

AI-powered Healthcare Workflow Transformation



Outpatient Workflow



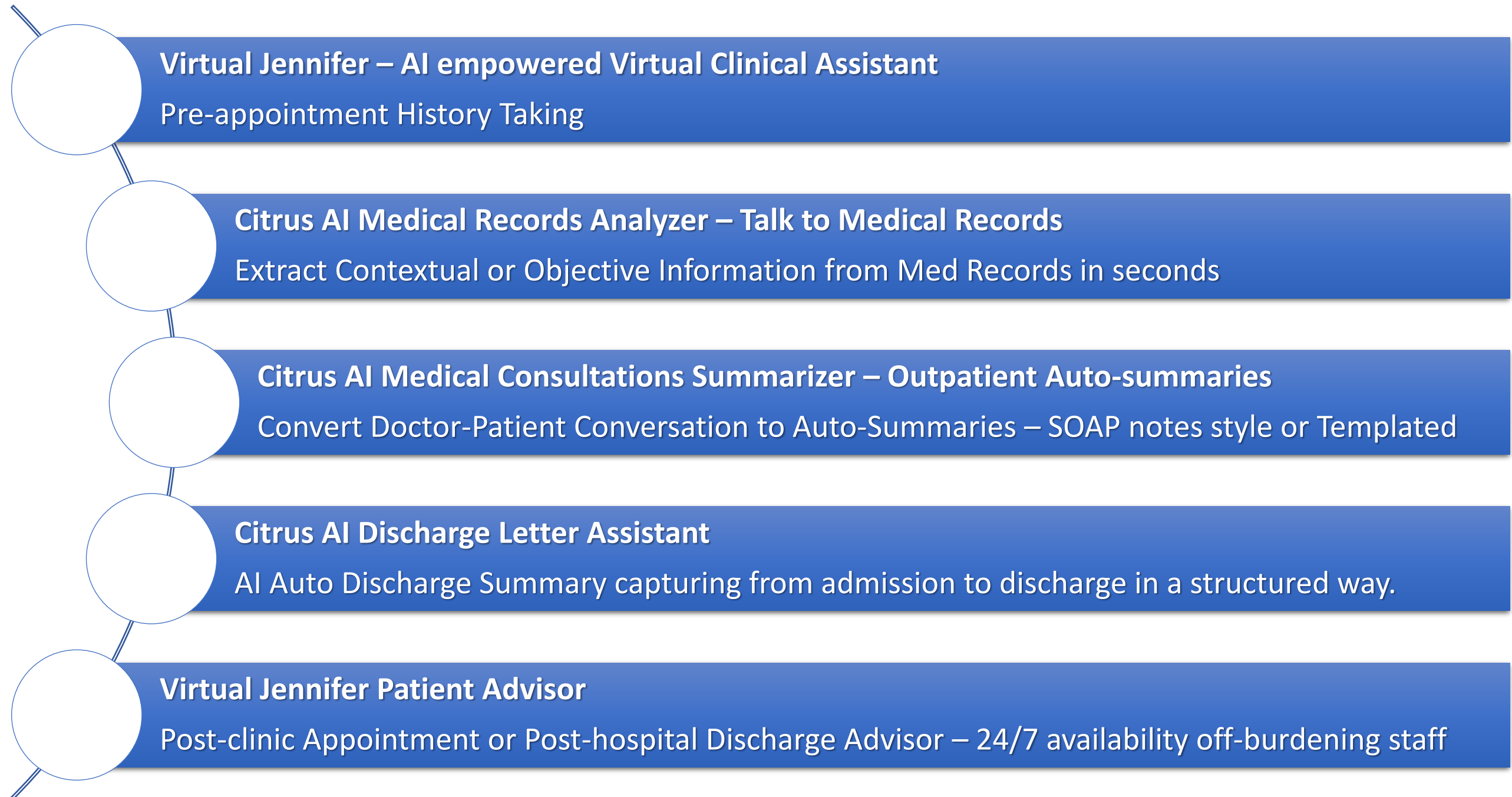
In-patient Workflow

Dr Suhail Chughtai FRCS

Orthopaedic Surgeon – AI & Telehealth Strategist, London (UK)

Co-founder & Medical Innovation Officer VMLP AI Healthcare

AI empowered Healthcare Workflow





AI-powered Outpatient Workflow

Patient at home before clinic appointment

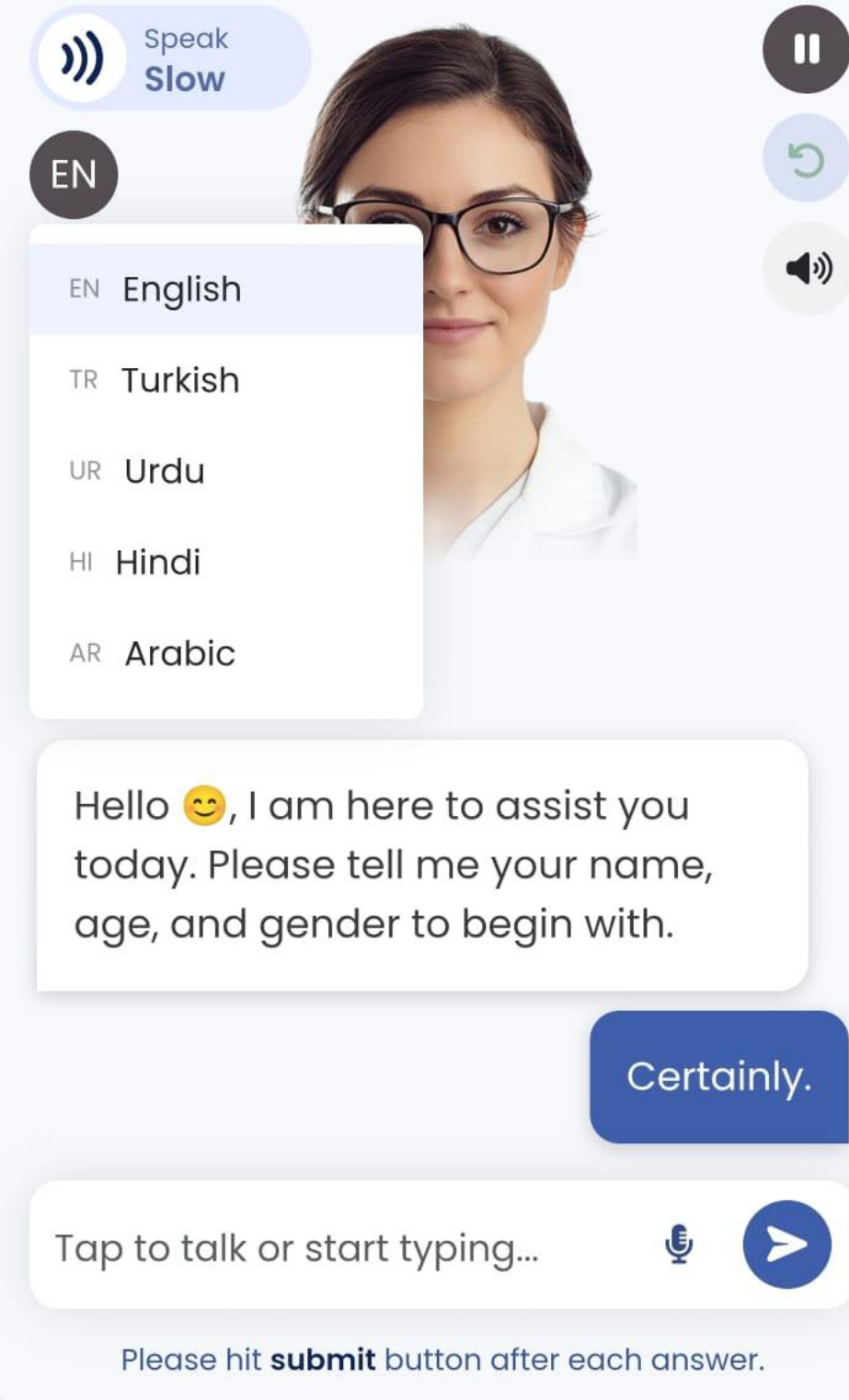
Patient in Clinic Waiting Area

Patient with Doctor in consultation room

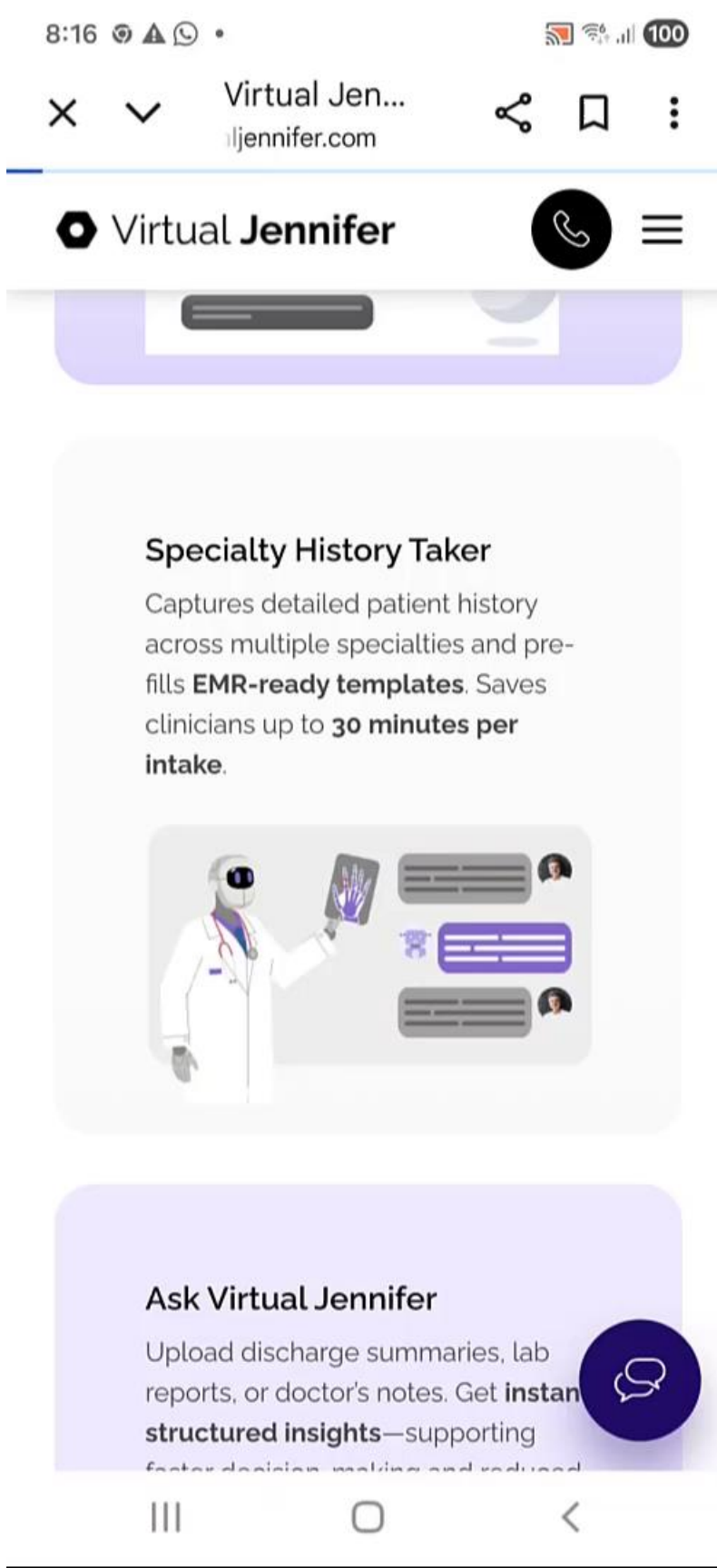
AI-powered OPD Workflow Transformation

Virtual Jennifer taking patient's history

- Pre-consultation Patient History populates EMR
- Clinician's time for Critical Questions
- Clinician better prepared to ask relevant questions
- Doctor-Patient gradient not in the way of History Taking
- Increased Patient Involvement, reducing rate of "Did not attend"



The screenshot displays the Virtual Jennifer interface. At the top, it identifies the user as 'Virtual Jennifer' and 'Practice manager for Dr. Chughtai'. A 'Tools' button is visible in the top right corner. The main area features a chat window with a greeting: 'Hello 😊, I am here to assist you today. Please tell me your name, age, and gender to begin with.' Below the chat, there is a language selection menu with options: EN English, TR Turkish, UR Urdu, HI Hindi, and AR Arabic. A blue button labeled 'Certainly.' is positioned to the right of the chat. At the bottom, there is a text input field with the placeholder 'Tap to talk or start typing...' and a microphone icon. A blue arrow button is also present. A footer note reads: 'Please hit **submit** button after each answer.'



Conversation with Virtual Jennifer on 12 October 2025 at 8:30 PM Inbox x

◆ Summarise this email

◆ Add to Calendar

Virtual Jennifer <rajlrpy.test@gmail.com>

to me ▼

Dear **Shakeel Khan**,


Please download the attached PDF file of your conversation with **Virtual Assistant** on 12 October 2025 at 8:30 PM.

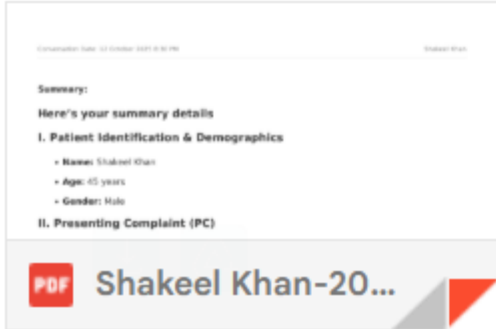
Thank you for your cooperation.

Practice Manager

M L Professionals

London, England

One attachment • Scanned by Gmail ⓘ  Add to Drive



Summary:

Here's your summary details

I. Patient Identification & Demographics

- **Name:** Shakeel Khan
- **Age:** 45 years
- **Gender:** Male

II. Presenting Complaint (PC)

- **Right shoulder pain** for 2 weeks.

III. Associated Symptoms

- Very occasional clicking.
- Pain can radiate to the middle of the right arm when severe.
- **Denies:** numbness, tingling, weakness or reduced grip, swelling, redness, neck pain.

IV. History of Presenting Complaint

- **Onset:** Sudden, after a badminton game.
- **Severity:** Peak pain 9/10; baseline mild constant pain with fluctuations.
- **Aggravating factors:** Reaching overhead/up and out; reaching behind the back (hand to lower back); lifting/pulling heavy objects; carrying a briefcase; driving in heavy traffic.
- **Relieving factors:** Resting the arm; avoiding lying on the right shoulder; temporary relief with paracetamol and heat (hot water bottle) but pain returns as effects wear off.
- **Impact on function:** Difficulty reaching top shelves; pain with carrying items to work; discomfort when driving.
- **Course:** Slight improvement compared with onset over 2 weeks.
- **Previous episodes:** None reported.

V. Past Medical History (PMH)

- No ongoing medical conditions reported.
- Appendectomy approximately 20 years ago.

VI. Drug History (DH)

- No regular medications.
- Paracetamol taken up to 3 times/day for pain with temporary benefit.

VII. Allergies

- **Seasonal pollen allergy** (springtime). No drug allergies reported.

VIII. Family History (FH)

- Paternal relatives with high blood pressure.
- Parents without noted chronic conditions.

IX. Social History & Risk Factors

- **Occupation:** Office-based software writer.
- **Smoking:** Non-smoker.
- **Alcohol:** Does not consume alcohol.
- **Activity:** Gym twice per week (self-controlled exercises). Plays badminton (recent game preceded onset).

X. Co-morbidities & Systemic Review

- Denies headaches, dizziness, chest pain, breathlessness, abdominal pain, bowel/urinary changes, skin rashes, low mood/anxiety.

XI. Red Flags

- **Negative:** No fever, unexplained weight loss, night sweats, severe worsening night pain, inability to move the shoulder, prior dislocations, or significant trauma beyond a badminton game.



AI-powered Outpatient Workflow

Patient at home before
clinic appointment

Patient in Clinic Waiting
Area

Patient with Doctor in
consultation room

AI-powered Medical Records Analysis

Talk to Medical Records

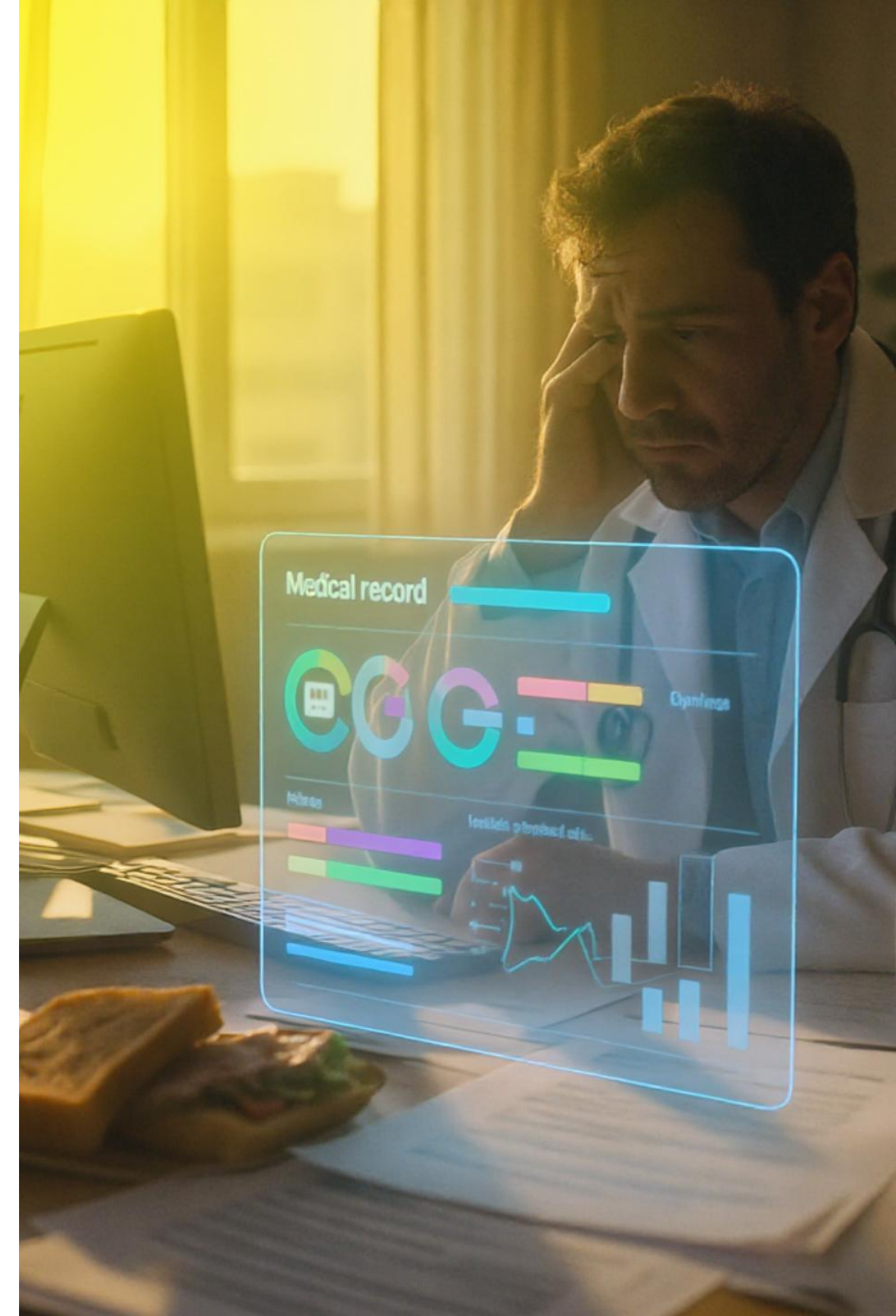
- **High-yield pre-briefs**
- **Cross-specialty stitching**
- **Cognitive burden reduced**



AI-powered Medical Records Analysis

Talk to Medical Records

- **Conversation with Medical Records**
 - Objective
 - Subjective
- **Reduced LLM Hallucinations**
 - Content restriction
 - Domain restriction



Welcome to Citrus - AI Clinic Assistant (Your intelligent healthcare assistant powered by AI)

Get Started

Select one of the options below to begin analysing your health records, examine previous analyses, transcribe medical audio, or manage your data.

AI Medical Records Analyser

Upload and analyze your health records to get AI-powered insights.

148026 pages left

AI Consultation Transcriber

Convert medical audio recordings into accurate text transcripts.

4947 minutes left

Auto Discharge Summary

Summary of patient's hospitalization, treatment, progress, and follow-up instructions.

9810 pages left

Auto Lab Reports Summary

Document containing detailed results of patient's medical lab tests.

Coming Soon

Auto Referral Letter

Creates referral letters for patients to consult with specialists.

Coming Soon

Read ECGs

Interprets ECG results to identify cardiac abnormalities.

Coming Soon

Analyse X-Ray





AI-powered Outpatient Workflow

Patient at home before
clinic appointment

Patient in Clinic Waiting
Area

Patient with Doctor in
consultation room

AI-powered Medical Transcription

AI Ambient Listening

Outpatient Visit Summary Time reduced

Lower Perceived Documentation & Cognitive Burden

Allows Clinician to focus on patient



AI-powered Medical Transcription

AI Ambient Listening

Multi-linguistic Support

Conversation to Templated Notes

Expunging irrelevant sentences

Accuracy of Summary Notes



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Upload and analyze your health records to get AI-powered insights.

147980 pages left

AI Consultation Transcriber

Convert medical audio recordings into accurate text transcripts.

4947 minutes left

Auto Discharge Summary

Summary of patient's hospitalization, treatment, progress, and follow-up instructions.

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Interprets ECG results to identify cardiac abnormalities.

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AI-powered In-patient Workflow

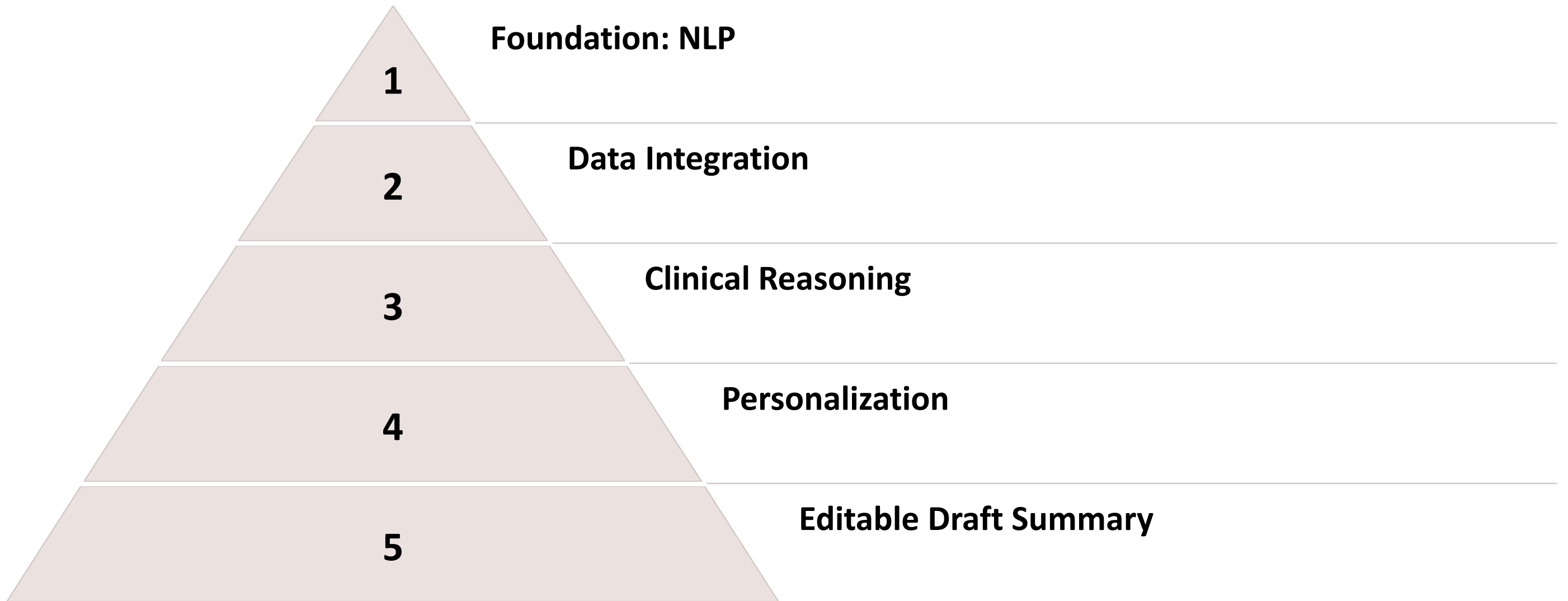
Patient Discharge Summaries

AI-powered
Auto Discharge
Summaries



Post-Discharge
Patient
Enquires

AI Principles for Effective Discharge Summaries





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Get Started

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AI Consultation Transcriber

Convert medical audio recordings into accurate text transcripts.

4947 minutes left

Auto Discharge Summary

Summary of patient's hospitalization, treatment, progress, and follow-up instructions.

9856 pages left

Auto Lab Reports Summary

Document containing detailed results of patient's medical lab tests.

Coming Soon

Auto Referral Letter

Creates referral letters for patients to consult with specialists.

Coming Soon

Read ECGs

Interprets ECG results to identify cardiac abnormalities.

Coming Soon

Analyse X-Ray



AI Auto Discharge Summary

Dr. Demo Gemniai
Orthopaedics/Trauma

Past AI Discharge Summaries 9856 pages left.

[+ Start new summary](#)

Upload date	Auto-deletion Date	Patient Name	Admission Date	Discharge Date	Completion Date	Page Count	Action
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No records to display

5 rows |< < 1-0 of 0 > >|



AI Auto Discharge Summary



Dr. Demo Gemniai
Orthopaedics/Trauma



Add Files



Specify Sensitive Info



Anonymization & Processing



Edit, Validate & Export



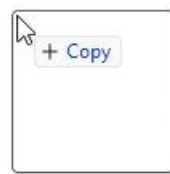
Upload Files for OCR



Drag and drop files here.

Click to browse files.

Supported formats: .pdf, .jpg, .png



Upload and Process



AI Auto Discharge Summary

Dr. Demo Gemniai
 Orthopaedics/Trauma

- Add Files
- Specify Sensitive Info
- Anonymization & Processing
- Edit, Validate & Export

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< Discharge Summary - Edit, Validate and Export

- Patient Details
- Export

DIAGNOSIS

Edit

Primary Diagnosis:

- Fracture of the Tibial Plateau, Right Knee, with ORIF.

Secondary Diagnoses / Co-Morbidities:

- Essential Hypertension.
- Hypothyroidism.

CLINICAL SUMMARY

Edit

The patient is Mrs. Shaista Zaib, aged 46 years. She was admitted on an emergency basis following a road traffic accident where she was struck by a car. The incident occurred on 22 March 2024 as she was crossing the road. She fell, landing on her right knee and hitting her face on the pavement. She was unable to weight bear on her right leg following the accident.



AI Auto Discharge Summary

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- Patient Details
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DETAILS OF INPATIENT TREATMENT Edit

During the in-patient stay, Mrs. Shaista Zaib received several treatments following a road traffic accident that resulted in a Schatzker type II lateral tibial plateau split depression fracture. She underwent an operative procedure for an Open Reduction and Internal Fixation (ORIF) with plating of her right proximal tibia on 27 March 2024, performed by Mr. M. Chomicki.

Analgesia was administered, with the patient being prescribed Paracetamol 500mg tablets and Codeine 30mg tablets for pain relief as required. These medications were prescribed from 26 March 2024 onwards.

VTE Prophylaxis was provided in the form of Dalteparin sodium 5,000 units solution for injection, administered subcutaneously once daily, starting from 27 March 2024.

A **Backslab Cast** was applied to the right knee above the knee level. Following this, X-Rays were performed, and a further CT scan of the right knee was requested.

The patient was advised to remain **Non-Weight Bearing** on her right side and was provided with a plaster cast, which was to continue for a total duration of 6 weeks.

Surgical Intervention: Mrs. Zaib underwent an Open Reduction Internal Fixation (ORIF) and Plating of her right proximal tibia. The operation was performed by Mr. M. Chomicki and proceeded without complication.

In-Patient Medications Administered:

- Paracetamol 500mg tablets
- Codeine 30mg tablets



AI Auto Discharge Summary

Dr. Demo Gemniai
 Orthopaedics/Trauma

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-
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INVESTIGATIONS DURING INPATIENT

X-Rays Right Knee: 22-03-2024

Performed following a road traffic accident involving a car and pedestrian, resulting in a right knee injury. The X-ray confirmed a Schatzker type II lateral tibial plateau split depression fracture. This imaging was crucial in determining the severity and nature of the fracture, guiding subsequent management.

X-Rays Right Knee: 27-03-2024

Following the application of an above-knee backslab cast, repeat X-rays were taken to reassess the fracture alignment. These images, reviewed alongside the initial CT scan findings, confirmed the Schatzker type II fracture and indicated satisfactory initial fixation. The purpose was to ensure the fracture remained reduced and stable within the immobilisation device before definitive surgical intervention.

CT Scan Right Knee: 27-03-2024

A CT scan was performed to provide detailed imaging of the right tibial plateau fracture. The findings specifically identified a Schatzker type II lateral tibial plateau split depression fracture, offering precise anatomical detail essential for surgical planning and the Open Reduction Internal Fixation (ORIF) procedure performed on the same day.

Blood Tests (Including Group & Save): 27-03-2024

Pre-operative blood investigations, including a Group and Save, were conducted prior to the surgical procedure. While specific results are not detailed here, these tests are standard for surgical patients to assess haemoglobin levels, clotting function, and blood compatibility for potential transfusion, ensuring patient safety during the operation.



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 Orthopaedics/Trauma

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 Healthcare

< Discharge Summary - Edit, Validate and Export

- Patient Details
-
- Export

MEDICATIONS HISTORY

Edit

MEDICATIONS ADMINISTERED DURING INPATIENT STAY

Paracetamol (1000 mg)

- Route: Oral
- Frequency: 4 Times / Day as Required
- Duration: Not Specified

Codeine (30 mg)

- Route: Oral
- Frequency: 4 Times / Day as Required
- Duration: Not Specified

Dalteparin sodium (5,000 units)

- Route: Subcutaneous
- Frequency: Once / Day
- Duration: Not Specified



AI Auto Discharge Summary

Dr. Demo Gemniai
 Orthopaedics/Trauma

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- Patient Details
-
- Export

MEDICATIONS BEING TAKEN PRIOR TO ADMISSION

Levothyroxine sodium (100 microgram)

- Route: Oral
- Frequency: Mornings
- Duration: Not Specified

Amlodipine (5 mg)

- Route: Oral
- Frequency: Once / Day
- Duration: Not Specified

MEDICATIONS PRESCRIBED ON DISCHARGE

Paracetamol (500 mg)

- Route: Oral
- Frequency: 4 Times / Day as Required
- Duration: Not Specified



AI Auto Discharge Summary

Dr. Demo Gemniai
 Orthopaedics/Trauma

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- Patient Details
-
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MEDICATIONS PRESCRIBED ON DISCHARGE

Paracetamol (500 mg)

- Route: Oral
- Frequency: 4 Times / Day as Required
- Duration: Not Specified

Codeine (30 mg)

- Route: Oral
- Frequency: 4 Times / Day as Required
- Duration: Not Specified

Dalteparin sodium (5,000 units)

- Route: Subcutaneous
- Frequency: Once / Day
- Duration: Not Specified

Cetraben cream (500 gram)



AI Auto Discharge Summary

Dr. Demo Gemniai
Orthopaedics/Trauma

- Add Files
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- Edit, Validate & Export

- Home
- Documents
- Microphone
- Checklist
- Chat
- Clipboard

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Discharge Summary - Edit, Validate and Export

- Patient Details
- Export

MEDICATIONS PRESCRIBED ON DISCHARGE

Paracetamol (500 mg)

- Route: Oral
- Frequency: 4 Times / Day as Required
- Duration: Not Specified

Codeine (30 mg)

- Route: Oral
- Frequency: 4 Times / Day as Required
- Duration: Not Specified

Dalteparin sodium (5,000 units)

- Route: Subcutaneous
- Frequency: Once / Day
- Duration: Not Specified

Cetraben cream (500 gram)



AI Auto Discharge Summary

Dr. Demo Gemniai
Orthopaedics/Trauma

- Add Files
- Specify Sensitive Info
- Anonymization & Processing
- Edit, Validate & Export



Discharge Summary - Edit, Validate and Export

- Patient Details
- Export

MEDICATIONS HISTORY

Save Cancel



- Duration: Not Specified

Dalteparin sodium (5,000 units)

- Route: Subcutaneous
- Frequency: Once / Day
- Duration: 14 Days

Cetraben cream (500 gram)

- Route: Not Specified
- Frequency: As Directed



AI Auto Discharge Summary

Section content updated successfully.



Dr. Demo Gemniai
Orthopaedics/Trauma



Add Files



Specify Sensitive Info



Anonymization & Processing



Edit, Validate & Export



Discharge Summary - Edit, Validate and Export

Patient Details



Export

MEDICATIONS HISTORY

Edit

MEDICATIONS ADMINISTERED DURING INPATIENT STAY

Paracetamol (1000 mg)

- Route: Oral
- Frequency: 4 Times / Day as Required
- Duration: Not Specified

Codeine (30 mg)

- Route: Oral
- Frequency: 4 Times / Day as Required
- Duration: Not Specified

Dalteparin Sodium (5,000 units)

- Route: Subcutaneous
- Frequency: Once / Day



AI Auto Discharge Summary

Dr. Demo Gemniai
Orthopaedics/Trauma

- Add Files
- Specify Sensitive Info
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- Home
- Documents
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Discharge Summary - Edit, Validate and Export

- Patient Details
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COMPLICATIONS DURING INPATIENT STAY (IF ANY)

Edit

Fracture Of The Tibial Plateau: Following a road traffic accident on 22 March 2024, Mrs Zaib sustained a Schatzker type II lateral tibial plateau split depression fracture. This necessitated an Open Reduction Internal Fixation (ORIF) with plating, performed on 27 March 2024. The operation proceeded without complication. Post-operatively, the patient was managed with analgesia (Paracetamol, Codeine), an anticoagulant (Dalteparin sodium), and received a plaster cast. She was advised to remain non-weight-bearing and was discharged on 30 March 2024 to continue her recovery at home with ongoing follow-up appointments.

Wound Healing And Follow-Up: During subsequent reviews, including on 16 April 2024 and 10 May 2024, the surgical wound was noted to have healed well with no signs of infection or breakdown. The initial plaster cast was removed, clips were taken out, and a gutter cast was applied. Radiographs confirmed satisfactory fracture alignment and fixation. The patient was advised to continue non-weight-bearing and Dalteparin injections until her next review.



AI Auto Discharge Summary

Dr. Demo Gemniai
 Orthopaedics/Trauma

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< Discharge Summary - Edit, Validate and Export

FOLLOW-UP ARRANGEMENTS

- **Clinic Appointments:** Follow-up appointments in Mr. Singh's fracture clinic are scheduled for 3 weeks from 17 Apr 2024, 6 weeks from 10 May 2024, and 8 weeks from 24 Jun 2024. Another review in Mr. Singh's clinic is scheduled for 19 Aug 2024, after which the patient is to be discharged from orthopedic care.
- **GP To Follow-Up:** Yes, the patient is being followed up by the GP, as indicated by the distribution of discharge summaries and clinic letters to Thistle Moor Medical Centre and Dr. Modha.
- **Community Services:** Physiotherapy referral is mentioned for 24 Jun 2024.
- **Pending Results:** A Lipid Profile test was requested on 05 Dec 2024. A TSH test was requested on 06 Sep 2024 and again on 28 Aug 2024.

FUNCTIONAL STATUS & CARE PLAN



AI Auto Discharge Summary

Dr. Demo Gemniai
 Orthopaedics/Trauma

- Add Files
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Patient Details
 Export

• Care Package In Place / Care Home Placement:

- Lives with a friend.
- Received physiotherapy as part of rehabilitation.
- Follow-up arranged with Mr. Singh's fracture clinic.
- Patient is coping well with post-operative protocols.

• Patient Tasks:

- Adhere to non-weight bearing restrictions and progress as advised.
- Continue with physiotherapy.
- Take prescribed medications as directed (Amlodipine, Codeine, Paracetamol, Dalteparin Sodium, Levothyroxine).
- Attend follow-up appointments.
- Monitor blood pressure at home and submit readings.
- Participate in hypertension self-management and lifestyle changes.
- Manage a cast for a total duration of 6 weeks.
- Continue with Dalteparin injections until advised otherwise.
- Mobilize ankle.
- Use a frame/crutches for mobility as needed.



AI Auto Discharge Summary

Dr. Demo Gemniai
Orthopaedics/Trauma

- Add Files
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Discharge Summary - Edit, Validate and Export

- Patient Details
- Export

- SMS Consent: Consented for communication by SMS text messaging.
- Email Consent: Consented for communication by email.
- Organ Donation: Not willing to be a donor.
- Identity Verification: Driving licence used for identity verification.
- Communication Preference: Preferred communication method updated to SMS text messaging; previously unknown.

SIGNED OFF BY

Edit

Full Name: **Dr Matthew Shepherd**
 Role/Grade: **FY2**
 Date & Time of Completion: **12 Oct 2025 07:14 pm**

ADMISSION DETAILS

Mode Of Admission: A&E
Date Of Admission: 23 Mar 2024
Date Of Discharge: 30 Mar 2024
Total Number Of Days: 7 Days
Ward / Unit: WARD B5 (ORTHOPAEDIC)
Consultant-in-Charge: Mr. M. Chomicki
Specialty: Trauma & Orthopaedics
Hospital Name: Peterborough City Hospital

DIAGNOSIS

Primary Diagnosis:

- Fracture of the Tibial Plateau, Right Knee, with ORIF.

Secondary Diagnoses / Co-Morbidities:

- Essential Hypertension.
- Hypothyroidism.

CLINICAL SUMMARY

The patient is Mrs. Shaista Zaib, aged 46 years. She was admitted on an emergency basis following a road traffic accident where she was struck by a car. The incident occurred on 22 March 2024 as she was crossing the road. She fell, landing on her right knee and hitting her face on the pavement. She was unable to weight bear on her right leg following the accident.

- Monitor blood pressure at home and submit readings.
- Participate in hypertension self-management and lifestyle changes.
- Manage a cast for a total duration of 6 weeks.
- Continue with Dalteparin injections until advised otherwise.
- Mobilize ankle.
- Use a frame/crutches for mobility as needed.
- Underwent removal of stapplers and clips.
- Applied a gutter cast and later an above-knee plaster of Paris.

ALERTS / SPECIAL INSTRUCTIONS

Allergies:

Patient: Mrs Shaista Zaib | Page 7 of 8 | Consultant: Mr. M. Chomicki

Peterborough City Hospital - Trauma and Orthopaedics | From: 23 Mar 2024 - To: 30 Mar 2024

- No drug allergies are recorded.

Safeguarding:

- No safeguarding concerns have been identified in the document.

Infection Risk:

- No specific infection risks (e.g., MRSA) are mentioned.

Patient Preferences/Instructions:

- Summary Care Record (SCR) Update: Patient preference for core items in SCR has been overridden to include additional items.
- SMS Consent: Consented for communication by SMS text messaging.
- Email Consent: Consented for communication by email.
- Organ Donation: Not willing to be a donor.
- Identity Verification: Driving licence used for identity verification.
- Communication Preference: Preferred communication method updated to SMS text



AI-powered In-patient Workflow

Post-Discharge Enquiries

AI-powered
Auto Discharge
Summaries



Post-Discharge
Patient
Enquires



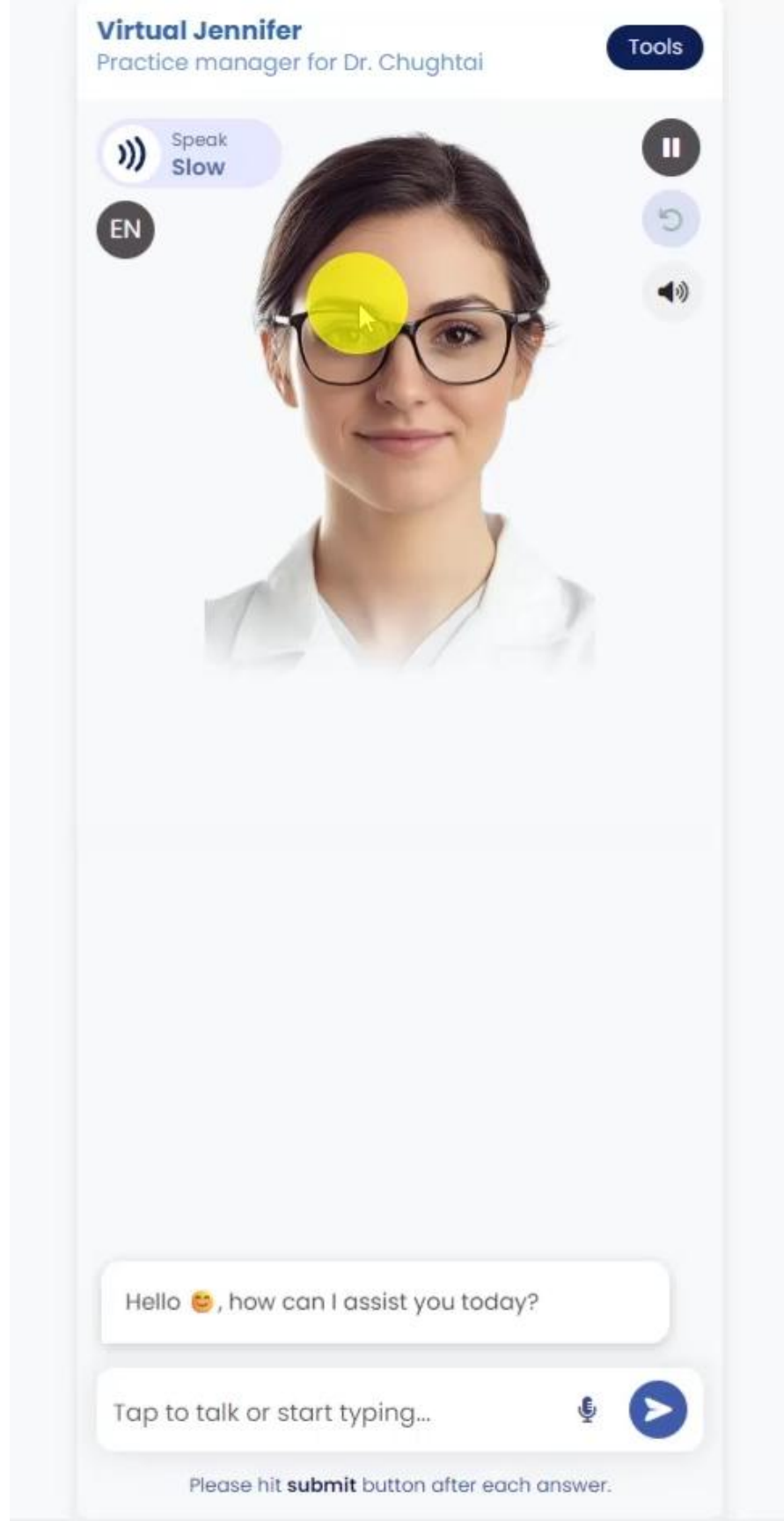
Post-Hospital Discharge Enquiries

Poor patient understanding of discharge instructions

Automated texting programs not attractive

Communication about Hospital Discharge

- *lower re-admissions*
- *higher adherence*
- *higher satisfaction*



Virtual Jennifer

Ask me, 24/7

VirtualJennifer.com