

Safe Vaccination Platform

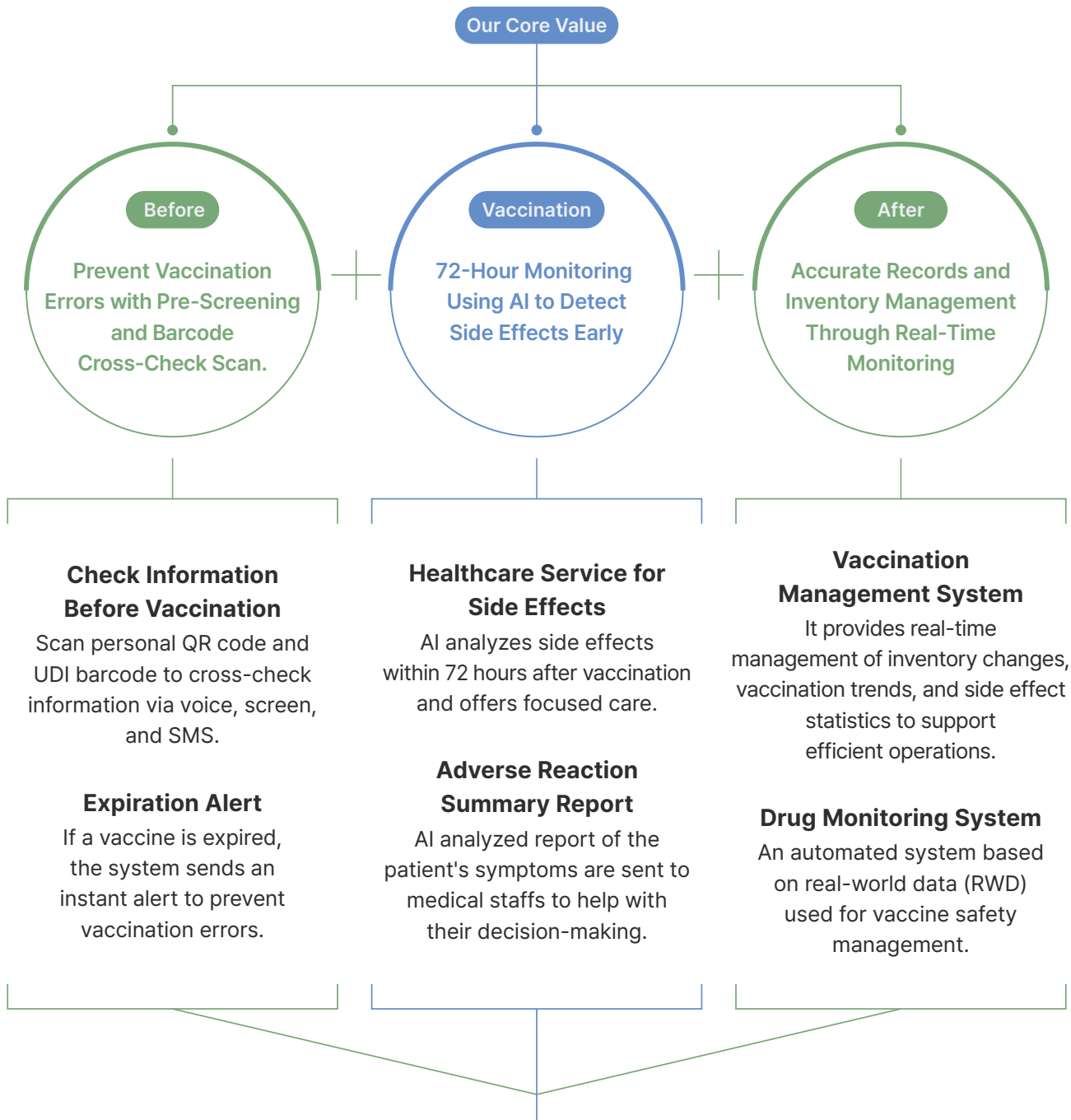
A Vaccine Safety Network Built on RealWorld Data



Vision

Protecting Every Patient Through a Vaccine Safety Network Built on Real-World Data

Using Digital Technology to Create a Safer and More Sustainable Cycle of Healthcare



We Are Building a Sustainable Vaccination System through Digital Innovation.

Project

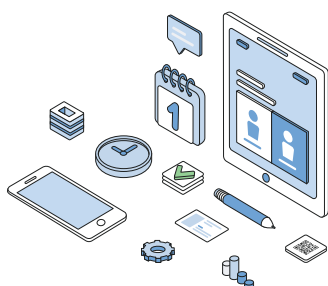
"Through ESG-focused management for a sustainable future,
we eliminate human errors and overcome limitations
on safety management in the vaccination process."

Eliminating both paper waste and human error in pre-screening.

Reducing medical waste and enhancing safety through digitalization

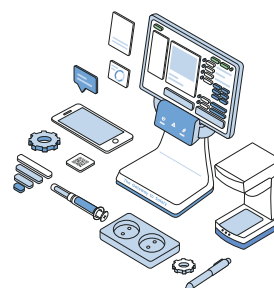
Guaranteeing equal healthcare access and safe vaccinations for all patients.

01 Digital Pre-Screening



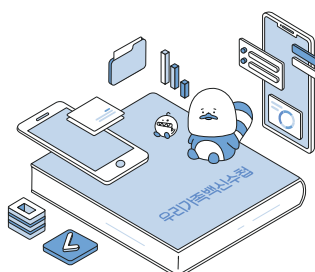
- Minimizes missing or incorrect information through digital input.
- Allows users to complete forms on a mobile device before visiting the clinic

02 UDI Barcode Scanner & Miranda Healthcare



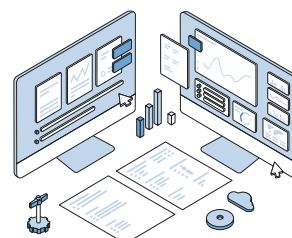
- Prevents vaccination errors through barcode cross-verification
- Checks vaccine expiration date, tracks and auto-adjusts inventory.

03 ePRO (electronic Patient Reported Outcomes) Patient Self-Monitoring



- Records post-vaccination health status and side effects
- Analyzes similarity, rarity, correlation, and severity of side effects

04 Side Effect Monitoring & Medication Monitoring Software

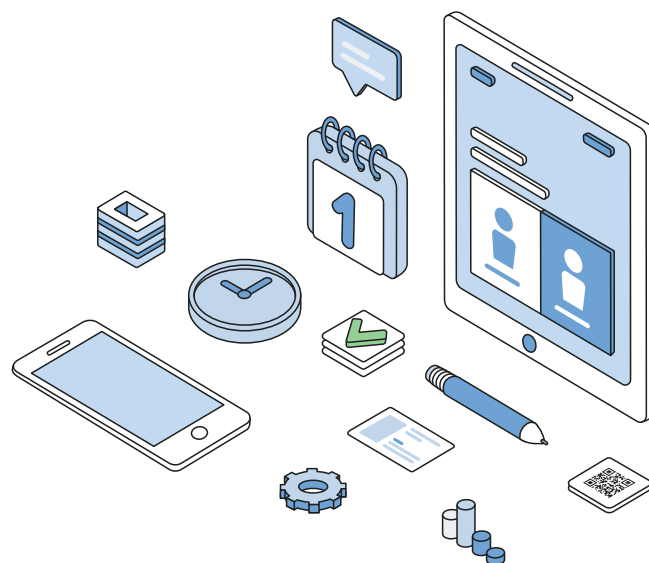


- Instant warning when side effect is detected
- An automated system based on real world data

01

Digital Pre-screening

Medical Facility



Introduction

A digital pre-screening system that lets patients complete a full medical questionnaire on mobile device before vaccination via web or the "Digital Pre-screening" app



Key Features and Benefits

Intuitive interface makes pre-screening easy for anyone.
Data is securely stored on the server
No physical documents needed



Main Features

Patients can enter their health information such as current condition, medical history, and underlying conditions on a mobile device before visiting the clinic

- Minimizes missing or incorrect data through digital input
- Complete in advance on any mobile device



Implementation Benefits

Pre-screening in advance reduces waiting time and crowding in clinics, creating a better vaccination environment. It also lessens the administrative burden of managing, storing, and transferring forms, improving staff efficiency.

Reduced waiting time

Medical Staff's Screen

The Medical Staff's Screen consists of three sequential screens for the 'Digital Pre-vaccination Screening Questionnaire'.

- Screen 1:** Titled 'Let's get started. Who's using this?'. It features two illustrations: a 'Healthcare provider' (a doctor) and a 'Vaccine recipient' (a woman).
- Screen 2:** Titled 'Are you feeling unwell today?'. It asks the user to describe symptoms if 'Yes'. It has 'Yes' and 'No' buttons.
- Screen 3:** Continues the questionnaire with questions about allergic reactions and adverse reactions. It includes 'Yes' and 'No' buttons and a list of conditions: congenital anomalies, asthma/lung disease, kidney disease, liver disease, endocrine disorders (e.g., diabetes), and blood disorders.

Improved medical staffs' efficiency

Patient's Screen

The Patient's Screen consists of two sequential screens for the 'Digital Pre-vaccination Screening Questionnaire'.

- Screen 1: Vaccine Recipient List (14)**
 - Search bar: 'Please enter your name, birth date, and mobile phone number' with a 'Search' button.
 - Entry 1: [HPV Vaccination] 2023.08.07, Hong Gil Dong, 1995.10.18, 010-****-1234.
 - Entry 2: [General Vaccination] 2023.08.07, Hong Gil Dong, 1995.10.18, 010-****-1234.
 - Entry 3: [General Vaccination] 2023.08.07, Hong Gil Dong, 1995.10.18, 010-****-1234.
- Screen 2: Immunization Screening Questionnaire**
 - Section: [HPV Vaccination]
 - Fields: Name (Hong Gil Dong), Date of Birth (1995.10.18), Phone Number (010-****-1234).
 - Question: 'Are you feeling unwell today? If yes, please describe your symptoms.' with 'Yes' and 'No' buttons.
 - Response: 'Just a little bit of a cold and some coughing'.

02

UDI Barcode Scanner & Miranda Healthcare

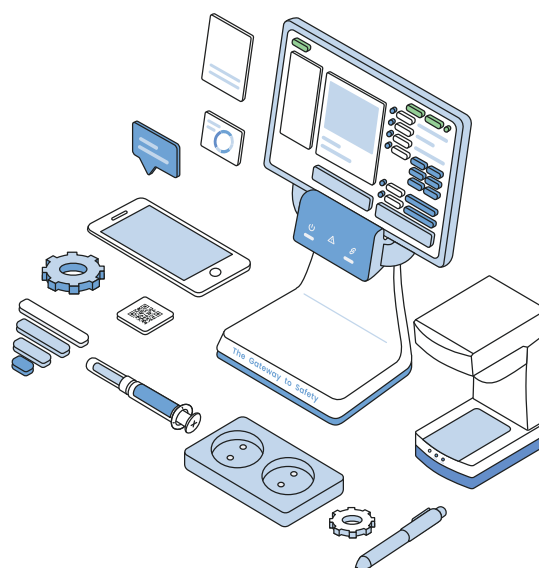
Medical Facility

CTC (Clinical Trials Center)

Pharmacy

Manufacturer

Logistic provider



Introduction

The system helps to prevent vaccine and registration errors by cross-verifying the patient's QR code with the UDI. It's used in clinics, pharmacies, public health centers, manufacturers, and logistics sites, with visual and audio guidance provided through a connected tablet.



Key Features and Benefits

Accurately reads low-quality barcodes (e.g., low contrast, damage, distortion).
Detachable tablet allows flexible use in vaccination areas, vaccine storages, hospitals, and pharmacies.



Main Features

Hardware

- Voice and screen guidance during scanning.
- Barcode cross-verification to prevent vaccination errors.

Software

- Expiration date checks for vaccines.
- Auto stock adjustment and inventory tracking.



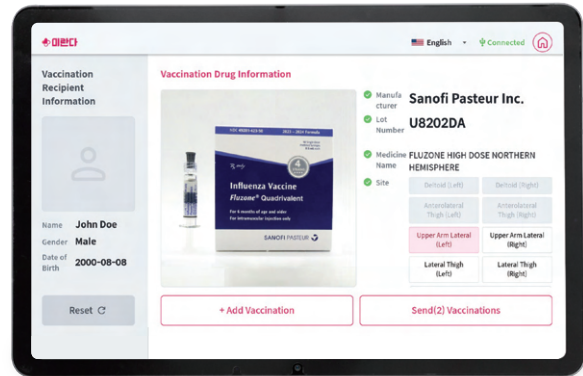
Implementation Benefits

Reducing human error during vaccination lowers the burden on medical staff and eases patient anxiety. The digital process also improves inventory management and record accuracy.

Check information before vaccination

Preventing Vaccine Errors

Scanning a personal QR code and the vaccine's UDI barcode allows the verification between the two (Patient & Vaccine) through voice, screen, and message. This process can prevent the vaccination error from happening.

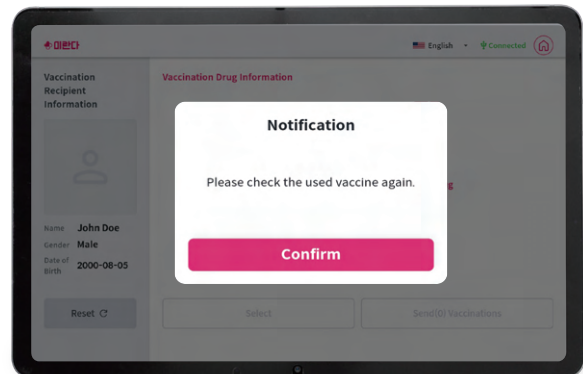


Barcode Scan Result (Display)

Expiration alert

Preventing Using Expired Vaccines

If a vaccine is expired, scanning triggers an instant pop-up alert, notifies the medical staff and prevent its injection.



Expired Vaccine Warning (Display)

RTMC Device

RTMC-TAB & RTMC-V



Vaccination Error Prevention Device

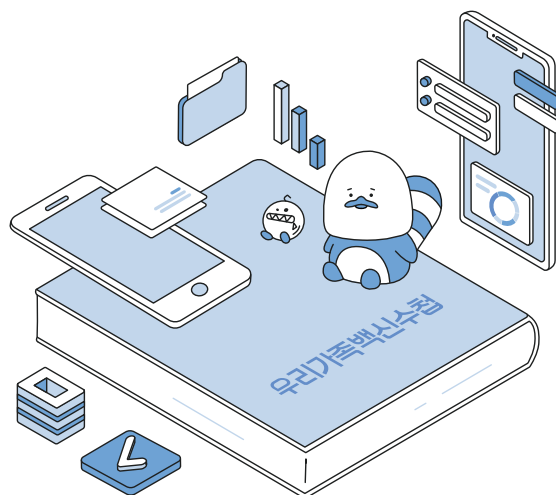


Clinical Trial Device

03

ePRO Patient Self-Monitoring

Medical Facility



*ePRO: electronic Patient Reported Outcomes



Introduction

After vaccination, patients report their condition and any side effects. AI monitors them for 72 hours, using data from Institute of Drug Safety & Risk Management to analyze and detect potential side effects early.



Key Features and Benefits

Collects all required data on side effects (symptoms, drug info, patient and reporter details) without errors, ensuring high reliability. Also gathers real-world data from special groups like children, the elderly, and pregnant individuals for broader analysis.



Main Features

- Record post-vaccination health status and side effect.
- Analyze similarity, rarity, relevance, and frequency of side effects.
- Give the self-assessment report of side effects.



Implementation Benefits

Enables early detection and fast response to side effects, improving the reliability and usability of clinical and public health data and enhancing patients' quality of life.

Self-monitoring side effects and AI personalized care

Self-Monitoring and Side Effect Care Services

Patients can enter any symptoms experienced within 72 hours into our self-monitoring system. The AI analyzes the submitted symptoms to help provide targeted and intensive care.

9:41

< Self-Check for Side Effects

Select all areas where you're feeling pain.
*If none, tap 'Next':

Respiratory / Cardiopulmonary

cough phlegm shortness of breath

chest pain palpitations

Cardiovascular

chest pain palpitations

low blood pressure leg swelling

Neurological

headache dizziness sleep disturbance

memory decline tingling/abnormal sensation

muscle weakness

Systemic

fatigue weight loss tiredness fever

muscle pain underarm pain other pain

< Prev Next >

Side effect self-monitoring (Display)

5:12

user.ftmc-k.com

Side Effect Care Service X

Kim Baek Seol 1 st, 2 nd, and 3 rd Side Effect Care Service Report

Total: 2 cases

Diphtheria, Tetanus, Pertussis, Polio, a... >

Haemophilus influenzae type b (Hib) a... >

AI Analysis Details

Overall Score Overall Assessment All Data

Rarity of the Side Effects

This shows the chance that a related side effect has been reported, even if it's not directly on the side effect list.

Rarity 90%

Correlation with Pre-existing Conditions

A higher percentage means your pre-existing condition is more likely connected to this symptom, which could make it more severe. If it gets worse, we recommend seeing a doctor as soon as possible.

Correlation 65%

Side effect healthcare service (Display)

Adverse Reaction Self-Check Summary Report John Doe

This report summarizes self-check results from respondents who requested telemedicine services via RealTime WebCheck. Submission Date: 2024-10-25

Vaccination Details

Vaccine Name	Manufacturer	Lot Number	Expiration Date
Tetanus-Six Protein/Spore (Human Tetanus Immunoglobulin)	SK Biopharm Co., Ltd.	42230567	2024-10-29
Shingrix Injection (Herpes Zoster Vaccine)	GlaxoSmithKline Co., Ltd.	42230567	2024-10-29
Shy Varicella Injection (Live Varicella Virus Vaccine)	SK Biopharm Co., Ltd.	42230567	2024-11-29

Recipient Information

Name: John Doe
Gender: Male
Date of Birth: 1990-11-22
Contact Number: 010-1234-5678
Vaccination Date and Time: 2024-10-15 11:30 am
Vaccination Site: Maple Grove Health Center

Pre-existing Medical Conditions

Hypertension: 2 years duration
Kidney Disease: 2 years duration
Diabetes: 1 years duration

Submission History Last Update: 2024-10-25 11:20

The patient is experiencing persistent coughing with abdominal and stomach pain that seem to be worsening over time. They also report a feeling of progressively deteriorating vision. The injection site is on the upper part of their right arm, and they have no recent vaccination history.

Telemedicine Request: Submitted

Self-Check Summary

Additional Notes: 3h 4th

Responses:

- Respiratory: Cough, Chest Pain, Shortness of Breath, Phlegm, Palpitations, Chest Pain, Palpitations
- Cardiovascular: Chest Pain, Palpitations
- Neurological: Headache, Dizziness, Sleep Disturbance, Memory Decline, Tingling/Abnormal Sensation, Muscle Weakness
- Systemic: Fatigue, Weight Loss, Tiredness, Fever, Muscle Pain, Underarm Pain, Other Pain

72h 10 100% 100%

Patient's symptoms check

Self-Monitored Summary Report

When a patient requests for a remote care, the AI analyzes their reported symptoms and sends a report to the medical staff. This process helps with decision-making of a medical staff.

04

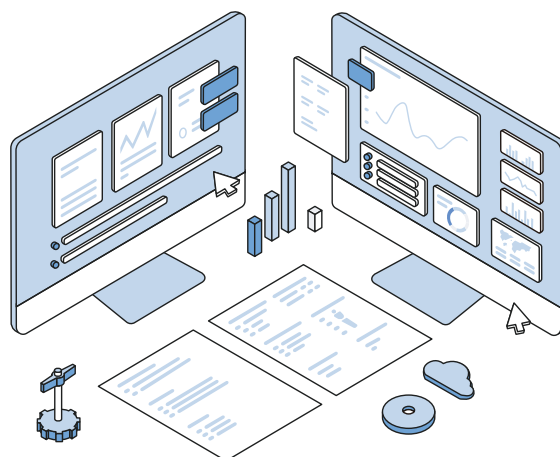
Side Effect Monitoring & Medication Monitoring

Medical Facility

CTC (Clinical Trials Center)

Pharmaceutical Company

Research Institution



Introduction

This software collects, analyzes, and predicts side effect data in real time for post-marketing surveillance (PMS), using UDI barcode scans and ePRO inputs. It includes data from groups that are excluded from clinical trials like infants and pregnant individuals, providing a vital foundation for vaccine safety evaluation.



Key Features and Benefits

The system offers a dashboard for monitoring side effect frequency, types, and stats by age, gender, and conditions. It auto-generates PMS case reports, reducing data gaps and improving accuracy and efficiency.



Main Features

- Sends instant alerts when side effects are detected.
- Tracks product details including name, manufacturing date, expiration date, and lot number.



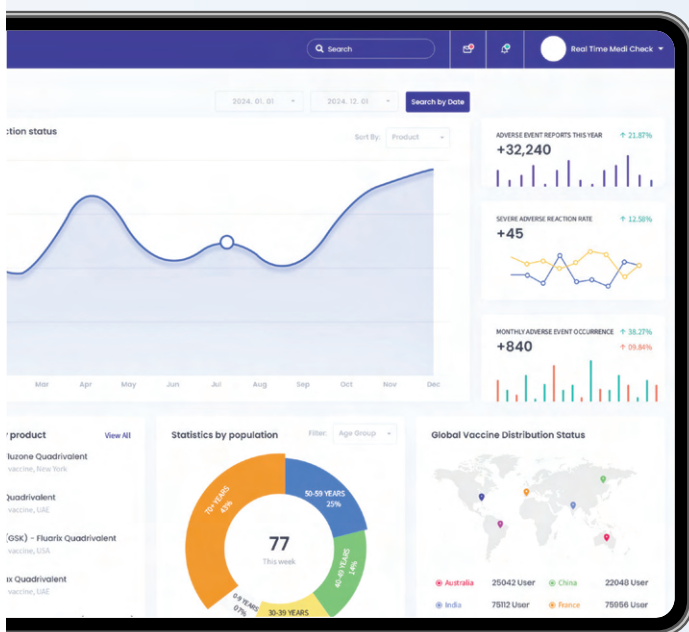
Implementation Benefits

The system gathers RWD from groups that are excluded from clinical trials like infants, pregnant individuals, the elderly, and those with unique health conditions to provide more accurate review for vaccine safety. It also saves time on case reporting, reduces staff workload and improves efficiency.

Vaccine administration system

Vd-IMS

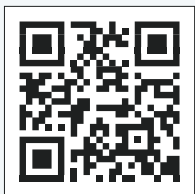
This system enables real-time management of vaccination-related data. It provides a clear view of inventory changes, vaccination trends, and side effect statistics which supports the healthcare professionals more efficiently.



Drug monitoring system

Pv-IMS

This automated platform enhances vaccine safety management by using real-world data (RWD) to track and report side effects efficiently."



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