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Working Party on Inland Water Transport

Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation

Fifty-seventh session
Geneva, 24–26 June 2020
Item 9 of the provisional agenda
Mutual recognition of boatmasters' certificates and harmonization of professional requirements in inland navigation

Revision of resolution No. 31: Standards for medical fitness

Note by the secretariat

Mandate

1. This document is submitted in line with the programme of work of the Transport subprogramme for 2020 (ECE/TRANS/2020/21, chapter IV, table, section A, para. 11) adopted by the Inland Transport Committee at its eighty-second session (ECE/TRANS/294, para. 136).

2. At its fifty-sixth session, the Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation (SC.3/WP.3) exchanged views on the applicability of the standards of competence in the European Standard for Qualification in Inland Navigation (ES-QIN) for countries outside CESNI in connection with the revision of resolution No. 31. The secretariat was asked to continue work on proposals for revision of resolution No. 31 and to cover the standards for medical fitness (ECE/TRANS/SC.3/WP.3/112, paras. 88 and 92).

3. The annex to this document contains provisions of the standards for medical fitness for crew members of inland navigation vessels, adopted by European Standard for Qualifications in Inland Navigation (ES-QIN) edition 2019,[1] which complement Directive (EU) 2017/2397 on the recognition of professional qualifications in inland navigation. SC.3/WP.3 may wish to use them as the basis for updating resolution No. 31.

[1] See ES-QIN edition 2019, Part IV "Standards for medical fitness", www.cesni.eu/wp-content/uploads/2020/03/ES-QIN_2019_en.pdf.

Annex

Standards for medical fitness (Resolution CESNI 2018-II-2)

Medical fitness criteria for medical conditions (general fitness, vision and hearing)

Introduction

The medical examiner should bear in mind that it is not possible to develop a comprehensive list of fitness criteria covering all possible conditions and the variations in their presentation and prognosis. The principles underlying the approach adopted in the table are often capable of being extrapolated to conditions not covered by it. Decisions on fitness when a medical condition is present depend on careful clinical assessment and analysis, and the following points need to be considered whenever a decision on fitness is taken:

- Medical fitness, comprising of physical and psychological fitness, means not suffering from any disease or disability which makes the person serving on board an inland craft unable to do either of the following:
  - a) execute the tasks necessary to operate the craft;
  - b) perform assigned duties at any time;
  - c) perceive correctly the environment.
- The medical conditions listed are common examples of those that may render crew members unfit. The list can also be used to determine appropriate limitations on fitness. The criteria given can only provide guidance for physicians and shall not replace sound medical judgement.
- The implications for working and living on inland waters vary widely, depending on the natural history of each condition and the scope for treatment. Knowledge about the condition and an assessment of its features in the individual being examined shall be used to reach a decision on fitness.
- Where medical fitness cannot be fully demonstrated, mitigation measures and restrictions may be imposed on the condition of equivalent navigation safety. A list of mitigation measures and restrictions is added to the notes of this text. Where necessary, references to those mitigation measures and restrictions are made in the descriptions of the medical fitness criteria.

The table is laid out as follows:

Column 1: WHO International classification of diseases, 10th revision (ICD-10). Codes are listed as an aid to analysis and, in particular, international compilation of data.

Column 2: The common name of the condition or group of conditions, with a brief statement on its relevance to work on inland waterways.

Column 3: The medical fitness criteria that lead to the decision: incompatibility.

Column 4: The medical fitness criteria that lead to the decision: able to perform assigned duties at any time.

There are two appendices:

- Appendix 1: Relevant criteria for vision as meant under diagnostic code H 00–59
- Appendix 2: Relevant criteria for hearing as meant under diagnostic code H 68–95.

ICD 10 Diagnostic Codes	*Condition* *Justification for criteria*	*Incompatibility to perform assigned duties at any time: expected to be temporary (T); expected to be permanent (P)*	*Able to perform assigned duties at any time*
A 00–B99	**INFECTIONS**		
A 00–09	**Gastrointestinal infection** Transmission to others, recurrence	T – If detected while onshore (current symptoms or awaiting test results on carrier status) or confirmed carrier status until elimination demonstrated	No symptoms affecting safe work
A 15–16	**Pulmonary TB** Transmission to others, recurrence	T – Positive screening test or clinical history, until investigated. If infected until treatment stabilised and lack of infectivity confirmed P – Relapse or severe residual damage	Successful completion of a course of treatment
A 50–64	**Sexually transmissible infections** Acute impairment, recurrence	T – If detected while onshore: until diagnosis confirmed, treatment initiated and successful completion of a course of treatment. P – Untreatable impairing late complications	No symptoms affecting safe work
B 15	**Hepatitis A** Transmissible by food or water contamination	T – Until jaundice resolved or exercise tolerance restored	No symptoms affecting safe work
B 16–19	**Hepatitis B** Transmissible by contact with blood or other body fluids. Possibility of permanent liver impairment and liver cancer	T – Until jaundice resolved or exercise tolerance restored P – Persistent liver impairment with symptoms affecting safe work or with likelihood to complications	No symptoms affecting safe work. Fit with a time limitation of maximum two years
	Hepatitis C Transmissible by contact with blood or other body fluids. Possibility of permanent liver impairment	T – Until jaundice resolved or exercise tolerance restored P – Persistent liver impairment with symptoms affecting safe work or with likelihood to complications	No symptoms affecting safe work
B 20–24	**HIV+** Transmissible by contact with blood or other body fluids. Progression to HIV associated diseases or AIDS	T – Good awareness of the condition and full compliance with treatment recommendations P – Non-reversible impairing HIV associated diseases. Continuing impairing effects of medication	No symptoms affecting safe work. Fit with a time limitation of maximum two years
A 00–B 99 not listed separately	**Other infection** Personal impairment, infection of others	T – In case of serious infection and serious risk of transmission P – If continuing likelihood of repeated impairing or infectious recurrences	No symptoms affecting safe work
C00–48	**CANCERS**		
C 00–48	**Malignant neoplasms** – including lymphoma,	T – Until investigated, treated and prognosis assessed	No symptoms affecting safe work

ICD 10 Diagnostic Codes	*Condition Justification for criteria*	*Incompatibility to perform assigned duties at any time: expected to be temporary (T); expected to be permanent (P)*	*Able to perform assigned duties at any time*
	leukaemia and related conditions Recurrence – especially acute complications e.g. harm to self from bleeding	P – Continuing impairment with symptoms affecting safe work or with high likelihood of recurrence	To be confirmed by formal assessment of a specialist
D 50–89	**BLOOD DISORDERS**		
D 50–59	**Anaemia/Haemoglo-binopathies** Reduced exercise tolerance. Episodic red cell anomalies	T – Until haemoglobin normal or stable P – Severe recurrent or continuing anaemia or impairing symptoms from red cell breakdown that are untreatable	No symptoms affecting safe work
D 73	**Splenectomy** (history of surgery) Increased susceptibility to certain infections	T – Until completion of clinical treatment and exercise tolerance restored	No symptoms affecting safe work
D 50–89 not listed separately	**Other diseases of the blood and blood-forming organs** Varied – recurrence of abnormal bleeding and also possibly reduced exercise tolerance or low resistance to infections	T – While under investigation P – Chronic coagulation disorders	Case-by-case assessment
E 00–90	**ENDOCRINE AND METABOLIC**		
E 10	**Diabetes – insulin using** Acute impairment from hypoglycaemia. Complications from loss of blood glucose control. Increased likelihood of visual, neurological and cardiac problems	T – If lack of: 1) good control, 2) compliance with treatment or 3) hypoglycaemia awareness. P – If poorly controlled or not compliant with treatment. History of hypoglycaemia or loss of hypoglycaemia awareness. Impairing complications of diabetes	Case-by-case assessment with a maximum time limitation of 5 years. If evidence of good control, full compliance with treatment recommendations and good hypoglycaemia awareness. Restriction 04*** may be indicated
E 11–14	**Diabetes – non-insulin treated. On other medication** Progression to insulin use, increased likelihood of visual, neurological and cardiac problems	T – If lack of: 1) good control, 2) compliance with treatment or 3) hypoglycaemia awareness.	When stabilized, in the absence of impairing complications: fit with a time limitation of maximum 5 years
	Diabetes – non- insulin; treated by diet alone Progression to insulin use, increased likelihood of visual,	T – If lack of: 1) good control, 2) compliance with treatment or 3) hypoglycaemia awareness.	When stabilized, in the absence of impairing complications: fit with

ICD 10 Diagnostic Codes	*Condition Justification for criteria*	*Incompatibility to perform assigned duties at any time: expected to be temporary (T); expected to be permanent (P)*	*Able to perform assigned duties at any time*
	neurological and cardiac problems		a time limitation of maximum 5 years
E 65–68	**Obesity/abnormal body mass –** high or low Accident to self, reduced mobility and exercise tolerance for routine and emergency duties. Increased likelihood of diabetes, arterial disease and arthritis	T – If safety critical duties cannot be performed, capability or exercise test performance is poor, Body Mass Index (BMI) ≥ 40 (obesity level 3) P – Safety critical duties cannot be performed; capability or exercise test performance is poor with failure to achieve improvements	Able to meet routine and emergency capabilities for assigned safety critical duties. Restrictions 07*** or/and 09*** may be indicated
E 00–90 not listed separately	**Other endocrine and metabolic disease (thyroid, adrenal including Addison's disease, pituitary, ovaries, testes)** Likelihood of recurrence or complications	T – Until investigated, good control and compliance with treatment. Until one year after initial diagnosis or relapse in which a regular review has taken place P – If continuing impairment, need for frequent adjustment of medication or increased likelihood of major complications	Case-by-case assessment: if medication stable and surveillance of conditions infrequent, no impairment and very low likelihood of complications
F 00–99	**MENTAL, COGNITIVE AND BEHAVIOURAL DISORDERS**		
F10	**Alcohol abuse** (dependency) Recurrence, accidents, erratic behaviour/safety performance	T – Until investigated, good control and compliance with treatment. Until one year after initial diagnosis or relapse in which a regular review has taken place P – If persistent or there is comorbidity, likely to progress or recur while at work	For three years in a row: fit with a time limitation of one year, with restrictions 04*** and 05***. Thereafter: fit for a period of three years with restrictions 04*** and 05***. Thereafter: fit without restrictions for consecutive periods of two, three and five years, without relapse and without co-morbidity, if a blood test at the end of each period shows no problems
F 11–19	**Drug dependence/ persistent substance abuse,** includes both illicit drug use and dependence on prescribed medications Recurrence, accidents, erratic behaviour/safety performance	T – Until investigated, good control and compliance with treatment. Until one year after initial diagnosis or relapse in which a regular review has taken place P – If persistent or there is comorbidity, likely to progress or recur while at work	For three years in a row: fit with a time limitation of one year, with restrictions 04*** and 05***. Thereafter: fit for a period of three years with restrictions 04*** and 05***. Thereafter:

ICD 10 Diagnostic Codes	*Condition Justification for criteria*	*Incompatibility to perform assigned duties at any time: expected to be temporary (T); expected to be permanent (P)*	*Able to perform assigned duties at any time*
			fit without restrictions for consecutive periods of two, three and five years, without relapse and without co-morbidity, if a blood test at the end of each period shows no problems
F 20–31	**Psychosis** (acute) – whether organic, schizophrenic or another category listed in the ICD. Bipolar (manic depressive disorders) Recurrence leading to changes to perception/ cognition, accidents, erratic and unsafe behaviour	Following single episode with provoking factors: T – Until investigated, good control and compliance with treatment. Until three months after initial diagnosis	If the deck crew member has insight, is compliant with treatment and has no adverse effects from medication: fit with restriction 04***. Restriction 05*** may be indicated. Fit without restriction: one year after episode provided provoking factors can and will always be avoided Time limitation: first two years, six months. Next five years, one year
		Following single episode without provoking factors or more than one episode with or without provoking factors: T – Until investigated, good control and compliance with treatment. Until two years since last episode. P –More than one episode or continuing likelihood of recurrence. Criteria for fitness with or without restrictions are not met	If there has been no relapse and no use of medication for a period of two years: fit, if a medical specialist has determined that the cause can be unequivocally identified as one which is transient and a relapse is very unlikely
F 32–38	**Mood/affective disorders**. Severe anxiety state, depression, or any other mental disorder likely to impair performance. Recurrence, reduced performance, especially in emergencies	T – While acute, under investigation or if impairing symptoms or side effects of medication present. P – Persistent or recurrent impairing symptoms	After full recovery and after full consideration of the individual case. A fit assessment may be indicated depending on the characteristics and gravity of the mood disorder. Time limitation: first two years, six months. Restrictions 04*** and/or 07*** may be

ICD 10 Diagnostic Codes	*Condition Justification for criteria*	*Incompatibility to perform assigned duties at any time: expected to be temporary (T); expected to be permanent (P)*	*Able to perform assigned duties at any time*
			indicated. Next five years, one year
	Mood/affective disorders. Minor or reactive symptoms of anxiety/depression. Recurrence, reduced performance, especially in emergencies	T – Until symptom free, and free from medication P – Persistent or recurrent impairing symptoms	If free from impairing symptoms or impairing side effects from medication. Restrictions 04*** and/or 07*** may be indicate.
F 00–99 not listed separately	**Other disorders** e.g. disorders of personality, attention (ADHD), development (e.g. autism) Impairment of performance and reliability, and impact on relationships	P – If considered to have safety-critical consequences	No anticipated adverse effects while at work. Incidents during previous periods of service. Restrictions 04*** and/or 07*** may be indicated
G 00–99	**DISEASE OF THE NERVOUS SYSTEM**		
G 40–41	**Single seizure** Harm to craft, others and self from seizures	Single seizure T – While under investigation and for one year after seizure	One year after seizure and on stable medication: fit with restriction 04*** Fit without restrictions: one year after seizure and one year after end of treatment
	Epilepsy – no provoking factors (multiple seizures) Harm to craft, others and self from seizures	T – While under investigation and for two years after last seizure P – Recurrent seizures, not controlled by medication	Off medication or on stable medication with good compliance: fit with restriction 04*** Fit without restrictions when seizure-free and without medication for at least ten years
	Epilepsy – provoked by alcohol, medication, head injury (multiple seizures) Harm to craft, others and self from seizures	T – While under investigation and for two years after last seizure P – Recurrent fits, not controlled by medication	Off medication or on stable medication with good compliance: fit with restriction 04*** Fit without restrictions when seizure free and without medication for at least five years
G 43	**Migraine** (frequent attacks causing incapacity) Likelihood of disabling recurrences	P – Frequent attacks leading to incapacity	No anticipated incapacitating adverse effects while at work. No incidents during previous periods of service

ICD 10 Diagnostic Codes	*Condition Justification for criteria*	*Incompatibility to perform assigned duties at any time: expected to be temporary (T); expected to be permanent (P)*	*Able to perform assigned duties at any time*
G 47	**Sleep apnoea** Fatigue and episodes of sleep while working	T – Until treatment started and successful for three months P – Treatment unsuccessful or not being complied with	Once treatment demonstrably working effectively for three months. Six-monthly assessments of compliance. Restriction 05*** may be indicated
	Narcolepsy Fatigue and episodes of sleep while working	T – Until controlled by treatment for at least two years P – Treatment unsuccessful or not being complied with	If specialist confirms full control of treatment for at least two years: fit with restriction 04***
G 00–99 not listed separately	**Other organic nervous disease** e.g. multiple sclerosis, Parkinson’s disease. Recurrence/progression. Limitations on muscular power, balance, coordination and mobility	T – Until investigated, good control and compliance with treatment P – If limitations affect safe working or unable to meet physical capability requirements	Case-by-case assessment based on job and emergency requirements, informed by neurological-psychiatric specialist advice
R 55	**Syncope and other disturbances of consciousness** Recurrence causing injury or loss of control	T – Until investigated to determine cause and to demonstrate control of any underlying condition. Event is: a) Simple faint / idiopathic syncope	Case-by-case assessment. Restriction 04*** may be indicated
		b) Not a simple faint / idiopathic syncope. Unexplained disturbance: not recurrent and without any detected underlying cardiac, metabolic or neurological cause T – Four weeks c) Disturbance: recurrent or with possible underlying cardiac, metabolic or neurological cause T – With possible underlying cause that is not identified or treatable: for six months after event if no recurrences T – With possible underlying cause or cause found and treated for one month after successful treatment d) Disturbance of consciousness with features indicating a seizure. Go to G 40–41 P – For all of above if recurrent incidents persist despite full investigation and appropriate treatment	Case-by-case assessment. Restriction 04*** may be indicated

ICD 10 Diagnostic Codes	*Condition Justification for criteria*	*Incompatibility to perform assigned duties at any time: expected to be temporary (T); expected to be permanent (P)*	*Able to perform assigned duties at any time*
T 90	**Intracranial surgery/injury,** including treatment of vascular anomalies or serious head injury with brain damage. Harm to ship, others and self from seizures. Defects in cognitive, sensory or motor function. Recurrence or complications of underlying condition	T – For one year or longer until seizure likelihood low* based on advice from specialist P – Continuing impairment from underlying condition or injury or recurrent seizures	After at least one year, if seizure likelihood low* and no impairment from underlying condition or injury: fit with restriction 04*** Fit without restrictions when no impairment from underlying condition or injury, not on anti-epilepsy medication. Seizure likelihood very low*
H 00–99	**DISEASES OF THE EYES AND EARS**		
H 00–59	**Eye disorders:** progressive or recurrent (e.g. glaucoma, maculopathy, diabetic retinopathy, retinitis pigmentosa, keratoconus, diplopia, blepharospasm, uveitis, corneal ulceration, retinal detachment) Future inability to meet vision criteria, risk of recurrence	T – Temporary inability to meet relevant vision criteria (see Appendix 1) and low likelihood of subsequent deterioration or impairing recurrence once treated or recovered P – Inability to meet relevant vision criteria (see Appendix 1) or if treated increased likelihood of subsequent deterioration or impairing recurrence	Very low likelihood of recurrence. Progression to a level where vision criteria are not met during period of certificate is very unlikely
H 65–67	**Otitis – external or media** Recurrence, risk as infection source in food handlers, problems using hearing protection	T –If symptoms affecting safe work P - If chronic discharge from ear in food handler	Effective treatment and no likelihood of recurrence
H 68–95	**Ear disorders:** progressive (e.g. otosclerosis)	T – Temporary inability to meet relevant hearing criteria (see Appendix 2) and low likelihood of subsequent deterioration or impairing recurrence once treated or recovered P – Inability to meet relevant hearing criteria (see Appendix 2) or if treated increased likelihood or subsequent deterioration or impairing recurrence	Very low recurrence rate*. Progression to a level where hearing criteria are not met during period of certificate is very unlikely
H81	**Meniere’s disease** and other forms of chronic or recurrent disabling vertigo Inability to balance causing loss of mobility and nausea	T – During acute phase P – Frequent attacks leading to incapacity	Low likelihood* of impairing effects while at work

ICD 10 Diagnostic Codes	*Condition Justification for criteria*	*Incompatibility to perform assigned duties at any time: expected to be temporary (T); expected to be permanent (P)*	*Able to perform assigned duties at any time*
I 00–99	**CARDIO-VASCULAR SYSTEM**		
I 05–08 I 34–39	**Congenital and valve disease of heart** (including surgery for these conditions). Heart murmurs not previously investigated Likelihood of progression, limitations on exercise	T – Until investigated and, if required, successfully treated P – If exercise tolerance limited or episodes of incapacity occur or if on anticoagulants or if permanent high likelihood of impairing event	Case-by-case assessment based on cardiologic advice
I 10–15	**Hypertension** Increased likelihood of ischemic heart disease, eye and kidney damage and stroke. Possibility of acute hypertensive episode	T – Normally if >160 systolic or >100 diastolic mm Hg until investigated and if required successfully treated P – If persistently >160 systolic or >100 diastolic mm Hg with or without treatment	If treated and free from impairing effects from condition or medication
I 20–25	**Cardiac event**, i.e. myocardial infarction, ECG evidence of past myocardial infarction or newly recognized left bundle branch block, angina, cardiac arrest, coronary artery bypass grafting, coronary angioplasty Sudden loss of capability, exercise limitation. Problems of managing repeat cardiac event at work	T – For three months after initial investigation and treatment, longer if symptoms not resolved and in case of increased likelihood of recurrence due to pathological findings P – If criteria for issue of certificate not met and further reduction of likelihood of recurrence improbable	Very low recurrence rate* and fully compliant with risk reduction recommendations and no relevant co-morbidity issue six month certificate initially and then annual certificate. Low recurrence rate*: fit with restriction 04*** Fit with a time limitation of one year
I 44–49	**Cardiac arrhythmias** and conduction defects (including those with pacemakers and implanted cardioverter defibrillators (ICD)) Likelihood of impairment from recurrence, sudden loss of capability, exercise limitation Pacemaker/ICD activity may be affected by strong electric fields	T – Until investigated, treated and adequacy of treatment confirmed P – If disabling symptoms present or excess likelihood to impairment from recurrence, including ICD implant	Low recurrence rate*: fit with restriction 04*** Fit with a time limitation of one year
I 61–69 G 46	**Ischaemic cerebrovascular disease** (stroke or transient ischaemic attack) Increased likelihood of recurrence, sudden loss of capability, mobility limitation. Liable to develop other circulatory disease	T – Until investigated, good control and compliance with treatment. Until three months after initial diagnosis P – If residual symptoms interfere with duties or there is significant excess likelihood of recurrence	Case-by-case assessment of fitness for duties; restriction 04*** is indicated. Assessment shall include likelihood of future cardiac events. Able to meet routine and emergency capabilities for

ICD 10 Diagnostic Codes	*Condition Justification for criteria*	*Incompatibility to perform assigned duties at any time: expected to be temporary (T); expected to be permanent (P)*	*Able to perform assigned duties at any time*
	causing sudden loss of capability		assigned safety critical duties Fit with a time limitation of one year
I 73	**Arterial – claudication** Likelihood of other circulatory disease causing sudden loss of capability. Limits to exercise capacity	T – Until assessed P – If incapable of performing duties	Fit with restriction 04*** provided symptoms are minor and do not impair essential duties or if they are resolved by surgery or other treatment. Assess likelihood of future cardiac events. Fit with a time limitation of one year
I 83	**Varicose veins** Possibility of bleeding if injured, skin changes and ulceration	T – Until treated if impairing symptoms. Post-surgery for up to one month	No impairing symptoms or complications
I 80.2–3	**Deep vein thrombosis/ pulmonary embolus** Likelihood of recurrence and of serious pulmonary embolus. Likelihood to bleeding from anticoagulant treatment	T – Until investigated and treated and normally while on short term anticoagulants P – Consider if recurrent events or on permanent anticoagulants	May be considered fit for work with a low likelihood for injury once stabilized on anticoagulants with regular monitoring of level of coagulation
I 00–99 not listed separately	**Other heart disease,** e.g. cardiomyopathy, pericarditis, heart failure Likelihood of recurrence, sudden loss of capability, exercise limitation	T – Until investigated, treated and adequacy of treatment confirmed P – If impairing symptoms or likelihood of impairment from recurrence	Case-by-case assessment based on specialist reports
J 00–99	**RESPIRATORY SYSTEM**		
J 02–04 J 30–39	**Nose, throat and sinus conditions** Impairing for individual. Transmission of infection to food/other crew in some conditions	T –Until no symptoms affecting safe work P – If impairing and recurrent	When treatment complete if no factors predisposing to recurrence
J 40–44	**Chronic bronchitis and/or emphysema** Reduced exercise tolerance and impairing symptoms	T – If acute episode P – If repeated severe recurrences or if general fitness standards cannot be met or if impairing shortness of breath	Consider fitness for emergencies. Able to meet routine and emergency capabilities for assigned safety critical duties. Fit with a time limitation of one year
J 45–46	**Asthma** (detailed assessment with information from specialist in all new entrants)	T – Until episode resolved, cause investigated (including any occupational link) and effective	Fit for duty if history of adult asthma**, with good control with

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	Unpredictable episodes of severe breathlessness	treatment regime in place In person under age 20 with hospital admission or oral steroid use in last three years P – If foreseeable likelihood of rapid life-threatening asthma attack while at work; or history of uncontrolled asthma i.e. history of multiple hospital admissions	inhalers and no episodes requiring hospital admission or oral steroid use in last two years or history or exercise induced asthma that requires regular treatment
J 93	**Pneumothorax** (spontaneous or traumatic) Acute impairment from recurrence	T – Normally for 12 months after initial episode P – After recurrent episodes unless pleurectomy or pleurodesis performed	Normally 12 months after episode or shorter duration as advised by specialist
K 00–99	DIGESTIVE SYSTEM		
K 01–06	**Oral health** Acute pain from toothache. Recurrent mouth and gum infections	T – Until no symptoms affecting safe work	If teeth and gums (gums alone of edentulous and with well-fitting dentures in good repair) appear to be good. No complex prosthesis; or if dental check in last year, with follow-up completed and no problems since
K 25–28	**Peptic ulcer** Recurrence with pain, bleeding or perforation	T – Until healing or cure by surgery or by control of Helicobacter and on normal diet for three months P – If ulcer persists despite surgery and medication	When cured and on normal diet for three months
K 40–41	**Hernias – inguinal and femoral** Likelihood of strangulation	T – Until investigated to confirm no likelihood of strangulation and, if required, treated	When satisfactorily treated or when surgeon reports that there is no likelihood of strangulation
K 42–43	**Hernias – umbilical, ventral** Instability of abdominal wall on bending and lifting	Case-by-case assessment depending on severity of symptoms or impairment. Consider implications of regular heavy whole-body physical effort	Case-by-case assessment depending on severity of symptoms or impairment. Consider implications of regular heavy whole-body physical effort
K 44	**Hernias – diaphragmatic (hiatus)** Reflux of stomach contents and acid causing heartburn, etc.	Case-by-case assessment based on severity of symptoms when lying down and on any sleep disturbance caused by them	Case-by-case assessment based on severity of symptoms when lying down and on any sleep

ICD 10 Diagnostic Codes	*Condition* *Justification for criteria*	*Incompatibility to perform assigned duties at any time: expected to be temporary (T); expected to be permanent (P)*	*Able to perform assigned duties at any time*
			disturbance caused by them
K 50, 51, 57, 58, 90	**Non-infectious enteritis, colitis, Crohn's disease, diverticulitis, etc.** Impairment and pain	T – Until investigated and treated P – If severe or recurrent	Case-by-case specialist assessment. Low likelihood of recurrence
K 60 I 84	**Anal conditions: piles (haemorrhoids), fissures, fistulae** Likelihood to episode causing pain and limiting activity	T – If symptoms affecting safe work P – Consider if not treatable or recurrent	Case-by-case assessment
K 70, 72	**Cirrhosis of liver** Liver failure. Bleeding oesophageal varices	T – Until fully investigate P – If severe or complicated by ascites or oesophageal varices	Case-by-case based on specialist assessment. Fit with a time limitation of one year
K 80–83	**Biliary tract disease** Biliary colic from gallstones, jaundice, liver failure	T – Biliary colic until definitively treated P – Advanced liver disease, recurrent or persistent impairing symptoms	Case-by-case specialist assessment. Sudden onset of biliary colic unlikely
K 85–86	**Pancreatitis** Likelihood of recurrence	T – Until resolved P – If recurrent or alcohol related, unless confirmed abstention	Case-by-case assessment based on specialist reports
Y 83	**Stoma (ileostomy, colostomy)** Impairment if control is lost – need for bags etc. Potential problems during prolonged emergency	T – Until investigated, good control and compliance with treatment P – Poorly controlled	Case-by-case assessment
N 00–99	**GENITO-URINARY CONDITIONS**		
N 00, N 17	**Acute nephritis** Renal failure, hypertension	P – Until resolved	Case-by-case assessment if any residual effects
N 03–05, N 18–19	**Sub-acute or chronic nephritis or nephrosis** Renal failure, hypertension	T – Until investigated	Case-by-case assessment by specialist based on renal function and likelihood of complications
N 20–23	**Renal or ureteric calculus** Pain from renal colic	T –Until investigated to confirm no likelihood of symptoms affecting safe work P – In severe cases of recurrent stone formation	Case-by-case assessment

ICD 10 Diagnostic Codes	*Condition Justification for criteria*	*Incompatibility to perform assigned duties at any time: expected to be temporary (T); expected to be permanent (P)*	*Able to perform assigned duties at any time*
N 33, N40	**Prostatic enlargement/ urinary obstruction** Acute retention of urine	T – Until investigated and treated P – If not remediable	Case-by-case assessment
N 70–98	**Gynaecological conditions** – Heavy vaginal bleeding, severe menstrual pain, endometriosis, prolapse of genital organs or other Impairment from pain or bleeding	T – If impairing or investigation needed to determine cause and remedy it	Case-by-case assessment if condition is likely to require treatment on voyage or affect working capacity
R 31, 80, 81, 82	**Proteinuria, haematuria, glycosuria**, or other urinary abnormality Indicator of kidney or other diseases	T – If initial findings clinically significant P – Serious and non-remediable underlying cause – e.g. impairment of kidney function	Very low likelihood of serious underlying condition
Z 90.5	**Removal of kidney or one non-functioning kidney** Limits to fluid regulation under extreme conditions if remaining kidney not fully functional	P – Any reduction of function in remaining kidney in new deck crew member. Significant dysfunction in remaining kidney of serving deck crew member	Remaining kidney must be fully functional and not liable to progressive disease, based on renal investigations and specialist report
O 00–99	**PREGNANCY**		
O 00–99	**Pregnancy** Complications, late limitations on mobility. Potential for harm to mother and child in the event of premature delivery at work	T – Decision to be in accord with national legislation Abnormality of pregnancy requiring high level of surveillance	Uncomplicated pregnancy with no impairing effects: Decisions to be in accord with national practice and legislation
L 00–99	**SKIN**		
L 00–08	**Skin infections** Recurrence, transmission to others	T – If symptoms affecting safe work P – Consider for deck crew members with recurrent problems	Based on nature and severity of infection
L 10–99	**Other skin diseases,** e.g. eczema, dermatitis, psoriasis Recurrence, sometimes occupational cause	T – If symptoms affecting safe work	Case-by-case decision, restricted as appropriate if aggravated by heat, or substances at work
M 00–99	**MUSCULOSKELETAL DISORDERS**		
M 10–23	**Osteoarthritis,** other joint diseases and subsequent joint replacement Pain and mobility limitation affecting normal or emergency duties. Possibility of infection or dislocation and	T – Full recovery of function and confirmation by formal assessment of a specialist required before return to work after hip or knee replacement P – For advanced and severe cases	Case-by-case assessment. Able to fully meet routine and emergency duty requirements with very low likelihood of worsening such that

ICD 10 Diagnostic Codes	*Condition Justification for criteria*	*Incompatibility to perform assigned duties at any time: expected to be temporary (T); expected to be permanent (P)*	*Able to perform assigned duties at any time*
	limited life of replacement joints		duties could not be undertaken
M 24.4	**Recurrent instability** of shoulder or knee joints Sudden limitation of mobility, with pain	T – Until sufficient recovery and stability of joint function	Case-by-case assessment of occasional instability
M 54.5	**Back pain** Pain and mobility limitation affecting normal or emergency duties. Exacerbation of impairment	T – In acute stage P – If recurrent or incapacitating	Case-by-case assessment
Y 83.4 Z 97.1	**Limb prosthesis** Mobility limitation affecting normal or emergency duties	P – If essential duties cannot be performed	If routine and emergency duties can be performed, limitations specific nonessential activities are allowed. Restriction 03*** may be indicated
	GENERAL		
R 47, F 80	**Speech disorders** Limitations to communication ability	P - Incompatible with reliable performance of routine and emergency duties safely or effectively	No impairment to essential speech communication
T 78 Z 88	**Allergies** (other than allergic dermatitis and asthma) Likelihood to recurrence and increasing severity of response. Reduced ability to perform duties	T –Until no symptoms affecting safe work P – If life-threatening response reasonably foreseeable	Where response is impairing rather than life-threatening, and effects can be fully controlled by long-term nonsteroidal self-medication or by lifestyle modifications that are practicable at work with no safety critical adverse effects
Z 94	**Transplants –** kidney, heart, lung, liver (for prosthetics, i.e. joints, limbs, lenses, hearing aids, heart valves, etc., see condition specific sections) Possibility of rejection. Side effects of medication	T – Until effects of surgery and anti- rejection medication stable P – Case-by-case assessment and confirmation by formal assessment of a specialist	Case-by-case assessment with specialist advice. Fit with a time limitation of one year
Classify by condition	**Progressive conditions** which are currently within criteria, e.g. Huntington’s chorea (including family history), keratoconus	T – Until investigated and treated if indicated P – If harmful progression is likely	Case-by-case assessment, with specialist advice. Such conditions are acceptable if harmful progression before next medical check-up is judged unlikely

ICD 10 Diagnostic Codes	*Condition Justification for criteria*	*Incompatibility to perform assigned duties at any time: expected to be temporary (T); expected to be permanent (P)*	*Able to perform assigned duties at any time*
Classify by condition	**Conditions not specifically listed**	T – Until investigated and treated if indicated P – If permanently impairing	Use analogy with related conditions as a guide. Consider excess likelihood of sudden incapacity, of recurrence or progression and limitations on performing normal and emergency duties. If in doubt obtain advice or consider restriction and referral to referee

Notes to the table and the Appendices

* **Recurrence rates:**

Where the terms very low and low are used for the excess likelihood of a recurrence. Those are essentially clinical judgements but for some conditions quantitative evidence on the likelihood of recurrence is available. Where that is available, e.g. for seizure and cardiac events, it may indicate the need for additional investigations to determine an individual's excess likelihood of a recurrence. Quantitative recurrence levels approximate to:

- very low: recurrence rate less than 2 per cent per year;
- low: recurrence rate 2–5 per cent per year.

** **Adult asthma:**

Asthma may persist from childhood or start over the age of 16. There is a wide range of intrinsic and external causes for asthma developing in adult life. In late entry recruits with a history of adult onset asthma the role of specific allergens, including those causing occupational asthma, shall be investigated. Less specific inducers such as cold, exercise and respiratory infection also need to be considered. All can affect fitness for work on inland waters.

<u>Mild intermittent asthma</u> – infrequent episodes of mild wheezing occurring less than once every two weeks, readily and rapidly relieved by beta agonist inhaler.

<u>Mild asthma</u>: frequent episodes of wheezing requiring use of beta agonist inhaler or the introduction of a corticosteroid inhaler. Taking regular inhaled steroids (or steroid/long acting beta agonists) may effectively eliminate symptoms and the need for use of beta agonist treatment.

<u>Exercise induced asthma</u>: episodes of wheezing and breathlessness provoked by exertion especially in the cold. Episodes may be effectively treated by inhaled steroids (or steroid/long acting beta agonist) or other oral medication.

<u>Moderate asthma</u>: frequent episodes of wheezing despite regular use of inhaled steroid (or steroid/long acting beta agonist) treatment requiring continued use of frequent beta agonist inhaler treatment, or the addition of other medication, occasional requirement for oral steroids.

<u>Severe asthma</u>: frequent episodes of wheeze and breathlessness, frequent hospitalization, frequent use of oral steroid treatment.

*** **Mitigation measures and restrictions:**

01 Sight correction (glasses or contact lenses, or both) required

02 Hearing aid required

03 Limb prosthesis required

04 No solo duty in the steering house

05 Only during daylight

06 No navigational duties allowed

07 Limited to one craft, named ....

08 Limited area, namely ....

09 Limited task, namely........

The mitigation measures and restrictions may be combined. They shall be combined if necessary.

Appendix I

Relevant vision criteria as meant under diagnostic code H 00-59

Minimum eyesight criteria:

1. Daytime visual acuity:

Acuity of both eyes together or of the better eye with or without correction greater than or equal to 0.8. Monocular vision is accepted.

Manifest double vision (motility) which cannot be corrected is not accepted. In the event of monocular vision: normal motility of the good eye.

Restriction 01[***] may be indicated.

2. Eyesight at dawn and dusk:

To be tested in case of glaucoma retinal disorders or media opacities (e.g. cataract). Contrast sensitivity at 0.032 cd/m^2 in the absence of glare; test result 1:2.7 or better as tested with the mesotest.

3. Field of view:

The horizontal visual field shall be at least 120 degrees. The extension shall be at least 50 degrees left and right and 20 degrees up and down. No defects shall be present within a radius of the central 20 degrees.

At least one eye shall meet the visual acuity standard and have the visual field without pathological scotomata. Formal testing by an eye doctor is mandatory if any abnormalities are found during the initial test or in case of glaucoma or retinal dystrophy.

4. Colour sense for deck crew members with navigational duties:

The colour sense is considered to be adequate if the candidate passes the Ishihara 24 plate edition test with a maximum of two mistakes. If the candidate does not pass this test, one of the mentioned approved alternative tests have to be performed. In case of doubt, a test with an anomaloscope shall be performed. The anomaloscope quotient shall be between 0.7 and 1.4 and thus exhibit normal trichromacy.

The approved alternative tests to the Ishihara plates are:

(a) Velhagen/Broschmann (result with a maximum of two mistakes);

(b) Kuchenbecker-Broschmann (maximum of two mistakes);

(c) HRR (minimum result “mild”);

(d) TMC (minimum result “second degree”);

(e) Holmes Wright B (result with a maximum of 8 errors for small);

(f) Farnsworth Panel D 15 test (minimum result: maximum one diametrical crossing in the plot of the arrangement of colours);

(g) Colour Assessment and Diagnosis (CAD) test (result with a maximum of four CAD units).

Holders of boatmaster’s certificates issued in accordance with Council Directive 96/50/EC[1] whose anomaloscope quotient for colour sense is between 0,7 and 3,0 are deemed fit if their certificate has been issued before 1 April 2004.

The use of filter glass optical correction for colour sense, such as tinted contact lenses and glasses, is not allowed.

Appendix II

Relevant hearing criteria as meant under diagnostic code H 68-95

Minimum hearing criteria:

Hearing shall be deemed adequate if the average value of the hearing loss in both ears, with or without hearing aid, does not exceed 40 dB at the frequencies 500, 1000, 2000 and 3000 Hz. If the value of 40 dB is exceeded, hearing shall nonetheless be deemed adequate, if a hearing test with an audiometer which complies with ISO 8253-1:2010 or equivalent is passed.

Restriction 02[***] may be indicated.