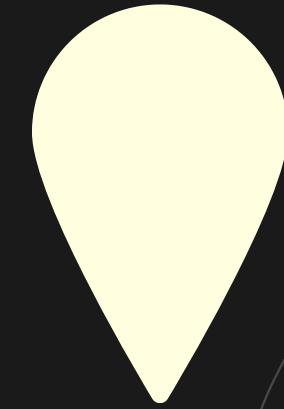
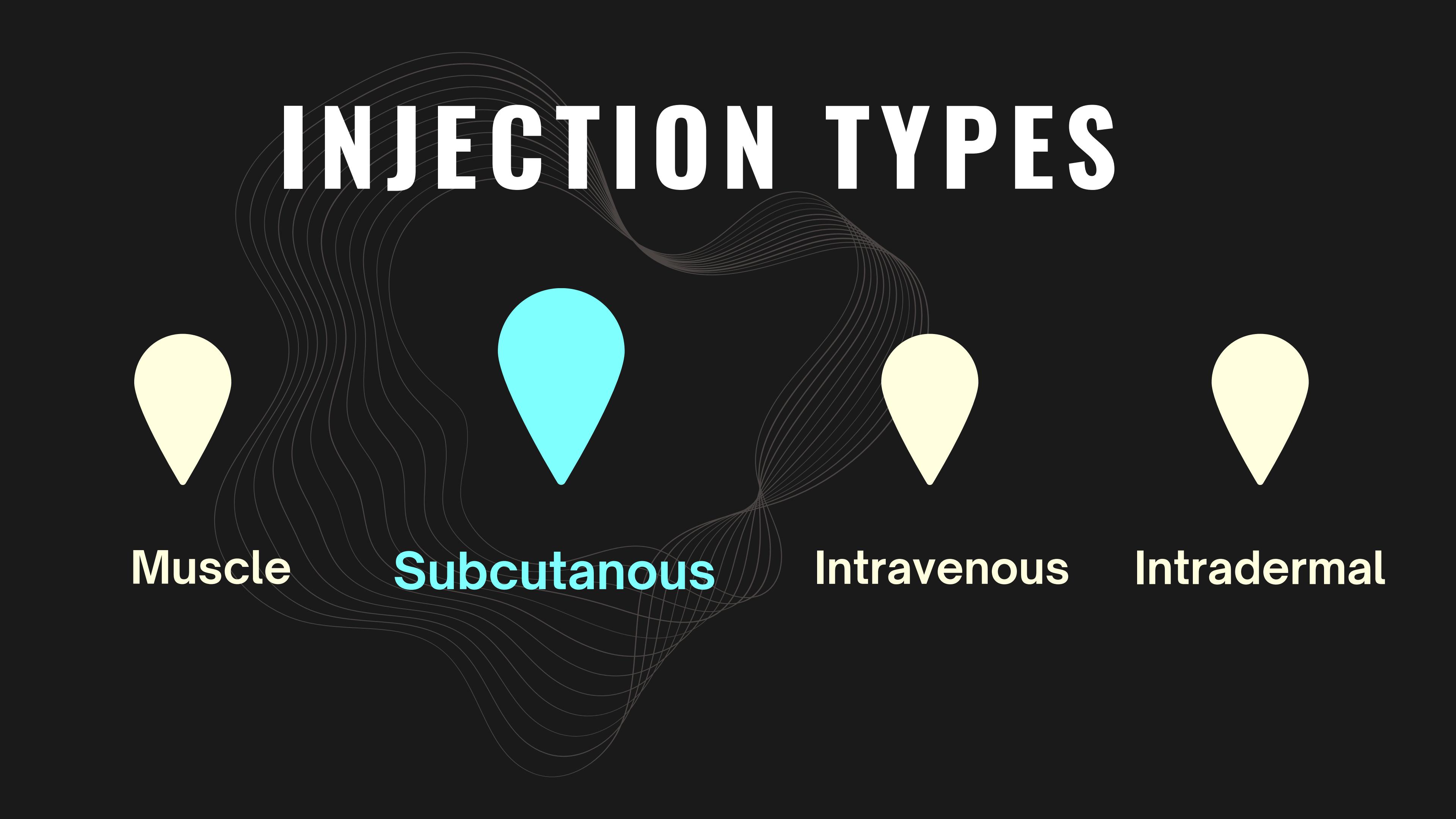


SUBCUTANOUS INJECTION

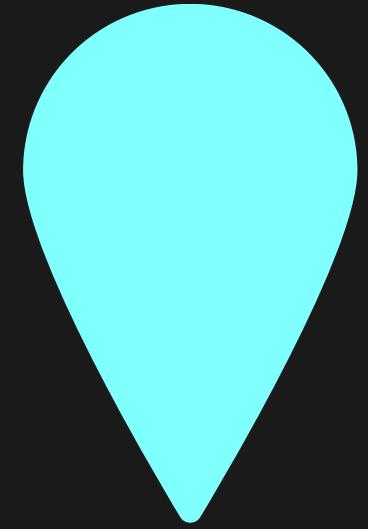
VIRTUAL SUBCUTANEOUS INJECTION SIMULATION



INJECTION TYPES



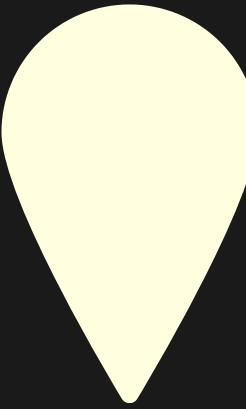
Muscle



Subcutaneous

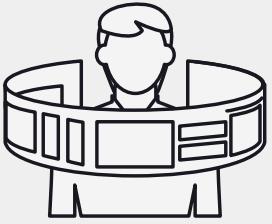


Intravenous



Intradermal

INTRODUCTION



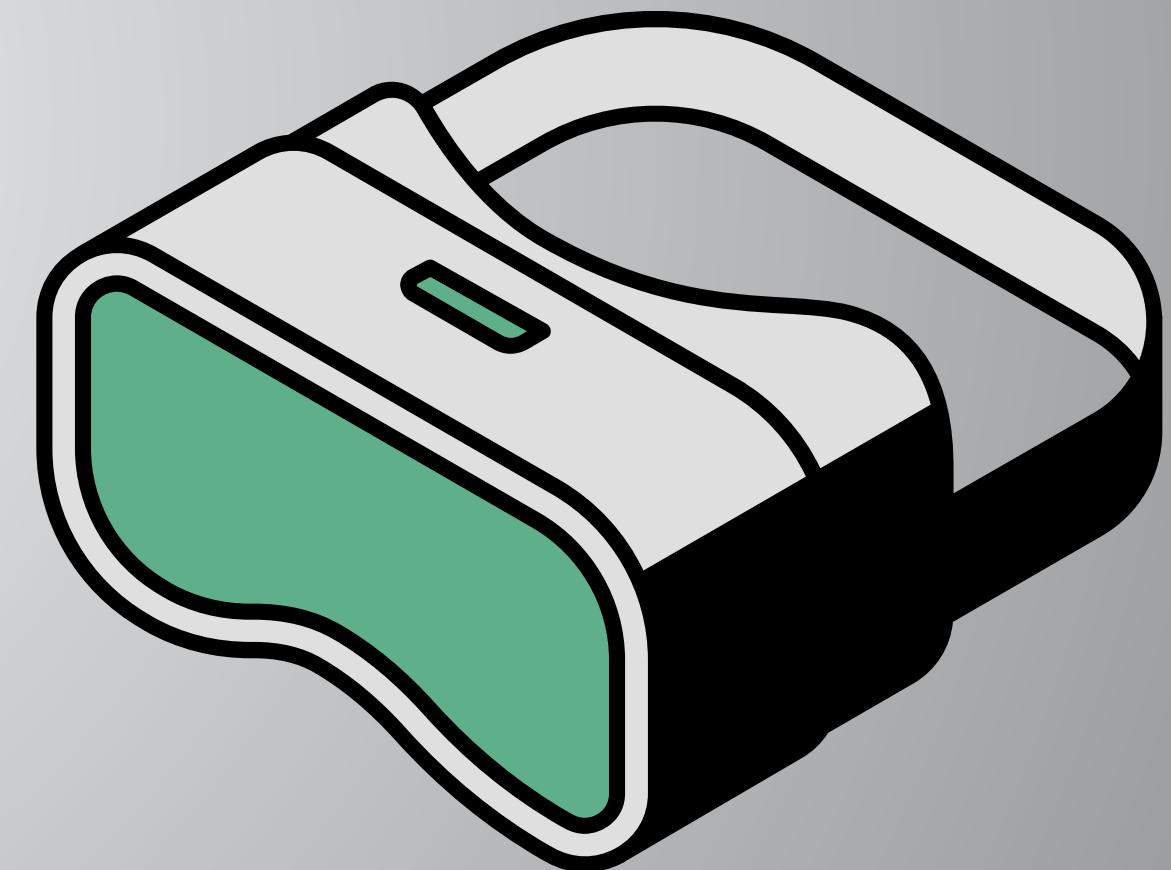
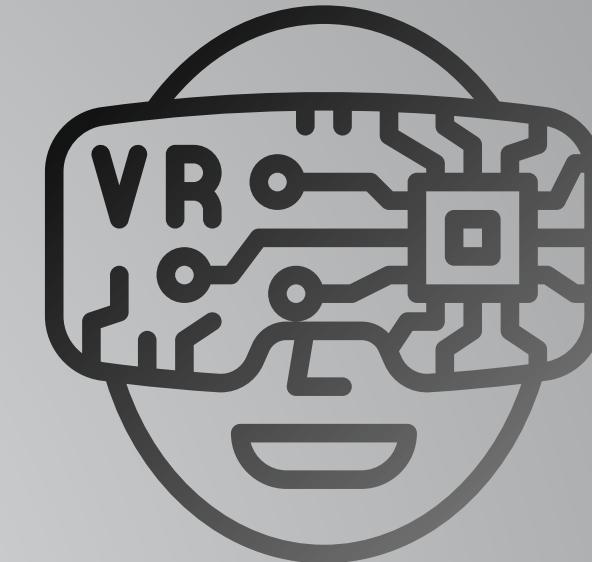
Today, we're diving into a revolutionary leap in medical education—where technology meets technique, and learning meets innovation.



Our focus: subcutaneous injections. This project harnesses the immersive power of Virtual Reality (VR) to reshape how healthcare professionals learn and practice this essential skill.



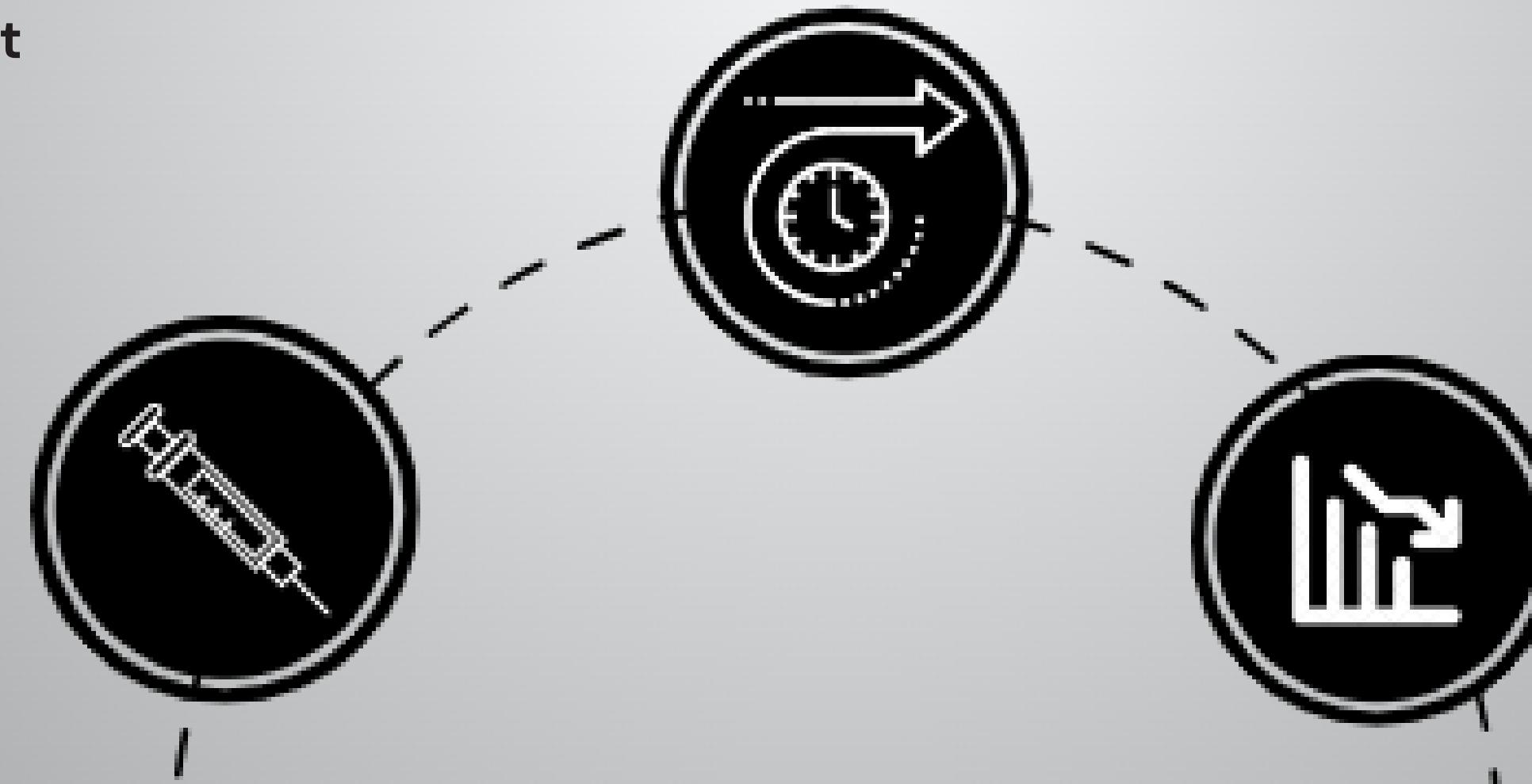
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis vulputate nulla at ante rhoncus, vel efficitur felis condimentum. Proin odio odio.



GOALS AND OBJECTIVES

Objective n° 1

Using virtual Reality to make Subcutaneous injection on a virtual environment



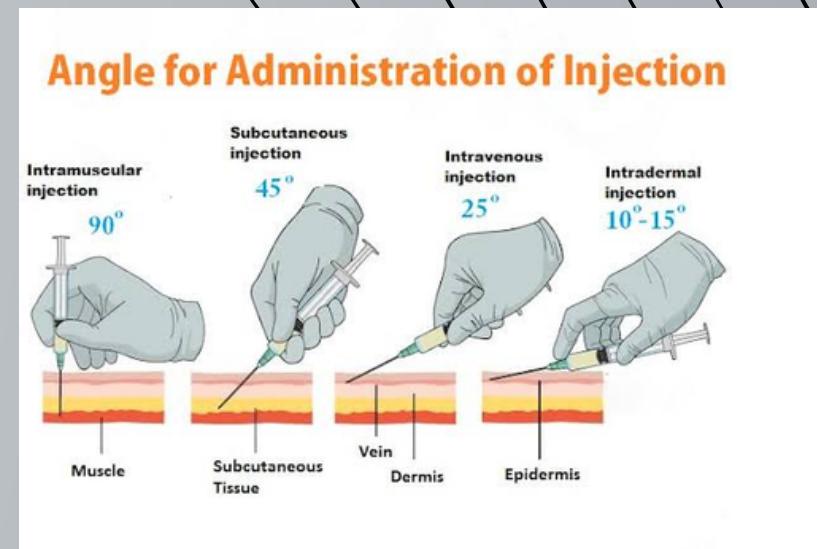
Objective n° 2

we do that to make the process of learning easier for medical students

Objective n° 3

And to reduce mistakes that happened from students on the first practical session

HOW TO

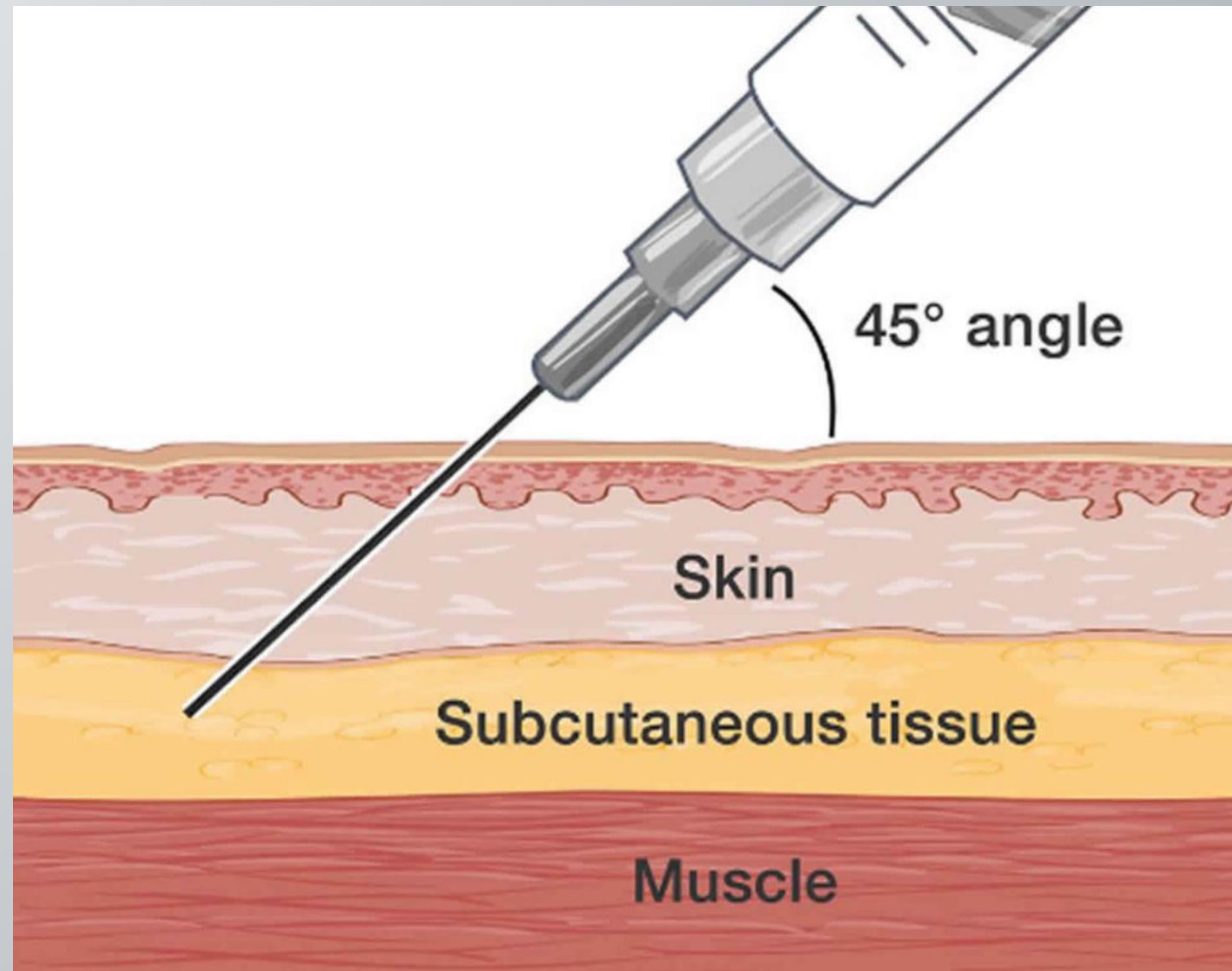


Depth: In a subcutaneous injection, the needle is inserted into the fatty tissue just beneath the skin, usually at a 45 to 90-degree angle.

Location: Common sites for SC injections include the abdomen, thighs, and upper arms.

Purpose: SC injections suit slow, steady drug absorption due to fatty tissue, used for insulin, vaccines, hormones, and other meds.

HOW TO



The Technique

01

PREPARATION

Gather the necessary equipment, including a syringe, needle, medication, alcohol swab, and a sharps container. Wash hands thoroughly.

01



PREPARATION (WASHING HANDS)

To wash your hands, go to the left room.
Touch the water tap.



PREPARATION (DRYING HANDS)

To dry your hands,
Touch the Hand dryer.



The Technique

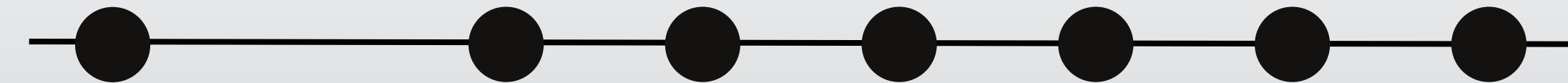
02



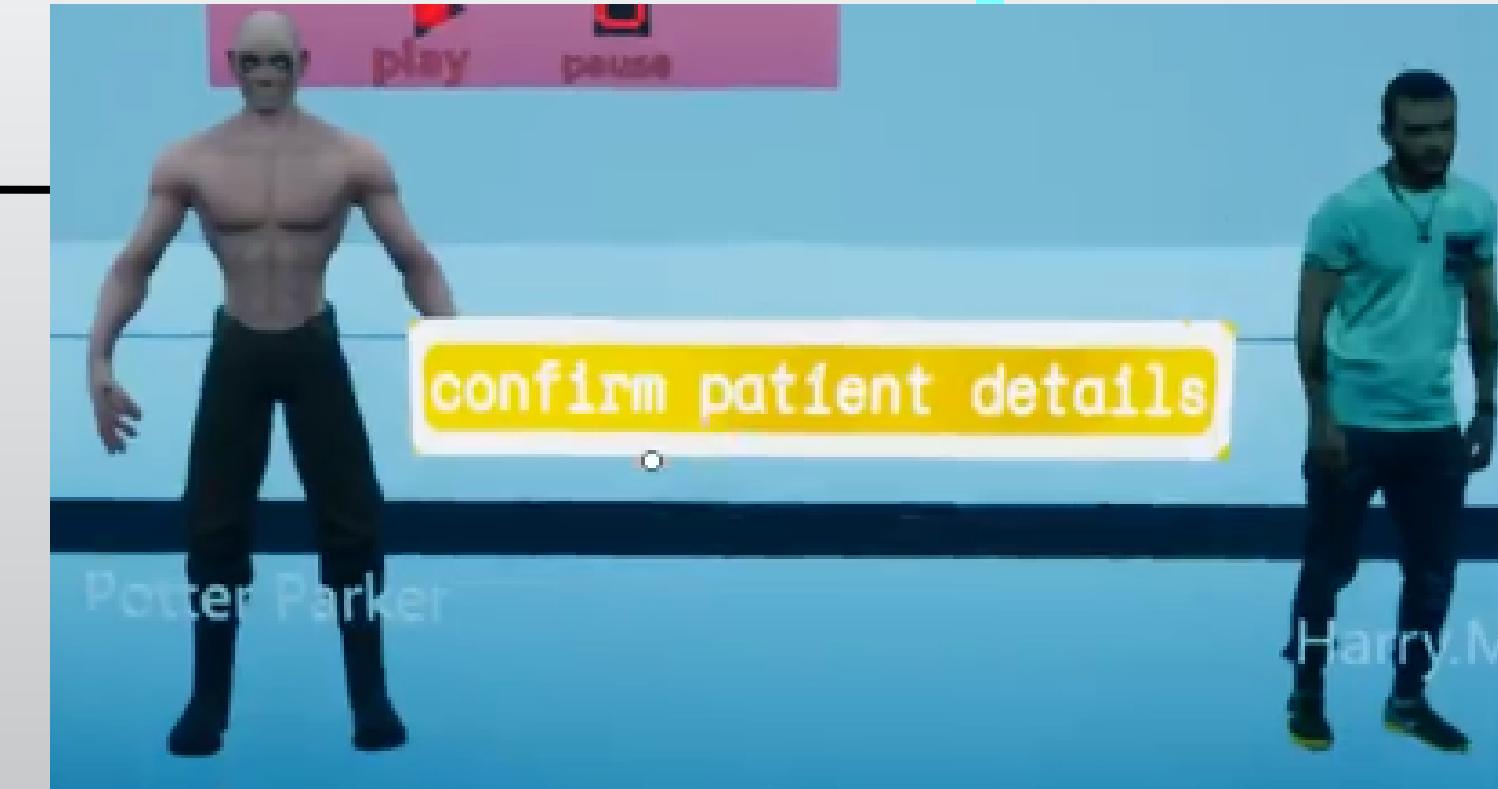
CONFIRMING PATIENT DETAILS

To confirm his allergies or other diseases

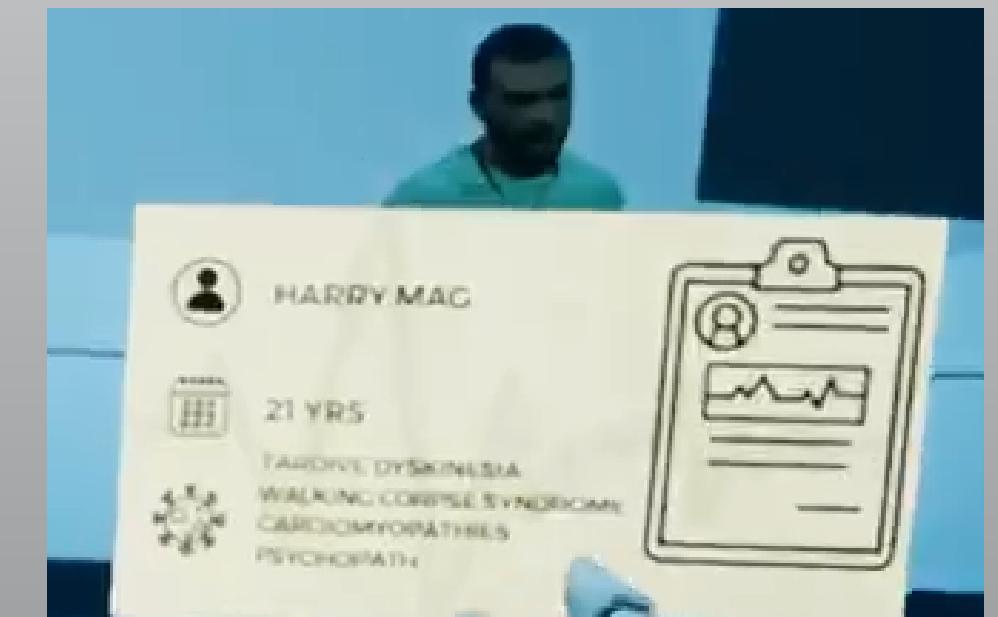
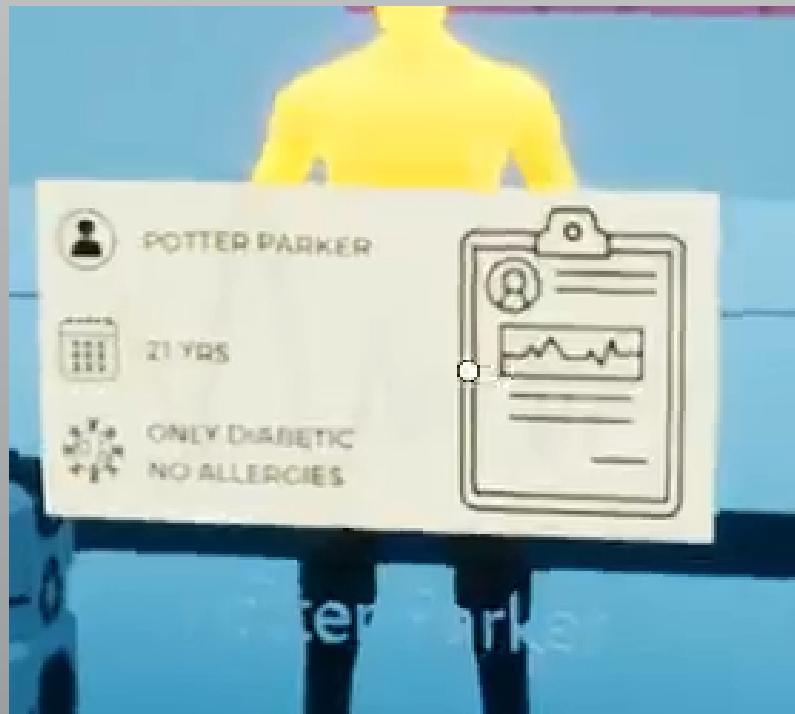
02



TO CONFIRM THE PATIENT DETAILS YOU HAVE TO CLICK THE BUTTON AS SHOWN IN FIGURE



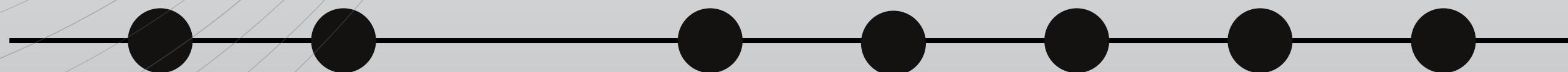
Then patients ID Cards will be shown in front of patients



Note : the right patient will glow

The Technique

03



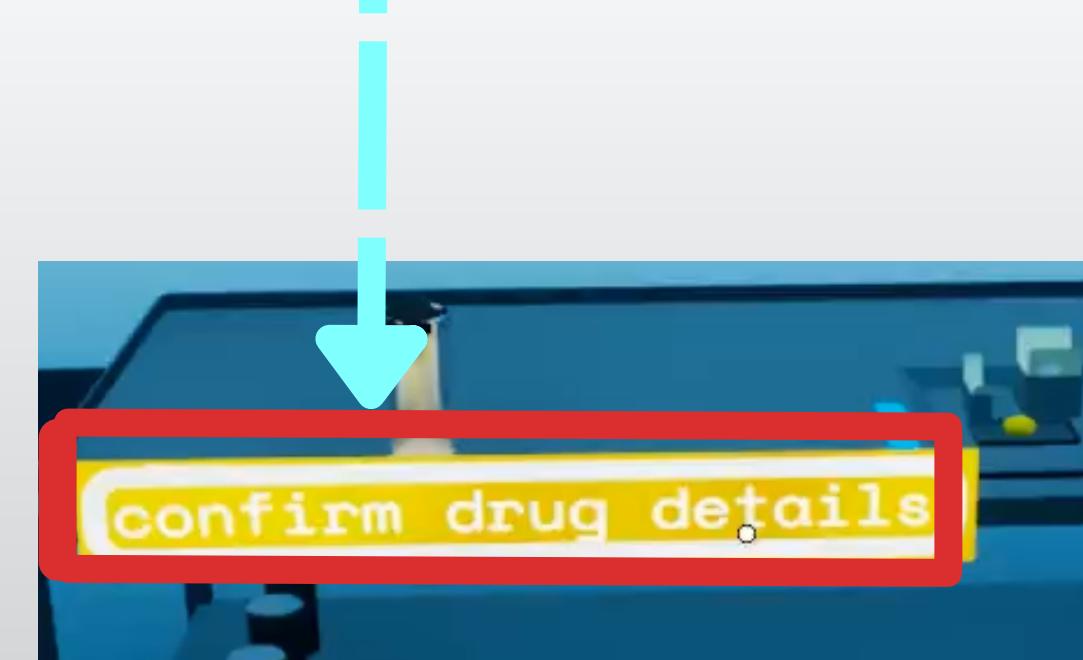
CONFIRMING DRUG DETAILS

Choosing the correct drug is crucial to ensure effective treatment, minimize risks of adverse reactions or allergies, and align with the patient's medical condition and treatment plan.

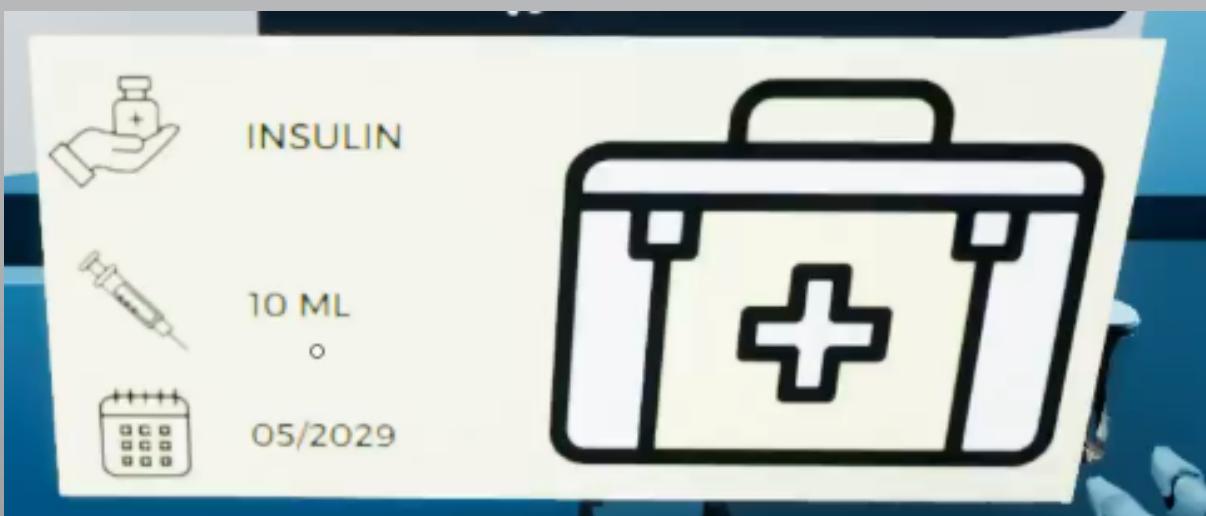
03



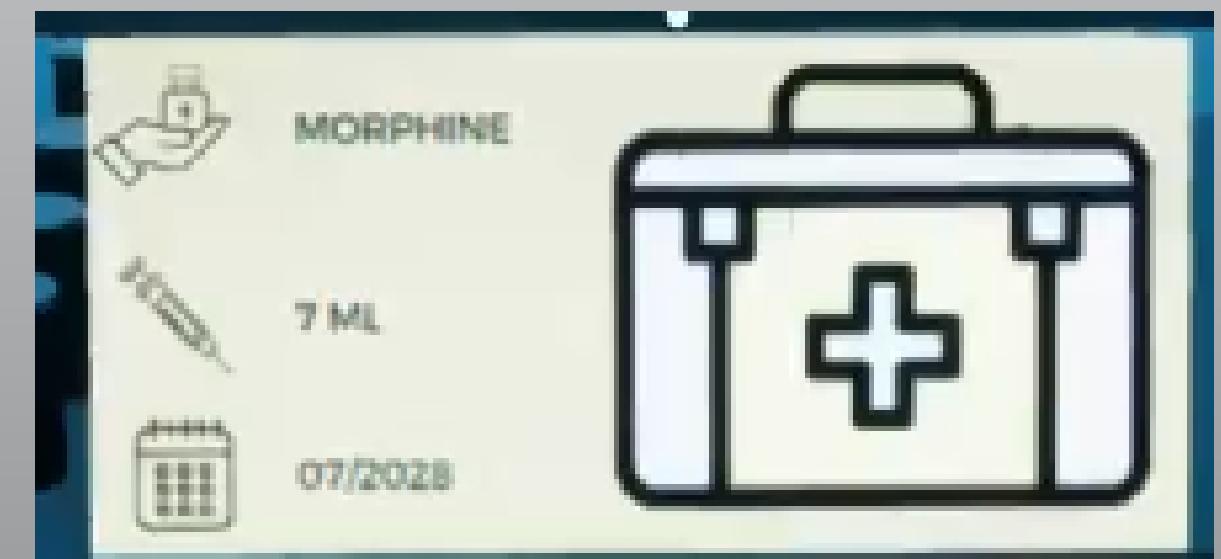
TO CONFIRM THE DRUGDETAILS
YOU HAVE TO CLICK THE BUTTON
AS SHOWN IN FIGURE



Then drug detailed Cards will be shown in front of drugs

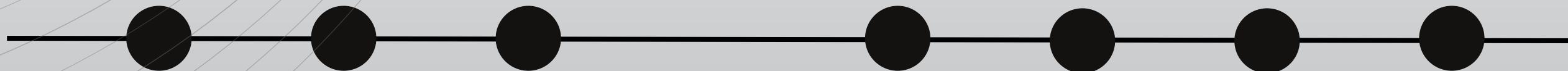


Note : the right drug will glow



The Technique

04



CONFIRM HOMOGENEITY

Be sure of the solubility and homogeneity of the drug by Shaking or by other methods.

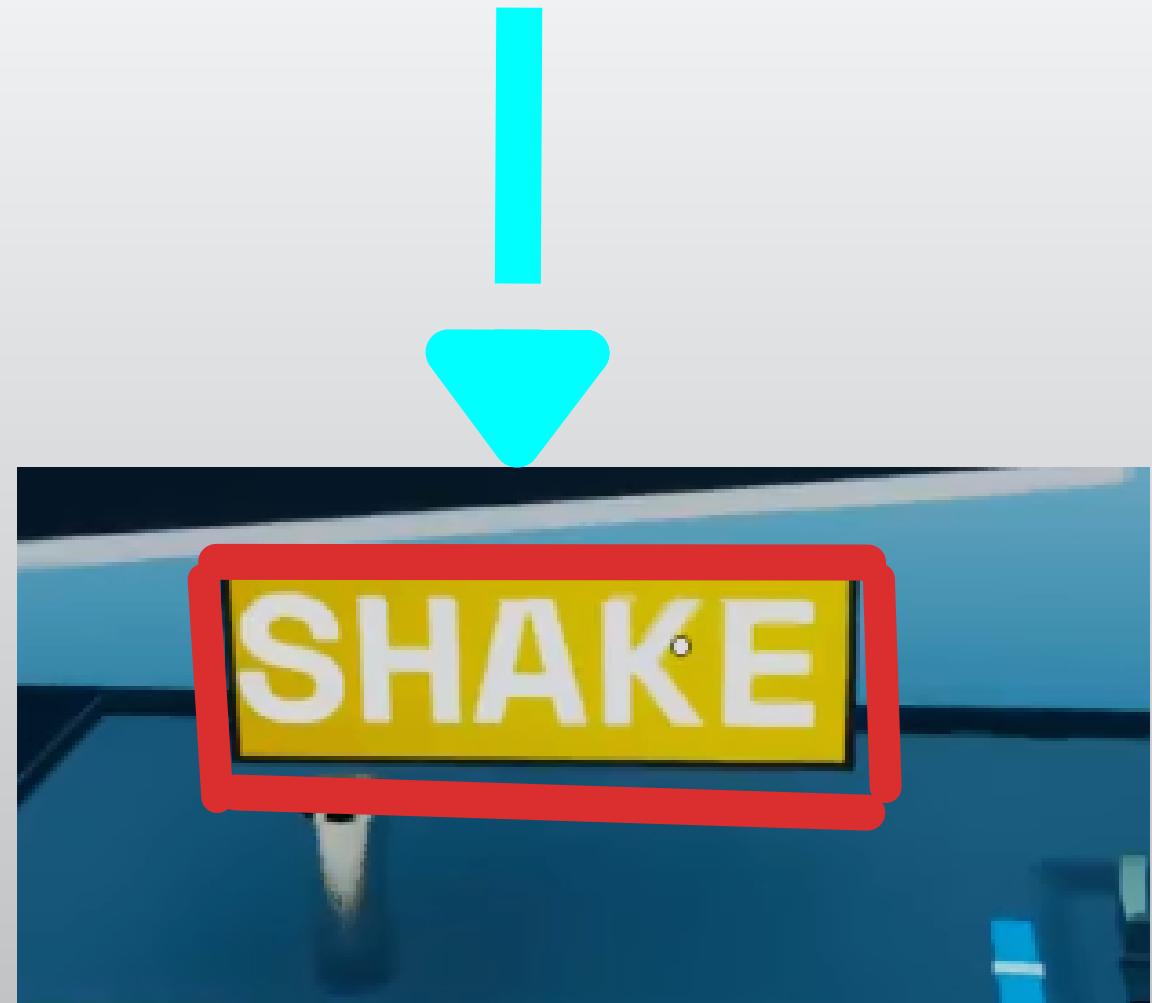
WITHDRAW MEDICINE

WITHDRAW THE SPECIFIED VOLUME OF THE DRUG using Drawing-Up needle.

0 4



IN ORDER TO MAKE SURE OF SOLUBILITY AND HOMOGENEITY OF THE DRUG, WE WILL SHAKE THE MEDICINE BY CLICKING ITS BUTTON.



WITHDRAW THE SPECIFIED VOLUME OF THE DRUG USING DRAWING-UP NEEDLE BY CLICKING THE BUTTON.



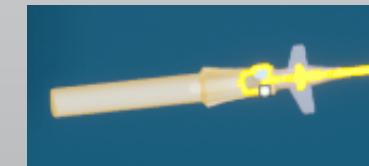
The Technique

05



REPLACE THE NEEDLE

THE SYRINGE SHOULD BE LESS THAN 2 CM WITH NEEDLE OF 25-
26 GAUGE AND -1 INCH LONG



DISINFECT SKIN

DISINFECT THE SKIN WITH 70% antiseptic, AND LEAVE DRY

EXPLAIN TO PATIENT

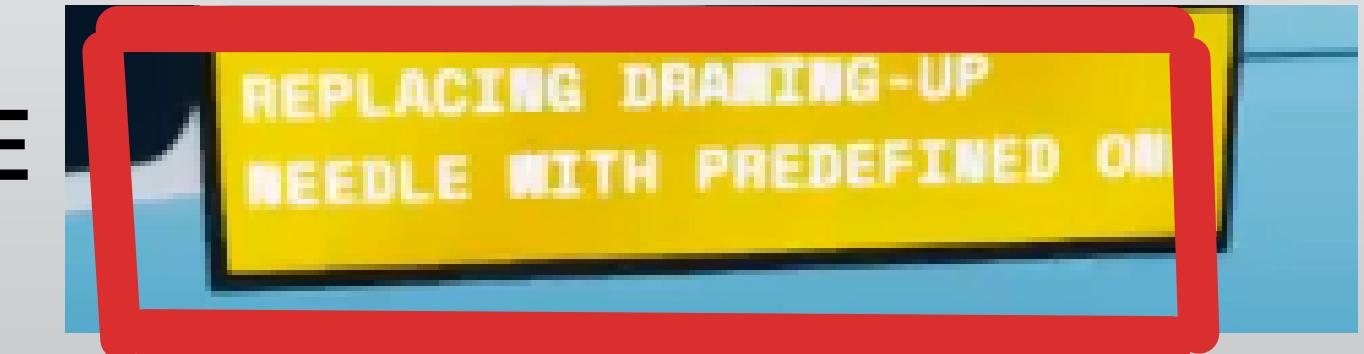
Explain the procedure to the patient, and assure him/her.



05



TO REPLACE DRAWING UP NEEDLE
CLICK THE BUTTON AS FIGURE.



TO DISINFECT THE SKIN TOUCH THE
ANTISEPTIC DIRECTLY (NO BUTTONS)

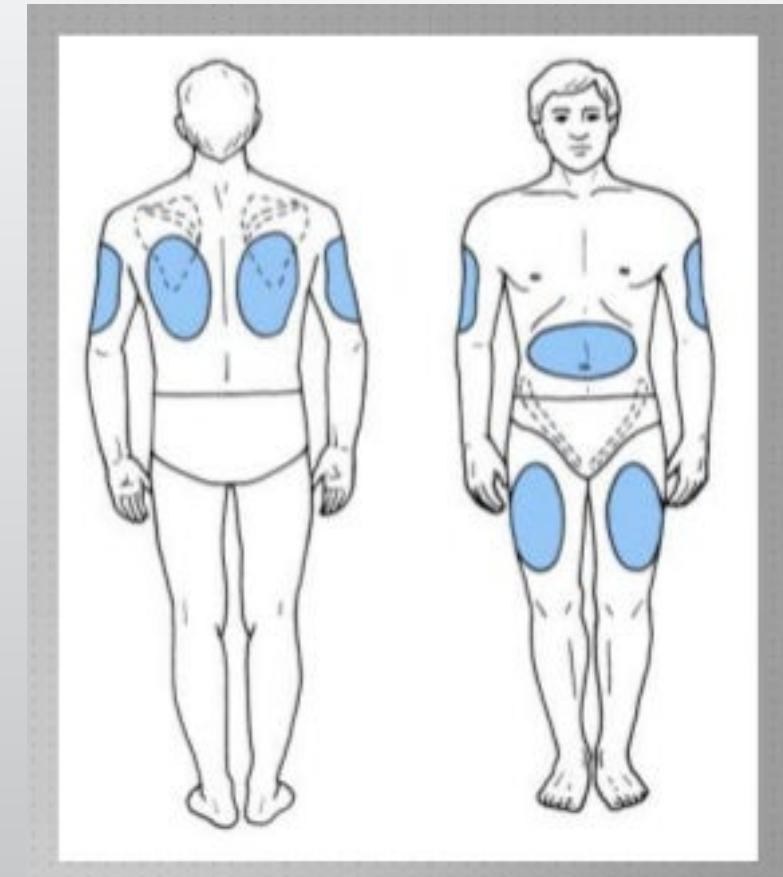


TO EXPLAIN THE PROCEDURE TO
THE PATIENT AND ASSURE HIM/HER.
CLICK THE BUTTON AS SHOWN



The Technique

06



SITE SELECTION

Choose an appropriate injection site, often in the abdomen, thighs, or upper arms

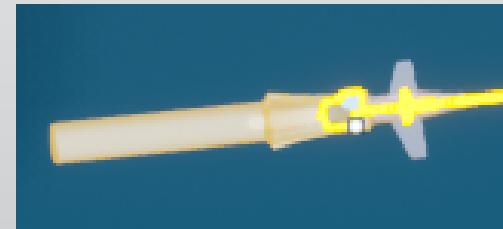
NEEDLE INSERTION

Hold the syringe like a pencil and insert the needle at a 45-degree angle.

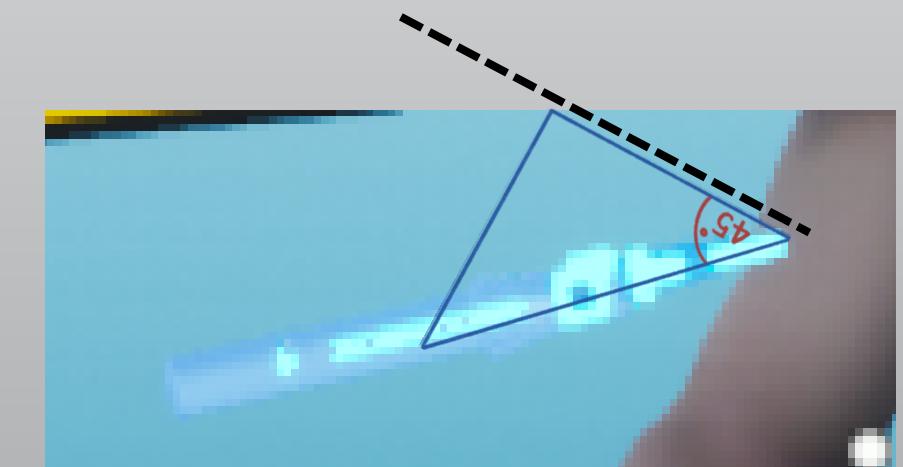
06



TO INSERT THE NEEDLE
TOUCH THE SYRINGE DIRECTLY
(NO BUTTONS)



BE SURE OF INJECTION ANGLE
(45-DEGREE) AND INJECTION TIME.



REMEMBER TO REMOVE ANY AIR
BUBBLES FROM THE SYRINGE

ALSO REMEMBER THAT YOU HAVE TO
SLOWLY PUSH THE PLUNGER TO
INJECT THE MEDICATION

The Technique

07



NEEDLE REMOVAL

Withdraw the needle gently and apply slight pressure with a cotton ball or sterile gauze. Do not rub the area.

DISPOSAL

Discard the used needle and syringe in a designated sharps container.



07



TO REMOVE NEEDLE
TOUCH THE BUTTON AS SHOWN



THEN DISPOSE THE NEEDLE BY CLICKING ITS
BUTTON



YOU WILL FIND IT IN FRONT OF THE TRASH CONTAINER

USER EXPERIENCE



we designed
some buttons
so the user can
interact as
easy as
possible

CONCLUSION

While subcutaneous injections might have complications such as pain, bruising, infection, or inaccurate dosage delivery.

VR Training is essential to mitigate these risks.

The VR environment is interactive, Risk free and doesn't require any technical knowledge.

OUR TEAM

عمر السيد صبحي الطيراني
فارس محمد عبد العليم عريف
عمرو باسم محمد مرسي
عمرو ابراهيم محمد عتتر
محمد مجدي ابراهيم عزام
السعيد محمد متيرد

**THANK'S FOR
WATCHING**

