

Instant Medical History

Tools and Solutions for a seamless and efficient workflow



Overview of Instant Medical History



Patient Answers Questions Pre-Visit

- History of present illness
- Relevant review of systems
- Relevant medical, social & family history
- Risk and outcome assessments



Branching Algorithms Drive Appropriate Questions for Patient

- Several hundred starting points
- Relevant questions are asked of the patient to capture appropriate patient intake
- Questions follow what doctors would ask



Data is Organized into the Visit Note

- Data is mapped to relevant position in the EHR visit note
- Data is saved in EHR database
- Data is accepted by the provider

IMH Points of Integration



Patient Portal

Patients can complete IMH through the NextGen® Patient Portal Message.



Telehealth

Questionnaires are embedded into the Telehealth workflow and run through the NextGen Virtual Visits branding



Kiosk and Tablet

IMH interviews run through the IMH cloud



Global Access


A single license enables practices to engage IMH questionnaires across the breadth of NextGen's portfolio of products

Most Common Deployment: Appointment Reminder Process


Sally,
Please review the details below for your upcoming appointment.

Confirm Appointment

Cancel




Saturday, September 9, 2017 at 2:20PM




Dr. Smith


NextGen Health



18111 Von Karman Ave. Suite 800 Irvine, CA 92612







Call us at [949-255-2600](tel:949-255-2600)



Please bring your ID, insurance card, and co-pay. Save yourself time in the office by completing your questionnaire at <https://www.imhinterview.com/site/nextgendemo>

Connect with us:



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Jacqueline, you have an appt on Sat 9/9, please check in @ 2:16PM. Text Y to confirm or X to cancel. (NextGen Health, [949-255-2600](tel:949-255-2600))

2:20 PM

2:20 PM

Y

Pls bring your ID, insurance card & copay. Save yourself time in the office by completing our questionnaire at <https://www.imhinterview.com/site/nextgendemo>

NextGen Touch Points

Best Utilization of IMH

- History of present illness (HPI Templates)
- Review of systems (ROS Templates)
- Medical, surgical & family history (History Grids)
- Allergies (Allergy module)
- Risk and outcome assessments (Screening Summary)

HPI Questions Loaded into Templates

Questionnaire Examples

How many days have you had abnormal vaginal bleeding?

Days

14

Submit Answer

Skip Question

Previous Question

Do you currently have any of the following?

Back pain ☐ Yes ☒ No

Bloating ☒ Yes ☐ No

Bruising ☒ Yes ☐ No

Constipation ☐ Yes ☒ No

Cramps ☒ Yes ☐ No

Submit Answer

Skip Question

Previous Question

EHR Encounter

GYN Bleeding - HPI

Information on this HPI that has been pre-populated from another HPI must be changed on the original HPI to prevent conflicting documentation.

Concern: **abnormal bleeding**

Onset: 14 day(s) ago

Duration: current bleeding for

Severity: 7

Location: ☐ Uterine ☐ Vaginal

Status: ☐ Chronic ☐ Improved ☐ New onset ☐ No change ☐ Worse ☐ Gradually worse ☐ Resolved

Frequency: ☐ Intermittent ☐ Irregular ☒ Menorrhagia ☐ Metrorrhagia ☐ Oligomenorrhea ☐ Polymenorrhea

Quality: ☐ Clotting ☐ Serous ☐ Spotting ☐ Staining ☐ Watery

Context: ☒ Pre-menopausal ☐ Peri-menopausal ☐ Post-menopausal ☐ Pregnancy

Aggravated by: ☐ Nothing ☐ Bowel movements ☒ Exercise ☒ Exertion

Relieved by: ☐ Nothing ☐ Analgesics ☒ Cold ☐ Dietary modification

Associated symptoms/pertinent negatives:

No associated symptoms: ☐ No ☒ Yes

No pertinent negatives: ☐ No ☒ Yes

All others negative: ☐ No ☒ Yes

Other associated symptoms:

Other pertinent negatives:

Comments: ☐ Tamoxifen ☐ HRT ☐ Alternative therapy ☐ Anticoagulant ☐ Hormonal contraception

Save & Close Cancel

Past Medical / Surgical Loaded into Histories

Questionnaire

Have you had any of the following surgeries or procedures? Check all that apply.

- ☐ Hysterectomy
- ☐ Mastectomy
- ☐ Bilateral oophorectomy
- ☐ Bilateral tubal ligation
- ☐ Breast enlargement (augmentation)
- ☒ Breast reduction
- ☐ Myomectomy
- ☒ D&C
- ☐ Pelvic sling

Submit Answer

Skip Question

Previous Question

Have you had any of the following surgeries or procedures? Check all that apply.

- ☐ Hip replacement
- ☐ Knee replacement
- ☐ Arthroscopy - ankle
- ☐ Arthroscopy - elbow
- ☐ Arthroscopy - hip
- ☐ Arthroscopy - knee
- ☒ Arthroscopy - shoulder
- ☐ Arthroscopy - wrist
- ☐ Back surgery

Submit Answer

Skip Question

Previous Question

Histories

Specialty ▼ Gynecology Visit Type ▼ Preventive Medicine-GYN

Care Team Contagion Risk

TOB HTN DM CAD

Intake Histories SOAP Finalize Checkout

Demographics Order Management Document Library Chart Abstraction

Care Guidelines Global Days History Review

Panel Control: Toggle Cycle

Problem List 0

Medical/Surgical/Interim

☐ No relevant past medical/surgical history ☐ Medical History ☐ Surgical History ☐ Interim History ☒ Show All History Review

Disease/Disorder	Side	Onset Date	Management	Side	Date	Encounter Type	Outcome
Depression							
Clotting disorder							
Bruising/bleeding disorder							
			D&C				
			Breast reduction				
			Arthroscopy-Shoulder				

Interim History Add Edit Remove

Diagnostic Studies

Family

Social

Intake Note

Family History Loaded into Family History Grid

Questionnaire

Does anyone in your biological family have or did they have any of the following? Check all that apply.

- ☐ Breast cancer
- ☒ Cervical cancer
- ☒ Uterine cancer
- ☐ Colon cancer
- ☐ Ovarian cancer

Submit Answer

Skip Question

Previous Question

Does anyone in your biological family have or did they have any of the following? Check all that apply.

- ☐ Alcoholism
- ☒ Asthma
- ☐ Autoimmune disorder
- ☒ Depression
- ☐ Chronic kidney disease
- ☐ Seizure disorder
- ☐ Thyroid disease

Submit Answer

Skip Question

Previous Question

Codified Family History

Specialty ▼ Gynecology Visit Type ▼ Preventive Medicine-GYN

Intake Histories SOAP Finalize Checkout

Demographics Order Management Document Library Chart Abstraction

Care Guidelines Global Days History Review

Panel Control: Toggle Cycle

Problem List 0

Medical/Surgical/Interim

Diagnostic Studies

Family

☐ No relevant family history ☐ Adopted - no family history known

Relationship	Family Member	Deceased	Age at Death	Condition	Onset Age	Cause of Death	Comments
				Family history of Cancer, cervical	N		
				Family history of Cancer, uterine	N		
				Family history of Asthma	N		
				Family history of Depression	N		

Add Edit Remove

Social

Intake Note

Social History Loaded into Histories

Questionnaire

Do you smoke tobacco?

- ☒ Yes
- ☐ No, I've never smoked
- ☐ No, but I used to smoke
- ☐ Unknown if ever smoked

Submit Answer Skip Question Previous Question

Which option best describes your current smoking status?

- ☐ Current every day smoker
- ☐ Current some day smoker
- ☐ Heavy smoker
- ☒ Light smoker
- ☐ Smoker, current status unknown

Submit Answer Skip Question Previous Question

Codified Social History

Problem List 0

Medical/Surgical/Interim

Diagnostic Studies

Family

Social

Last documented All History Review

Substances	Encounter Date	Tobacco Type	Smoking Status	Usage Per Day	Pack Years	Date Quit	Vaping Status
Tobacco/Vaping Use	10/22/2019	Cigarette	Light tobacco smoker	2 Cigarettes	1.00		
Alcohol/Caffeine							
Statuses							
Lifestyle							
Occupation							
Comment							
Diet History							
Environmental							

Social Determinants of Health Confidential History

Add/Edit

Intake Note

Review of Systems Loaded into Encounter

Questionnaire

Do you currently have any of these symptoms?

- Fever ☐ Yes ☒ No
- Chills ☐ Yes ☒ No
- Night sweats ☐ Yes ☒ No
- Fatigue ☐ Yes ☒ No
- Feeling poorly ☒ Yes ☐ No
- Unexplained weight change ☐ Yes ☒ No
- Recent weight gain ☒ Yes ☐ No
- Recent weight loss ☐ Yes ☒ No
- Other general problem ☒ Yes ☐ No

Submit Answer

Skip Question

Previous Question

Structured Review of Systems

ROS-Female

Information pre-populated from a popup such as an HPI must be changed on that popup to prevent conflicting documentation.

ROS Defaults:

System	Neg	Pos	All neg
Constitutional	<input checked="" type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Chills	<input checked="" type="radio"/>	<input type="radio"/>	
Fatigue	<input checked="" type="radio"/>	<input type="radio"/>	
Fever	<input checked="" type="radio"/>	<input type="radio"/>	
Malaise	<input checked="" type="radio"/>	<input type="radio"/>	
Night sweats	<input checked="" type="radio"/>	<input type="radio"/>	
Weight gain	<input checked="" type="radio"/>	<input type="radio"/>	
Weight loss	<input checked="" type="radio"/>	<input type="radio"/>	
Other:	<input checked="" type="radio"/>	<input type="radio"/>	
<input type="text"/>			
HEENT	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Ear drainage	<input type="radio"/>	<input type="radio"/>	
Ear pain	<input type="radio"/>	<input type="radio"/>	
Eye discharge	<input type="radio"/>	<input type="radio"/>	
Eye pain	<input type="radio"/>	<input type="radio"/>	
Hearing loss	<input type="radio"/>	<input type="radio"/>	
Nasal drainage	<input type="radio"/>	<input type="radio"/>	
Sinus pressure	<input type="radio"/>	<input type="radio"/>	
Sore throat	<input type="radio"/>	<input type="radio"/>	
Visual changes	<input type="radio"/>	<input type="radio"/>	
Other:	<input type="radio"/>	<input type="radio"/>	
<input type="text"/>			
Respiratory	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Chronic cough	<input type="radio"/>	<input type="radio"/>	
Cough	<input type="radio"/>	<input type="radio"/>	
Known TB exposure	<input type="radio"/>	<input type="radio"/>	
Shortness of breath	<input type="radio"/>	<input type="radio"/>	
Wheezing	<input type="radio"/>	<input type="radio"/>	
Other:	<input type="radio"/>	<input type="radio"/>	
<input type="text"/>			
Cardiovascular	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Chest pain	<input type="radio"/>	<input type="radio"/>	
Claudication	<input type="radio"/>	<input type="radio"/>	
Edema	<input type="radio"/>	<input type="radio"/>	
Palpitations	<input type="radio"/>	<input type="radio"/>	
Other:	<input type="radio"/>	<input type="radio"/>	
<input type="text"/>			
Gastrointestinal	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Abdominal pain	<input type="radio"/>	<input type="radio"/>	
Blood in stools	<input type="radio"/>	<input type="radio"/>	
Change in stools	<input type="radio"/>	<input type="radio"/>	
Constipation	<input type="radio"/>	<input type="radio"/>	
Diarrhea	<input type="radio"/>	<input type="radio"/>	
Heartburn	<input type="radio"/>	<input type="radio"/>	
Loss of appetite	<input type="radio"/>	<input type="radio"/>	
Nausea	<input type="radio"/>	<input type="radio"/>	
Vomiting	<input type="radio"/>	<input type="radio"/>	
Other:	<input type="radio"/>	<input type="radio"/>	
<input type="text"/>			
Genitourinary	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Dysuria	<input type="radio"/>	<input type="radio"/>	
Hematuria	<input type="radio"/>	<input type="radio"/>	
Polyuria (Genitourinary)	<input type="radio"/>	<input type="radio"/>	
Urinary frequency	<input type="radio"/>	<input type="radio"/>	
Urinary incontinence	<input type="radio"/>	<input type="radio"/>	
Urinary retention	<input type="radio"/>	<input type="radio"/>	
Other:	<input type="radio"/>	<input type="radio"/>	
<input type="text"/>			
Reproductive	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Abnormal Pap	<input type="radio"/>	<input type="radio"/>	
Dysmenorrhea	<input type="radio"/>	<input type="radio"/>	
Dyspareunia	<input type="radio"/>	<input type="radio"/>	
Hot flashes	<input type="radio"/>	<input type="radio"/>	
Irregular menses	<input type="radio"/>	<input type="radio"/>	
Vaginal discharge	<input type="radio"/>	<input type="radio"/>	
Other:	<input type="radio"/>	<input type="radio"/>	
<input type="text"/>			
Integumentary	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Breast discharge	<input type="radio"/>	<input type="radio"/>	
Breast lump	<input type="radio"/>	<input type="radio"/>	
Brittle hair	<input type="radio"/>	<input type="radio"/>	
Brittle nails	<input type="radio"/>	<input type="radio"/>	
Hair loss	<input type="radio"/>	<input type="radio"/>	
Hirsutism	<input type="radio"/>	<input type="radio"/>	
Hives	<input type="radio"/>	<input type="radio"/>	
Pruritus	<input type="radio"/>	<input type="radio"/>	
Mole changes	<input type="radio"/>	<input type="radio"/>	
Rash	<input type="radio"/>	<input type="radio"/>	
Skin lesion	<input type="radio"/>	<input type="radio"/>	
Other:	<input type="radio"/>	<input type="radio"/>	
<input type="text"/>			
Neurological	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Dizziness	<input type="radio"/>	<input type="radio"/>	
Extremity numbness	<input type="radio"/>	<input type="radio"/>	
Extremity weakness	<input type="radio"/>	<input type="radio"/>	
Gait disturbance	<input type="radio"/>	<input type="radio"/>	
Headache	<input type="radio"/>	<input type="radio"/>	
Memory impairment	<input type="radio"/>	<input type="radio"/>	
Seizures	<input type="radio"/>	<input type="radio"/>	
Tremors	<input type="radio"/>	<input type="radio"/>	
Other:	<input type="radio"/>	<input type="radio"/>	
<input type="text"/>			
Psychiatric	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Anxiety	<input type="radio"/>	<input type="radio"/>	
Depression	<input type="radio"/>	<input type="radio"/>	
Insomnia	<input type="radio"/>	<input type="radio"/>	
Other:	<input type="radio"/>	<input type="radio"/>	
<input type="text"/>			
Metabolic / Endocrine	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Cold intolerance	<input type="radio"/>	<input type="radio"/>	
Heat intolerance	<input type="radio"/>	<input type="radio"/>	
Polydipsia	<input type="radio"/>	<input type="radio"/>	
Polyphagia	<input type="radio"/>	<input type="radio"/>	
Other:	<input type="radio"/>	<input type="radio"/>	
<input type="text"/>			
Musculoskeletal	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Back pain	<input type="radio"/>	<input type="radio"/>	
Joint pain	<input type="radio"/>	<input type="radio"/>	
Joint swelling	<input type="radio"/>	<input type="radio"/>	
Muscle weakness	<input type="radio"/>	<input type="radio"/>	
Neck pain	<input type="radio"/>	<input type="radio"/>	
Other:	<input type="radio"/>	<input type="radio"/>	
<input type="text"/>			
Hematologic / Lymphatic	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Easy bleeding	<input type="radio"/>	<input type="radio"/>	
Easy bruising	<input type="radio"/>	<input type="radio"/>	
Lymphadenopathy	<input type="radio"/>	<input type="radio"/>	
Other:	<input type="radio"/>	<input type="radio"/>	
<input type="text"/>			
Immunologic	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Contact allergy	<input type="radio"/>	<input type="radio"/>	
Environmental allergies	<input type="radio"/>	<input type="radio"/>	
Food allergies	<input type="radio"/>	<input type="radio"/>	
Seasonal allergies	<input type="radio"/>	<input type="radio"/>	
Other:	<input type="radio"/>	<input type="radio"/>	
<input type="text"/>			

☐ All others negative

Save & Close Cancel

Self Assessments and Outcome Measurements

Interactive Screening Tools

Behavioral Health Assessments

- ❖ AUDIT-C Questionnaire
- ❖ AUDIT Screening Instrument
- ❖ Drug Abuse Screening Tool (DAST)
- ❖ Opioid Risk Tool (ORT)
- ❖ Patient Health Questionnaire (PHQ-2)
- ❖ Patient Health Questionnaire (PHQ-9)
- ❖ Adolescent Health Questionnaire (PHQ-A)
- ❖ Suicidal/Homicidal Risk
- ❖ Generalized Anxiety Disorder - 7 (GAD-7)
- ❖ Eating Attitudes Test (EAT-26)
- ❖ Mood Disorder Questionnaire (MDQ)



Health Status Assessments

- ❖ ACC/AHA Risk Calculator
- ❖ Cognitive Assessment
- ❖ Mini-Cog
- ❖ Functional Limitations
- ❖ Epworth Sleep Scale
- ❖ Food Insecurity Screen
- ❖ Breast Cancer Risk Factors

Self Assessments

- ❖ Edinburgh Postnatal Depression Scale

Website Screening Tools

- Bipolar Spectrum Diagnostic Scale (BSDS)
- GAIL Model for Breast Cancer
- Statin Decision Aid
- FRAX tool for Osteoporosis

Screening instrument: Score: Severity/interpretation: Comments: Major Depressive Disorder (MDD) pre-treatment

☐ See scanned document [Exclusions](#)

Screening Tool

[Health](#)

Encounter Date	Documented Date	Instrument	Score	Severity/Interpretation	Completed By	Comments
04/23/2020	04/23/2020	Exposure to violence	1	Exposed to interpersonal violence	IMH Admin	
04/23/2020	04/23/2020	AUDIT-C Screening Instrument	5	Active alcohol use disorders	IMH Admin	
04/23/2020	04/23/2020	Food Insecurity Screen		Positive	IMH Admin	
04/23/2020	04/23/2020	Patient Health Questionnaire (PHQ-2)	3	3 - Further testing indicated	IMH Admin	
04/11/2020	04/11/2020	Patient Health Questionnaire (PHQ-2)	3	3 - Further testing indicated	IMH Admin	



Telehealth Workflow

Added within NextGen Virtual Visits Intake Process

Questions

Terms of Use

What is your height and weight?

Height

Feet

5

Inches

9

Weight

Pounds

190

Once your answer is submitted you cannot return to this question.

* Indicates this question is required by your provider.

Continue

Vital Signs and ROS Loaded into Encounter

05/22/2020 01:08 PM : "**SOAP"

05/29/2020 01:45 PM : "**SOAP" x

Review of Systems

ROS Defaults:

One Page ROS - Female
Constitutional
HEENT
Respiratory
Cardiovascular
Vascular
Gastrointestinal
Genitourinary
Reproductive
Metabolic | Endocrine
Neuro | Psychiatric
Dermatologic
Musculoskeletal
Hematologic
Immunologic

System	Neg/Pos	Findings
Constitutional	Negative	Fatigue, Fever, Malaise and Night sweats.
Endocrine	Positive	Polydipsia.
ENMT	Negative	Sinus pressure and Sore throat.
Eyes	Negative	Eye discharge.
GU	Negative	Dysuria, Hematuria and Urinary frequency.
Integumentary	Negative	Brittle hair, Brittle nails and Hair loss.
Neuro	Positive	Headache.
Neuro	Negative	Dizziness, Extremity weakness and Numbness in extremity.
Reproductive	Negative	Hot flashes.
Respiratory	Negative	Chronic cough and Cough.

Vital Signs Vital Signs Outside Normal Range BMI Outside Normal Range

Time	Ht (in)	Wt (lb)	BMI	BP	Position	Side	Site	Cuff Size	Pulse	Respiration	Temp (F)	Pulse Ox Rest	Pain Level	Comment
1:49 PM	69.00	190.00	28.06	120/90					60		98.0		8/10	

Add

Edit

Remove

Technical Requirements and Prerequisites

Rosetta Agent (Installed by NextGen for Full IMH)

Import/Export of Appointments, Check Messages, and Demographic changes

PTMS Service Controller (Full or Telehealth)

.NET 4.6.1 or higher widget that connects to an API endpoint to securely transmit and consume data

<https://imhmessage.com/v1/> must be accessible through firewall

Mirth 3.4 or Higher (Full or Telehealth)

Usually Separate Instance installed as 2nd named service

Mirth channels that consume JSON files and release into the EHR

A separate SQL account is recommended with Select/Insert/Update rights

NextGen User Account for CreatedBy/ModifiedBy columns

Connection string will need to be configured

Write permission to the folder where NextGen stores images is needed