



Covid-19 Vaccination Process

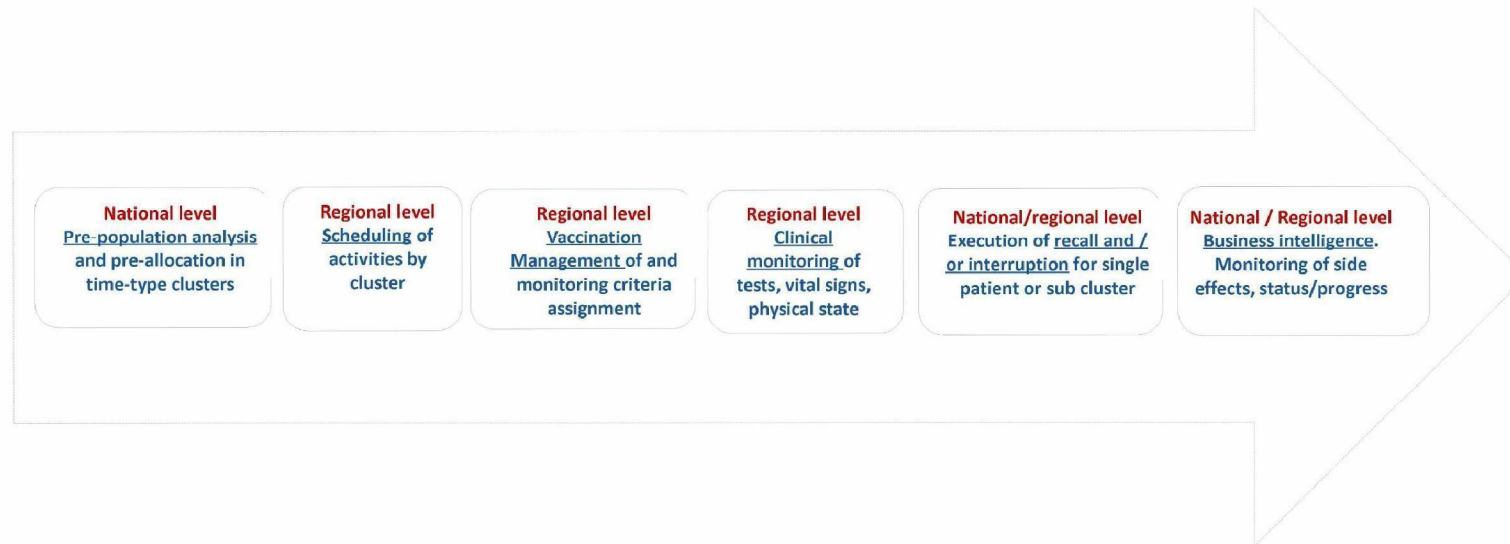
LIFE FLOWS THROUGH OUR SOFTWARE

> The challenge

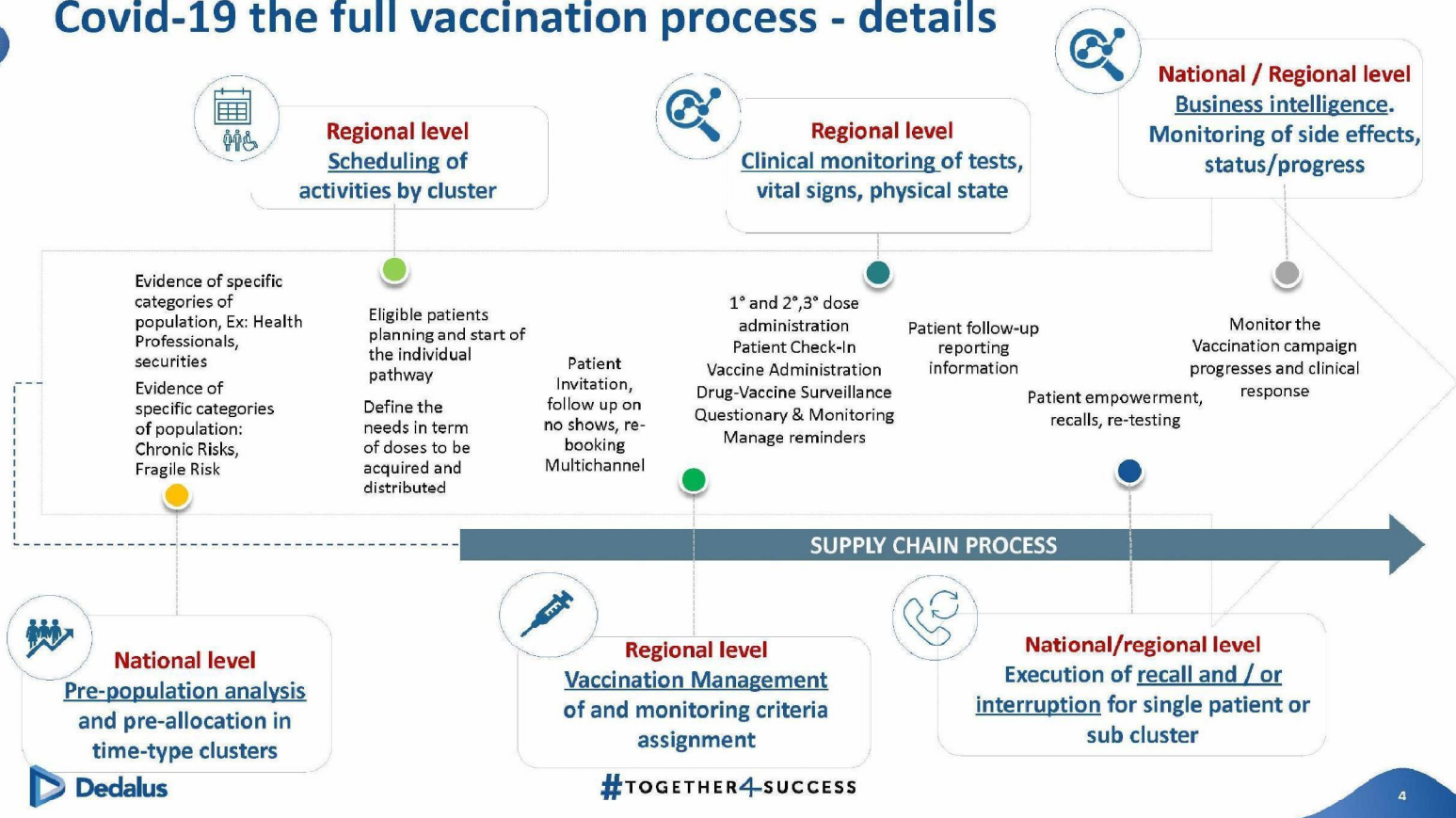
Never in human history a vaccination campaign has been carried out with the following characteristics:

- Between **60% and 70% of a country's population will need to be vaccinated** in the shortest time possible
- It will be used Vaccines whose efficacy and safety have never really been tested in the field
- **Logistics of different** types of vaccines will have to be managed with complex transport and storage problems
- Individual patients will have to be managed according to pre-assigned vaccination priorities: this **pre-assignment is going to be complex**
- The phase 4, following a phase 3 accelerated as never before in the history of the development of a vaccine, **will have to be carried out as a kind of phase 3bis**
- The relationship with the healthy citizen and with the **patient suffering from any chronic or acute disease cannot be treated in the classical way** of a vaccination campaign

Covid-19 the full vaccination process



Covid-19 the full vaccination process - details



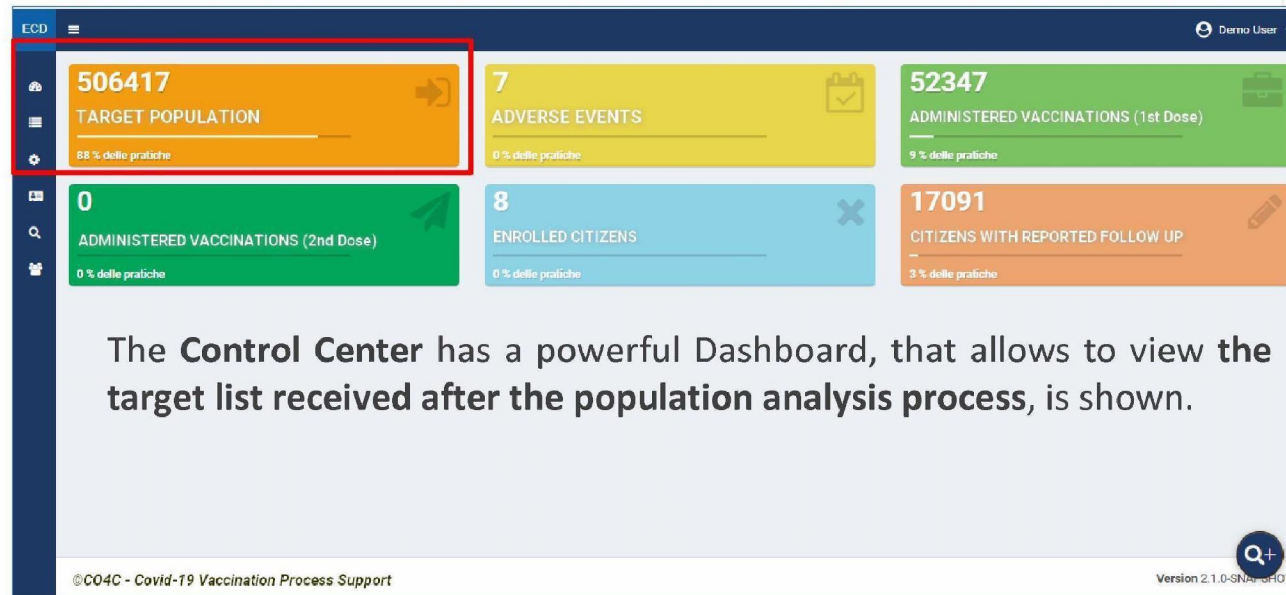
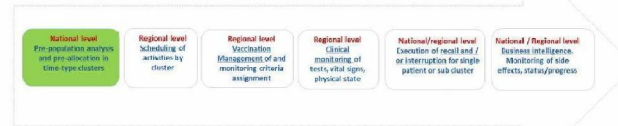


> Patients enrollment and plan of care Our application – example slides

LIFE FLOWS THROUGH OUR SOFTWARE



Co4C: Eligible Population incoming





Co4C: Vaccination Point select patients of Cluster and define treatment protocol



Full name	Pathologies	Criteria	Protocol	Insurance ID
LLOYD PATRICK	COPD, Diabetes	Pathologies: Diabetes, Age Cohort: 60-70, Notified By: GP	AZD1222: AstraZeneca - Half dose	13322
EVANS CARL	COPD, Diabetes	Area: Milan Cohort South East, Care giver: Dr. Steve Chen, Profession: Pharmacist	BN116252: Pfizer e BioNTech	15554
WILLIAMS ALISA	COPD, Diabetes		AZD1222: AstraZeneca - Half dose	14423
GRAY BRIAN	BPCO		AZD1222: AstraZeneca - Full dose	16922
MORRISON LUCAS	COPD, Diabetes			13704
THOMAS CHERRY	COPD, Diabetes			10768
JONES MAYA	COPD, Diabetes			19772
MANZ ANN	BPCO			10053
HUNT EDDY	Diabetes			10421
DOUGLAS MILEY	COPD, Diabetes			16825
MORRISON WILLIAM	BPCO			17669
HAWKINS ADRIANNA	COPD, Diabetes			16925
BENNETT JESSICA	COPD, Diabetes			16869
HARPER KATE	COPD, Diabetes			10570
FOSTER EMMA	COPD, Diabetes			11795
ROSS CHARLOTTE	Diabetes			18714
LLOYD VIOLET	COPD, Diabetes			15358
DE LORENT MARIO	COPD, Diabetes			10892
JUNG MATILDE	COPD, Diabetes			10606
BRANDEN RILEY	COPD, Diabetes			10320
SULLIVAN LEONARDO	COPD, Diabetes			16181
GRANT MARY	BPCO			11796
TARRELL BRIDNY	COPD, Diabetes			11230

Select patients and citizens using criteria based on demographic data, profession pathology and defines a treatment protocol



Co4C: Treatment Protocol



Ccm

Patient

TESTBAR TESTBAR (AGE: 40.5)

Internal Case

ID: 1384 DATA: 12/1/2020

Created by

OPERATOR

Michael Taylor

Individual Vaccination Plan

Reported Information

Applied Protocol

AstraZeneca Full Dose Protocol - Diabetic patient

Treatment Protocol

Search...

Code	Description	Suggested Timing	Assigned Timing	Status	
DIA1	FULL DOSE (1st)	T0	T0	●	✖ ✔
DIA2	FEEDBACK REPORT	T0 + 24H	T0 + 24H	●	✖ ✔
DIA3	BLOOD GLUCOSE MONITORING	T0 + 24h	T0 + 24h	●	✖ ✔
DIA4	DIABETOLOGICAL VIRTUAL VISIT	T0 + 24h	T0 + 24h	●	✖ ✔
DIA5	FULL DOSE (2nd) - T1	T0 + 14days	T0 + 14days	●	✖ ✔
DIA6	FEEDBACK REPORT	T1 + 24h	T1 + 48h	●	⚠ ✖ ✔
DIA7	BLOOD GLUCOSE MONITORING	T1 + 24h	T1 + 24h	●	✖ ✔

10

Tot: 7

1

Notes

Edit

Send to Planner

Add service

Q+

Planning: book vaccinations



C19 Patient Enrollment System
Patient-provider association

Dashboard > Clusters > Milan cohort south east > AZD1222:AstraZeneca - Half dose > Patients enrolling

Global Search

John Doe Doctor

7 Patients

Sort By: Name

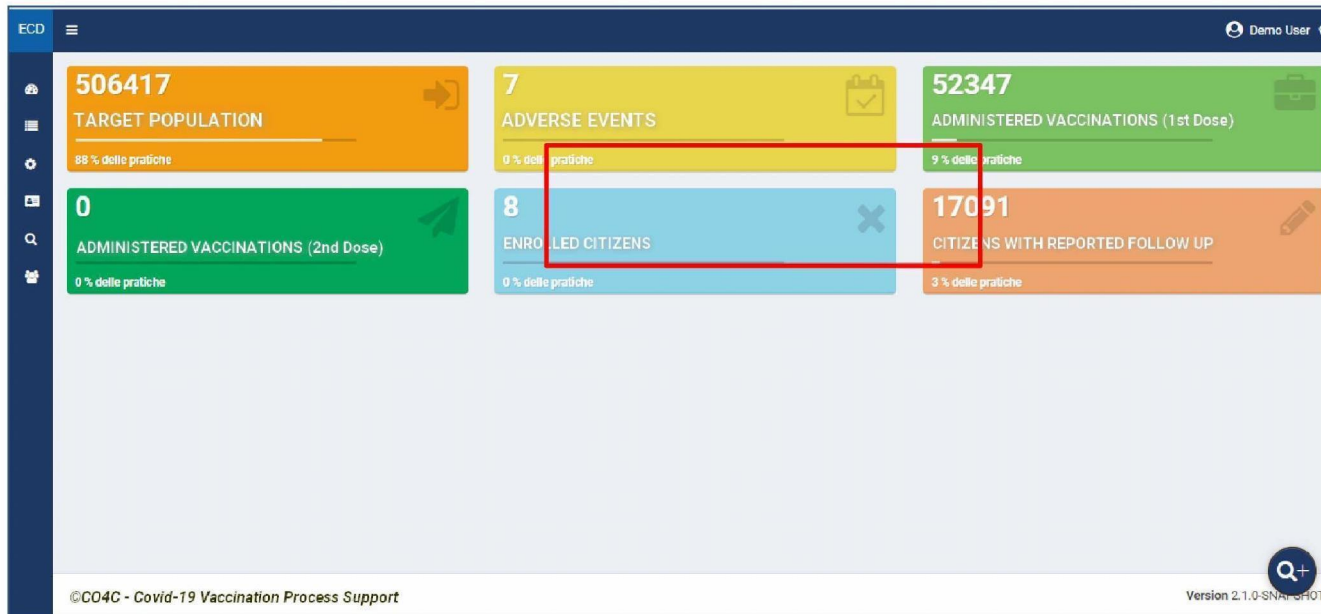
Profile	Name	Age	Area	Profession
	Daniele Siciliano	48 years old 24/11/1972	Milan cohort south east	Pharmacist
	James Ford	51 years old 26/05/1967	Milan cohort south east	Pharmacist
	Roberta Lupoli	33 years old 26/05/1985	Milan cohort south east	Pharmacist
	Thomas Brody	30 years old 26/05/1979	Milan cohort south east	Pharmacist
	Brandon Lee	34 years old 26/05/1984	Milan cohort south east	Pharmacist
	Carl Potter	59 years old 26/05/1963	Milan cohort south east	Pharmacist
	Rita Fusilli	58 years old 04/10/1964	Milan cohort south east	Pharmacist

4 Providers

Provider	Area	Available Daily Doses	Available Total Doses
PROVIDER 1 Milan cohort south east AZD1222:AstraZeneca - Half dose	24/24	129/512	
PROVIDER 2 Milan cohort south east AZD1222:AstraZeneca - Half dose	5/32	29/312	
PROVIDER 3 Milan cohort south east AZD1222:AstraZeneca - Half dose	8/24	329/512	
PROVIDER 4 Milan cohort south east AZD1222:AstraZeneca - Half dose	24/24	129/512	



Co4C: Cluster 1: patients enrolled



The image displays a sequence of seven smartphone screens from the A4 app, illustrating its user interface for COVID-19 management. The screens are as follows:

- Screen 1:** Shows the 'CARE PLAN' section with a red box highlighting a message about COVID-19 vaccination.
- Screen 2:** Shows the 'MESSAGES' section with a list of messages, including one about COVID-19 vaccination.
- Screen 3:** Shows the 'COVID' section with a table of study details, including 'Institution', 'Title of the Study', 'Study director', 'Principal investigators in different locations', 'Sponsor', and 'Locations'.
- Screen 4:** Shows the 'Registration' section with a 'Self-declaration COVID' form.
- Screen 5:** Shows the 'How to prevent the infection' section with a 'Registration' form.
- Screen 6:** Shows the 'Epidemiological valuation' section with a table of study details, including 'Institution', 'Title of the Study', 'Study director', 'Principal investigators in different locations', 'Sponsor', and 'Locations'.
- Screen 7:** Shows the 'The information have been correctly sent' confirmation screen.

A4P Multichannel Platform SMS received for invitation

A4P APP - PATIENT

COVID

Epidemiological valuation

Stay in a country with high covid risk *

Yes No

Declare if you have been in a country/locality with high covid risk *

*mandatory field

Exposition to certain covid cases (alive or deceased) *

Yes No

*mandatory field

Exposition to suspected cases *

Yes No

*mandatory field

Epidemiological valuation

Connections with people coming back from high risk country/locality *

Yes No

*mandatory field

Connections with relatives of suspected cases *

Yes No

*mandatory field

Number of cohabitants

Insert number of cohabitants

*mandatory field

According to the article 46 and 47 of the D.Lgs. n. 46/2000, concerning the false declarations are punished according to the penal code and the specific laws in the field, as claimed by the disposition of art. 76 of D.Lgs. n. 46/2000, I declare that the entered information are true.

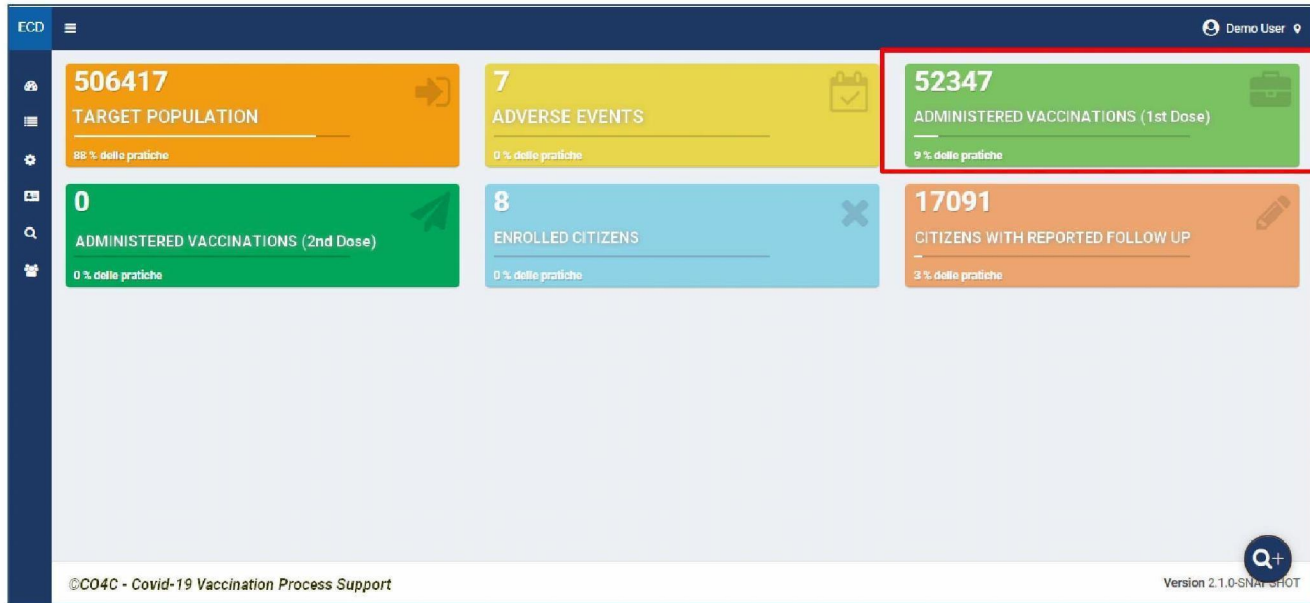
*mandatory field

The information have been correctly sent

CLOSE



Co4C: Check in for the first Dose

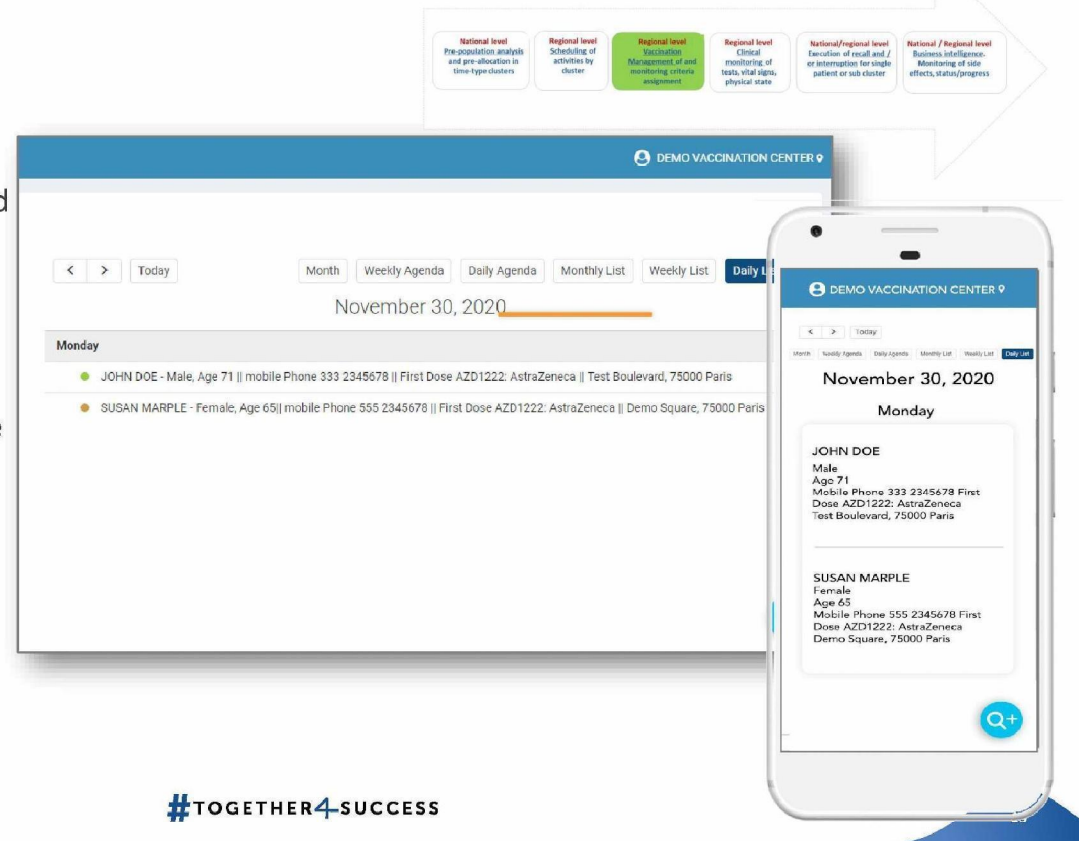


Co4C Worklist

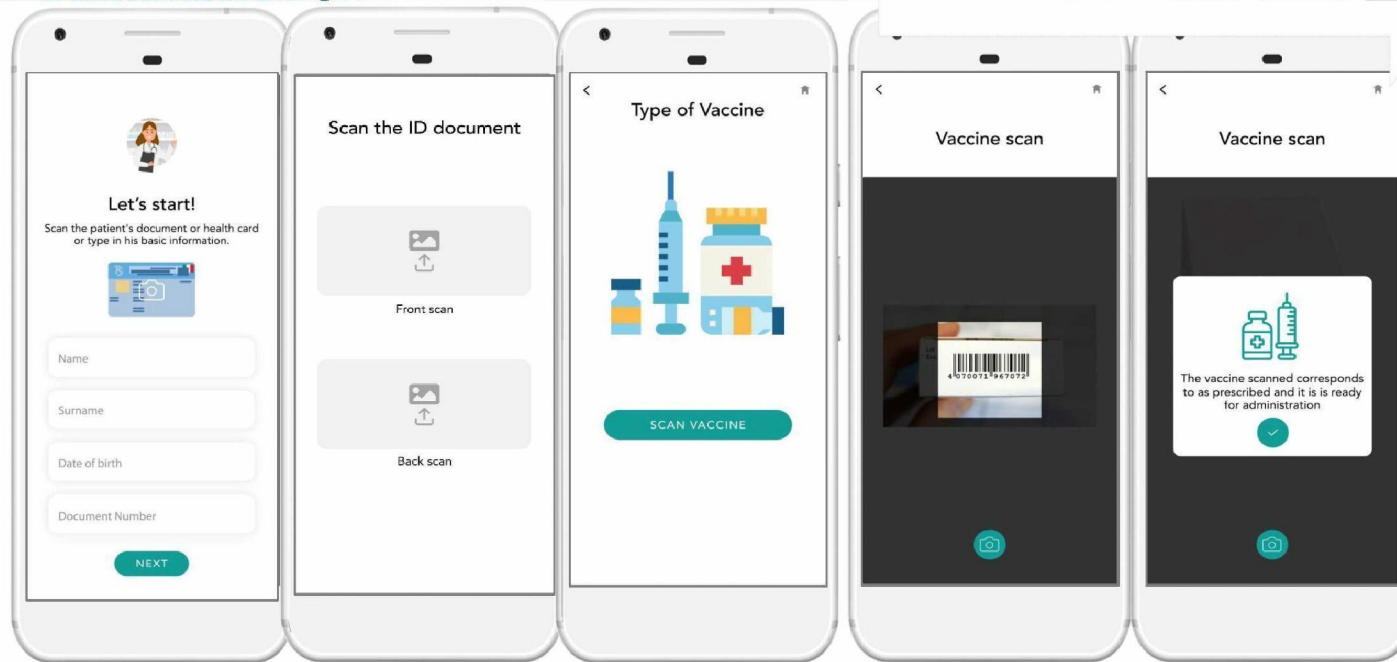
Every Vaccination Point has its own agenda, that can be filtered by Month, Week, Day

The list displays information about Demographics, Vaccination, Contacts.

After having prepared the dose will be used for every patient, the operator can check the correct pairing patient-dose



Via A4H: dose scanning and administration



C4H: Stock administration

The screenshot displays the 'COVID 19 Vaccine BNT162b1' stock administration interface. The main panel shows the following details:

Field	Value
Stock	24 Doses
LOT	12644759301
Expiry Date	14/01/2028
Supplier	Pfizer Limited
Maintenance	Preserve in fridge at -80 -60 degree

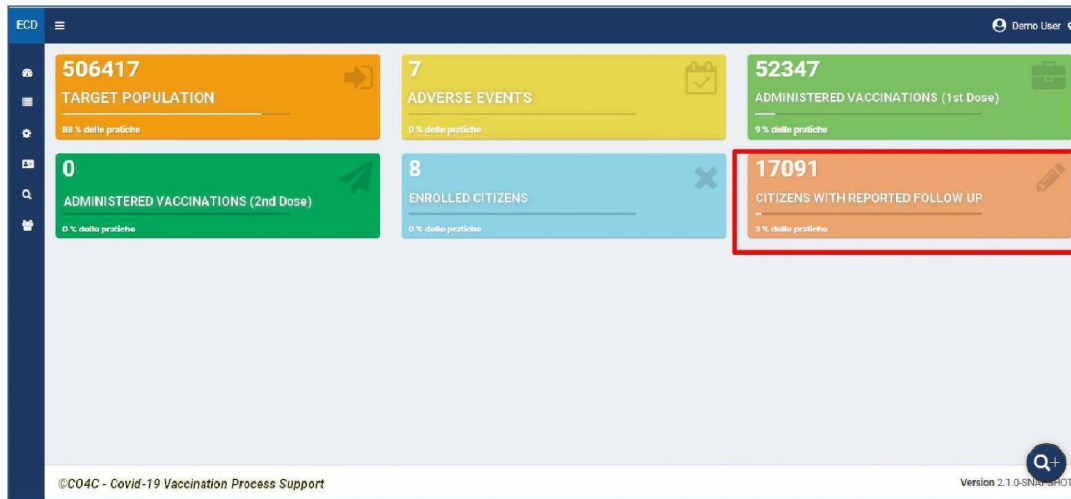
An information box on the right provides details about the vaccine, including its efficacy and safety data. A circular inset shows a syringe and a person receiving a vaccine.

Below the main panel, a smaller version of the same interface is shown, but with the 'Stock' value updated to 23 Doses.

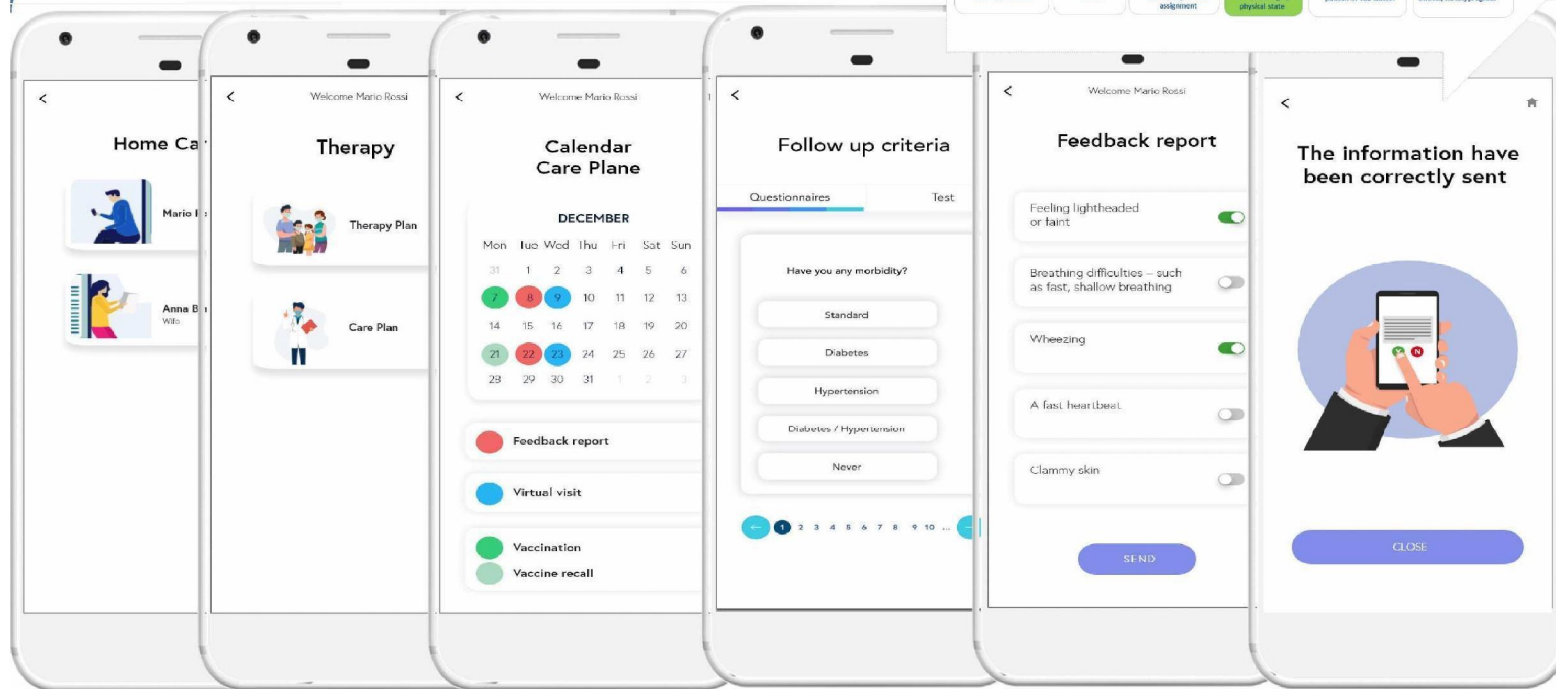
At the top right, a workflow diagram illustrates the process flow across different levels:

- National level:** Pre-population analysis and pre-allocation in time-type clusters.
- Regional level:** Scheduling of activities by cluster.
- Regional level:** Vaccination management and monitoring criteria engagement.
- Regional level:** Clinical monitoring of tests, vital signs, physical state.
- National/regional level:** Execution of recall and/or interruption for single patient or sub-cluster.
- National / Regional level:** Business intelligence: Monitoring of side effects, status/progress.

Co4C: Follow up



A4P: Patients send a follow up





Co4C: Doctor reporting: self-evaluation patient answers



Patient Data

Id Patient

1524552

Name

Prova Prova

Birth Date

Telephone Contact

35541256

Email

612e@prova.it

Zip Code

95030

Seriousness

☐ Death
☐ Life-threatening
☐ Hospitalization (initial or prolonged)
☐ Disability- significant, persistent, or permanent change
☐ Requires intervention to prevent permanent impairment or damage

Treatment

☐ Use an adrenaline auto-injector if the person has one
☐ Call 999 for an ambulance immediately (even if they start to feel better)
☐ Lie the person down flat
☐ Give another injection after 5 to 15 minutes

Symptoms

☒ Feeling lightheaded or faint
☐ Breathing difficulties – such as fast, shallow breathing
☒ Wheezing
☐ A fast heartbeat
☐ Clammy skin
☐ Confusion and anxiety
☐ collapsing or losing consciousness

Reporting

Destination

Detail

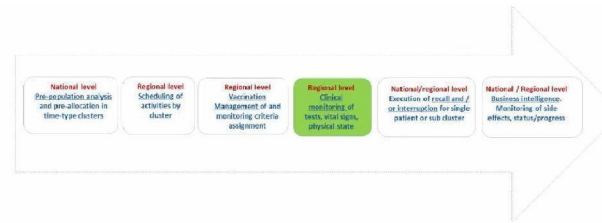
Save

... through patient self-evaluation





Co4C: Doctor reporting can register adverse reactions



✓

Patient Data					
Id Patient	Name	Birth Date	Telephone Contact	Email	Zip Code
1554552	Prova Prova		35541256	prova@prova.it	65030

Seriousness

- ☐ Death
- ☐ Life-threatening
- ☐ Hospitalization (initial or prolonged)
- ☐ Disability – significant, persistent, or permanent change
- ☐ Requires intervention to prevent permanent impairment or damage

Treatment

- ☐ Use an adrenaline auto-injector if the person has one
- ☐ Call 999 for an ambulance immediately (even if they start to feel better)
- ☐ Lie the person down flat
- ☐ Give another injection after 5 to 15 minutes

Symptoms

- ☒ Feeling lightheaded or faint
- ☐ Breathing difficulties – such as fast, shallow breathing
- ☒ Wheezing
- ☐ A fast heartbeat
- ☐ Fainting/skips
- ☐ Confusion and anxiety
- ☐ Sleeping or losing consciousness

Reporting

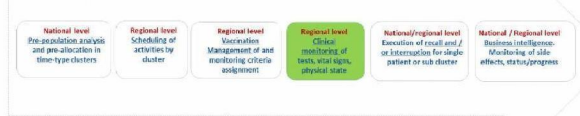
Destination

Detail

Save

for example after tele-visit

Co4C: Monitoring patient conditions



PATIENT SYNOPSIS

ANGELA MARELLA | Identifier: BLBMLGMS3E2908 | Assigning Authorities | Born on: 1963-08-13 | 57 years | Female | Allergies | Procedures

Solve configuration: Clinical view | Show | Report | Delete

Questionnaire

Date	Title	View
2020-03-26	Self Assessment Questionnaire	View
2020-03-26	Follow-Up Questionnaire	View
2020-03-29	Rare Disease Questionnaire	View

Blood pressure

Static pressure (mmHg) | Dynamic pressure (mmHg)

140
120
100
80
60

Mar 10 12:45 | Mar 10 14:00 | Mar 10 16:00 | Mar 10 18:00 | Mar 10 20:00 | Mar 10 22:00 | Mar 10 24:00

Enable Zoom

ECG

Date/Time	Heart rate	QTc	QRS	QT	View
2020-03-09 04:15:42 pm	65 bpm	413 bpm	74 bpm	350 bpm	View
2020-03-09 04:22:28 pm	81 bpm	414 bpm	68 bpm	337 bpm	View
2020-03-09 02:26:01 pm	69 bpm	399 bpm	71 bpm	378 bpm	View
2020-03-09 01:41:25 pm	75 bpm*	404 bpm*	69 bpm*	362 bpm*	View

SpO2

Date/Time	Code	Value	Range	Interpretation
2020-03-19 12:18:12 pm	Saturazione dell'ossigeno (%)	91 %		
2020-03-19 12:18:12 pm	Indice di perfusione (PI)	2.2 PI		
2020-03-19 12:18:12 pm	Frequenza cardiaca da polsimitro (bpm)	82 bpm		
2020-03-19 06:15:12 pm	Saturazione dell'ossigeno (%)	91 %		
2020-03-19 06:15:12 pm	Indice di perfusione (PI)	1.8 PI		

Self Assessment Questionnaire

**COVID-19 MONITORING SYSTEM
RESPIRATORY DISEASES EVALUATION QUESTIONNAIRE**

GENERAL INFORMATION

Date: 2020-03-20 | Time: 12:40

COMPLETED BY WHEN NOT COMPLETED BY THE PATIENT

Family name: DOE | First name: JOHN
Acting as: CHILD
Phone: +391234567890 | Email: john.doe@domain.com

PATIENT INFORMATION

Family name: ANGELA | First name: MARELLA
Tax code: BLBMLGMS3E2908 | Gender: FEMMINA
Birth date: 1963-08-13 | Birth place: IMPERIA
Living address: | Country: | Home address: | Country: |
City: | Phone: | Cohabitate: 4
Email: |

PATIENT EPIDEMIOLOGICAL PROFILE

RECENT STAY IN A RISK COUNTRY/AREA: ☒ Yes ☐ No ☐ Not known
IF SO, SPECIFY COUNTRY: |

RISK (LOCATION DEPARTURE DATE: 2020-03-09)

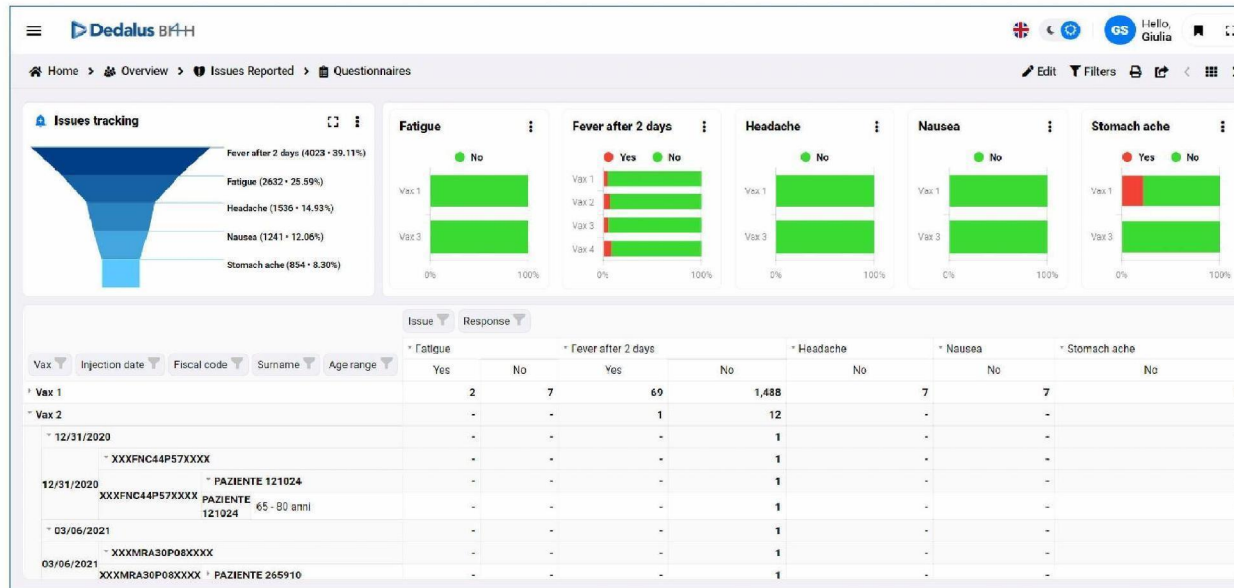
EXPOSURE TO CONFIRMED CASES (living or deceased): ☐ Yes ☒ No
EXPOSURE TO SUSPECTED CASES (high probability cases): ☒ Yes ☐ No
CONTACTS WITH PEOPLE RETURNED FROM RISK COUNTRY/AREAS: ☒ Yes ☐ No
CONTACT WITH RELATIVES OF SUSPECTED CASES: ☐ Yes ☒ No



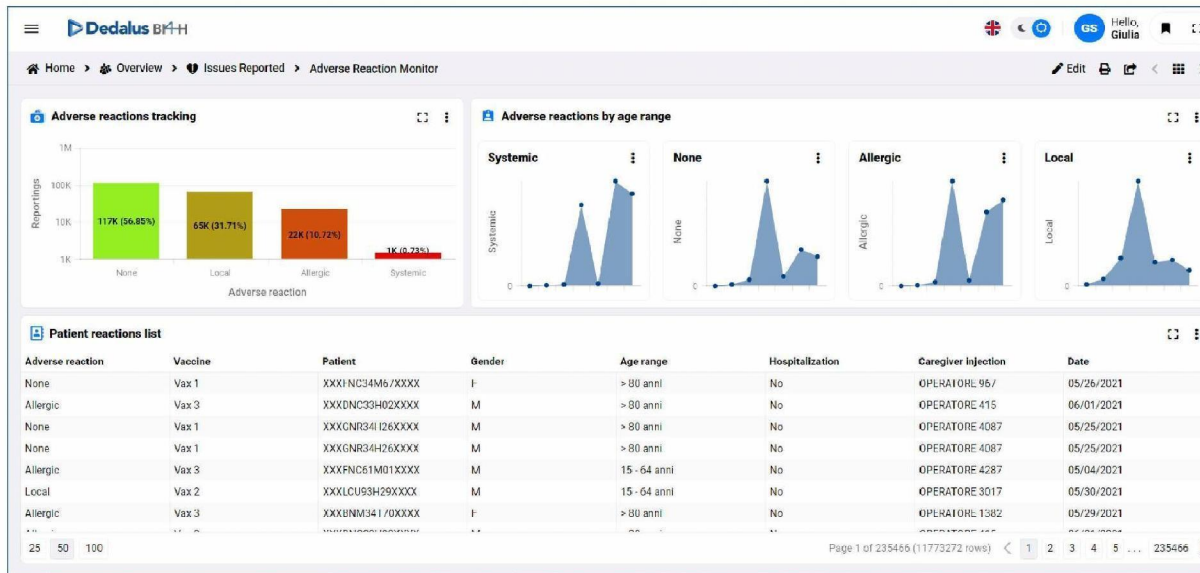
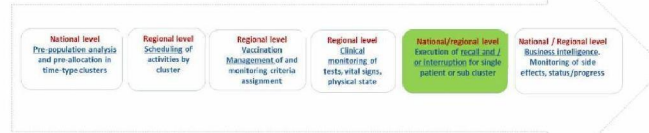
> **Focus on: KPI to governance and
campaign monitoring**

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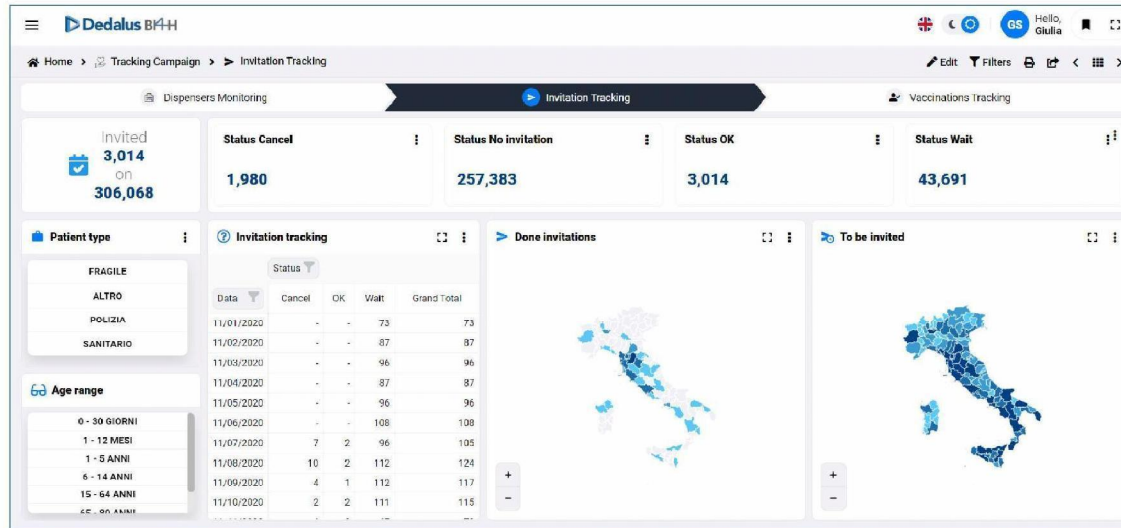
BI4H: Issues reported monitoring



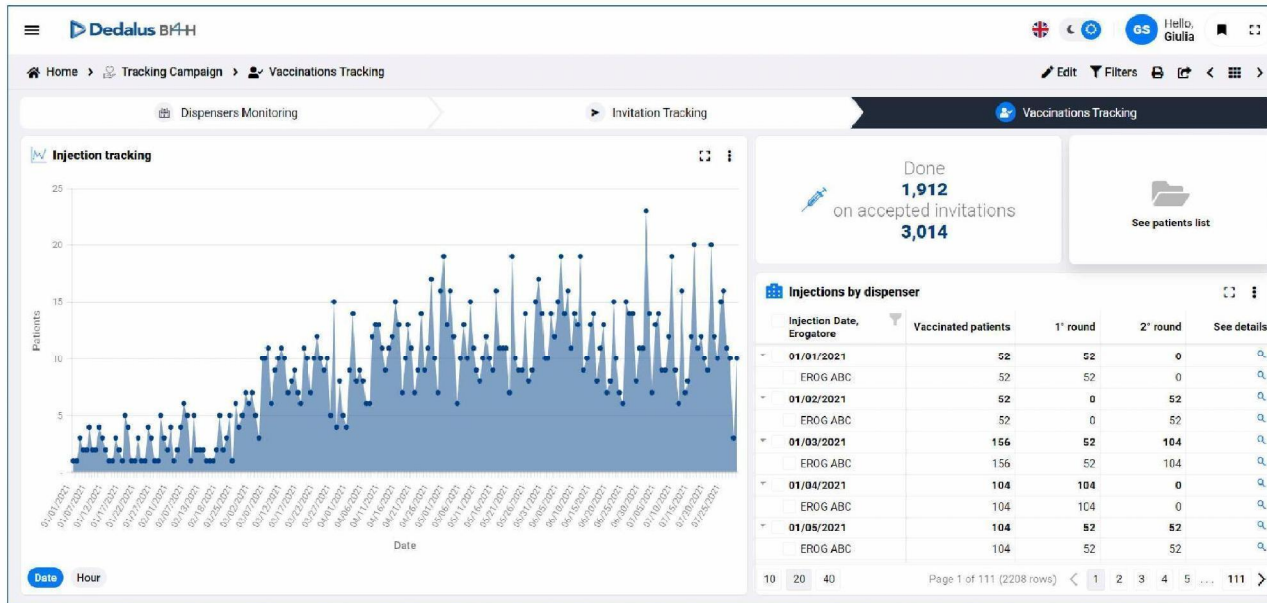
BI4H: Adverse reaction monitor



BI4H: Vaccination campaign progress - invitations



BI4H: Vaccination campaign progress - vaccinations



BI4H: Monitor distribution and stocks of doses

