

Impact of the Covid-19 epidemic on nurses' working conditions and burnout in Belgium

Main results and recommendations

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Objectives

April 2020: What about nurses?

Assess the impact of the COVID-19 crisis on:

- the working conditions and the private life of nurses
- the risk of burnout (prevalence and risk factors)
- Management at work and social support from colleagues

Definition

In ICD-11, burnout is defined as follows:

"Burnout, or professional exhaustion, is a syndrome conceptualized as resulting from chronic stress at work that has not been properly managed."

Three dimensions characterize it

- a feeling of low energy or exhaustion
- withdrawal from work or feelings of negativity or cynicism related to work
- loss of professional efficiency

Symptoms

- Emotional disorders (anxiety, sadness, hypersensitivity, lack of emotion ...)
- Cognitive (memory, attention, concentration ...)
- Behavioral or interpersonal (social isolation, aggressive or violent behavior, decreased empathy, addictive behavior, etc.)
- Motivational (disengagement, professional questioning, devaluation ...)
- Physical (sleep disorders, musculoskeletal, gastrointestinal disorders, etc.)

Instruments

- **Maslach Burn-out Inventory (MBI)**
 - **Utrechtse Burn-out Schaal**
 - **Copenhagen Burn-out Inventory**
 - **Shirom Melamed Burn-out Measure**
 - **Burnout Assessment Tool (BAT) – KUL**
 - No biomarker could be identified to establish the diagnosis of burnout
- ➔ The risk of Burnout

Instruments



Global prevalence of burnout symptoms among nurses: A systematic review and meta-analysis

Tiffany Woo^a, Roger Ho^{b,c,d}, Arthur Tang^{e,*}, Wilson Tam^{a,f}

Table 2

Subgroup analyses for prevalence rate of overall high burnout.

Subgroups comparison	No. of studies	Pooled prevalence (%)	95% CI	I ² (%)	Test for subgroup difference
Specialty	61	11.21	8.85–13.85	99	$\chi^2 = 19.69, df = 4 (p < 0.01), I^2 = 79.7\%$
Intensive & critical care	9	14.36	1.59–27.14	99	
Multi-specialty	29	13.11	9.52–16.70	99	
Paediatric	3	11.74	–5.96–29.44	97	
Emergency	6	10.18	3.25–17.12	90	
Others	14	4.41	2.37–6.45	87	
Geographic location	61	10.34	8.32–12.37	8	$\chi^2 = 6.86, df = 5 (p = 0.23), I^2 = 27.1$
Southeast Asia & Pacific	8	13.68	9.61–17.75	95	
Latin America & the Caribbean	7	10.51	5.49–15.53	80	
North America	27	10.27	7.14–13.40	95	
Europe & Central Asia	13	10.06	5.07–15.05	98	
Sub-Saharan Africa	3	8.94	–0.54 – 18.41	93	
Middle East and North Africa	2	4.68	–0.76 – 10.12	97	
Measurement tool	59	10.96	8.61–13.32	99	$\chi^2 = 2.40, df = 3 (p = 0.49), I^2 = 0\%$
MBI-HSS	27	10.39	6.05–14.73	99	
MBI-GS	4	10.66	2.54–18.79	95	
ProQOL	25	9.32	6.55–12.09	95	
CBI	3	30.60	2.95–58.25	97	

Maslach Burn-out Inventory (MBI)

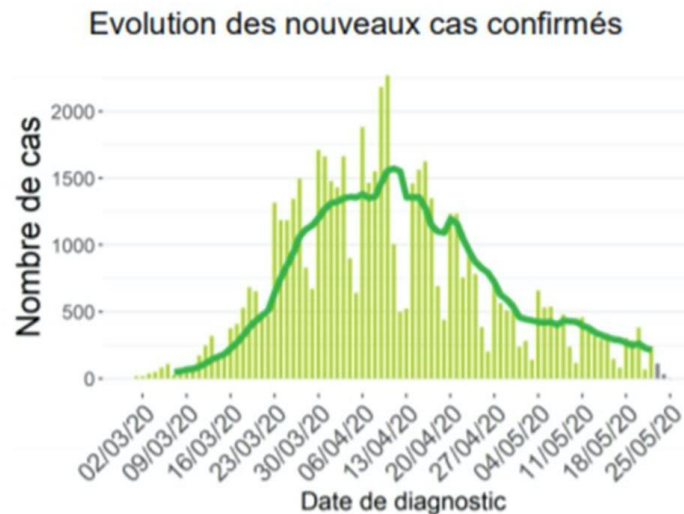
- Used by KCE and FEDRIS (Agence fédérale des risques professionnels)
- 22-item self-report instrument to measure the subscales of **Burnout**.
 - **Emotional Exhaustion** (nine items)
 - **Depersonalization** (five items)
 - **Personal Accomplishment** (eight items)
- Calculated from a mean for each subscale
- Scored using a seven point fully anchored scale ranging from zero to six (*Never = 0 to Every Day = 6*)

(Maslach, Jackson, Leiter, & Wilmar, 1996)

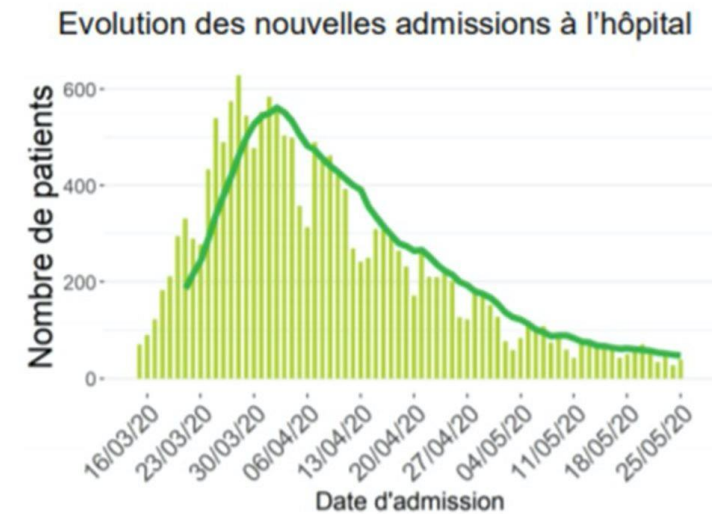


Methods

- The online questionnaire was disseminated via Belgian professional nursing associations, inpatient and outpatient health care service
- Questionnaire translated into Dutch
- Between April 21 and May 04, 2020



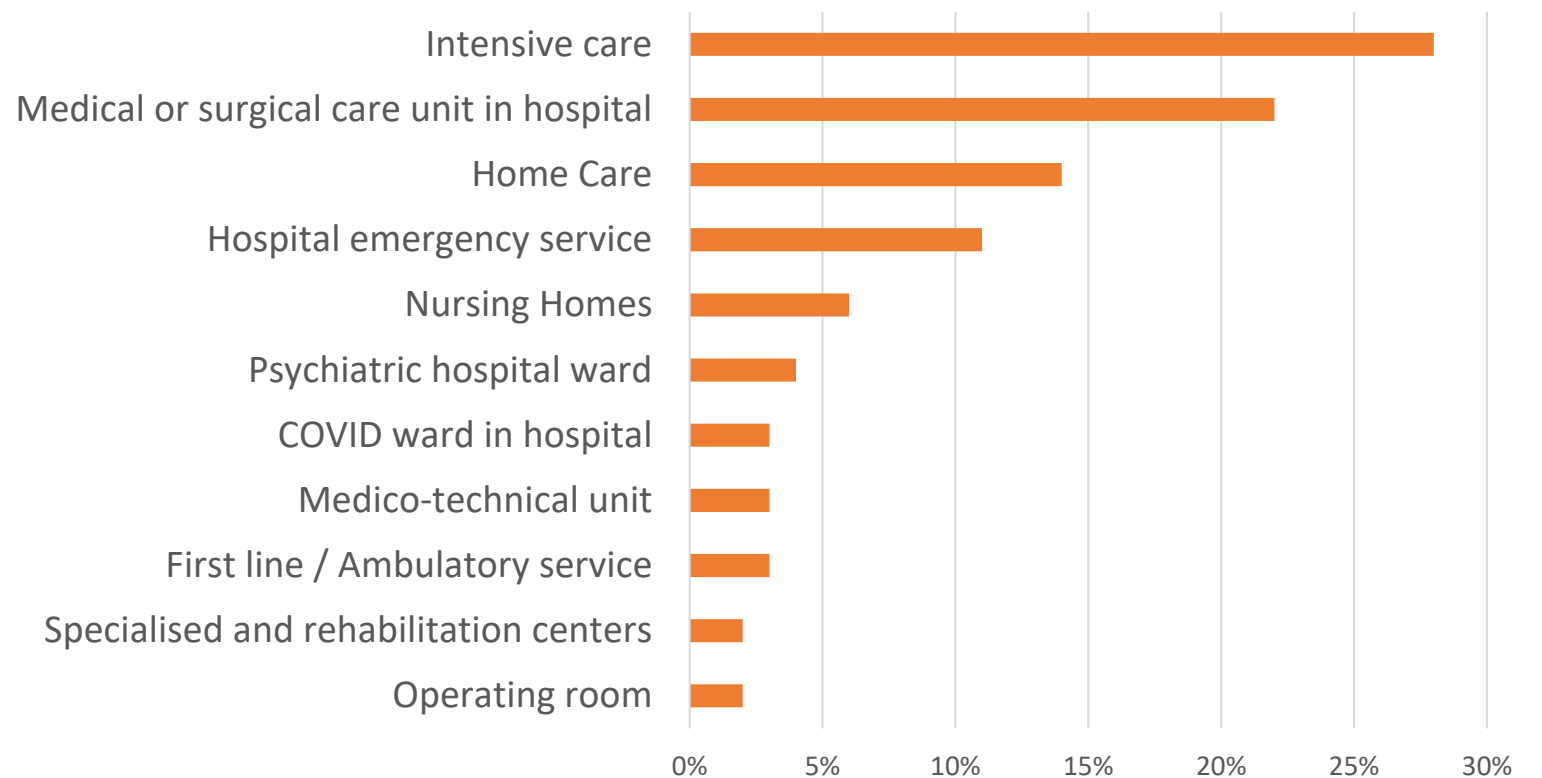
Source : Réseau des laboratoires cliniques et plateforme nationale



Source : Surveillance des hôpitaux (Sciensano)

Sample

- 4552 French-speaking nurses (low response rate with Dutch-speaking nurses)
 - 29% Brussels-Capital Region
 - 71% Walloon Region
- For comparison, the KCE report (325B) on nursing staffing in acute hospitals published at the end of 2019 had a sample of 5000 nurses
- Representation of different health services:

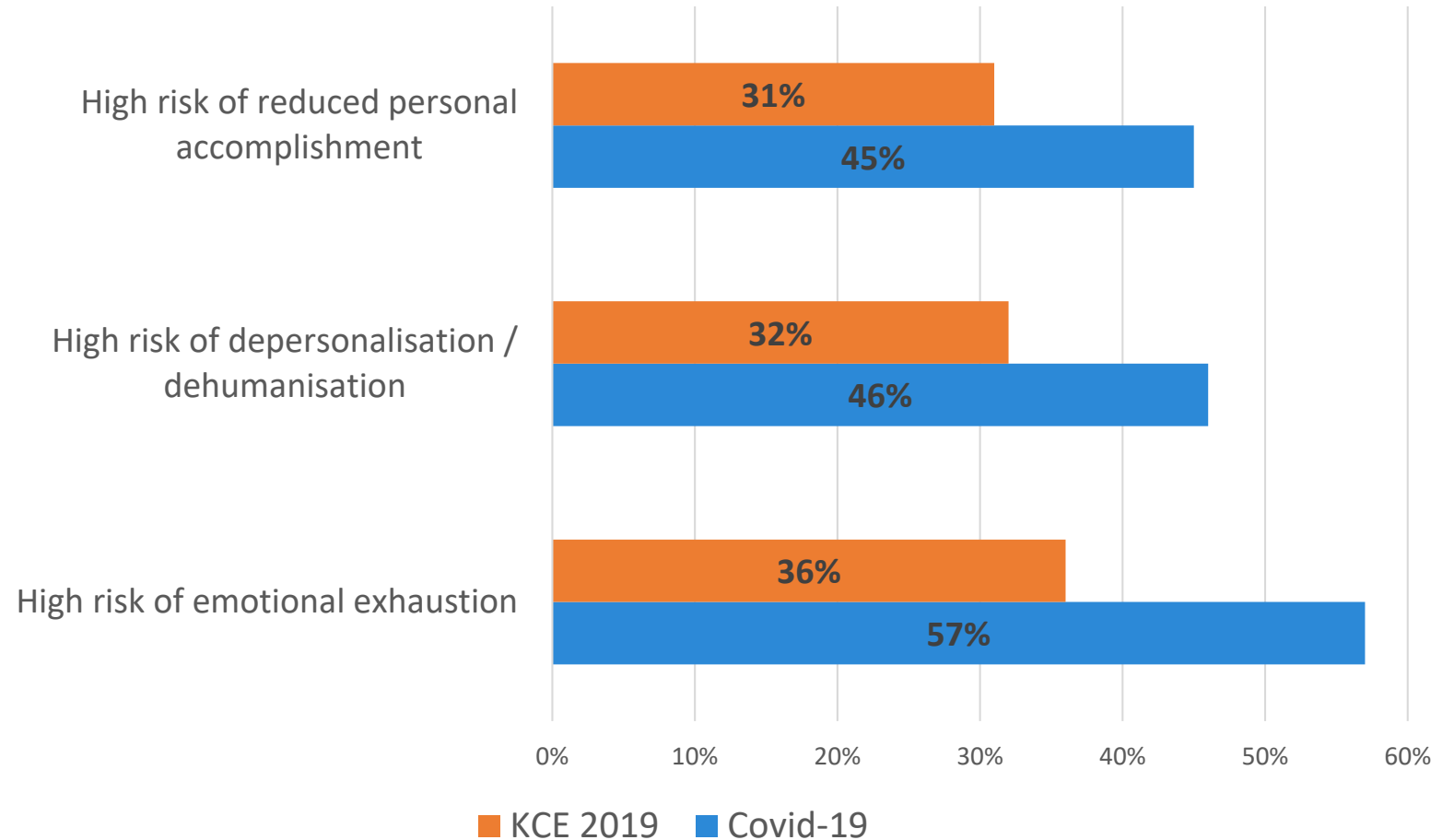


Study sample and characteristics

Variables	Results
Age, year, mean \pm SD	39.7 \pm 10.9
Gender, female, n (%)	3823 (84)
Seniority, year, mean \pm SD	15.8 \pm 11.1
The perceived workload during the COVID-19 epidemic was, n (%)	
• Lower	513 (14.3)
• The same	561 (15.6)
• Greater	2516 (70.1)
Having adequate and sufficient protective equipment for COVID-19, n (%)	
• Yes	1484 (39.6)
• No	2265 (60.4)
Number of COVID-19 patients in the ward over the last week, n (%)	
• None	500 (13.4)
• Less than 25% of patients	1070 (28.9)
• 25%-49% of patients	700 (18.9)
• 50%-75% of patients	480 (12.9)
• More than 75% of patients	958 (25.9)

Burnout assessment

- Scientifically validated and often used in healthcare (allows comparison groups)
- Used in 2019 in the KCE 325B study on nursing staffing in acute hospitals:



Taking into account the three dimensions, **71%** of nurses who responded to the survey since April 21 are at risk of burnout

Some groups more at risk of burnout

- Younger nurses (OR = 0.98, $p < 0.01$)
- Nurses with less seniority, regardless of their age (OR = 0.98, $p < 0.01$)

Warning ! Professional exhaustion of the young workforce who should still have a long career ...

- Compared to nurses in medical or surgical hospital ward:
 - Nurses in nursing homes (OR = 1.37, $p < 0.001$)
 - Nurses in Covid wards in hospitals (OR = 1.32, $p < 0.001$)
 - Nurses in hospital emergency services (OR = 1.29, $p < 0.01$)
 - Nurses in intensive care units (OR = 1.25, $p < 0.01$)

Risk factors for burnout

1) Increased workload since the covid-19 epidemic

- For 70% of nurses the workload increased following the covid-19 epidemic
- More present in some services ($\chi^2 = 608.4$, $p < 0.001$) :
 - Nursing homes: 91%
 - Intensive care units: 89%
 - Specialised and rehabilitation centers: 82%
 - Covid wards in hospitals: 77%
- Nurses who report an increase in their workload since the start of the Covid-19 epidemic are **81% more likely to be at risk of burnout** than nurses whose workload has remained the same ($p < 0.001$)

Risk factors for burnout

2) Increase in working time beyond full time since the start of the Covid-19 epidemic

- The working time of 18% of nurses exceeds a full time since the start of the covid-19 epidemic
- More present in some services ($\chi^2 = 157.01$, $p < 0.001$) :
 - Home Care: 24%
 - Nursing homes: 22%
 - Intensive care units: 21%
 - Covid wards in hospitals: 21%
- Compared to nurses with 100% working time, nurses who have worked more than full time since the start of the covid-19 epidemic are **16% more likely to be at risk of burnout** ($p < 0.001$)

Risk factors for burnout

3) Not having adequate and sufficient protective equipment for Covid-19

- 61% of nurses declare that they do not have adequate and sufficient equipment in their service when faced with Covid-19
- More present in some services ($\text{Khi}^2 = 145.64, p < 0.001$) :
 - Home Care: 81%
 - Psychiatric services: 77%
 - Specialised and rehabilitation centers: 73%
 - Nursing homes: 66%
- Compared to nurses who consider that they have enough adequate equipment, nurses who declare that they do not have it have are **51% more likely to be at risk of burnout** ($p < 0.001$)

Risk factors for burnout

4) Others risk factors for burnout

- Increase in patient / nurse ratio (OR = 1.13, $p < 0.01$): for detailed recommendations on this ratio in Belgium see the KCE 325B report
- Having an imposed schedule, with no possibility of choice, since the covid-19 epidemic: concerns 60% of nurses, 27% more likely to be at risk of burnout ($p < 0.001$)
- Number of Covid-19 patients to be treated and number of Covid-19 patient deaths: significantly associated with the risk of burnout and should also draw our attention to the risk of post traumatic stress disorder (PTSD)

Comparison



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Comparison

Table 4| Nurse outcomes in 12 European countries and the US. Data are number of nurses reporting outcome/total number of nurses surveyed, and percentage

Country	Reported ward to have poor or fair quality of care		Gave ward poor or failing safety grade		Regarded themselves to be burnt out		Dissatisfied with job		Intended to leave their job in the next year		Not confident that patients can manage own care after hospital discharge		Not confident that hospital management would resolve patients' problems	
Belgium	688/3167	22	100/3100	3	730/2938	25	680/3159	22	934/3164	30	1921/3153	61	2518/3134	80
England	540/2899	19	191/2895	7	1138/2699	42	1136/2904	39	1261/2896	44	981/2901	34	1856/2893	64
Finland	141/1099	13	76/1095	7	232/1047	22	300/1114	27	546/1111	49	441/1098	40	890/1094	81
Germany	526/1507	35	94/1506	6	431/1430	30	561/1505	37	539/1498	36	473/1505	31	879/1504	58
Greece	170/361	47	61/358	17	246/315	78	199/358	56	177/358	49	231/358	65	311/356	87
Ireland	152/1389	11	117/1385	8	536/1293	41	581/1383	42	612/1380	44	588/1385	42	872/1381	63
Netherlands	756/2185	35	123/2187	6	211/2061	10	240/2188	11	418/2197	19	889/2195	41	1781/2200	81
Norway	468/3732	13	199/3712	5	823/3501	24	773/3729	21	942/3712	25	2097/3710	57	2739/3698	74
Poland	683/2581	26	463/2579	18	929/2321	40	663/2584	26	1056/2387	44	1890/2571	74	2196/2571	85
Spain	897/2794	32	173/2784	6	787/2670	29	1053/2786	38	740/2774	27	1554/2779	56	2370/2767	86
Sweden	2750/10051	27	1117/10035	11	2788/9477	29	2251/10027	22	3418/10013	34	2833/9995	28	7308/9988	73
Switzerland	324/1604	20	71/1606	4	228/1563	15	338/1610	21	447/1623	28	564/1612	35	1216/1612	75
US	4196/26316	16	1628/26772	6	9122/27163	34	6692/26935	25	3767/27232	14	11449/25110	46	15240/26717	57

Rates of between 10% and 78% among the European nursing workforce

Occurrence, prevention, and management of the psychological effects of emerging virus outbreaks on healthcare workers: rapid review and meta-analysis

Steve Kisely,^{1,2,3,4} Nicola Warren,^{1,3} Laura McMahon,³ Christine Dalais,³ Irene Henry,¹
Dan Siskind^{1,2,5}

Recommendations to deal with psychological problems in healthcare workers in novel outbreaks

Individual factors	Service / system factors
Sufficient rest and time off	Workload: <ul style="list-style-type: none">• Appropriate work shift and regular breaks• Reducing the density of patients on wards• Redeployment of wards and human resources
Opportunities for reflection on the effects of stress (debriefing*)	Access to adequate personal protection
Training and education around infectious diseases	Practical and psychological support
	Clear communication

* Expert: Jean-Christophe Servotte ULG

Literature review

*Adequate and
sufficient
equipment,
medication
(quality and
conformity)*

- Particular attention must be paid to the proper use of these.
- Procedures and training

*Emotional load
both
institutionally
and individually*

- Psychological follow-up and support in all sectors (recognized, funded and compulsory) under two main groups:
- Team debriefing (accompanied by a professional - intervention) focused on:
 - crisis management (Fear, change of assignment, etc.),
 - the potential loss of landmarks,
 - support for change (Values and meaning - Acceptance to resume normal activity - place of the patient), taking on new responsibilities without being trained, uncertainty.
- Individual debriefings

*Emotional load
both
institutionally
and individually*

- Definition and implementation of a crisis recovery training policy for various managers and identification of signs of burnout
 - Appropriate tools
- Definition and implementation of a policy of support by occupational medicine in collaboration with directors and managers
- Definition and implementation of a training policy for burnout prevention, stress management and management of demanding patients
- Definition and implementation of a scientific monitoring policy (UCLouvain - ULB - UZA) with a nursing and transversal taskforce.
- Definition and implementation of awareness campaigns on burnout and the promotion of a healthy lifestyle

*Emotional
load both
institutionally
and
individually*



Workload

- Definition of standards related to the management of Covid patients (Covid / Non Covid cohabitation and post-covids for medium and long-stay institutions)
- Preparation for the second wave - maintaining acquired skills

Schedule management and job security

- Definition and implementation of a job security policy and social legislation with regard to the schedule adjustments made.
 - Overtime, postponement of leave
- Valuation of flexibility and risk
- Retention of appropriate human resources policies (Autonomy, training, involvement and place of nurses in organizations - ARIQ, salary increase according to skills and diploma)

*Clear and
consistent
communication
between the
different entities
and for the
different sectors*

- Decrease uncertainty and strengthen the sense of anticipation
- Restore confidence

*Consultation,
involvement of
nurses in
decision-making
and official
bodies in order
to guarantee
coherent
communication
with the
profession*

- Fair representation in the various official bodies
- Creation of a transversal scientific nursing council

*Provide positive prospects in the medium and long term
(Memorandum of the profession)*

- Give consideration, recognition and means adapted to the reality of our profession
- Give a realistic and attractive vision of the profession
- Coach students in choosing their profession or specialization

*Recognition of
Burn Out and
post-traumatic
syndrome
linked to
COVID as an
occupational
disease*

- Provide funding for therapeutic monitoring

*Strengthen
collaboration
between the
different
structures*

- Reception and accommodation facilities, home care, hospitals, etc.

Conclusions

7 nurses out of 10 who responded to the survey are at risk of burnout: the risks for nurses, patients and our health systems must not be overlooked!

1) Act on risk factors (prevention): **Short and long-term actions**

- Act on all services, do not forget home care services, nursing homes, etc.
- Act on working conditions (i.e. sufficient protective equipment for covid-19)
- Act on the workload (patient / nurse ratio), schedules and days of rest
- Act for the profession: See UGIB / AUVB memorandum
<https://www.auvb.be/fr/a-propos-de-nous/memorandum-2019/>

2) Care for Caregivers (treatment):

- Implement psychological support interventions for caregivers (burnout, PTSD, etc.) in collaboration with **(1)** mental health professionals (psychiatrists, psychologists, etc.), **(2)** with employers (e.g. médecine du travail), and **(3)** with experts (e.g. Médecins Sans Frontière)

Thank you
for
listening !

