

Appendix A: Questionnaire (the survey for sections)

*The survey was conducted in Japanese

This questionnaire include 0: Basic information, and followed two areas: I and II. It will take about 15 minutes to answer all questions.

Please select the appropriate column for your answer. However, please answer 0, I-E-1 to 4 in written form.

0	Please tell us your profession	answer
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I In here, you will be asked about your section's disaster preparedness.(Questions range from A to E)

Question		agree	somewhat agree	somewhat disagree	disagree	I don't know	not applicable
sample	We have created a facility and supplies plan that assumes disasters and regularly inspect it		✓				
A)	Asking about the preparations in advance						
A-1	A disaster preparedness plan for equipment and supplies is prepared and regularly inspected						
A-2	The evacuation plan is well known among staffs in the section						
A-3	Safety of evacuation route is regularly inspected						
A-4	A contact network of managers and staff has been drawn up and is used on a daily basis						
A-5	A system to secure staff during disaster is prepared (Contact system to confirm availability)						
A-6	Methods to confirm the safety of patients and other outsiders in the event of a disaster is in place						
A-7	The damage that is likely to occur in your section and patients' characteristics in your section are understood						
A-8	A business action plan for disaster is prepared <small>*A business action plan is a plan that outlines the tasks that will be required in the event of a disaster and the section of roles.</small>						
A-9	A business action plan considered the damage that is likely to occur in your section and patients' characteristics in your section is prepared						
A-10	A business action plan consistent with hospital's disaster response booklet is prepared						
B)	Asking about equipment and goods						
B-1	A disaster preparedness plan for equipment and supplies is prepared and regularly inspected						
B-2	The equipment necessary to provide medical care (service) during disaster are ready for use at any time						
B-3	Safety of evacuation route is regularly inspected						
B-4	Staff are made aware of how to use equipment and supplies in the event of a disaster.						
B-5	The necessary space for disaster response is secured in advance (Whiteboard installation location, disaster storage room, space that can be expanded, visitor waiting area, etc.)						
B-6	Equipment for providing medical care (services) are prepared with collecting information on hospital characteristics						
C)	Asking about your efforts to improve disaster response capabilities <small>*The term "disaster education" in this section refers to anything that improves awareness, knowledge, and skills, such as training and study sessions</small>						
C-1	The necessary equipment, educational materials, supplies, etc. are prepared to provide disaster education						
C-2	An ICT (Information and communications Technology) environment is prepared that can be used for disaster education						
C-3	Staff in charge of disaster education are existed						
C-4	External parties (other sections, etc.) to provide disaster education are asked						
C-5	Staff who can provide disaster education are systematically trained.						
C-6	A system which employees are exempted from duties during the time they participate in disaster education are provided.						
C-7	Disaster educations considered the characteristics of hospitals and sections are conducted						
C-8	Opportunities for information exchange between staff (or professions) involved in disaster education are existed.						
C-9	Disaster educations are conducted in regularly						
C-10	Disaster response training of your section is planned and conducted at least once a year.						
D)	Asking about the operation of disaster countermeasures						
D-1	A budget for preparations is estimated and accounted						
D-2	Evaluating whether proper execution is being carried out						
D-3	Sections representatives are participating in the revision of the hospital's disaster response booklet as part of their duties						
D-4	Staff's contribution to/ participation in disaster countermeasures for the hospital and their sections are visibly encouraged * Examples for visible encouragement: setting up a reporting session, participation sticker on name tag						

I Here "about disaster preparedness" is continued

E)	Regarding the items that you chose "somewhat agree" "somewhat disagree" "disagree", what do you think as barrier?
	Please describe the factors specifically that are considered to be impediments for each of the following categories: E-1) hospital level, E-2) section level, and E-3) individual level. Also, please answer E-4) items for which you do not feel necessary.
E-1	Hospital level: Issues that cannot be resolved within the section
	(answer space)
E-2	Section level: section's business characteristics, organizational characteristics, culture, etc.
	(answer space)
E-3	Individual level: Individual circumstances of section members (living with children, etc.), personal characteristics, etc.
	(answer space)
E-4	Items for which you do not feel necessary *Please list up items that you feel strongly feel unnecessary (e.g. A-5, B-2, or none)
	(answer space)

II In here, you will be asked about current situation in you section(the questions are from A to G)

	Question	atrongly agree	agree	disagree	strongly disagree	not applicable
A)	Asking about workload of section					
A-1	The daily workload of the entire section is constant					
A-2	The daily workload of the entire section is unpredictable					
A-3	The section has a larger workload compared to human resources on a daily basis					
A-4	More than half of the staff are forced to work outside of normal work hours					
B)	Asking about the characteristics of work in section					
B-1	It is important that sectional operations follow established procedures					
B-2	It is important that sectional operations choose the means to achieve results					
B-3	The section often provides services to people who have difficulty communicating <u>The people who have difficulty communication</u> includes those who have difficulty communicating verbally, infants and young children, those who do not use Japanese as a communication tool, those with visual and hearing impairments, children who have difficulty understanding or expressing themselves, and those with intellectual disabilities or mental disabilities. etc.					
C)	Asking about the chain of command within the section					
C-1	In sectional operations, the daily chain of command and its personnel are fixed					
C-2	In sectional operations, the chain of command and its personnel change daily (or for each matter)					
C-3	The assignment of personnel within a section is often changed depending on the workload					
D)	Asking about cooperation within the section					
D-1	The work of the section is carried out by the cooperation of multiple occupations					
D-2	During normal operations, cooperation between multiple professions within the section is carried out smoothly					
D-3	During temporary operations, cooperation between multiple professions within the section is carried out smoothly					
D-4	Opportunities are regularly set up for related professions to exchange opinions across professions regarding the work of the section					
D-5	A shared break space is provided within the section for staff					
D-6	The break space has an atmosphere where staff can easily communicate with each other					
D-7	Within the section, there are differences in the right to speak depending on the profession					
D-8	Within the section, there are differences in the right to speak depending on years of experience					
E)	Asking about decision-making in emergencies within section					
E-1	It is decided (or clear) who will make decisions in an emergency					
E-2	There are multiple people within the section who can make decisions in an emergency					
E-3	Human resources who can make decisions in emergencies are consciously cultivated					
F)	Asking about the working style of employees (please select the appropriate percentage range)	50 % +	30-40 %	10-20 %	< 10%	non
F-1	Non-regular employees are working					
F-2	Short-time staff are working					
G)	Asking about cooperation between sections	atrongly agree	agree	disagree	strongly disagree	not applicable
G-1	Sectional operations always require collaboration with other sections					
G-2	The section receives operational support from other sections on daily basis					
G-3	The section supports other sections on daily basis					

Appendix B: Questionnaire and Summary

(the survey for individuals)

Question (n=338)		n	%
A About yourself			
A1	Age		
	<30	38	11.2
	30-39	99	29.1
	40-49	105	30.9
	50-59	79	23.2
	60+	19	5.6
A2	Gender		
	Male	130	38.6
	Female	207	61.4
	Neither	1	exclusion
A3	Profession		
	Physician	66	19.5
	Nurse	115	34.0
	Clerk	60	17.8
	Laboratory technician	31	9.2
	Radiology technician	7	2.1
	Pharmacist	1	0.3
	Rehabilitation specialist	1	0.3
	Social worker	2	0.6
	Other qualification	13	3.9
	Other	42	12.4
A4	Employment status		
	Regular employee	254	75.6
	Non-regular employee	41	12.2
	Temporary employee	16	4.8
	Outsourcer	25	7.4
A5	Type of work of affiliation		
	Department for critically ill patients	57	17.2
	General ward	64	19.3
	Clinical department other than above two	101	30.4
	Department that supports clinical activities	22	6.6
	Department for research	26	7.8
	Administration	37	11.1
	External partner	25	7.5
	Unknown	6	exclusion

A6 Years of professional experience (years)	n	%
5<	50	14.8
5-14	119	35.2
15-24	108	32.0
25+	61	18.1
A7 Years of work in the University of Tokyo Hospital (years)		
5<	101	29.9
5-14	152	45.0
15-24	58	17.2
25+	27	8.0
A8-a Where were you in Great East Japan Earthquake?		
Area in intensity <5	52	15.4
Area in intensity 5 lower and more	286	84.6
A8-b What did you do at Great East Japan Earthquake?		
Working at The University of Tokyo Hospital	109	32.3
Other	229	67.8
A9 Family structure (I have family needed of care)		
Living with family but not needed of care	129	38.2
Living with family needed of care	101	29.9
Having family needed of care but not living with	28	8.3
Living alone and no family needed of care	80	23.7
A10 Time required to reach the University of Tokyo Hospital		
On foot		
<15	39	11.5
15-<30	43	12.7
30-<45	27	8.0
45-<60	42	12.4
60<=	145	42.9
I don't know	19	5.6
Not applicable	23	6.8

A10 is continued(Time required to reach the University of Tokyo Hospital)

		n	%
by bicycle			
	<15	65	19.2
	15-<30	39	11.5
	30-<45	21	6.2
	45-<60	41	12.1
	60<=	97	28.7
	I don't know	30	8.9
	Not applicable	45	13.3
by car			
	<15	79	23.4
	15-<30	44	13.0
	30-<45	49	14.5
	45-<60	40	11.8
	60<=	54	16.0
	I don't know	19	5.6
	Not applicable	53	15.7
by public transportation			
	<15	37	11.0
	15-<30	49	14.5
	30-<45	52	15.4
	45-<60	97	28.7
	60<=	86	25.4
	I don't know	0	0.0
	Not applicable	17	5.0
A11 The numbers of working areas			
	Single	216	63.9
	Two and more	122	36.1
B About disaster in local area			
B1 I have experience of disaster response			
	No	251	74.3
	Yes	87	25.7

B1-a	What kind of work did you do? (n=87; answered yes in B1)	n	%
	Activities at headquarters	6	6.9
	Activities related to outpatient area after disaster occurs (including triage area)	18	20.7
	Activities related to hospitalized patients	46	52.9
	Activities related to visitors other than patients	23	26.4
	Others	23	26.4
B1-b	What was others which you worked for		
	Activities related to outpatient who had existed before disaster	9	
	Activities in the disaster-stricken area	4	
	Equipment support in the operating room	1	
	Confirmation of infrastructure	1	
	logistic support	1	
	Ensuring safety	1	
	Remaing on standby after regular shift for case of emergency	1	
	Transportation of necessary items	1	
	Fire response	1	
	Evacuation	1	
	Flooding due to heavy rain	1	
B2	I think Tokyo is high risk area where will be impacted by disaster		
	Very high	230	68.1
	High	85	25.2
	Somewhat high	19	5.6
	Never	4	1.2
B3	I think disaster will come various forms		
	Strongly agree	301	89.1
	Agree	32	9.5
	Disagree	3	0.9
	Strongly disagree	2	0.6
B4	I know it better than others what type of disaster will occur in Japan		
	Strongly agree	67	19.8
	Agree	141	41.7
	Disagree	111	32.8
	Strongly disagree	19	5.6

		n	%
B5	I know that some people are more vulnerable than others during disasters		
	Know well	183	54.1
	A little	120	35.5
	Not so much	27	8.0
	Not at all	8	2.4
B6	I think healthcare services will be affected during great disaster		
	Strongly agree	303	89.6
	Agree	30	8.9
	Disagree	3	0.9
	Strongly disagree	2	0.6
B7	In affected area, local healthcare facility has response to support victims in physically and psychologically for a long time		
	Strongly agree	217	64.2
	Agree	103	30.5
	Disagree	16	4.7
	Strongly disagree	2	0.6
B8	I know there are prioritization manner called <i>triage</i> for disaster medicine		
	Know well	300	88.8
	A little	32	9.5
	Not so much	3	0.9
	Not at all	3	0.9
B9	I have ever thought about hospital disaster countermeasure		
	Think and be involved	102	30.2
	Ever think	123	36.4
	A little	98	29.0
	Never	15	4.4
B10	For effective disaster countermeasures, it is important to have training		
	Strongly agree	270	79.9
	Agree	67	19.8
	Disagree	1	0.3
	Strongly disagree	0	0.0

		n	%
B11	Since multiple stakeholders play in disaster medicine, well maintained command system are important		
	Strongly agree	291	86.1
	Agree	43	12.7
	Disagree	3	0.9
	Strongly disagree	1	0.3
C About disaster response in workplace			
C1	The University of Tokyo Hospital is expected to play a role as a local hospital		
	Strongly agree	269	79.6
	Agree	53	15.7
	Disagree	10	3.0
	Strongly disagree	6	1.8
C2	I know where I can reach the disaster response booklet		
	Yes	218	64.5
	No	120	35.5
C3	My section has something that corresponds to the disaster response manual		
	Yes	207	61.2
	No	30	8.9
	Unknown	101	29.9
C4	Necessity of disaster response is recognized sufficiently in my section		
	Strongly agree	69	20.4
	Agree	146	43.2
	Disagree	83	24.6
	Strongly disagree	40	11.8
C5	I have prepared for disaster response sufficiently		
	Strongly agree	16	4.7
	Agree	118	34.9
	Disagree	148	43.8
	Strongly disagree	56	16.6
C6	I am expected to play a role of leader in my section		
	Strongly agree	72	21.3
	Agree	93	27.5
	Disagree	64	18.9
	Strongly disagree	109	32.3

C7	I understand my role in emergency in my section	n	%
	Strongly agree	56	16.6
	Agree	136	40.2
	Disagree	92	27.2
	Strongly disagree	54	16.0
C8	I can impliment BCP with confidence	n	%
	Strongly agree	8	2.4
	Agree	64	18.9
	Disagree	148	43.8
	Strongly disagree	118	34.9
C9	I am prepared to respond any disaster		
	Strongly agree	9	2.7
	Agree	41	12.1
	Disagree	149	44.1
	Strongly disagree	139	41.1
C10	I can respond disaseter with confidence		
	Strongly agree	8	2.4
	Agree	71	21.0
	Disagree	147	43.5
	Strongly disagree	112	33.1
C11	I have an arrengement for emergency with my family		
	Already decided	42	12.4
	Partially decided	135	39.9
	Going to decide	118	34.9
	Not going to decide	43	12.7
C12	I've got an understanding about disaster respond in medicine by my family		
	Strongly agree	62	18.3
	Agree	144	42.6
	Disagree	65	19.2
	Strongly disagree	31	9.2
	Not applicable	36	10.7
C13	I will have ristriction due to caring for my family		
	Yes	85	25.2
	A little	68	20.1
	Not so much	71	21.0
	Not at all	114	33.7

D About obtaining knowledge of disaster response			
D1	I need to attend study session in order to respond disaster	n	%
	Strongly agree	153	45.3
	Agree	153	45.3
	Disagree	27	8.0
	Strongly disagree	5	1.5
D2	I will attend study session if provided		
	Strongly agree	133	39.4
	Agree	161	47.6
	Disagree	36	10.7
	Strongly disagree	8	2.4
D3	I am interested in study session about disaste response of the University of Tokyo Hospital		
	Strongly agree	125	37.0
	Agree	157	45.5
	Disagree	46	13.6
	Strongly disagree	10	3.0
D4	I will attend study session of the University of Tokyo Hosipital disaseter response if it provided		
	Strongly agree	130	38.5
	Agree	148	43.8
	Disagree	51	15.1
	Strongly disagree	9	2.7
D5	I know there are study session about disaster medicine inside and outside the workplace		
	Yes	192	56.8
	No	146	43.2
D6	I have attended study session about disaster medicine		
	Yes	103	30.5
	No	235	69.5
D6-a	The study session was sufficient for responding in actual disaster n=103 (answered yes in D6)		
	Strongly agree	29	28.2
	Agree	47	45.6
	Disagree	22	21.4
	Strongly disagree	5	4.9

D7	I learned about disaster medicine sufficiently in my school	n	%
	Strongly agree	5	1.5
	Agree	28	8.3
	Disagree	98	29.0
	Strongly disagree	207	61.2
D8	It is difficult to find appropriate information for disaster response		
	Strongly agree	63	18.6
	Agree	176	52.1
	Disagree	76	22.5
	Strongly disagree	23	6.3
D9	External resources are useful for my preparation of disaster		
	Strongly agree	123	36.4
	Agree	175	51.8
	Disagree	30	8.9
	Strongly disagree	10	3.0
E About strengthening of disaster countermeasure at University of Tokyo Hospital			
E1	Cooperation with wide range of professions is essential for effective implementation of the disaster response booklet		
	Strongly agree	277	82.0
	Agree	53	15.7
	Disagree	6	1.8
	Strongly disagree	2	0.6
E2	Education for wide range of professions is essential for effective implementation of the disaster response booklet		
	Strongly agree	271	80.2
	Agree	62	18.3
	Disagree	4	1.2
	Strongly disagree	1	0.3
E3	Active participation is essential in training of disaster response		
	Strongly agree	249	73.7
	Agree	85	25.2
	Disagree	2	0.6
	Strongly disagree	2	0.6

		n	%
E4	Staff training during normal time is not necessary for strengthen of disaster response		
	Strongly agree	24	7.1
	Agree	13	3.9
	Disagree	66	19.5
	Strongly disagree	235	69.5
E5	Preparing for disaster response is hospital's responsibility		
	Strongly agree	226	66.9
	Agree	100	29.6
	Disagree	10	3.0
	Strongly disagree	2	0.6
E6	Preparation of individuals are not important for disaster response		
	Strongly agree	7	2.1
	Agree	7	2.1
	Disagree	76	22.5
	Strongly disagree	248	73.4
E7	Which one is important for making feasible disaster response booklet		
	Bottom-up	59	17.5
	Top-down	19	5.6
	Combination	255	75.4
	Neither	5	1.5
F About your idea on preparing for disaster response			
F1	Disaster medical respnse is not likely to happen in the University of Tokyo Hospital		
	Strongly agree	6	1.8
	Agree	5	1.5
	Disagree	54	16.0
	Strongly disagree	273	80.8
F2	Preparation takes effort		
	Strongly agree	228	67.5
	Agree	97	28.7
	Disagree	11	3.3
	Strongly disagree	2	0.6

		n	%
F3	Preparation takes time		
	Strongly agree	231	68.3
	Agree	95	28.1
	Disagree	9	2.7
	Strongly disagree	3	0.9
F4	Working system of my section is a barrier for my participation in study session		
	Strongly agree	44	13.0
	Agree	88	26.0
	Disagree	107	31.7
	Strongly disagree	99	29.3
F5	Participating in study session about disaster response is troublesome		
	Strongly agree	25	7.4
	Agree	94	27.8
	Disagree	128	37.9
	Strongly disagree	91	26.9
F6	Please tell us what are the barriers to prepare for disaster response? (for detail please refer to Table 7)		
	Time restriction (no information about reason)	14	
	Family	11	
	Workload	9	
	Environment of section (leadership and mood)	8	
	Difficulty to imagine	4	
	Lack of knowledge about disaster	4	
	Difficulty to find study session	2	
	Contraction of external partner	2	
	Others	13	