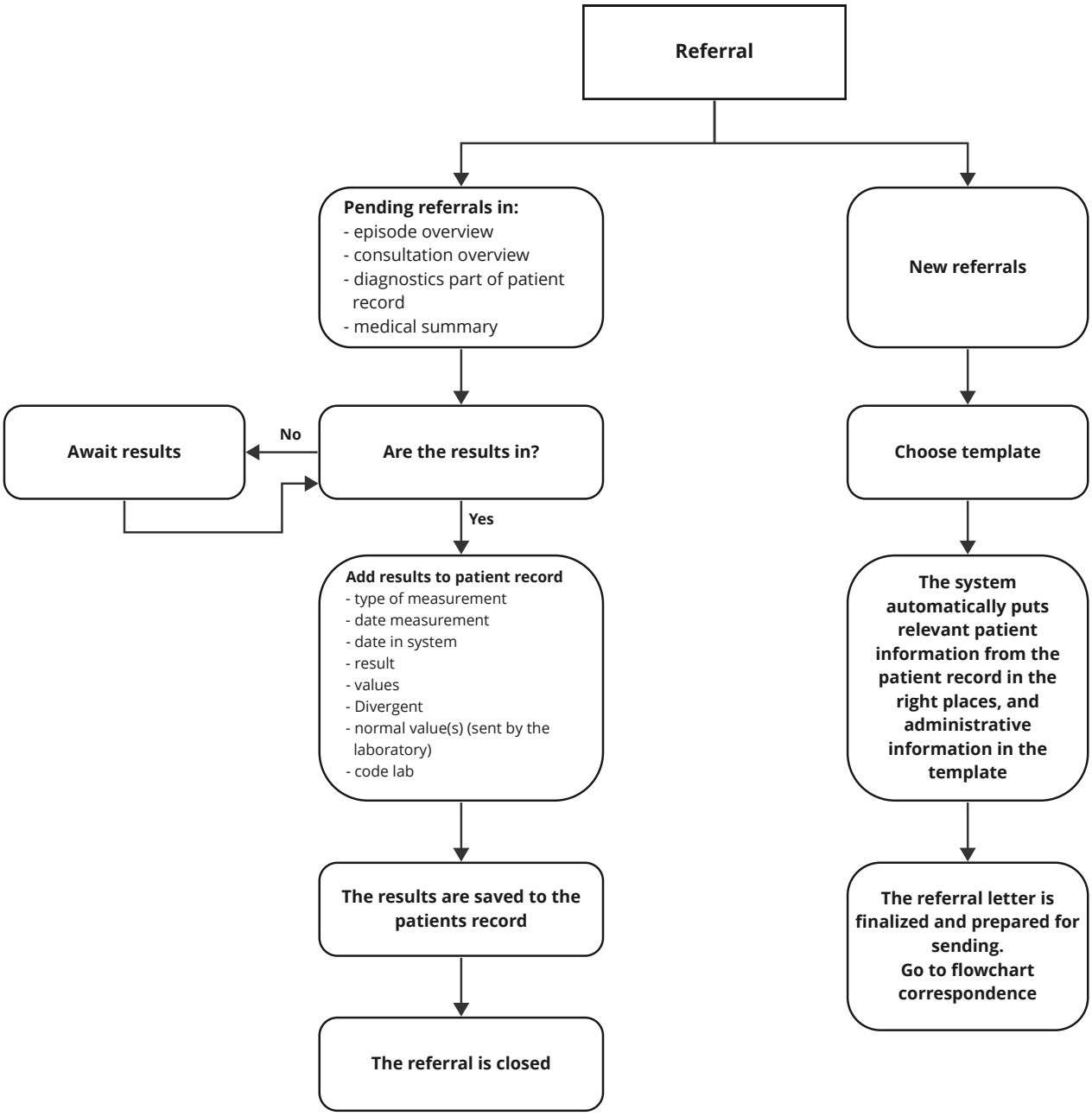
Flow: Medical Billing



Requirements: Medical Billing

Nr	Specification	
7.1	Billing can be done based on the local insurance companies standards	
7.2	Declarations are automatically generated based on consult records	
7.3	System supports medical billing process, manual and electronic (if available)	
7.4	Option to export the invoice data to an excel sheet	

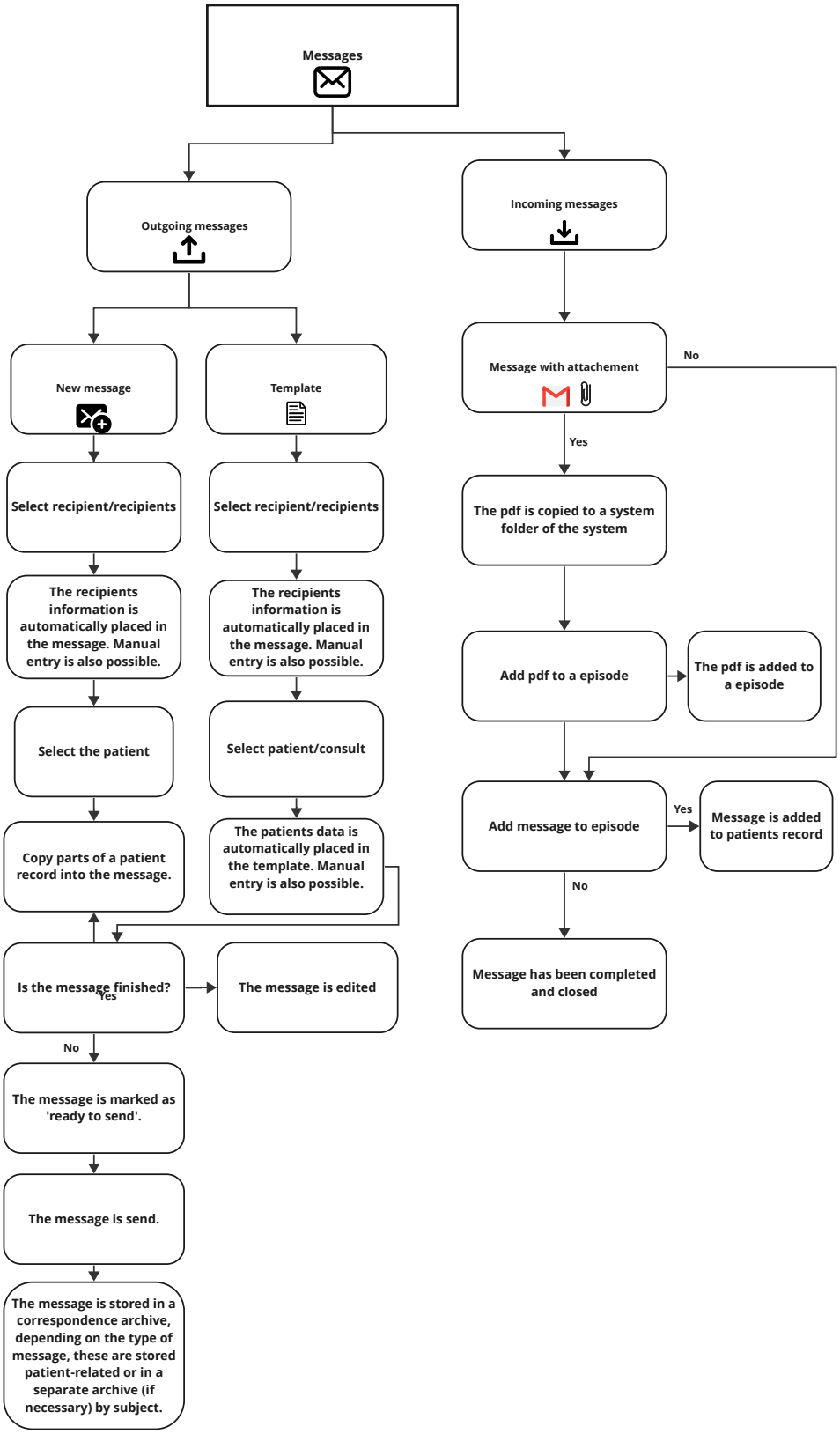
Flow: Diagnostics



Requirements: Diagnostics

Nr	Specification	
8.1	Within a selected patient there is an option to have an overview of all outstanding diagnostic referrals based on chronological order	
8.2	A diagnostic measurement performed in the clinic itself can be uploaded to the system without creating a diagnostic request	
8.3	The system has the option to setup templates for a predefined set of diagnostic requests	
8.4	Diagnostic requests are shown in:	
8.4.1	Episode overview	
8.4.2	Consult overview	
8.4.3	Past Medical History overview diagnostics	
8.4.4	Medical summary	
8.5	Diagnostic results are stored with the following parameters	
8.5.1	Type of measurement	
8.5.2	Date of measurement	
8.5.3	Date stored in EHR	
8.5.4	Result	
8.5.5	Unit	
8.5.6	Divergent of norm (Y or N)	
8.5.7	Norm values (based on laboratory send norm values)	
8.5.8	Code of laboratory	
8.5.9	Remarks	
8.6	There is a graphical representation of diagnostic values over time	O
8.7	EHR is able to process and store diagnostic results from laboratory that use different reference values	
8.8	Diagnostic results can be shown in an overview from within the patients record	
8.9	Divergent values are outlined in the overview	

Flow: Correspondence



Requirements: Correspondence

Nr	Specification	
	Outgoing correspondence	
9.1	A concept letter with the following properties	
9.1.1	Can be saved, edited or deleted	
9.1.2	Medical file summary letter; Generated based on a template	
9.1.3	Referral letter; based on template with option to select specific information from a consult or episode	
9.1.3.1	Referral can only be created by the physician	
9.1.4	Option to generate templates based on elements from the medical record	
9.2	A definitive letter van no longer be changed or deleted	
9.3	The system should contain standard templates based on existing forms used by the local healthcare community	
9.4	The template is automatically rendered with the specified information from the patients medical record	
9.5	The letter can be edited or redacted after generated through a template	
	Incoming correspondence	
9.6	System has the option to manually add a file/image to a patients record	
9.7	Option to link a file/image to an episode or consult	
9.8	The file or image is saved to a system folder	

Requirements: Additional

Nr	Specification	
10.1	In the patient record, family anamnese can be recorded	
10.2	Allergies and intolerances can be recorded in the health record	
10.3	Other sensitivities can be recorded in the health record	
10.4	Blood type can be recorded in the health record	
10.5	Social information can be recorded in the patient information	
10.6	Option to generate a complete patient medical file in case of medical exchange to a foreign country	
10.7	Option to include a patients medical file from other health specialists from abroad	
10.8	Image management, upload option to a specified max size	
10.9	System has the option to connect images to a patient record / episode or consult	
10.10	Option to store a patient consent or non consent	

Requirements: Medical Summary & Attention Page

Nr	Specification	
11.1	Medical Summary entails	
11.1.1	All episodes and their ICPC item codes (can be filtered based on open or closed episodes)	
11.1.2	All diagnostic requests	
11.1.3	Specifically identified ICPC codes by the physician	
11.1.3.1	Option for physician to specify ICPC codes that should always be generated in Medical Summary	
11.1.4	Family history	
11.1.5	Social recorded information	
11.1.6	Recorded contact information	
11.1.7	Matched but not yes processed acting physician messages	
11.1.8	Treatments	
11.2	Attention-page shows overview of all data recorded in the medical file provided with an attention flag	
11.3	Option to record a physician personal memo attached to a patient in patient record	
11.4	Personal memo is not shared with other staff of the clinic, with the exception of other primary physicians	

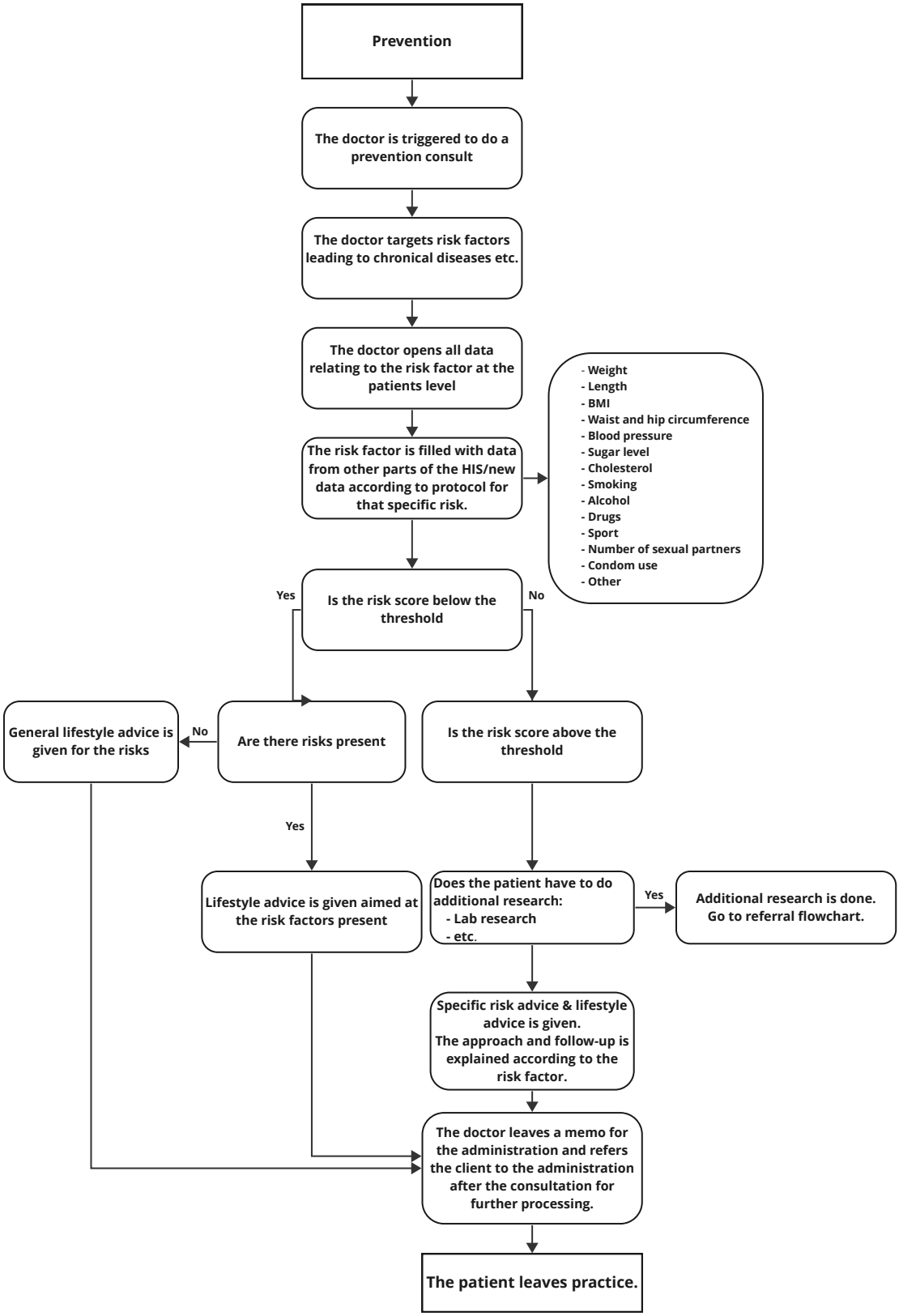
Requirements: Acting Physician Return Messages

Nr	Specification	
12.1	An acting physician should always be able to retrieve a patient medical summary from the EHR	
12.2	Patient Medical Summary should contain	
12.2.1	Episode overview: List of open episodes and attention flags	
12.2.2	Episode overview: Closed episodes only with attention flags	
12.2.3	Consult overview: Reason, Physical examination, Purpose and Policy	
12.2.4	Purpose and Policy per Episode	
12.2.5	Contact Summary: Overview of consult reports, ordered according to SOEP structure, open episode from last 4 months or 5 last contact points.	
12.2.6	Diagnostic measurements from last 4 months	
12.2.7	Correspondence from last 4 months	
12.2.8	Ongoing medication and medication history from last 4 months	
12.2.9	Medical operations and treatments	
12.2.10	Additional information	
12.3	EHR should always be able to receive acting physician return messages	
12.4	Acting physician sends the following medical data to the primary physician	
12.4.1	Consult type	
12.4.2	Consult Report	
12.4.3	Prescribed medication	
12.4.4	Diagnostic measurements	
12.4.5	Transfer information	
12.4.6	Episode information and underlying ICPC codes	
12.4.7	Consult information	

Requirements: Continuity of Care Record

Nr	Specification	
13.1	Continuity of Care Record contains the following parameters	
13.1.1	Demographic Data	
13.1.2	Healthcare contact moments	
13.1.3	Healthcare problems and diagnosis	
13.1.4	Consulted healthcare providers	
13.1.5	Healthcare insurance company	
13.1.6	Medical data concerning consult / episode containing:	
13.1.6.1	Vaccination	
13.1.6.2	Allergies and Intolerances	
13.1.6.3	Family history	
13.1.6.4	Patients Social information	
13.1.6.5	Operations	
13.1.6.6	Assisting medical instruments	
13.1.6.7	Functional Status	
13.1.6.8	Vital Signs	
13.1.6.9	Laboratory Results	
13.1.6.10	Instructions	
13.1.6.11	Medications	
13.1.6.12	Careplans	
13.1.6.13	Policies	
13.2	Return messages from a multi disciplinaire collaboration can be uploaded manually or received via the national data sharing platform	
13.3	Secondary care health specialists return messages contain	
13.3.1	Contact type	
13.3.2	Consult report	
13.3.3	Medical information concerning episode or consults containing	
13.3.3.1	Prescribed medication	
13.3.3.2	Diagnostic values	
13.3.3.3	Transfer data	
13.3.3.4	Contra indications	

Flow: Prevention



Requirements: Prevention

Nr	Specification	
14.1	Multiple risk clusters can be defined	
14.2	Via a prevention function data concerning a risk cluster can be shown based on patient level, per risk cluster	
14.3	Per risk cluster all data relating to prevention can be recorded or edited	
14.4	A risk cluster is generated based on data from diagnostic archive and family history but has the option to add new data points as well	
14.5	For prevention the following parameters should at least be recorded	
14.5.1	Weight	
14.5.2	Length	
14.5.3	BMI	
14.5.4	Midline and hip circumference	
14.5.5	Bloodpressure	
14.5.6	Blood sugar measurements	
14.5.7	Chloresterol	
14.5.8	Smoking	
14.5.8.1	Yes or No	
14.5.8.2	Amount per day/week	
14.5.9	Drugs	
14.5.9.1	Yes or No	
14.5.9.2	Types	
14.5.9.3	Regularity	
14.5.10	Sport	
14.5.10.1	Yes or No	
14.5.10.2	Hours per week	
14.5.11	Amount sexual partners	
14.5.12	Condom usage (yes or no)	
14.6	Based on prevention parameters calculate risk patients	
14.7	Option to specify follow up moments based on measurements	
14.8	Follow up moment is automatically calculated and guarded by the system	

Nr	Specification	
14.9	Follow up date can be manually overwritten after each measurement	
14.10	Per risk factor an overview can be generated with patients that exceeded 1 or multiple follow up dates	
14.11	Option to generate a follow up letter	
14.12	System gives a warning on screen if a follow up date is exceeded in patient records	
14.13	Warning is presented according to	
14.13.1	When patient medical records are opened	
14.13.2	When patient is selected in calendar function	
14.13.3	Push messages to administrative staff	
14.13.4	Type of exceeded follow up measurements can be opened in warning	
14.13.5	Amount of days/weeks/months is shown of exceeding follow up date	

Requirements: Disease Management

Nr	Specification	
15.1	The EHR contains electronic protocols for chronic diseases guidance specifically on:	
15.1.1	Healthcare Guidelines	
15.1.2	Healthcare protocols	
15.1.3	Planning	
15.1.3	Patient education	