

Le raisonnement clinique en temps difficiles. Pandémie de COVID-19 et Biais Cognitifs

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RAISONNEMENT CLINIQUE

PROCESSUS DE RÉFLEXION CONDUISANT À DES DÉCISIONS

+

ANCRÉ DANS LA PRATIQUE CLINIQUE

=

ACTIONS PRATIQUES «JUDICIEUSES»



**« PERTURBATION » DU RC
EN TEMPS PANDÉMIQUES:
UN CAS**

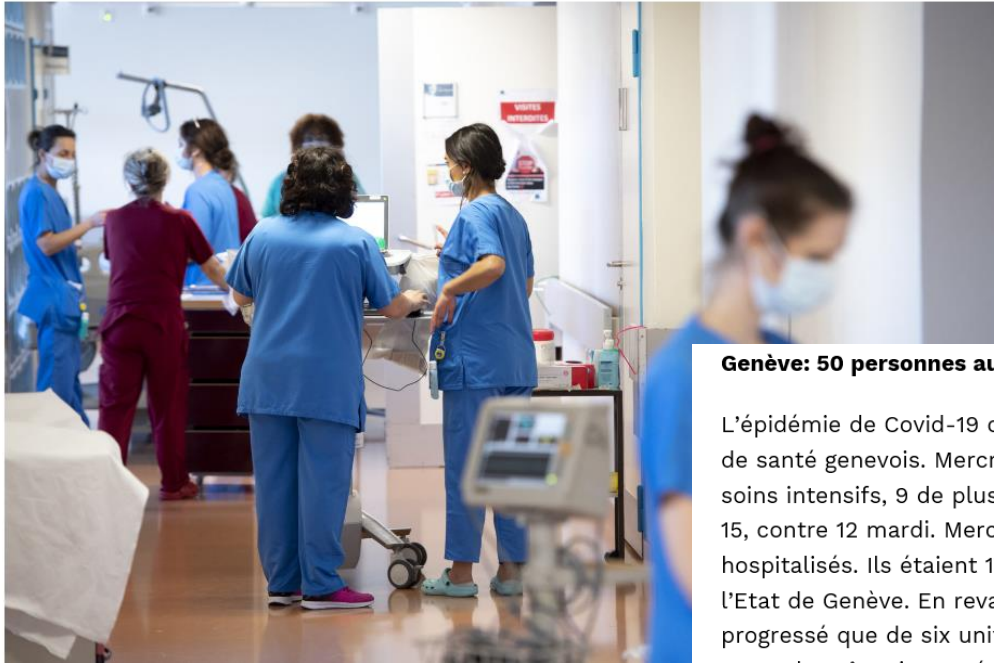
PREMIÈRE VAGUE, LE 25.03.2020



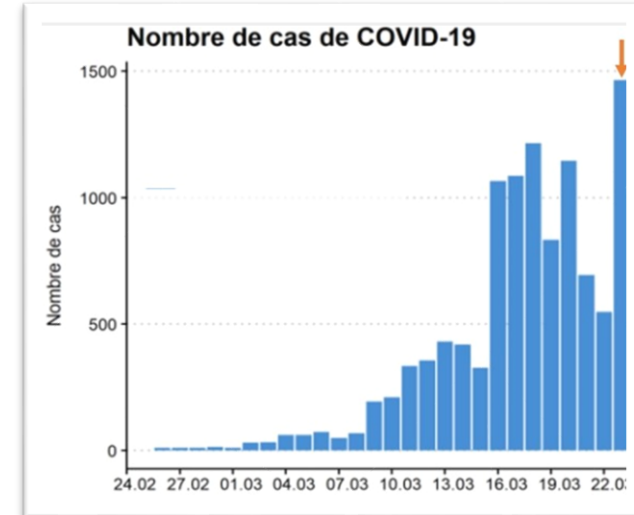
Coronavirus: toutes les infos du 25 mars 2020



Publié il y a 2 mois, le 25 mars 2020
De **ATS KEYSTONE**



La Ville de Genève ferme les places de jeux pour enfants



Genève: 50 personnes aux soins intensifs

L'épidémie de Covid-19 continue d'exercer une forte pression sur les services de santé genevois. Mercredi, 50 personnes contaminées se trouvaient aux soins intensifs, 9 de plus que la veille. Le bilan des morts s'élève désormais à 15, contre 12 mardi. Mercredi, 190 patients atteints du Covid-19 se trouvaient hospitalisés. Ils étaient 176 mardi, selon les chiffres figurant sur le site de l'Etat de Genève. En revanche, le nombre de nouveaux cas confirmés n'a progressé que de six unités mercredi. Un gros ralentissement qui doit cependant être interprété avec prudence.



Angleterre: le prince Charles testé positif au nouveau coronavirus

PNEUMONIE À COVID-19? Ou...

H, 74 ans: asthénie, état fébrile, confusion, SatO₂: sp.

ATCD: bioprothèse aortique

Ex. Ph.: souffle systolique

Lab: Leucocytose, Syndrome inflammatoire

RX thorax: pas de pneumonie – PCR SARS-CoV-2: nég.

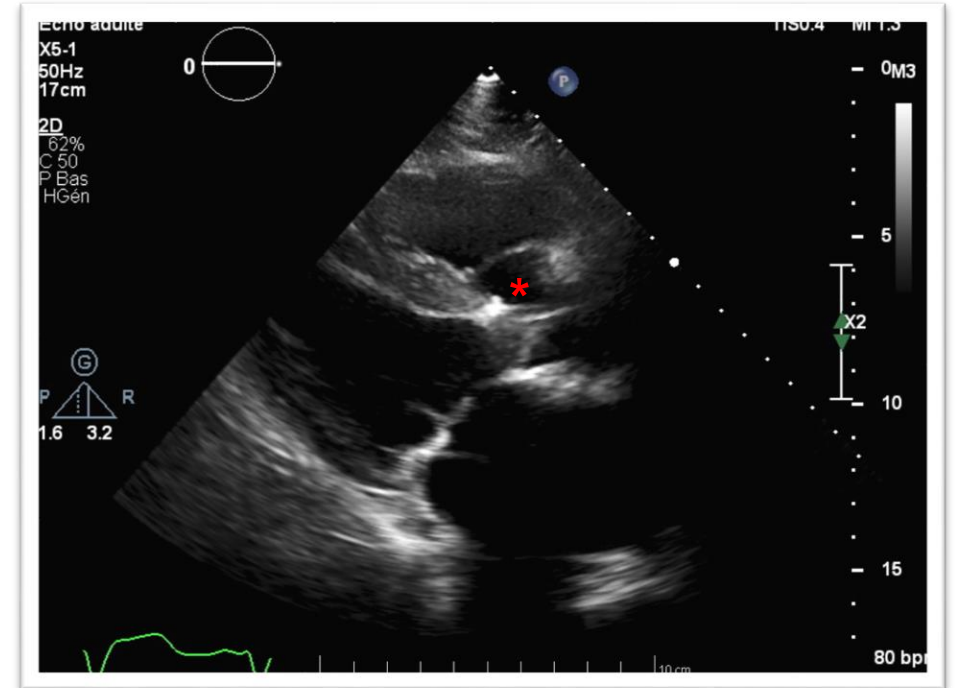
Diagnostic : pneumonie à COVID-19

... ENDOCARDITE INFECTIEUSE!

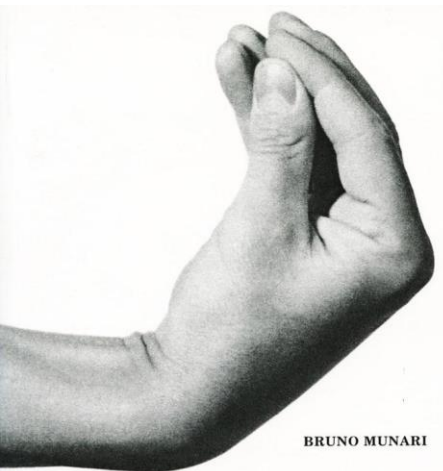
Choc septique

Bactériémie soutenue à
Staphylococcus aureus

ETT: abcès anneau aortique.



QU'EST-CE QUI S'EST PASSÉ?



BRUNO MUNARI

Supplemento al dizionario italiano
Supplement to the italian dictionary
Supplement au dictionnaire italien
Anhang zum italienischen Wörterbuch

CORRAINI EDITORE

DIAGNOSTIC: FERMETURE PREMATUREE DE LA DÉMARCHE DIAGNOSTIQUE

Difficulté très **COURANTE**

Recherche de données qui

confirment **UNE SEULE HYPOTHÈSE**

SANS remarquer de nouveaux indices

SANS explorer des informations

... QUI POURRAIENT CONDUIRE À D'AUTRES HYPOTHÈSES



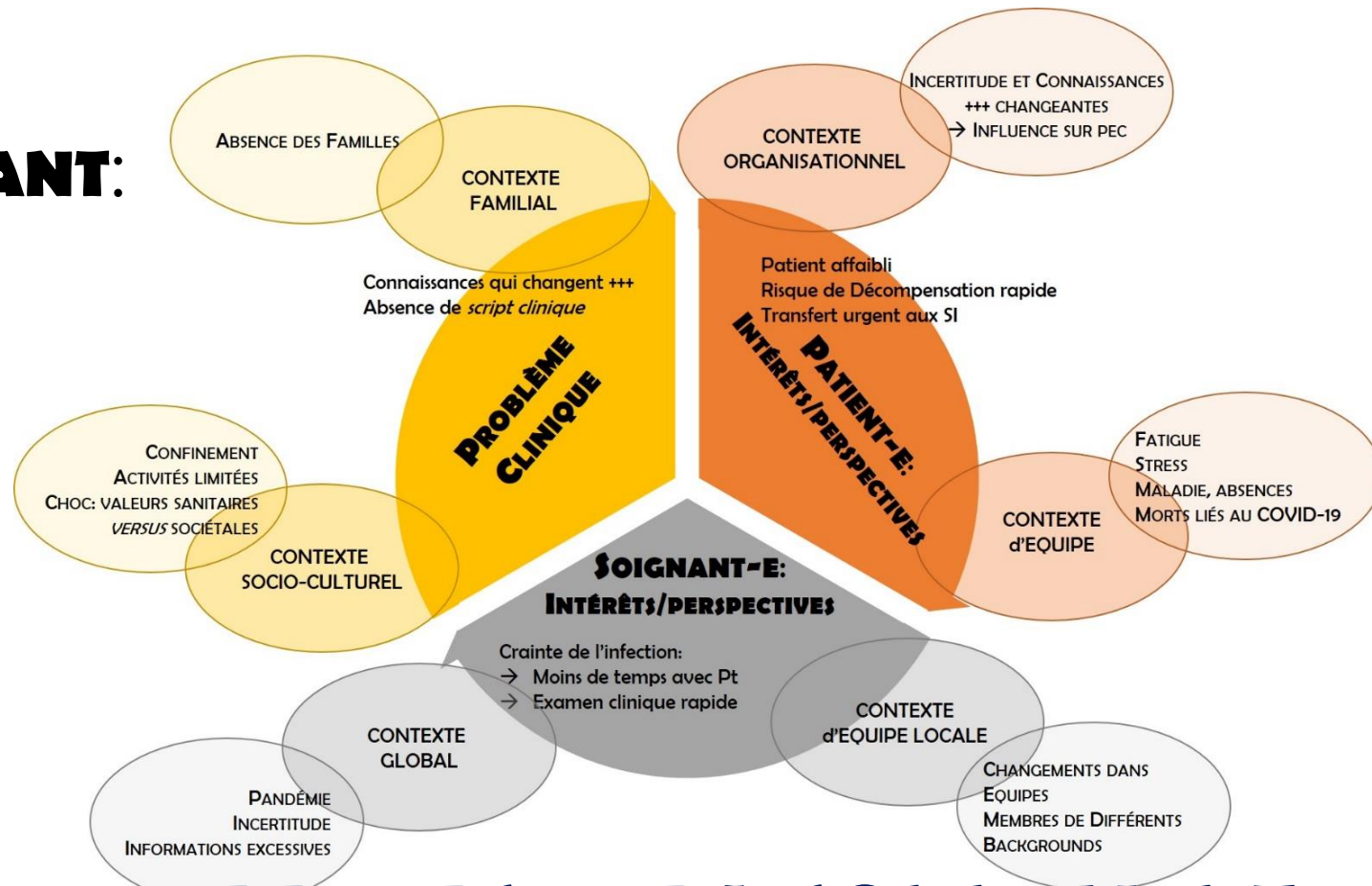
POURQUOI?

LE CONTEXTE: «PROBLEM SPACE»

RC se produit dans un

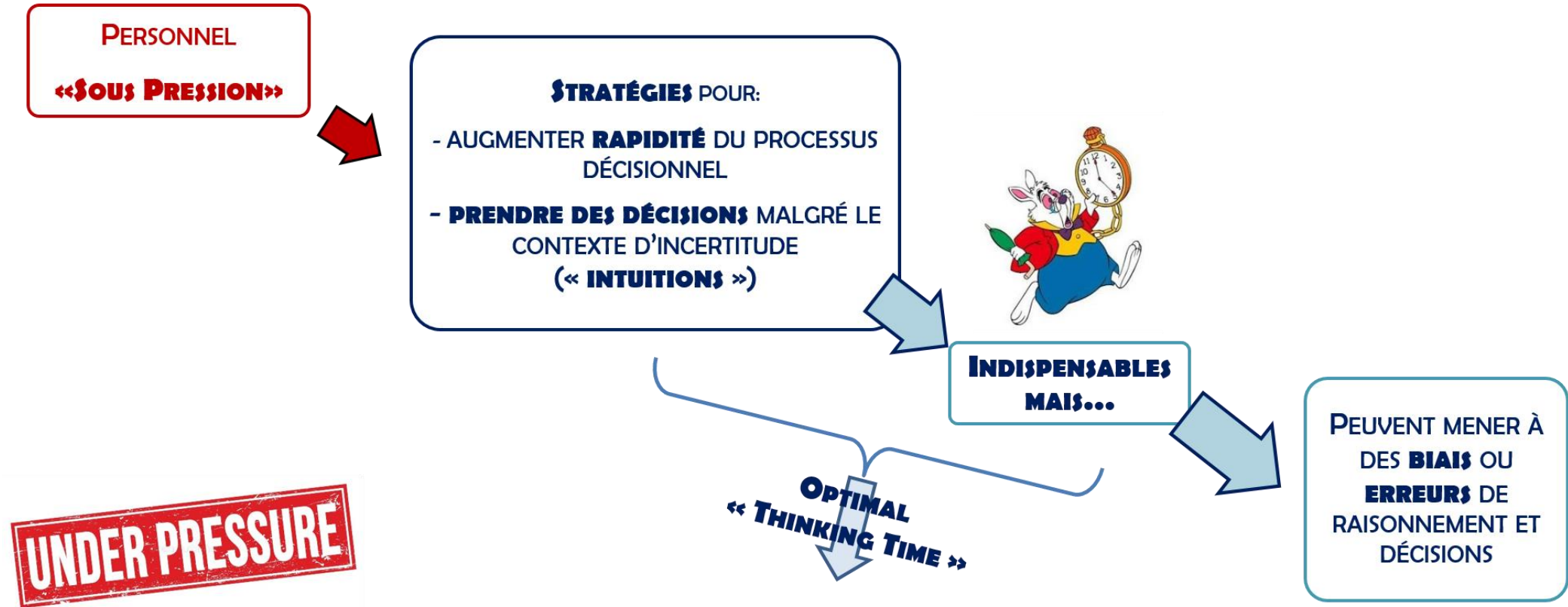
CONTEXTE VASTE ET CHANGEANT:

- facteurs locaux
- organisationnels
- socio-culturels
- mondiaux...

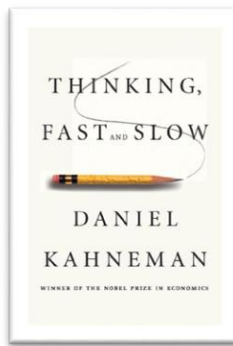


SUSCEPTIBLES D'ENTRAÎNER DES ERREURS DE RAISONNEMENT

TEMPS ET RACCOURCIS DE LA PENSÉE (HEURISTIQUES)



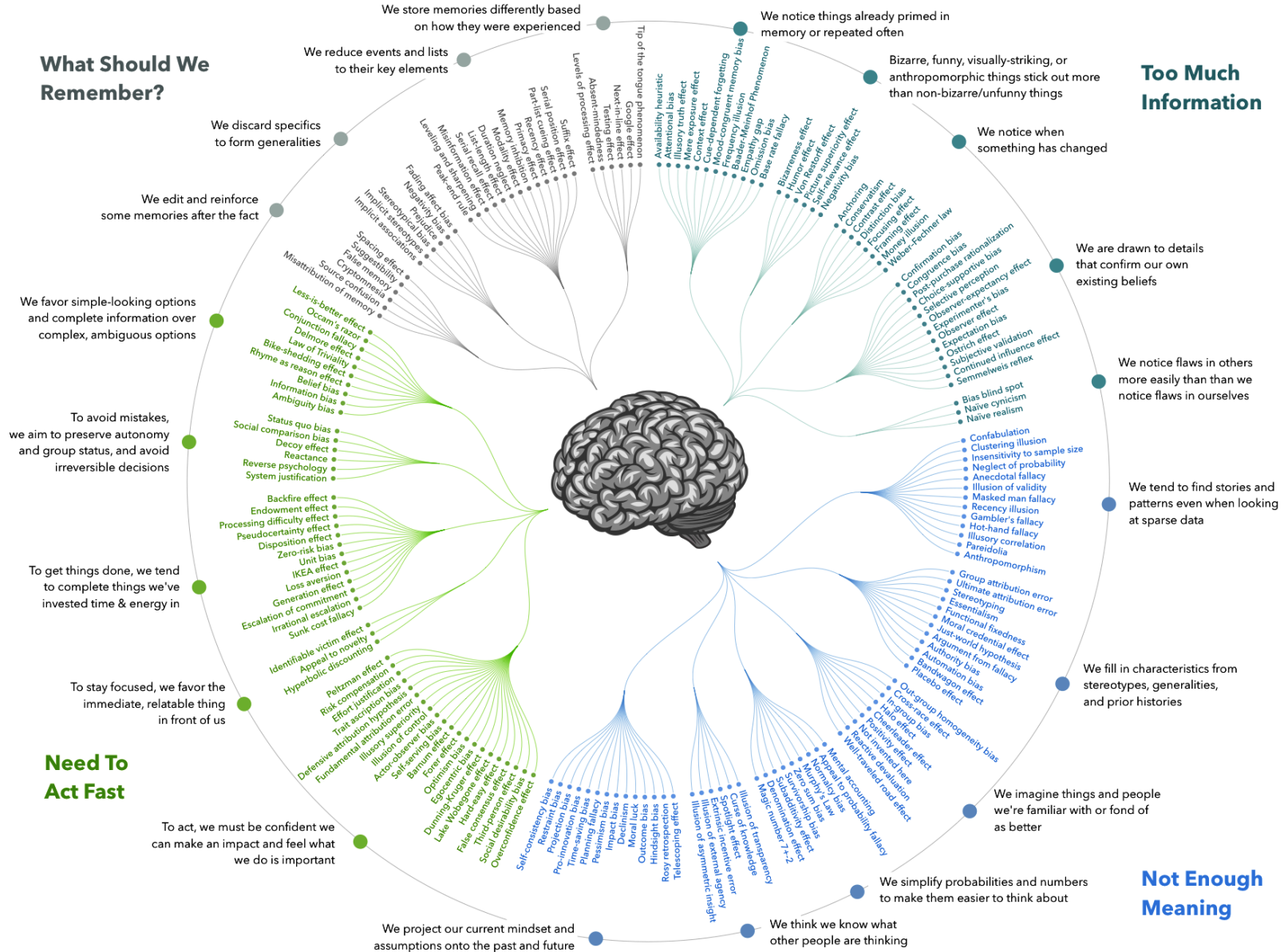
BIAIS COGNITIFS



Distorsions cognitives systématiques dans le traitement de l'information, que peuvent amener à un **jugement erroné**.

« **Contaminations mentales** » qui peuvent amener à des réponses (et des prises en charge) erronées en raisons de processus mentaux **inconscientes** et **incontrôlables**.

COGNITIVE BIAS CODEX



BIAIS FRÉQUEMMENT RENCONTRÉS EN CLINIQUE

1	ANCHORING BIAS	To be unable to adjust the initial diagnostic hypothesis when further information (e.g. test results) becomes available.
2	AVAILABILITY BIAS	To consider a diagnosis more likely because it readily comes to mind.
3	CONFIRMATION BIAS	To look only for symptoms or signs that may confirm a diagnostic hypothesis, or to interpret clinical findings only to support this hypothesis.
4	DIAGNOSTIC MOMENTUM BIAS	To consider a diagnosis as definite because a diagnostic label attached to a patient is transmitted repeatedly by all persons taking care of him/her.
5	FRAMING EFFECT	To be influenced by the way the problem is presented (framed).
6	MULTIPLE ALTERNATIVE BIAS	When multiple diagnostic options are possible, to simplify the differential diagnosis by reverting to a smaller subset with which the physician is familiar.
7	PREMATURE CLOSURE	To fail to consider reasonable alternatives after an initial diagnosis is made.
8	REPRESENTATIVENESS BIAS	To consider only prototypical manifestations of diseases, thus missing atypical variants
9	SEARCH SATISFYING BIAS	To stop considering other simultaneous diagnoses once a main diagnosis is made, thus leading to miss comorbidities, complications, or additional diagnoses
10	SUGGESTIBILITY BIAS	To alter our behavior based on the suggestions of others
11	SUNK COSTS BIAS	To have difficulty to consider alternatives when a clinician has invested time, efforts, and resources to look for a particular diagnosis.
12	VISCERAL BIAS	To favor a diagnosis or to discard other ones because of excessive emotional involvement (positive or negative feelings) with the patient.

ÉTUDE BIAIS_ « HERO » STUDY

- 169 médecins contactés (email) - Internes et CDC du SMIG
- À la fin de 1^{ère} vague, mai 2020
- Collection de plusieurs cas cliniques (vignettes)

Je pense que vous avez aussi eu l'impression que depuis quelque temps tout est COVID-19... jusqu'à preuve du contraire... et même au delà !

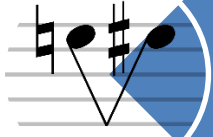
Il serait intéressant de collecter quelques cas clinique qui illustrent cette « perturbation » du raisonnement clinique. Pour, une fois les choses calmées, y revenir par la suite et les « disséquer ».

Je ne sais pas ce que ça peut donner... mais ça pourrait être intéressant d'aller au delà de la simple narration.

7 VIGNETTES CLINIQUES: RC « PERTURBÉ »

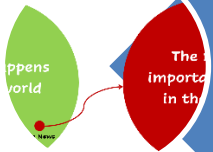
N	Diagnosis	Case description
1	ACUTE PULMONARY EDEMA	March 2020. A 77-year-old patient... coming from Italy... He has a history of ischemic and rhythmic heart disease... consulted for chest pain and orthopnoea. "Unluckily", he had been on a trip to Italy, at that time the epicentre of COVID-19. He was taken to intensive care in a COVID-19 area. The X-ray mostly showed upper lobe pulmonary venous diversion. Lung ultrasound showed B-lines; on cardiac ultrasound, the heart seemed to contract normally. [...] The CRP was negative on arrival! A few days later, after several SARS-CoV-2 negative tests, it was concluded that he had acute pulmonary oedema due to severe mitral insufficiency of ischemic origin [...] He was operated, and discharged.
2	DRESS SYNDROME	I saw a patient [...] who initially presented with fever, dyspnea, skin rash. Lung imaging showed diffuse infiltrates. She was initially hospitalized for 4 days in the COVID-19 unit before a diagnosis of DRESS (drug reaction with eosinophilia and systemic symptoms) was suggested, and then confirmed.
3	HEART FAILURE	[...] In the emergency department [...] his symptoms: asthenia and mild dyspnea (possibly a "small" COVID-19). Eventually he has severe heart failure with reduced ejection fraction related to dilated cardiomyopathy. The patient was admitted to the hospital for investigations.
4	PLEURO-PERICARDITIS	[...] Pleuropericarditis of undetermined origin finally! Initially we suspected COVID-19. The initial investigations were concentrated on the viral (scil. SARS-CoV-2) etiology. Given the rapid deterioration of his condition, the [pleural and pericardial] effusions which recidivated, the decline in renal function (suspicion of IgA nephropathy), and 2 negative SARS-CoV-2 RT-PCR in nasopharyngeal swab... he was eventually transferred to a non-COVID-19 hospital for investigations.
5	MALARIA	[...] This patient consulted the emergency department in 03.2020 for a fever and headaches following a trip to Africa. Blood smears identified Plasmodium falciparum and she was started on IV artesunate [...] Three days after, parasitemia was negative. We switched to oral therapy. On day 4 the patient presented fever (38.°C) without any other symptoms, apart from headaches. The tropical disease specialists said that this could have been still attributable to malaria. High peak fever on day 5. We decide to perform a nasopharyngeal swab for SARS-CoV-2, even though the probability of malaria and SARS-CoV-2 confection seemed remote. Test result is positive. The evolution was favorable [...] and could rapidly be discarded [...]
6	ACUTE EXACERBATION OF COPD	A 60-year-old patient with severe chronic obstructive pulmonary disease (COPD), hospitalized for respiratory failure. COVID-19 was negative. The patient is admitted to a COVID-19 unit for strong suspicion of COVID-19 pneumonia. He receives symptomatic treatment, but no corticosteroids. He had no signs of bronchoconstriction... and we did not yet if we were allowed to use systemic corticosteroids [sci. in case of SARS-CoV-2 infection]. The evolution was favorable... then unfavorable... then favorable... then, finally, unfavorable. The patient goes through different antibiotic regimens... and finally receives corticosteroids. During his whole hospitalization, he stayed in a single room. Often, with the infectious disease specialists and the medical assistant, we asked ourselves about his safety, in a COVID-19 unit with his negative tests. But we always conclude that: "The collective risk overcomes the individual risk". So, in the face of uncertainty, the patient remains in a COVID-19 unit. Over his whole stay, we will perform several SARS-CoV-2 PCR: in nasopharyngeal swabs (5-6 in total) and in expectorations. We performed serologies... all negative... until a new respiratory deterioration... This time SARS-CoV-2 test turned out positive! [...]
7	INFECTIOUS ENDOCARDITIS	A man in his seventies consulted the emergency department because of a generalised weakness, fatigue and fever. His medical history [...] the patient had undergone surgical aortic valve replacement with a bioprosthetic valve in the past year. The patient was ill looking, highly febrile (39.5°C), confused and disoriented. During examination, the patient was tachycardic, blood pressure and oxygen saturation at room air were normal. Physical examination revealed a systolic murmur (2/6), best heard over the aortic valve area; fine crackles were audible over the lower lobes of both lungs. Laboratory tests showed normal red blood cell count with leucocytosis and inflammatory markers were elevated. [...] Chest X-ray was devoid of the abnormalities; ECG was normal. A nasal swab for SARS-CoV-2 was performed, the test came back negative. Blood cultures were drawn, and a second nasal swab performed. Despite the first negative swab test, and in the absence of indirect evidence of COVID-19 pneumonia, a diagnosis of SARS-COV-2-CoV-2 infection was considered as the most likely diagnosis; antibiotics were not administered. [...] The patient [...] was transferred to a normal medical ward for stable patients with COVID-19. Soon after the patient developed rigors; repeated physical examination was unchanged, other than for an erythematous lesion of hallux of the right leg [...] Clinical and biological features suggested bacterial sepsis. After having received broad-spectrum antibiotic therapy, the patient was transferred to an intermediate care unit. The second nasal swab turned out negative. Instead, the patient was found to have persistent methicillin-susceptible Staphylococcus aureus bacteraemia; targeted antibiotic therapy was started. A clinical diagnosis of infectious endocarditis was made. Transoesophageal echocardiography showed an abscess in the aortic annulus. Cardiac surgery was planned.

LES BIAS PLUS FRÉQUENTS



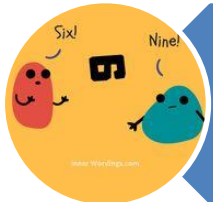
COGNITIVE DISSONANCE

To encounter psychological discomfort when simultaneous thoughts are in conflict with each other.



DISPONIBILITÉ/AVAILABILITY

To consider a diagnosis more likely because it READILY COMES TO MIND.



CONFIRMATION BIAS

To look only for symptoms or signs that may CONFIRM a diagnostic hypothesis, or to interpret clinical findings only to support this hypothesis.



ANCRAGE/ANCHORING BIAS

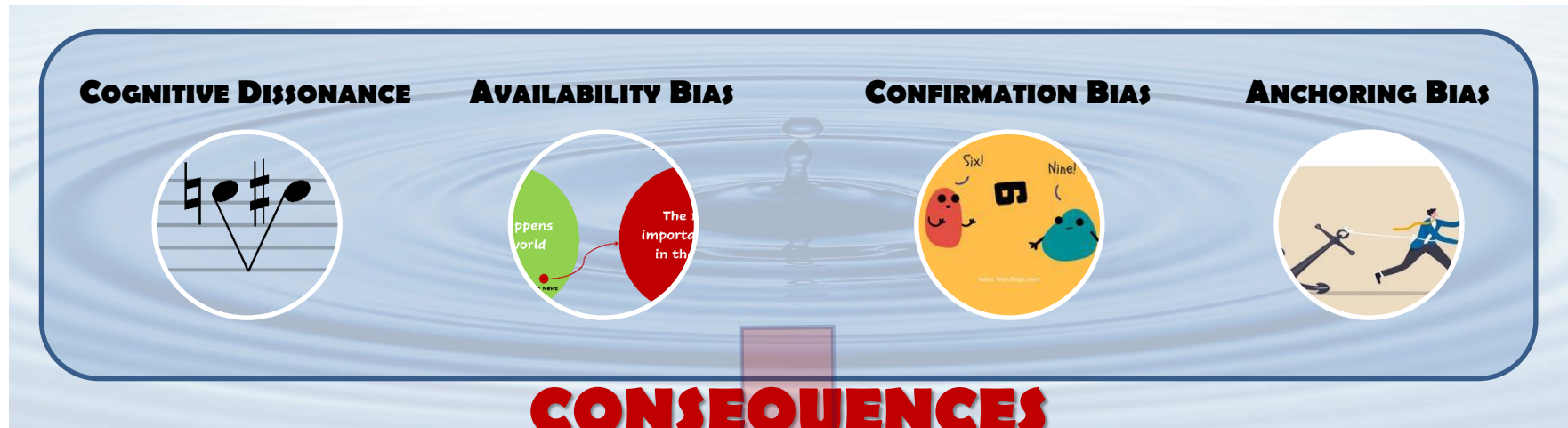
To be **UNABLE TO ADJUST** the initial diagnostic hypothesis when further information (e.g. test results) becomes available.

Souvent nous nous sommes interrogés sur sa sécurité, dans une unité COVID avec ses tests négatifs*

Patient de 77 ans... venant d'Italie... l'épicentre du COVID-19... emmené au SIA dans la zone COVID

Plasmodium falciparum... mise sous artésunate IV [...] Trois jours après, la parasitémie était négative [...] Le quatrième jour, la patiente a présenté de la fièvre [...] cela aurait pu être encore attribuable au paludisme [...]

Les premières investigations se sont concentrées sur l'étiologie virale. [...] et de 2 frottis négatifs... il a finalement été transféré dans un hôpital non COVID [...]).



- FERMETURE DIAGNOSTIQUE PRÉMATURÉE
- PAS DE VÉRIFICATIONS DES HYPOTHÈSES INITIALES

DECISIONS INADEQUATES

CONCLUSIONS



La pandémie a fortement influencé les processus de raisonnement clinique en favorisant l'apparition de biais → erreurs

Les clinicien-ne-s doivent en être conscient-e-s

Stratégies de minimisation:

- **pratique réflexive**
- **partager de l'incertitude**

● LIVE 142

Pas si simple: pourquoi?

- Capacité à reconnaître un biais est abyssale... même pour des experts!
 - Soumise à biais rétrospectif
- Accord entre experts proche de 0...
- Utilisation de système 2, analytique, plus lent, n'est pas (toujours) une protection contre erreurs, par rapport à l'utilisation du système 1, plus intuitif, plus rapide

Table 4 Per cent of cases where individual biases were present by consistent/inconsistent test result and inter-rater reliability

	Consistent (%)	Inconsistent (%)	Relative increase (%)	κ Value
Anchoring	35	70	100	0.0
Availability	25	55	120	0.025
Base rate neglect	11	28	150	0.063
Confirmation	35	62	77	0.024
Premature closure	39	88	125	0.046
Representativeness	26	45	73	0.044

Zwaan L, et al. *BMJ Qual Saf* 2016;0:1-7.

Sherbino et al. *Acad Med.* 2012;87:785-791. Ilgen. *Acad Med.* 2013;88:1545-1551
Norman et al. *Acad Med.* 2014;89:277-284

REMERCIEMENTS

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Collègues du SMIG, du SMPR, des soins intensifs et des urgences

Les généralistes/pédiatres de le luMFE (UIGP) et du réseau Delta

Fond Edmond J. Safra

