

L'applicativo ideale che vorrei. Le risposte che cercano i clinici

Federico Gaioni

Lodovico Rossetti

Scienze Fiction

- Scienze Fiction è un genere di narrativa speculativa che in genere tratta concetti fantasiosi e futuristici come scienza e tecnologia avanzate, esplorazione spaziale, viaggi nel tempo, universi paralleli e vita extraterrestre. È stata chiamata la "letteratura delle idee" e spesso esplora le potenziali conseguenze delle innovazioni scientifiche, sociali e tecnologiche.





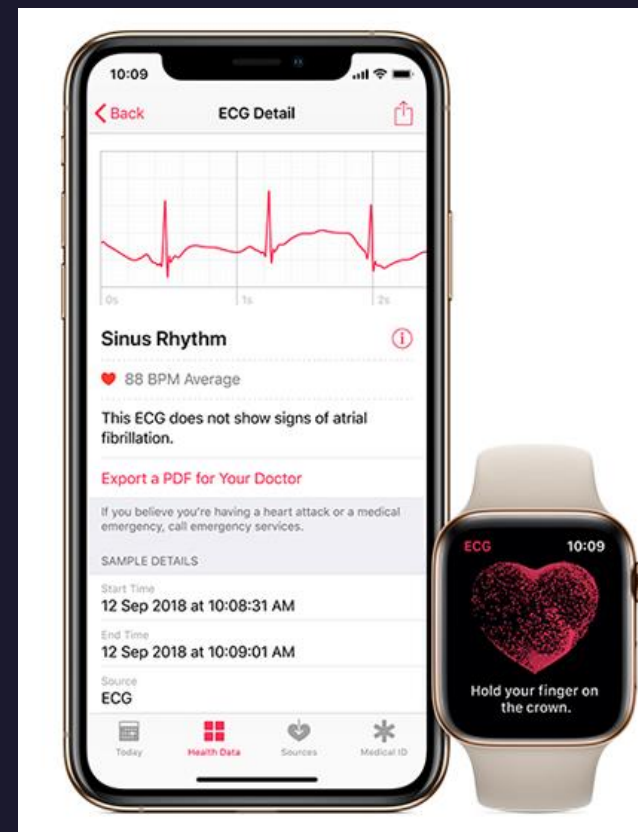
1966
(2265)



1997



ano i clinici



2018

Nel 2017 il concorso Qualcomm Tricorder ha premiato con 2,6 milioni di dollari un team americano, per aver sviluppato un dispositivo mobile in grado di analizzare 13 condizioni cliniche in maniera non invasiva e senza l'aiuto di personale qualificato.

Il vincitore si chiama Final Frontier Medical, capitanato dai fratelli Harris: Basil è un medico del pronto soccorso e George un ingegnere dei sistemi. Insieme hanno creato DxtER.

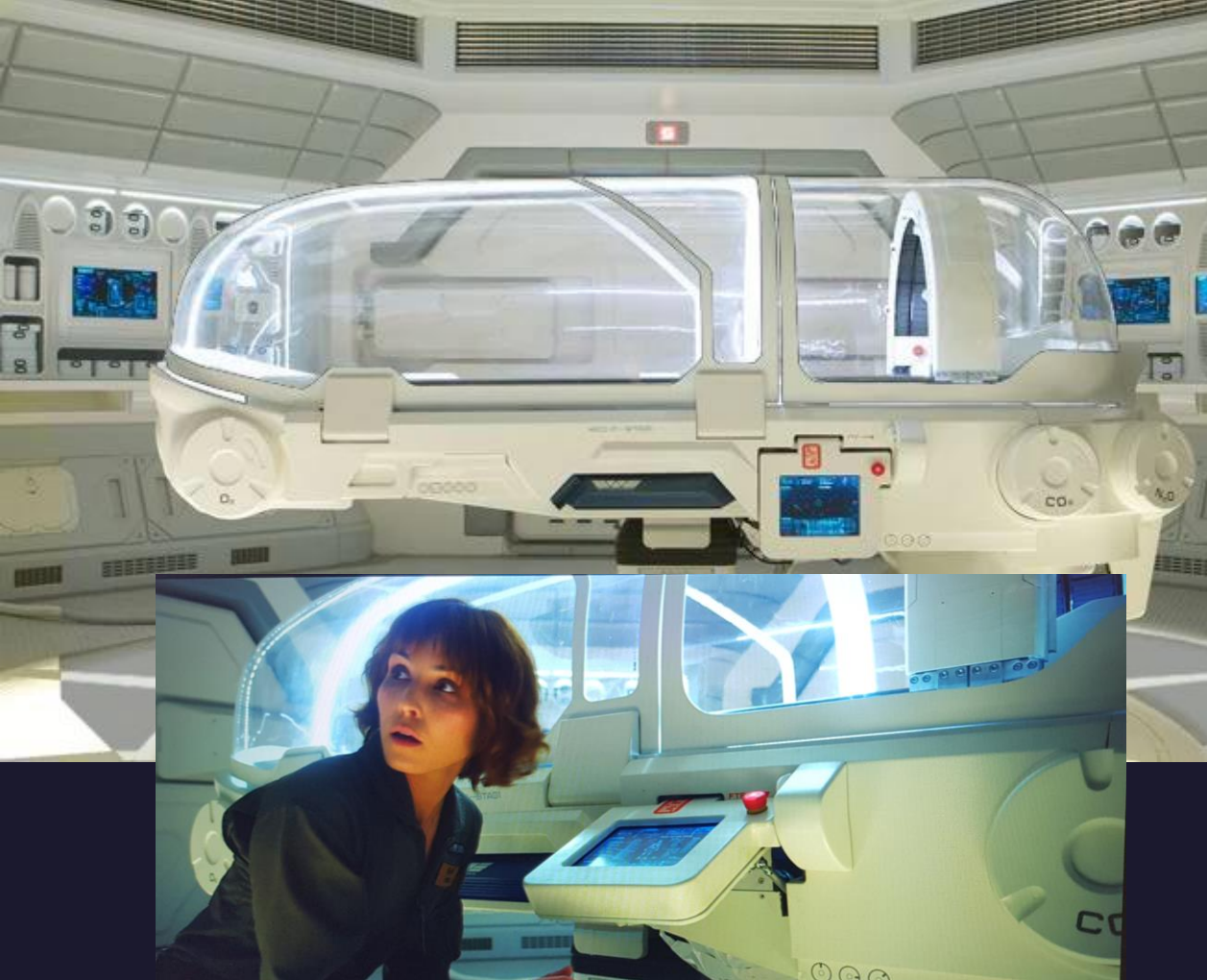
<https://youtu.be/rdpdWJdx5CE>



«AutoDoc»

The Expanse 2019



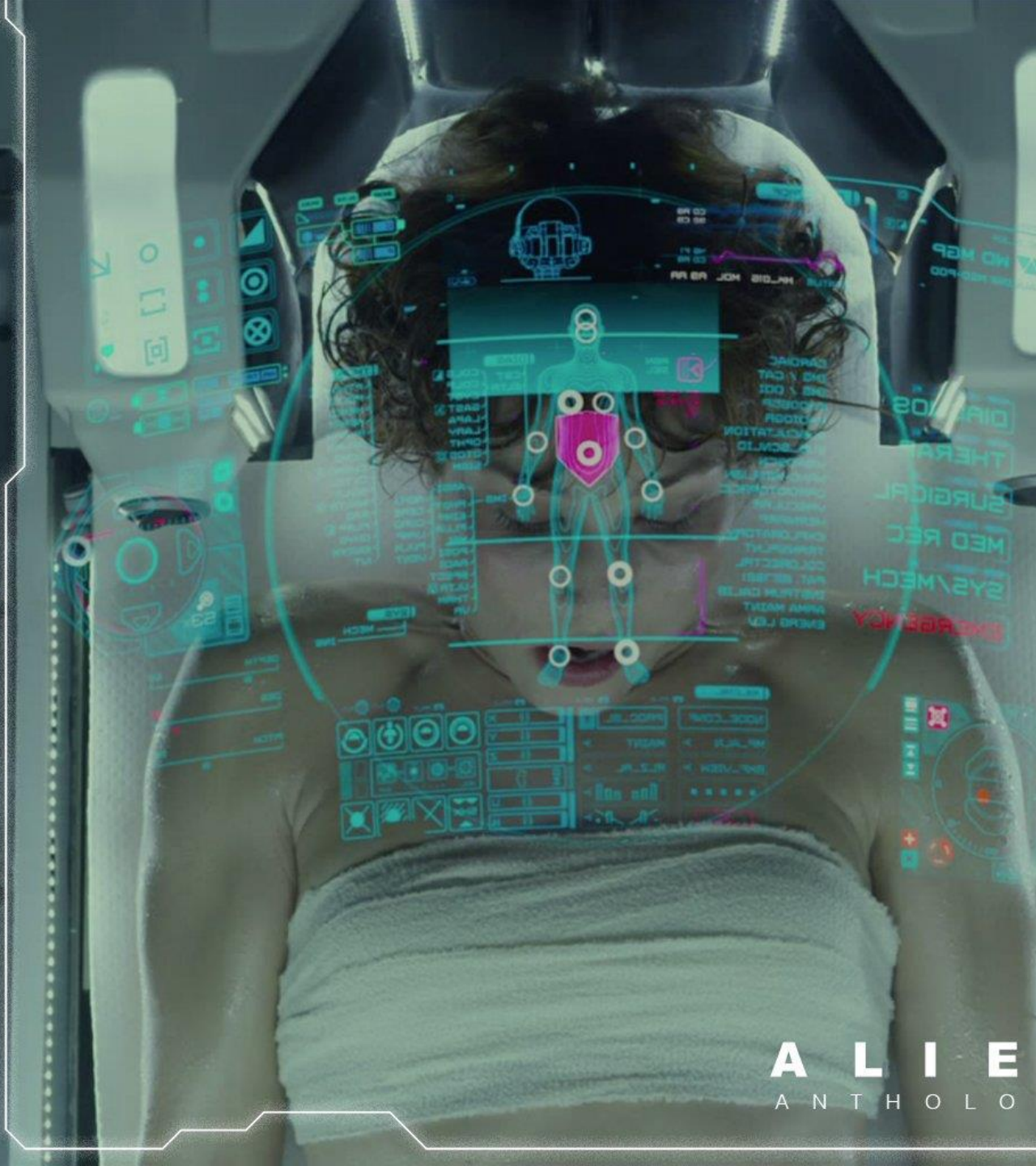


«Capsula chirurgica»

Prometheus (2017)

Lunedì 4 Aprile 2022

L'Applicativo ideale che vorrei. Le risposte che cerco



A L I E
A N T H O L O

Star Trek: Picard 2022



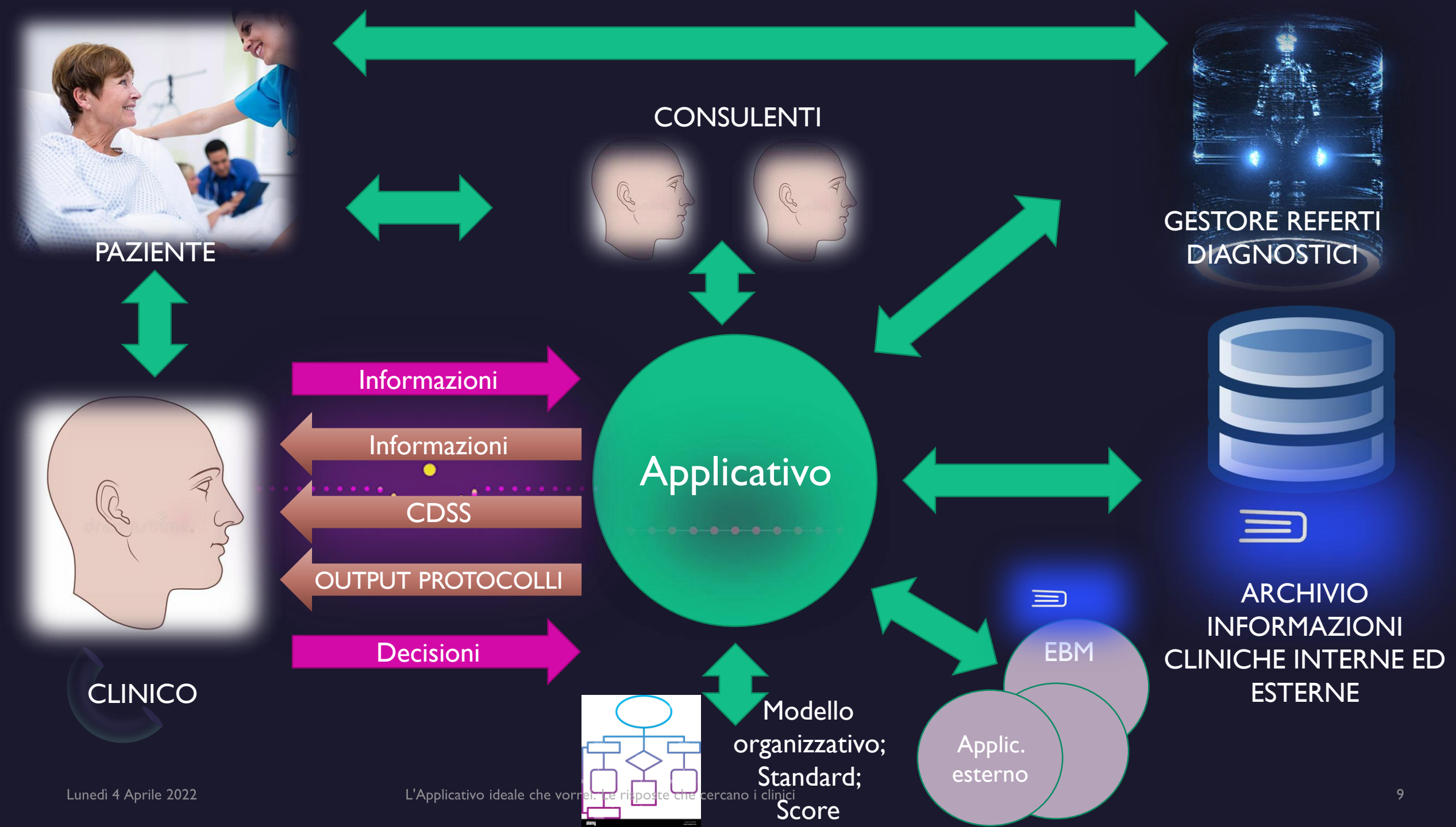
Lunedì 4 Aprile 2022

Cosa accomuna questi dispositivi

Interazione umana, Connettività, Integrazione fra sistemi, CDSS (clinical decision support system), Intelligenza Artificiale (autoapprendimento):

L'applicativo





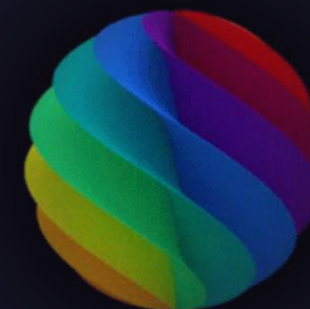
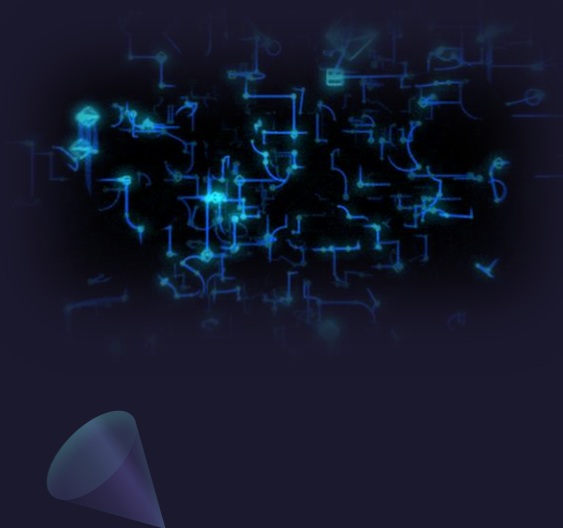
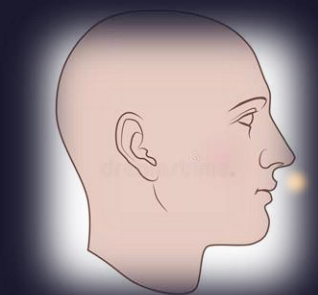
INFORMAZIONI

- Devono essere rese fruibili tutte le informazioni utili in modo organico, sul supporto più ergonomico
- Devono essere registrare tutte le informazioni in modo strutturato, a garanzia di una successiva indagine, analisi ed elaborazione
- Le informazioni devono essere elaborate secondo algoritmi o modelli per fornire supporto alla decisione clinica, sul «punto di cura» (qui e ora)



Triage, linee guida, CDSS

Le linee guida, i protocolli che sovrintendono il triage non siano solo un mero elenco di criteri selezionabili, ma siano elaborati in algoritmi attraverso i quali il sistema è in grado di dare supporto alla decisione di triage, attraverso output di alert, supporto o suggerimento.

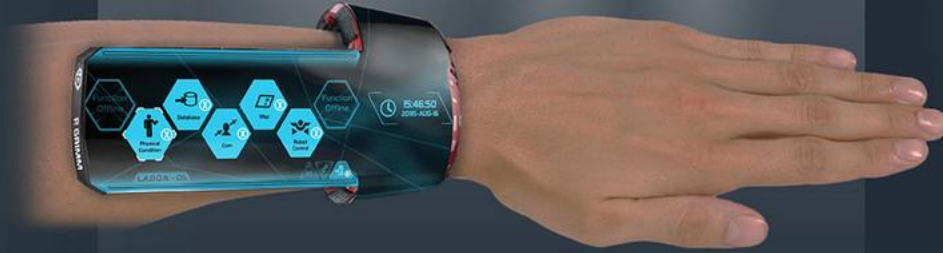


INTERFACCIA

Connessa
Ergonomica
Deve possedere periferiche di
input e output di facile accesso
Deve supportare il superamento
delle barriere linguistiche



<https://conceptdojo.com/projects/2y3WJ>



Compact State



Extended State



Circuit compartments



Lower Portion
& Locking Clasp

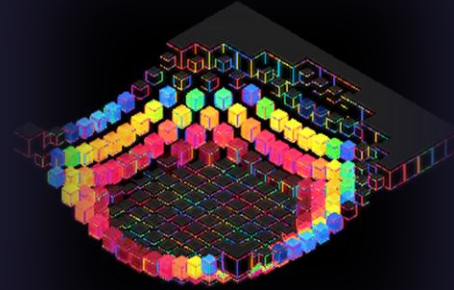


Diameter Extension

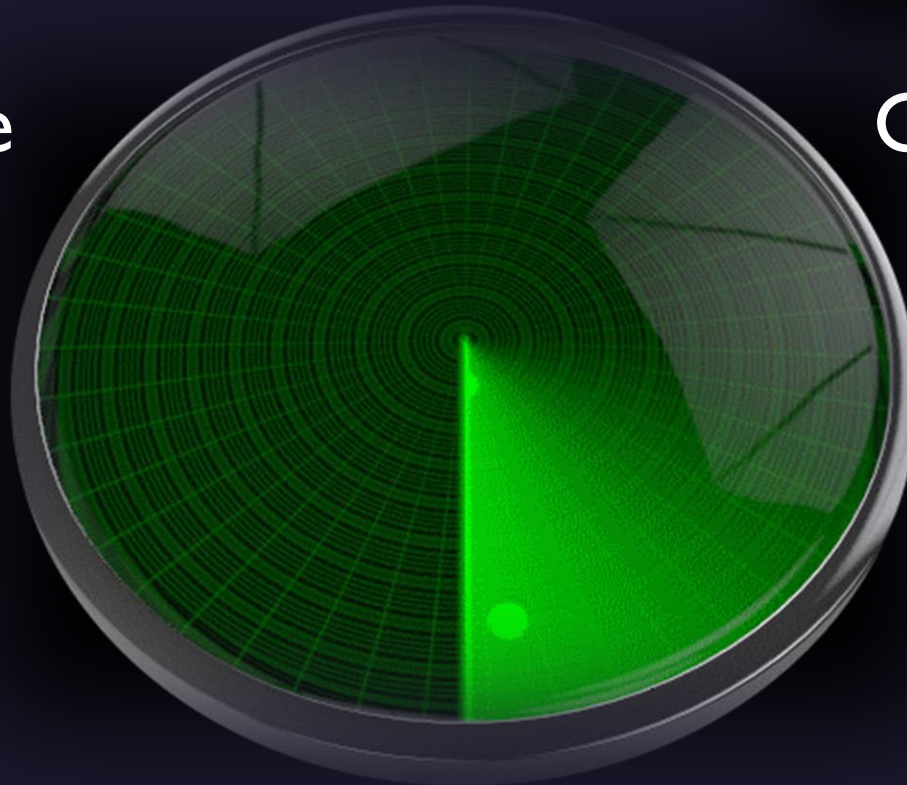


RAPPRESENTAZIONE DEL PAZIENTE

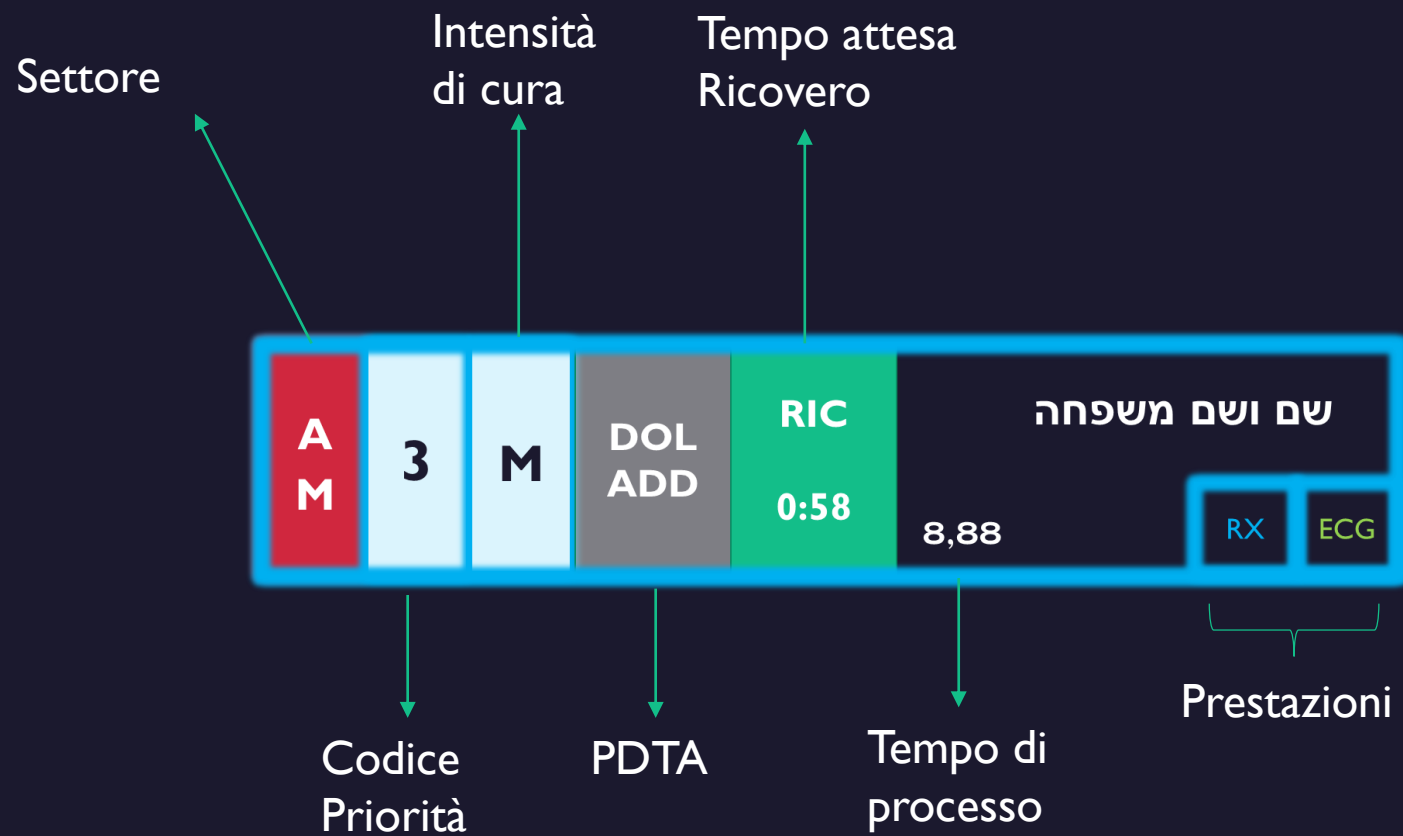
Rappresentazione grafica



Collocazione Spaziale



Collocazione di processo





שם ושם משפחה
RIC
DOL
ADD
0:58
8,88
RX
ECG

שם ושם משפחה
RIC
DOL
TOR
0:30
8,88
RX
ECG

שם ושם משפחה
RIC
DOL
TOR
0:30
8,88
RX
ECG

שם ושם משפחה
STROKE
8,88
RX
ECG

שם ושם משפחה
RIC
DOL
ADD
0:58
8,88
RX
ECG

שם ושם משפחה
TR
CRAN
8,88
RX
ECG

שם ושם משפחה
STROKE
8,88
RX
ECG

שם ושם משפחה
RIC
DOL
ADD
0:58
8,88
RX
ECG

שם ושם משפחה
RIC
DOL
ADD
0:58
8,88
RX
ECG

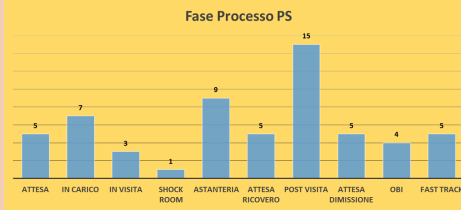
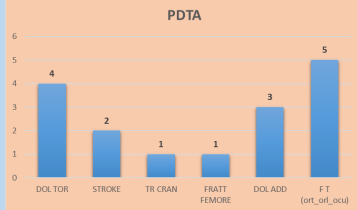
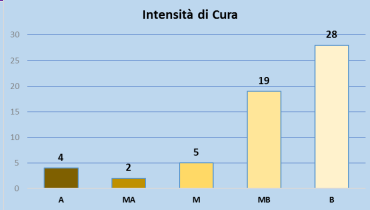
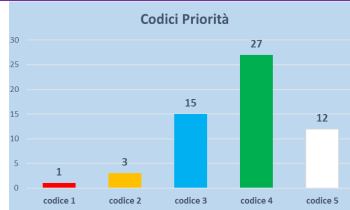
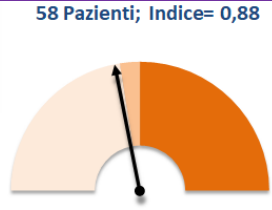


שם ושם משפחה



58 Pazienti; Indice= 0,88

58



Tempi medi

hh:mm:ss

Permanenza (escl. Ricoveri) 4:16:00

Attesa presa in carico 0:15:00

Attesa Ricovero 1:31:48

AREU 1 Triage NEW

Inf Scarlati; Inf Del Vecchio									
CAR	4	M	B	DTOR	XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88

5 Attesa

ATT	3	M	B	XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
ATT	3	M	B	XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
ATT	4	B		XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88

6 Presa in carico Inf. Sforza; Inf Scala

CAR	3	M	B	DTOR	XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
CAR	4	B			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
CAR	4	B			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
CAR	4	B			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
CAR	4	B			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
CAR	4	B			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88

Visita 1 Dr Guglielmi

SV1	3	M	B	XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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Visita 2 Dr ssa Fiori

SV2	3	M	B	XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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Visita 3 Dr ssa Primi

SV3	4	M	B	XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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Shock Room 6

S	1	A	TR	CRAN	XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	Nch 8:88
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4 Astanteria Alta Intensità Dr Bianchetti; Inf Trevisi

Dr Bianchetti; Inf Trevisi										3
1	A A	2	A	DTOR	XXXX YYYY, & 88a. Probl Principale					4
					Lab	Card		ECG	8:88	
2										5
3	Y... .. 8 88a									6

5

A	2	A	STROKE	RIC 0:15	XXXX YYYY, & 88a. Probl Principale	Lab	Nch	Tac	ECG 8:88
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A	3	M	A	RIC 1:03	XXXX YYYY, & 88a. Probl Principale	Lab	Rx	ECG 8:88
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4 OBI Dr Canini; Inf Pigoli

CBI										1
Dr. Canini; Inf. Pigoli										
1	OBI	4	M	B	XXXX YYYY, & 88a. Probl. Principale	Lab				2
2	OBI	3	M	B	XXXX YYYY, & 88a. Probl. Principale					3

4

OBI	3	M	B	XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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5

OBI	4	M	B	XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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6

OBI	4	M	B	XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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Astanteria Media Intensità 15

A	3	M	A	DTOR	XXXX YYYY, & 88a. Probl Principale	Lab	Card	ECG 8:88
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2

A	3	M			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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3

A	3	M			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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4

A	3	M	FR FEM		XXXX YYYY, & 88a. Probl Principale	Lab	Rx	ECG 8:88
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5

A	3	M			XXXX YYYY, & 88a. Probl Principale	Lab	Rx	ECG 8:88
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6

A	3	M			XXXX YYYY, & 88a. Probl Principale	Lab	Rx	ECG 8:88
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7

A	4	M			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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8

A	4	M			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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4

A	4	M	B	DOL ADD	XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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5

A	3	M	B		XXXX YYYY, & 88a. Probl Principale	Lab	Uro	ECG 8:88
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6

A	4	M	B	DOL ADD	XXXX YYYY, & 88a. Probl Principale	Lab	Rx	Ch	ECG 8:88
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7

A	4	M	B	DOL ADD	XXXX YYYY, & 88a. Probl Principale	Lab	Rx	Ch	ECG 8:88
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Post visita 15

S	3	M	B	XXXX YYYY, & 88a. Probl Principale	Lab	Rx	Vasc	ECG 8:88
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2

S	3	M	B	XXXX YYYY, & 88a. Probl Principale	Lab	Rx	Vasc	ECG 8:88
---	---	---	---	------------------------------------	-----	----	------	----------

3

S	4	M	B	DTOR	XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
---	---	---	---	------	------------------------------------	-----	-----	----	----------

4

S	4	B			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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5

S	4	B			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
---	---	---	--	--	------------------------------------	-----	-----	----	----------

6

S	4	B			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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7

S	4	B			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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8

S	4	B			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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5

S	3	B			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
---	---	---	--	--	------------------------------------	-----	-----	----	----------

6

S	4	M	B	DOL ADD	XXXX YYYY, & 88a. Probl Principale	Lab	Rx	Ch	ECG 8:88
---	---	---	---	---------	------------------------------------	-----	----	----	----------

7

S	4	B			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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8

S	4	B			XXXX YYYY, & 88a. Probl Principale	Lab	Tac	RX	ECG 8:88
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Radiologia PS

S	4	M	B	XXXX YYYY, & 88a. Probl Principale	Lab	Ort	RX	ECG 8:88
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2

S	4	B			XXXX YYYY, & 88a. Probl Principale	Lab	Ort	RX	ECG 8:88
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3

S	4	B			XXXX YYYY, & 88a. Probl Principale	Lab	Ort	RX	ECG 8:88
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4

F	5	B	FT		XXXX YYYY, & 88a. Probl Principale	Lab	Ort	Rx	ECG 8:88
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5

A	2	A	STROKE		XXXX YYYY, & 88a. Probl Principale	Lab	Nch	Tac	ECG 8:88
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6

A	2	A	STROKE		XXXX YYYY, & 88a. Probl Principale	Lab	Nch	Tac	ECG 8:88
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7

A	2	A	STROKE		XXXX YYYY, & 88a. Probl Principale	Lab	Nch	Tac	ECG 8:88
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8

A	2	A	STROKE		XXXX YYYY, & 88a. Probl Principale	Lab	Nch	Tac	ECG 8:88
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9

A	2	A	STROKE		XXXX YYYY, & 88a. Probl Principale	Lab	Nch	Tac	ECG 8:88
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10

A	2	A	STROKE		XXXX YYYY, & 88a. Probl Principale	Lab	Nch	Tac	ECG 8:88
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11

A	2	A	STROKE		XXXX YYYY, & 88a. Probl Principale	Lab	Nch	Tac	ECG 8:88
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12

A	2	A	STROKE		XXXX YYYY, & 88a. Probl Principale	Lab	Nch	Tac	ECG 8:88
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4

Astanteria Alta Intensità

Dr Bianchetti; Inf Trevisi

1	A A	2	A	D TOR	XXXX YYYY, & 88a. Probl Principale	120/75	SpO2 98	
					Lab Card ECG 8:88	Fr 102	Hr 13	

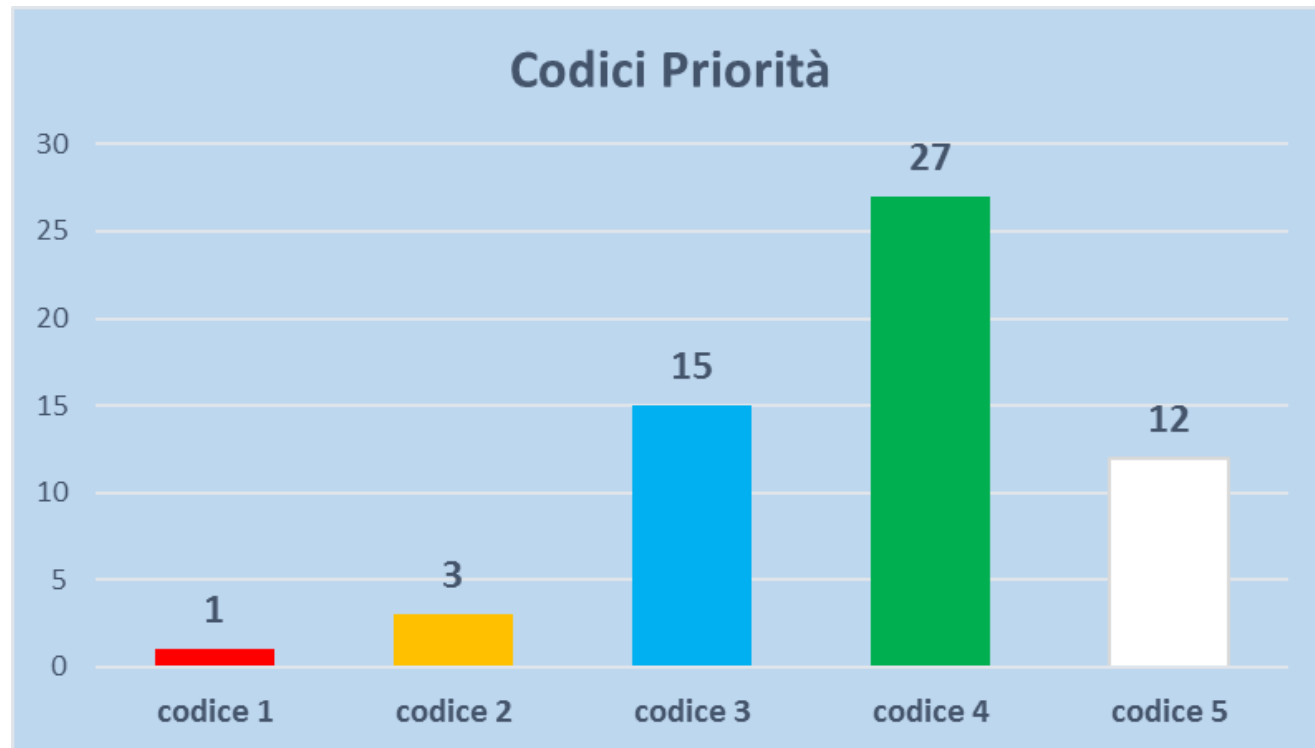
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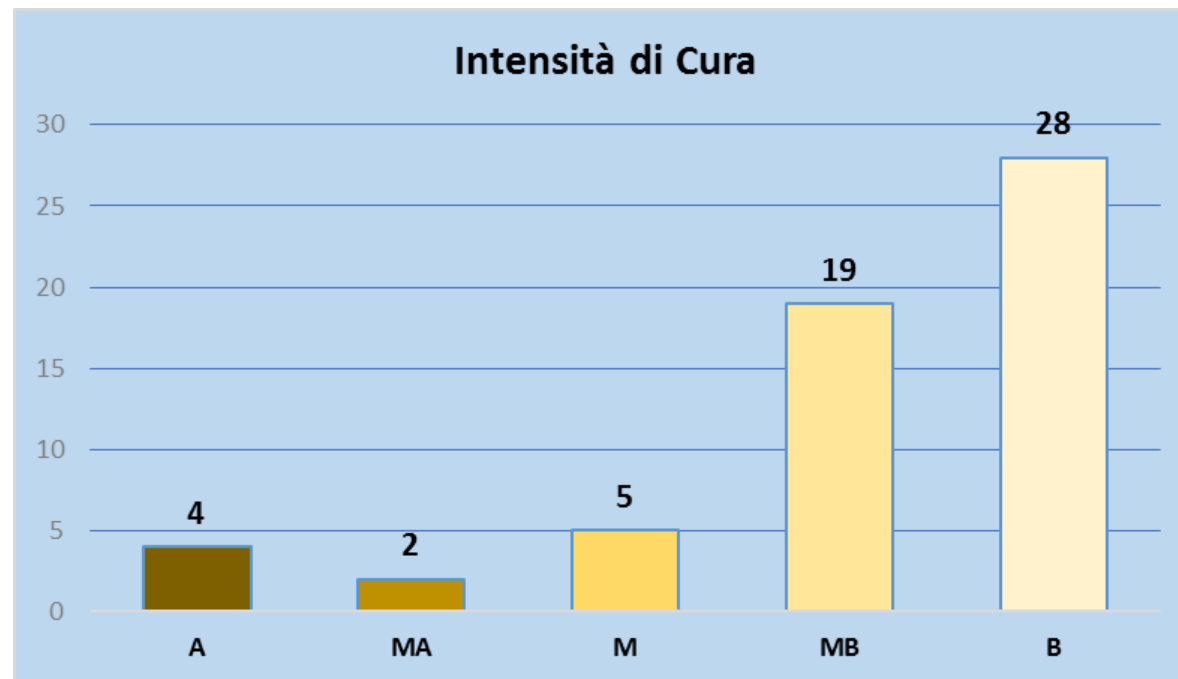
3	A A	2	A	STROKE	XXXX YYYY, & 88a. Probl Principale	150/99	SpO2 94	
					Lab Nch Tac ECG 8:88	Fr 86	Hr 10	

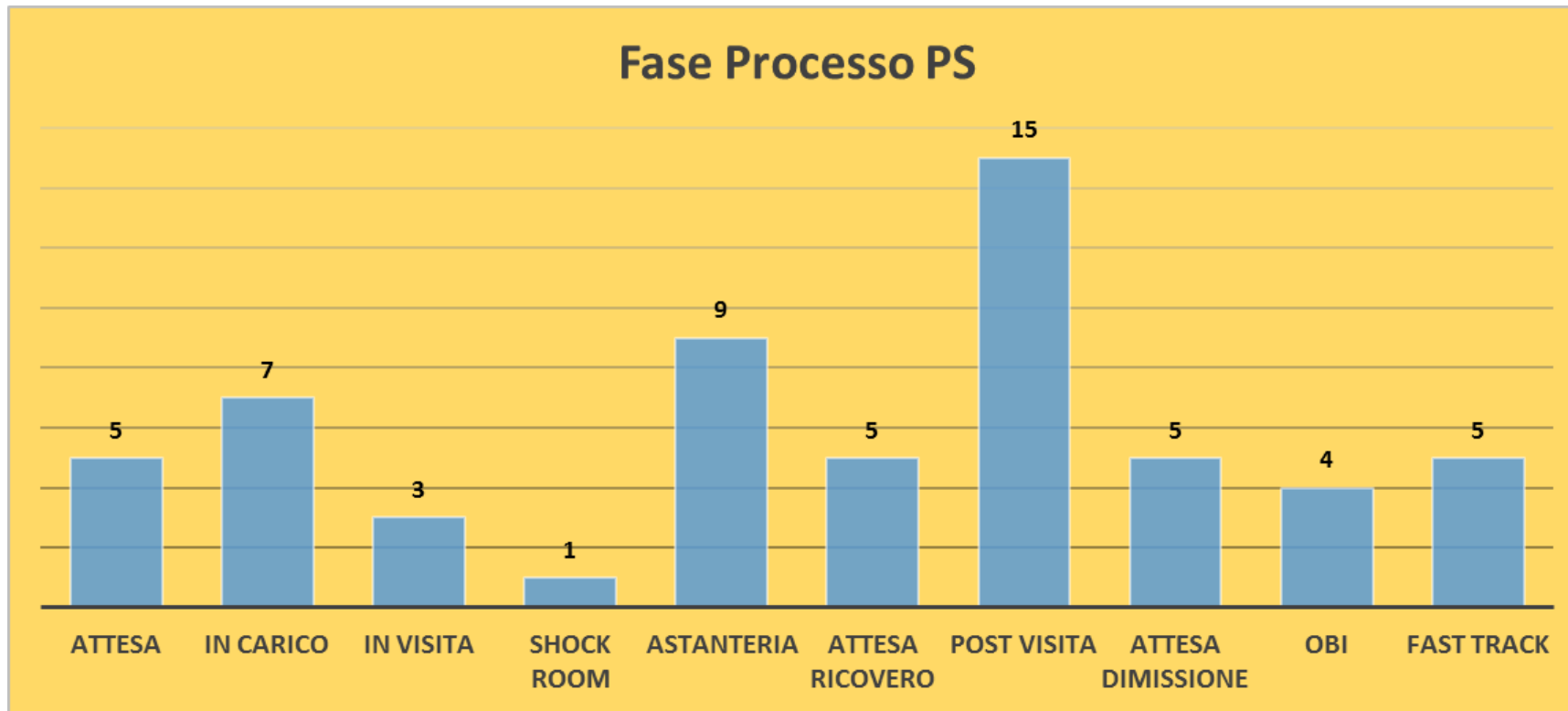
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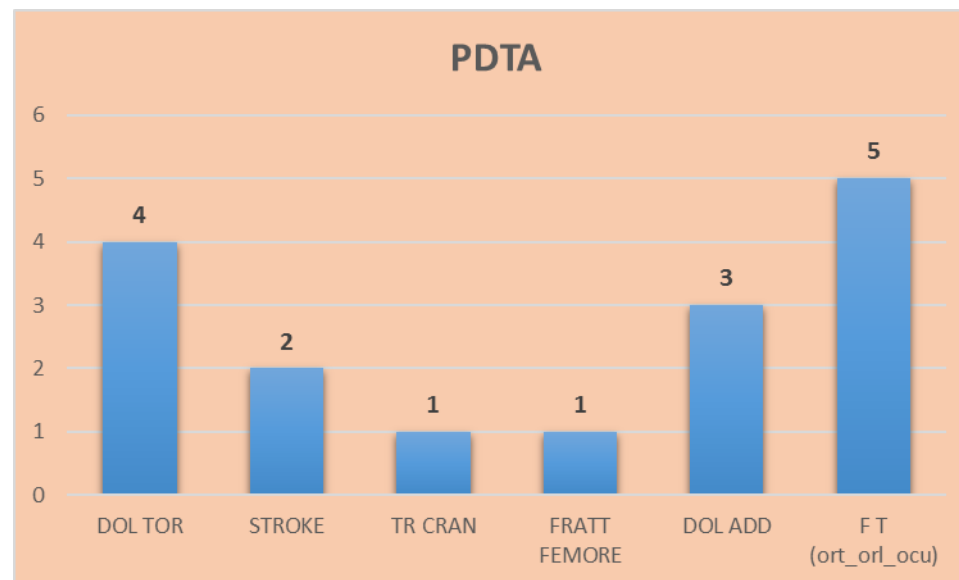
5	A A	2	A	STROKE	RIC 0:15	XXXX YYYY, & 88a. Probl Principale	135/77	SpO2 96	
						Lab Nch Tac ECG 8:88	Fr 74	Hr 15	

6	A A	3	M A		RIC 1:03	XXXX YYYY, & 88a. Probl Principale	113/75	SpO2 96	
						Lab Rx ECG 8:88	Fr 86	Hr 10	









PDTA	TOT.	A	MA	M	MB	B
DOL TOR	4	<u>1</u>			<u>3</u>	
STROKE	2		2			
TR CRAN	1	1				
FRATT FEMORE	1			1		
DOL ADD	3				3	
FT	5					5

58 Pazienti; Indice= 0,88



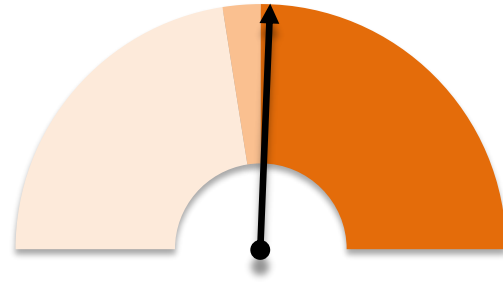
Individuare i fattori che intervengono sul concetto di sovraffollamento.

- Totale pazienti (ma non solo):
- Numero parziale dei pazienti sulla stratificazione per intensità di cura (stratificazione per risorse richieste) [PA, PB, PC, ...]
- Risorse a disposizione per ogni livello di intensità di cura espresso in postazioni massime a disposizione [KA, KB, KC, ...]
- Coefficiente per ogni livello di intensità di cura [XA, XB, XC, ...]

• **FORMULA:**

$$\frac{[(PA/KA)*XA + (PB/KB)*XB + (PC/KC)*XC +]}{(XA+XB+XC+...)}$$

50 Pazienti; Indice= 1,03



$$[(PA/KA)*XA + (PM/KM)*XB + (PB/KB)*XB]/(XA+XM+XB)$$

TIPS	K	posti	P	pz	TASS	X	Coeff
Alta e Medio-Alta	KA	8	PA	8	1,00	XA	5
Media	KM	8	PM	8	1,00	XM	3
Bassa e Medio-Bassa	KB	30	PB	34	1,13	XB	2
TOT		46		50			

INDICE= 1,03

S R	1	A	TR CRAN	XXXX YYYYYY, & 88a. Probl Principale				
				Lab	Tac	RX	ECG	8:88

A A	2	M A	STROKE	RIC 0:15	XXXX YYYYYY, & 88a. Probl Principale				
					Lab	Nch	Tac	ECG	8:88

PARAMETRI

P.A. 110 / 70

P diff 40

FR C 140

In terapia Betabloccante

FR Resp 15

Sat O2 95

O2 senza O2 terapia

T.c. °C 36

DOLORE

Glicemia

GCS Eyes 4

GCS VERBAL 4

GCS MOTOR 6

Perdita da GCS abituale

GCS ABITUALE

SHOCK INDEX

Possibile stato di Shock

GCS

Valutare rischio infezione

Qsofa

AVPU

MEWS mod

Paziente critico

fr r 1

O2 0


fr c 3

pa s 0

temp 0

avpu 1

mews CRIT



CODICE PROPOSTO

1

INTENSITA' DI CURA

Alta

SETTORE PROPOSTO

Shock Room

2

PARAMETRI VITALI

HARE

Dolore addominale

Trauma

TRAUMA CRANICO

RESET

CANCEL

CANCEL

CANCEL

CANCEL

T.I.P.S.

Peso Ass.

CANCEL

5

4

3

2

1

RESET

Settore

Anamnesi

PDTA

PDTA

×