

# 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

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:  Severity:  Location:  Uterine  Vaginal

Duration:   Pad(s)  Clot(s)

Status:  Chronic  Worse  Intermittent  Quality:  Clotting  Context:  Pre-menopausal  
 Improved  Gradually worse  Irregular  Serous  Peri-menopausal  
 New onset  Resolved  Menorrhagia  Spotting  Post-menopausal  
 No change  Metrorrhagia  Staining  Pregnancy  
 Oligomenorrhea  Watery  
 Polymenorrhea

Aggravated by:  Nothing  Bowel movements  Intercourse  Analgesics  Exercise  Oral contraceptives  
 Exertion  Urination  Cold  Heat  Rest  
 Dietary modification  Hormone therapy

Relieved by:  Nothing  Exercise  Heat  Rest  
 Dietary modification  Hormone therapy

Other:

Associated symptoms/pertinent negatives:

<input type="checkbox"/> No associated symptoms	<input type="checkbox"/> No pertinent negatives	<input type="checkbox"/> All others negative
<input type="radio"/> Abdominal pain	<input type="radio"/> Cramps	<input type="radio"/> Headache
<input checked="" type="radio"/> Back pain	<input type="radio"/> Diarrhea	<input type="radio"/> Nausea
<input type="radio"/> Bloating	<input type="radio"/> Dizziness	<input type="radio"/> Pallor
<input type="radio"/> Bruising	<input type="radio"/> Dyspnea	<input type="radio"/> Pelvic pain
<input type="radio"/> Constipation	<input type="radio"/> Fatigue	<input type="radio"/> Swelling

Comments:  Tamoxifen  Anticoagulant  HRT  Hormonal contraception  Alternative therapy

Other associated symptoms:

Other pertinent negatives:

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

Encounter Date:Time

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

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

ROS Defaults:

**Constitutional**  All neg

**Neg Pos**

- Chills
- Fatigue
- Fever
- Malaise
- Night sweats
- Weight gain
- Weight loss
- Other:

**HEENT**  All neg

**Neg Pos**

- Ear drainage
- Ear pain
- Eye discharge
- Eye pain
- Hearing loss
- Nasal drainage
- Sinus pressure
- Sore throat
- Visual changes
- Other:

**Respiratory**  All neg

**Neg Pos**

- Chronic cough
- Cough
- Known TB exposure
- Shortness of breath
- Wheezing
- Other:

**Cardiovascular**  All neg

**Neg Pos**

- Chest pain
- Claudication
- Edema
- Palpitations
- Other:

**Gastrointestinal**  All neg

**Neg Pos**

- Abdominal pain
- Blood in stools
- Change in stools
- Constipation
- Diarrhea
- Heartburn
- Loss of appetite
- Nausea
- Vomiting
- Other:

**Genitourinary**  All neg

**Neg Pos**

- Dysuria
- Hematuria
- Polyuria (Genitourinary)
- Urinary frequency
- Urinary incontinence
- Urinary retention
- Other:

**Reproductive**  All neg

**Neg Pos**

- Abnormal Pap
- Dysmenorrhea
- Dyspareunia
- Hot flashes
- Irregular menses
- Vaginal discharge
- Other:

**Integumentary**  All neg

**Neg Pos**

- Breast discharge
- Breast lump
- Brittle hair
- Hair loss
- Hirsutism
- Hives
- Pruritus
- Mole changes
- Rash
- Skin lesion
- Other:

**Neurological**  All neg

**Neg Pos**

- Dizziness
- Extremity numbness
- Extremity weakness
- Gait disturbance
- Headache
- Memory impairment
- Seizures
- Tremors
- Other:

**Musculoskeletal**  All neg

**Neg Pos**

- Back pain
- Joint pain
- Joint swelling
- Muscle weakness
- Neck pain
- Other:

**Hematologic / Lymphatic**  All neg

**Neg Pos**

- Easy bleeding
- Easy bruising
- Lymphadenopathy
- Other:

**Immunologic**  All neg

**Neg Pos**

- Contact allergy
- Environmental allergies
- Food allergies
- Seasonal allergies
- Other:

**Psychiatric**  All neg

**Neg Pos**

- Anxiety
- Depression
- Insomnia
- Other:

**Metabolic / Endocrine**  All neg

**Neg Pos**

- Cold intolerance
- Heat intolerance
- Polydipsia
- Polyphagia
- Other:

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 ❖ Help

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:

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.

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

### Vital Signs

⚠ Vital Signs Outside Normal Range ⚠ BMI Outside Normal Range

[Historical information entered this encounter](#)
[Health Promotion Plan | History | Graph](#)

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 2<sup>nd</sup> 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