

## **Frontline health workers' Occupational Risk and Characteristics in Emergencies index (FORCE-index)**

### **OVERVIEW:**

The FORCE index was developed to quantitatively assess frontline workers' job characteristics and tasks, in responding to an infectious outbreak. The FORCE-index is freely available in the public domain to all interested parties. The structural validity and internal consistency of the instrument has been evaluated in Norwegian. Here, we provide an English translation of the instrument. For translating the tool into other languages, please contact the original authors.

The attached instrument focus on 9 facets of work environment important during pandemics: Competency (item 1-3), Stress management (item 4-6), Familiarity (item 7-9), Workload manageability (item 10-13), Work performance (item 14-16), Infection Safety (item 17-18), Personal Protective Equipment (item 19-24), Social safety (25-27), and Social support (item 28-29).

The development of the scale is described in detail in Stensland et al. Public Health Pract (Oxf). 2025, <https://doi.org/10.1016/j.puhip.2025.100582>.

**SCORING RULES** are as follows:

- Items 1 to 6 are scored 1-10.
- Remaining items (7-29) are scored on a five points scale, using the following anchors:  
Never, Rarely, Sometimes, Often, Almost always.

For scoring, Items 1-9, 14-16, and 28-29 anchors are transformed into scores 0, 2.5, 5, 7.5, 10. Remaining Items 10-13, 17-27 anchors are transformed into reversed scores 10, 7.5, 5, 2.5, 0.

Subscale scores are calculated according to the below:

Competency = mean of items 1-3,

Stress management = mean of items 4-6,

Familiarity = mean of items 7-9,

Workload manageability = mean of reversed items 10-13,

Work performance = mean of items 14-16,

Infection Safety = mean of reversed items 17-18,

Personal Protective Equipment = mean of reversed items 19-24,

Social safety = mean of reversed items 25-27,

Social support= mean of items 28-29.

Higher subscale scores indicate a higher assessment of work environment in that specific facet.

**THE REFERENCE** for the measure is: Stensland SØ, Bondjers K, Zwart JA, Rosseland LA, Atar D, Christensen JO, Matre D, Glad KA, Wentzel-Larsen T, Wøien H, Dyb G. Development and psychometric validation of the frontline health workers' occupational risk and characteristics in emergencies index (FORCE-index) - The covid Hospital cohort study. Public Health Pract (Oxf).

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In connection with the pandemic ...

(Answer on a scale from 0–10, where 0 corresponds to “not at all” and 10 corresponds to “to a large degree”)

		Not at all								To a large degree			
1	have you received sufficient information and training on infection prevention and control and the procedures necessary for carrying out your work tasks safely?	0	1	2	3	4	5	6	7	8	9	10	
2	have you received sufficient other information and training to be able to carry out your work tasks in a professionally sound manner?	0	1	2	3	4	5	6	7	8	9	10	
3	have you and your colleagues collectively had sufficient competence to perform your work tasks well?	0	1	2	3	4	5	6	7	8	9	10	
4	have you received sufficient information about common stress reactions?	0	1	2	3	4	5	6	7	8	9	10	
5	have you received sufficient information about what might help with common stress reactions?	0	1	2	3	4	5	6	7	8	9	10	
6	have you received sufficient information about where employees experiencing stress reactions can get useful assistance?	0	1	2	3	4	5	6	7	8	9	10	

How often during the last month ...

(Answer ticking the appropriate box below)

		Never	Rarely	Some-times	Often	Almost always
7	have you known where you would be spending your workday/shift before arriving at work?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	have you known who your co-workers would be before arriving at work?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	have you worked with your regular, familiar colleagues?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	have you skipped necessary breaks (eating/going to the bathroom/resting) due to high work pressure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11	have you been understaffed due to quarantine/infection/welfare leave, etc., among employees?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	has your workload been so high that you have lost track and control?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	have you experienced increased workload due to absence among your colleagues (quarantine/infection/welfare leave, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	have you/your team had the opportunity to provide the patient(s) you are responsible for with the necessary physical care?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	have you/your team had the opportunity to provide the patient(s) you are responsible for with the necessary psychological care?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	have you/your team had the opportunity to provide the patient(s) you are responsible for with the necessary medical treatment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	have you feared getting infected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	have you feared infecting others (patients, colleagues, family)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	has the use of personal protective equipment hindered the exchange of information necessary for solving your work tasks well?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	has the use of personal protective equipment led to physical discomfort (e.g., chafing, feeling hot/clammy, or headaches)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	has the use of personal protective equipment caused difficulty breathing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	has the use of personal protective equipment led to feelings of social isolation (loneliness)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	has the use of personal protective equipment hindered social support between colleagues?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	have you skipped necessary breaks (eating/going to the bathroom/resting) to conserve personal protective equipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	have you been blamed, threatened, or excluded by your closest colleagues?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	have you been blamed, threatened, or excluded by your immediate superiors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	have you experienced increased conflict at work due to your own absence (quarantine, illness, welfare leave, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	have you received support and assistance from your closest colleagues when you needed it?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	have you received support and assistance from your immediate superiors when you needed it?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>