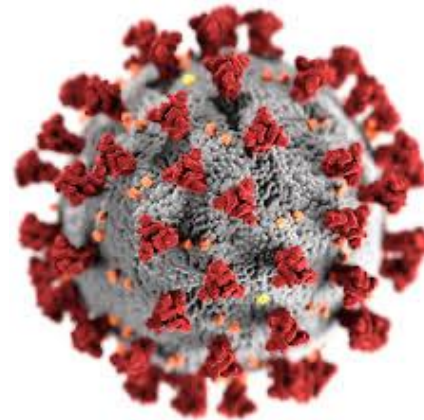


SIMDO

Vision SIMDO su COVID-19

Versione 20.04.20



COVID-19 & Diabete: cosa accadrà domani ?

Estimation of effects of nationwide lockdown for containing coronavirus infection on worsening of glycosylated haemoglobin and increase in diabetes-related complications: A simulation model using multivariate regression analysis

Samit Ghosal, Binayak Sinha, Milan Majumder, Anoop Misra

Disaster Name	Number of days*	Baseline A1c	Post-disaster A1c	A1c % increment
KATRINA ⁶	8	7.5	7.6	0.01
KOBE ⁷	8	7.44	7.64	0.03
Hanshin-Awashi ⁸	14	7.74	8.34	0.08
Gulf War ⁹	60	10.1	10.9	0.08
Marmara ¹⁰	21	7.4	8.8	0.19
GEJE Tsunami ¹¹	14	5.9	6.5	0.10

COVID-19 & Diabete: cosa accadrà domani ?

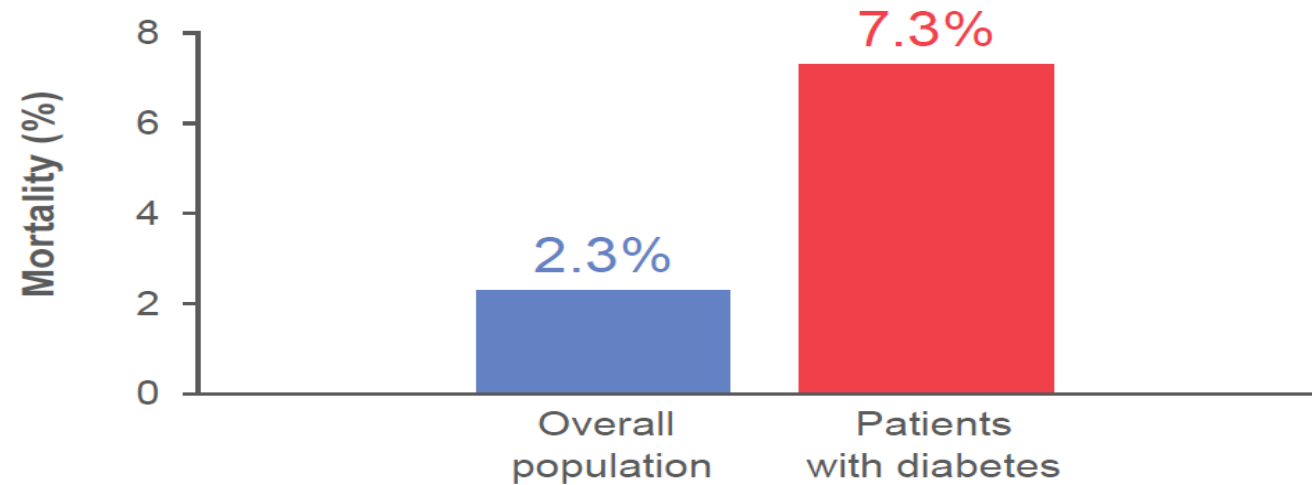
Number of days of lock-down	Baseline A1c	Post-disaster A1c	Non-proliferative diabetic retinopathy	Proliferative diabetic retinopathy	Photocoagulation	Microalbuminuria	Overt proteinuria	DPN	Amputation risk	MI	CVA	Infections
*	8.9		11.0%	11.6%	5.8%	36.5%	11.3%	41.4%	11.6%	3.4%	1.9%	2.1%
30	8.9	11.16	13.8%	14.5%	7.3%	45.8%	14.2%	51.9%	14.5%	4.3%	2.4%	2.6%
45	8.9	12.58	15.5%	16.4%	8.2%	51.6%	16.0%	58.5%	16.4%	4.8%	2.7%	3.0%
60	8.9	14.00	17.3%	18.2%	9.1%	57.4%	17.8%	65.1%	18.2%	5.3%	3.0%	3.3%
75	8.9	15.42	19.1%	20.1%	10.0%	63.2%	19.6%	71.7%	20.1%	5.9%	3.3%	3.6%
90	8.9	16.84	20.8%	21.9%	11.0%	69.0%	21.4%	78.3%	21.9%	6.4%	3.6%	4.0%

Table 3: Predicted diabetes-related complication rates in proportion to the increasing duration of lockdown (30-90 days) and associated increase in HBA1C.

«A pre-planned strategy must be put in place to prevent such a scenario as poorly controlled diabetes is an independent risk factor of mortality from COVID19».

COVID-19-related mortality rates are higher in patients with diabetes compared with the general population

A report of 44,672 cases of COVID-19 published by the Chinese Centre for Disease Control and Prevention



Modello SIMDO di gestione della persona con diabete in tempo di COVID-19

Le criticità

- La paura di uscire di casa, di andare in ambulatorio o in ospedale
- L'isolamento sociale: più stress, meno **attività fisica**, peggiore **dieta**, minore **aderenza terapeutica**
- Meno visite, meno cure, più scompenso e complicanze
- Prevedibile «ondata di ritorno» in ambulatorio diabetologico

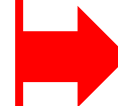
- **Nesso epidemiologico: pandemia cardiometabolica**
- **Nesso patogenetico**
 - Ingresso nella cellula – ACE2, DDP4, TMPRSS2
 - Replicazione virale – Iperglicemia
 - Risposta immune – CD4 – sistema HLA – **adipochine**
 - Implicazioni **cardiologiche**
 - Ruolo delle pre-esistenti **complicanze**
- **Aspetti clinici**
 - Ruolo del Controllo glicometabolico
 - Ruolo dell'Idrossiclorochina
 - Ruolo di DDP4-I e GLP1-RA

Acta Diabetol (2010) 47:193–199
DOI 10.1007/s00592-009-0109-4

ORIGINAL ARTICLE

Binding of SARS coronavirus to its receptor damages islets and causes acute diabetes

Jin-Kui Yang · Shan-Shan Lin · Xiu-Juan Ji ·
Li-Min Guo



**COVID-19 :anche
malattia
cardiometabolica ?**

Modello SIMDO di gestione della persona con diabete in tempo di COVID-19

Le risposte

- 1) Medicina di iniziativa → il diabetologo cerca il paziente
- 2) Implementare la Telemedicina
- 3) **4C**: verifichiamo **C**ompenso, attività fisica in **C**asa, **C**ibo, aderenza alla **C**ura
- 4) Oltre la telemedicina: necessità della visita «tradizionale»
- 5) Visita «tradizionale»: quanto e come



SIMDO

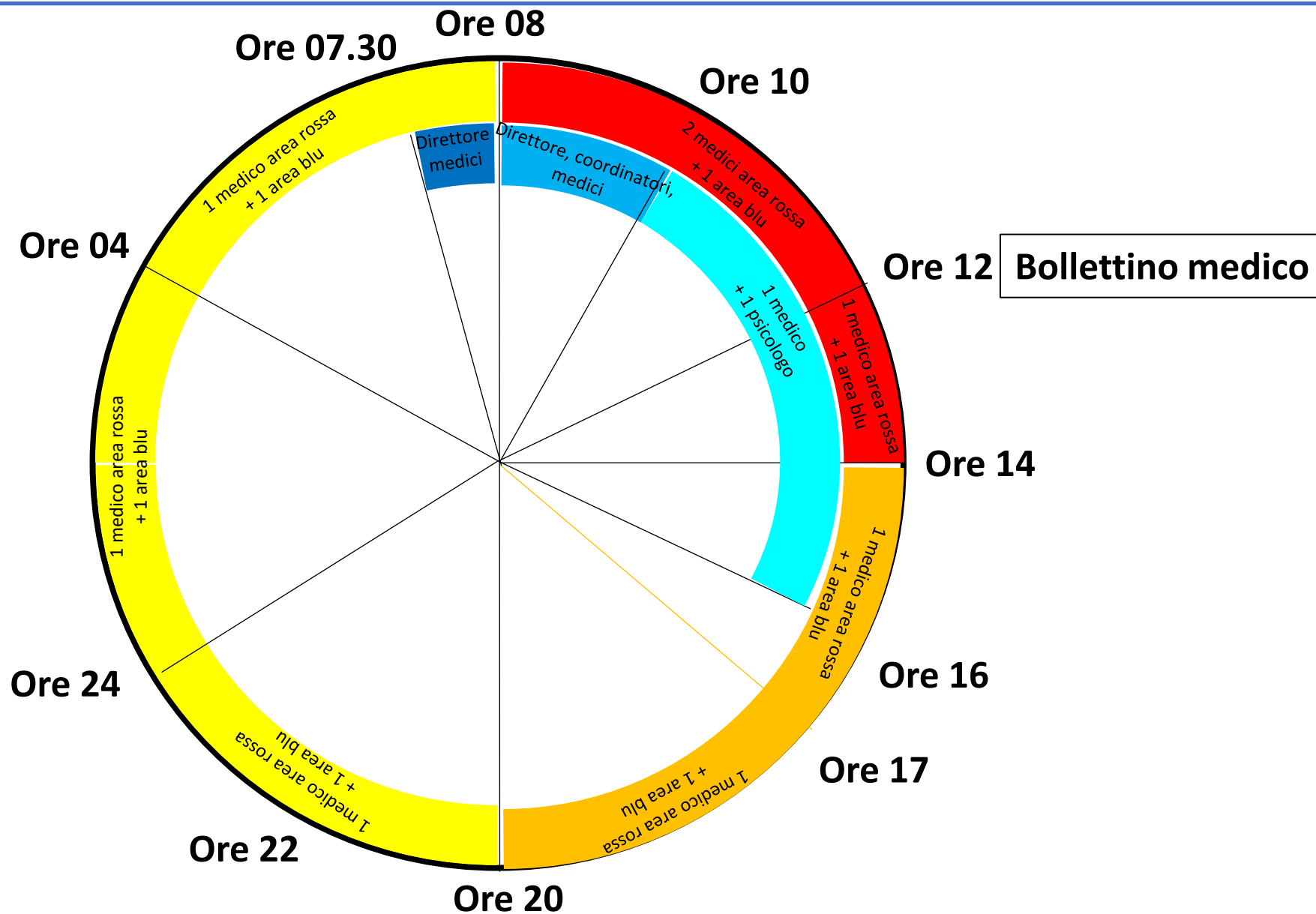
PERCORSO DIAGNOSTICO-TERAPEUTICO
DEL PAZIENTE CON COVID-19
CASO CONFERMATO – Vers 200420
Dal PS all'Area Medica COVID-19



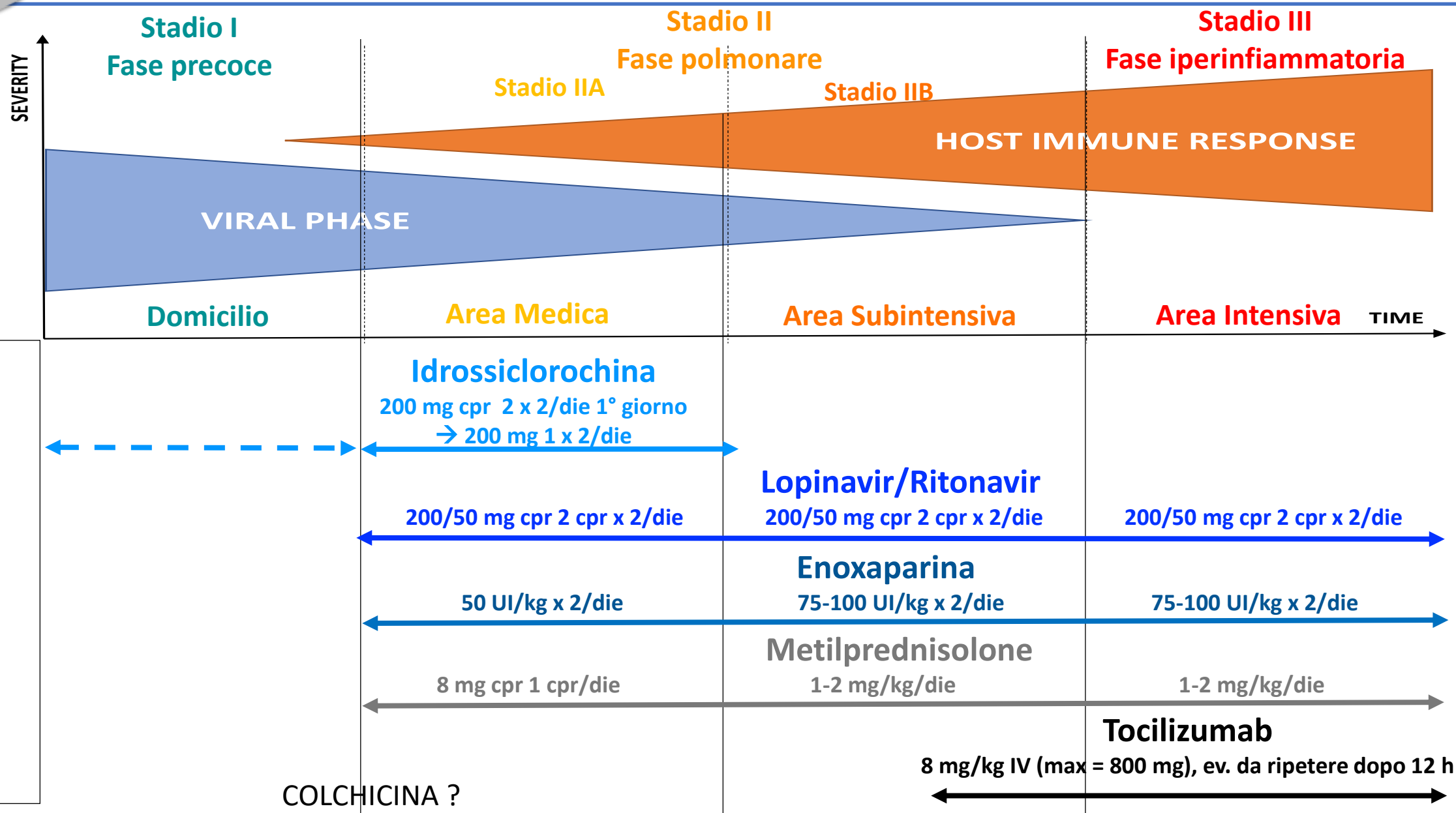
FAILURE
IS
NOT
AN
OPTION
KENNEDY SPACE CENTER



Ciclo di lavoro



Terapia della polmonite virale – COVID 19



Stadiazione, allocazione «ideale» ed O2 terapia

	Stadio I Fase precoce Domicilio	Stadio II Fase polmonare		Stadio III Fase iperinflammatoria Area Intensiva
		Stadio IIA Area Medica	Stadio IIB Area Subintensiva	
SIGNS & SYMPTOMS	Asymptomatic, fever <37.5°C, diarrhoea, headache, asthenia, anosmia and ageusia, conjunctivitis	Dry cough, fever >37,5°C, arthro-myalgia	Shortness of breathe, Hypoxia, arrhythmia	ARDS, SIRS, Shock, MOF, cardiac failure, MAS /HLH (Enlarged liver/spleen/lymph nodes), skin rash, Easy bruising and/or abnormal bleeding, fever >38.5°C.
LAB	Normal routine lab tests, mild lymphopenia, normal blood gas	Increasing lymphopenia, mild increase of PT and/or ferritin and/or D-Dimer and/or LDH, mild hypoxia >92	progressive increase of d-dimer and ferritin, increase transaminases and triglycerides, abnormal blood gas (hypoxia <92-hypocapnia etc.), mild increase NT-proBNP and troponin, IL6, CRP, reduction of platelet count	Elevation of inflammatory markers and ferritin, progressive cytopenias, increase in NT-proBNT, troponin and renal function markers
LUNG US	Normal Localized B-lines	Diffuse B-lines – pleural line thickening	Diffuse B-lines – pleural line thickening – Subpleural consolidation, localized pleural effusion	Diffuse B-lines – pleural line thickening – Subpleural and alveolar consolidation – air bronchograms
CT SCAN	Normal Localized supleural ground glass	Ground glass		Crazy paving
RESP	SaO2 > 92% (*) P/F > 300 FR < 20	SaO2 < 92% (*) FR > 30 P/F 200-300 Risposta a O2 ≤ 15 l/m	SaO2 < 92% (*) FR > 30 P/F 100-200 Risposta a CPAP/NIV	SaO2 < 92% (*) FR > 30 P/F < 100 NO Risposta a CPAP/NIV

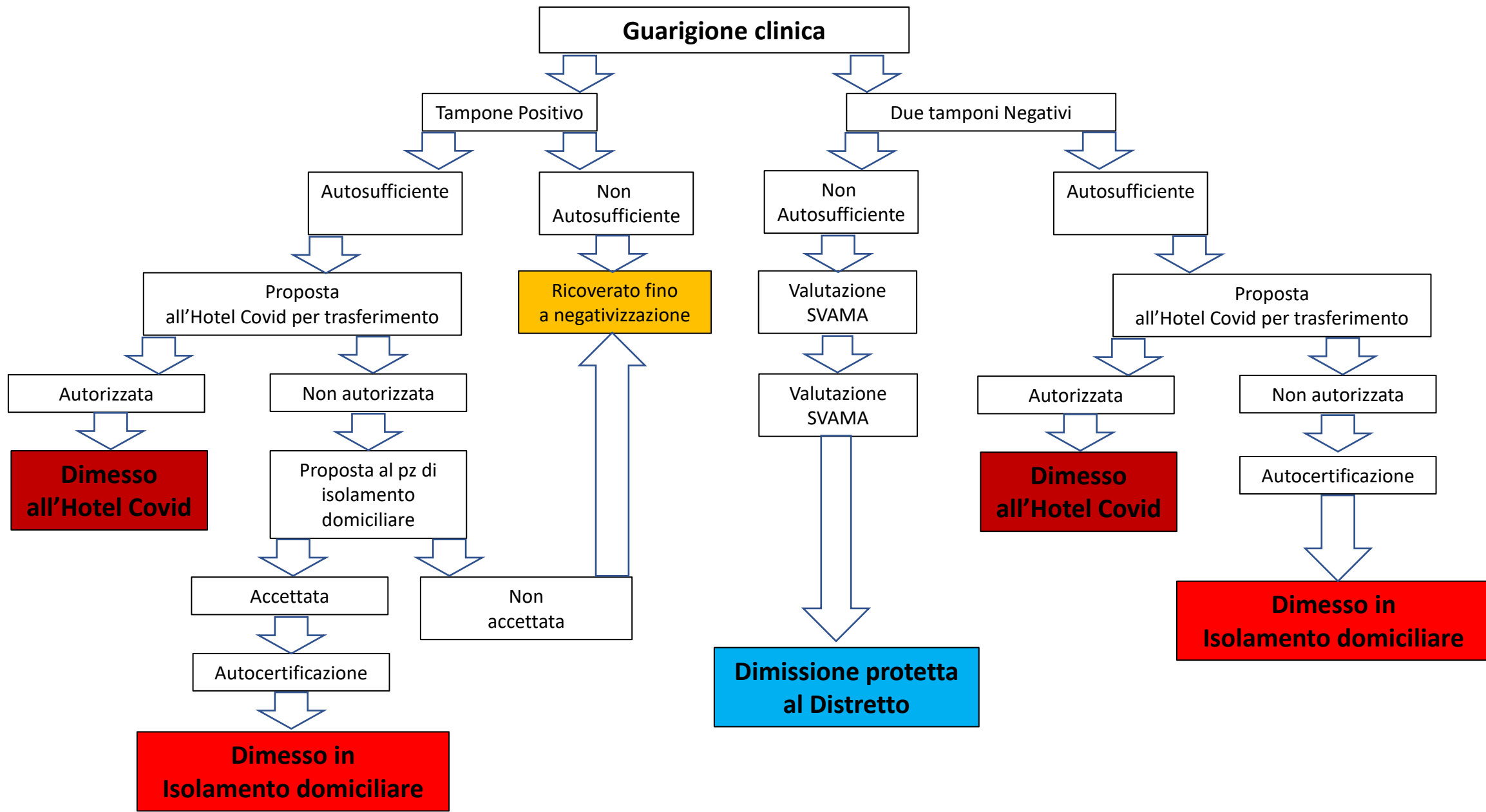
O2 terapia convenzionale

CPAP - NIV

IOT

(*) = 88% nei cronici

Proposta operativa SIMDO : Percorso di dimissione



Le criticità sia per la gestione del Diabete che per i soggetti post acuzie

- Quali sequele ?
- Quale modello di follow-up ?
- Quale ruolo del diabetologo nel follow-up post-dimissione ?