

Medevac Operations in Russian SAR region

**Эвакуация больных и пострадавших с борта морских судов на берег
в поисково-спасательных районах ответственности Российской Федерации**

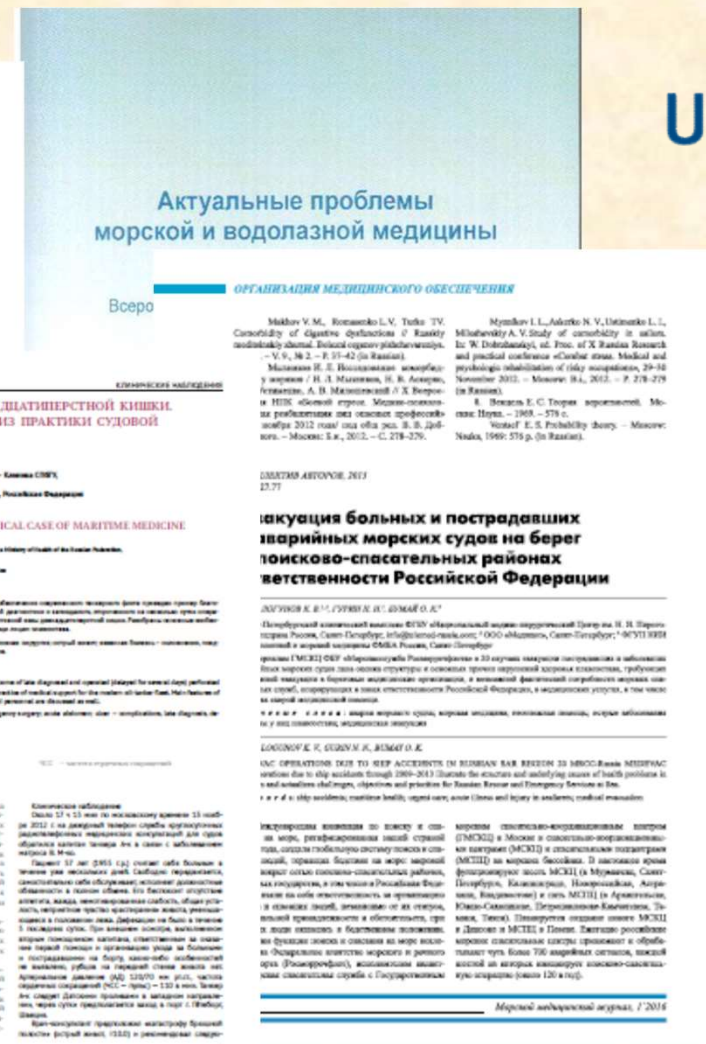
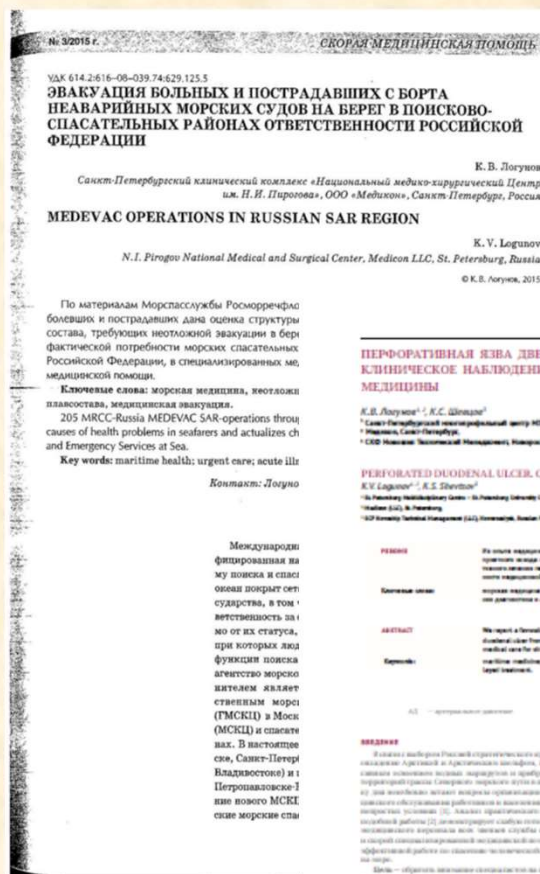


Telemed-Russia (Medicon LLC)

- commercial radio-medical advice service
- sophisticated know-how
- nearly 20 yrs, 2,000 patients
- research material – the second largest in the world



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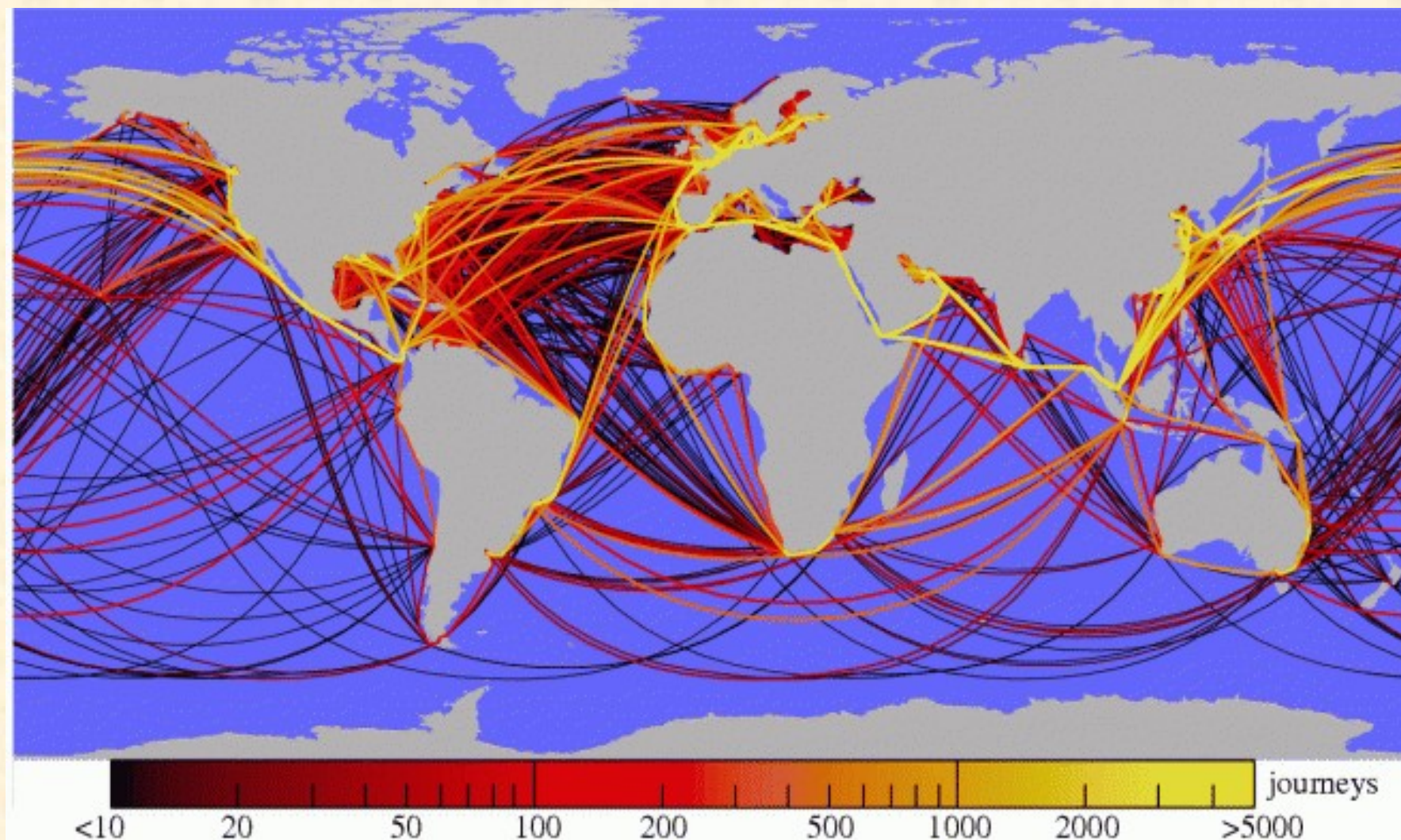
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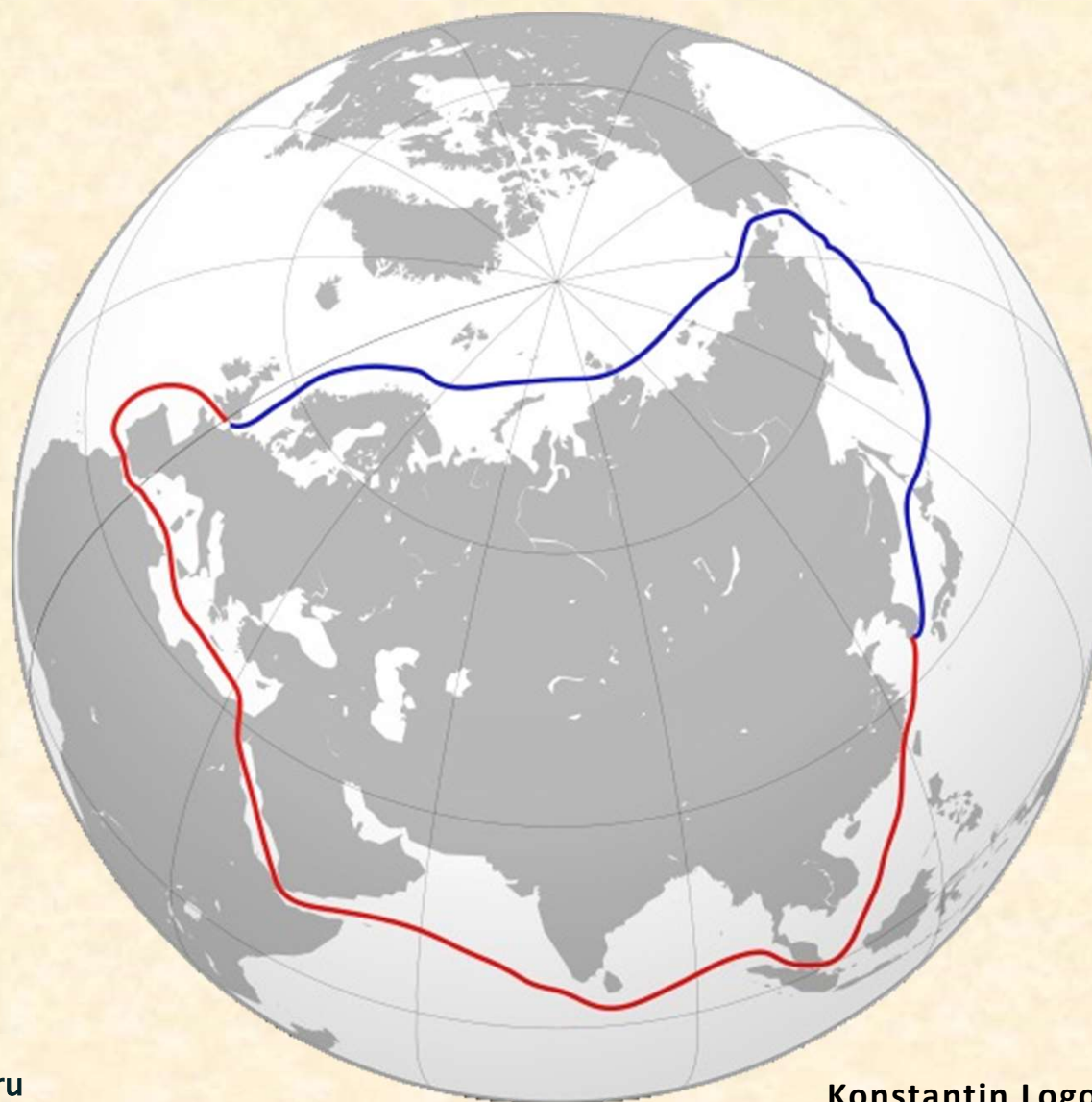
Northern region

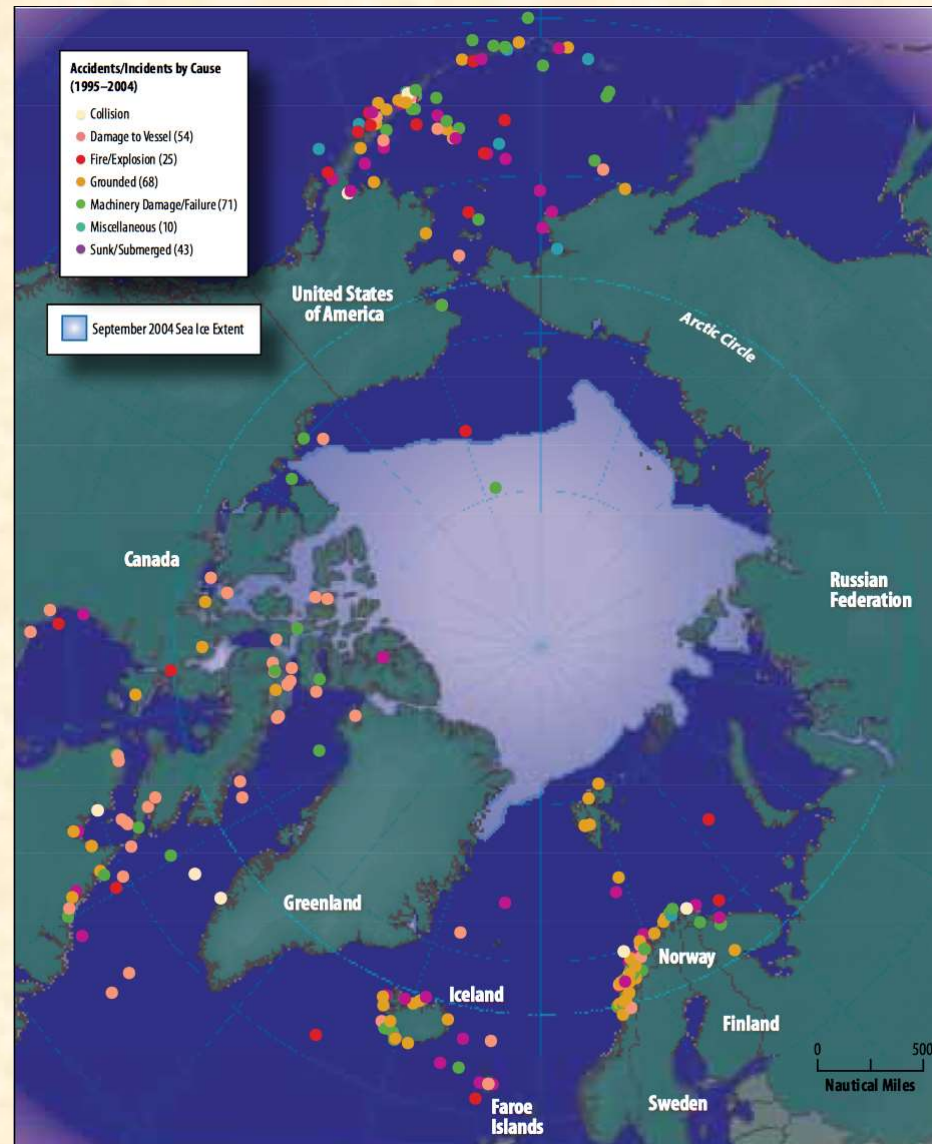
- territory (space) for humans
- natural resources
- transportation routes
- tourism



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Health service rationale

- how often do people get sick
- encountered health problems
- the ratio of different diseases



Objectives

- urgent medical evacuation from ship to shore

main reasons

- MEDEVAC common causes



Methods and Subjects

Methods	Subjects
Review	SAR operations coordinated through Russian MRCC (RSCs) in 5 years (2009-2013)
Analysis	All cases of medical evacuation

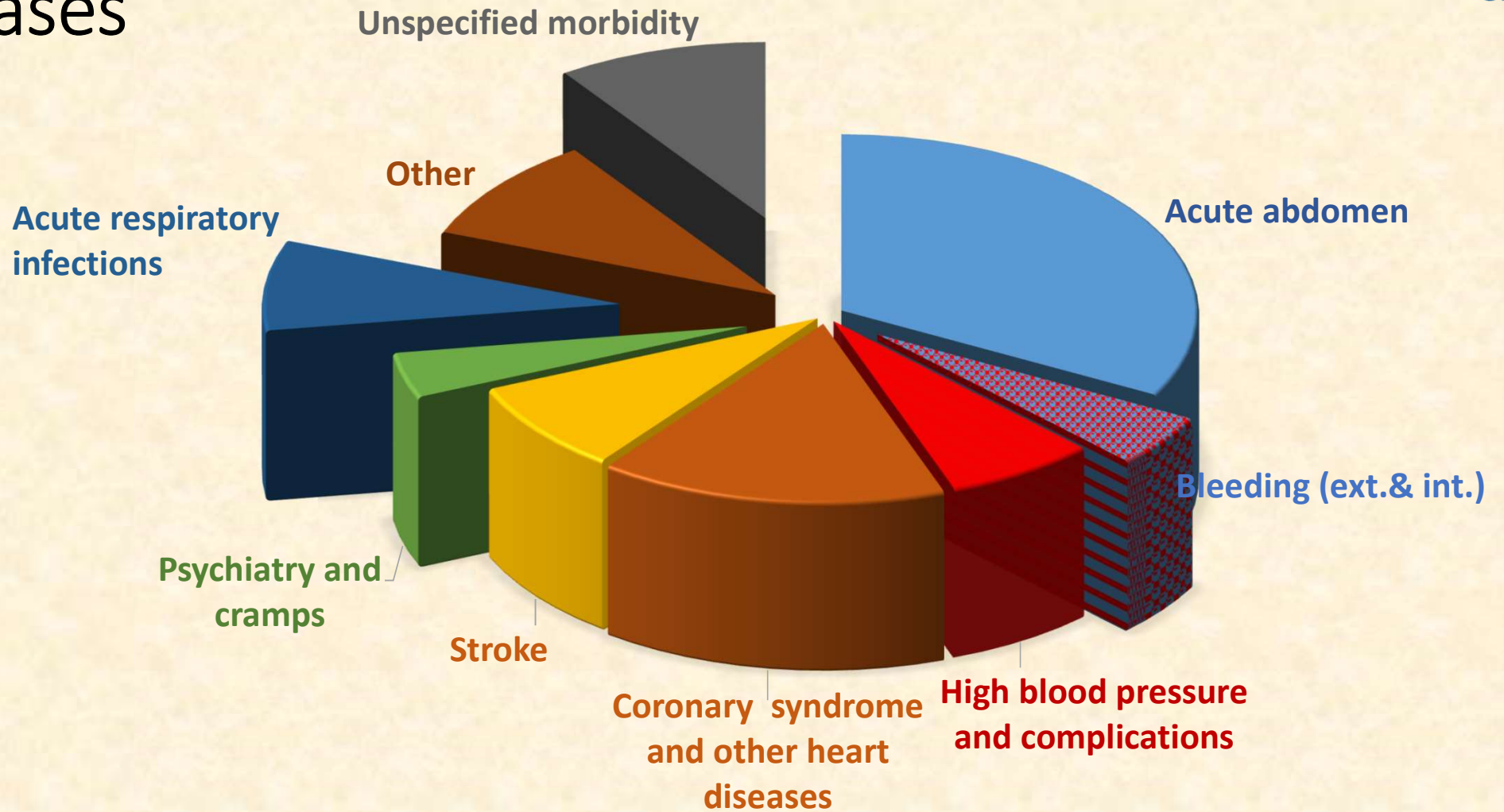


Ship-to-Shore Evacuation Reasons

Health Problems	Number of cases	Total number proportion, %	Group share, %
Diseases	146	78	100
Acute abdomen	48		33
High blood pressure and complications	10		7
Coronary syndrome and other heart diseases	23		16
Stroke	12		8
Psychiatry and cramps	6		4
Acute respiratory infections	12		8
Bleeding (external and internal)	7		5
Other	14		10
Unspecified morbidity	14		10
Poisonings	3	2	-
Injuries	37	20	100
Head trauma	5		13
Back and torso trauma	7		19
Limb damage	25		68



Diseases

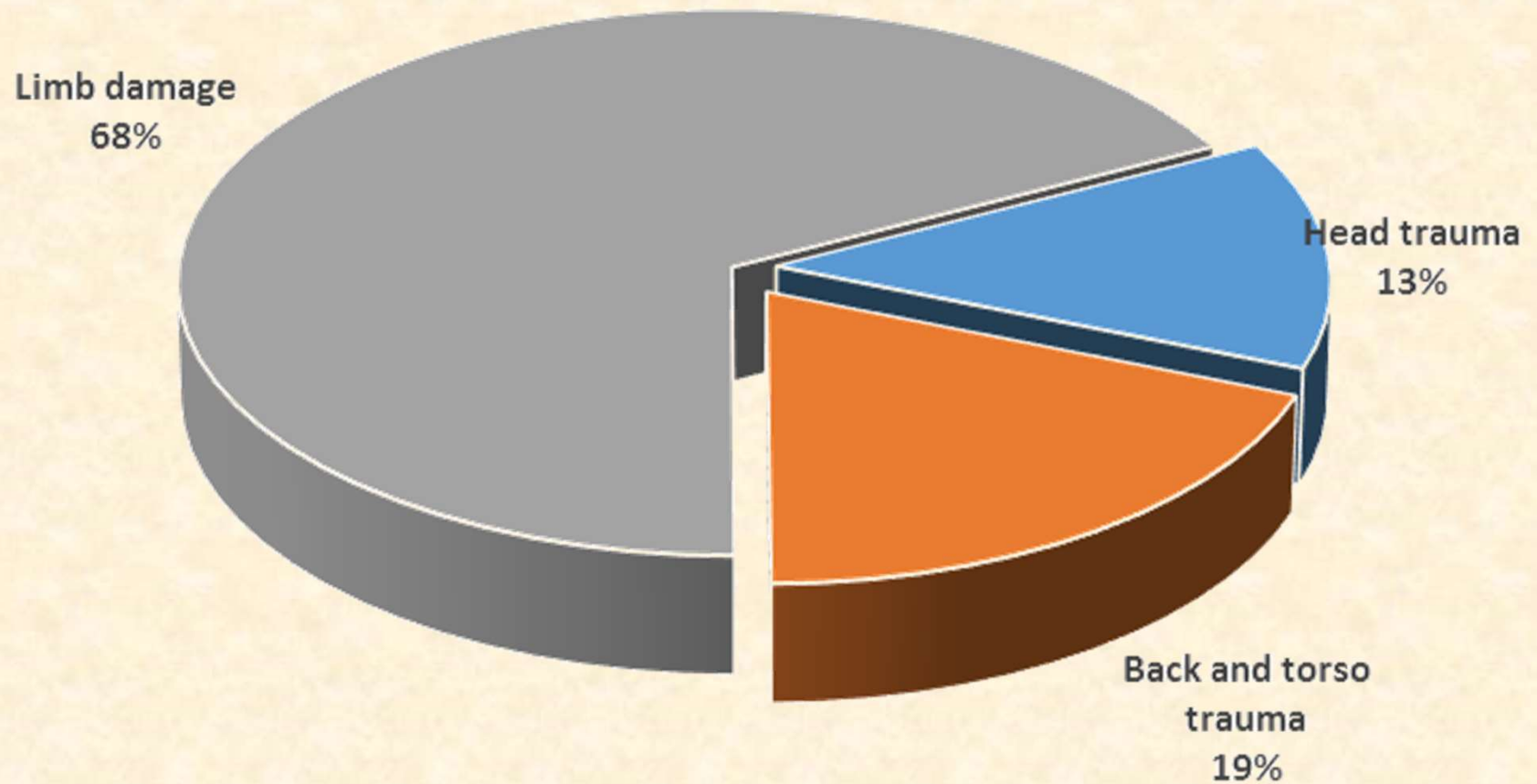


1/3 need surgery
1/3 need intensive care

Conclusions 1



Injuries



Most injuries are not life threatening

Conclusions 2



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Ship-to-Shore Evacuation Reasons

Certain diseases

Consequences of external causes

80 : 20



Professional selection and medical examinations are not effective in preventing diseases in seafarers

Conclusions 3



Ship-to-shore Evacuation Means

Means of evacuation	Number of accidents
Helicopter	44
Speedboat	35
Harbour tug	27
Another ship going in the same direction / the same ship in distress	75
Total:	181



Evacuation means do not correlate with medical diagnosis

Conclusions 4



Rescue Operation Duration

Means of evacuation	Average Duration, hrs
Helicopter	15 (4...35)
Speedboat	7 (3...11)
Harbor tug	12 (1...91)
Another ship going in the same direction / Emergency ship itself	13 (1...66)
Mean:	14 (1...91)



Helicopter is not the fastest evacuation means at sea

Conclusions 5



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Unlike in space flights, medical evacuation at sea is often stalled for days

Conclusions 6



MEDEVAC Outcomes

Outcomes	Total number	Rate, %
Hospitalization	115	62
Pass on Ambulance	64	35
Death	4	2
Rose to their feet and left themselves	2	1



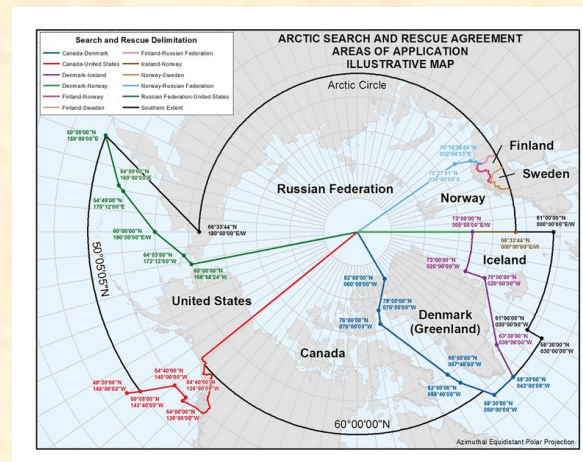
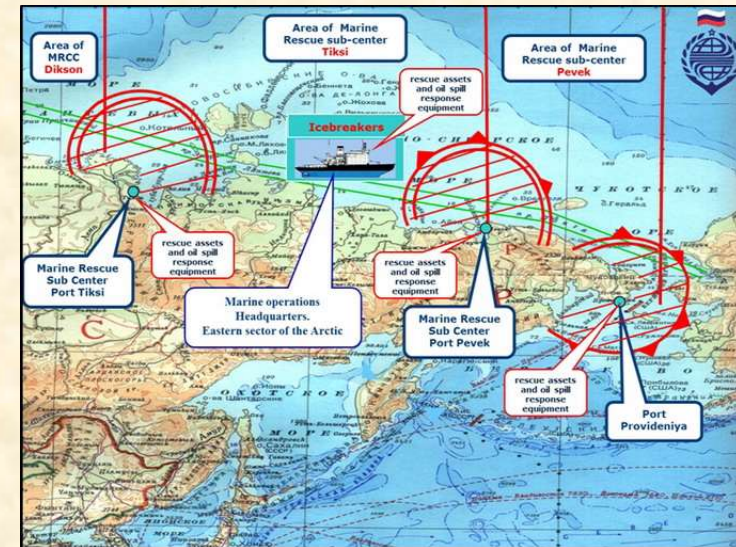
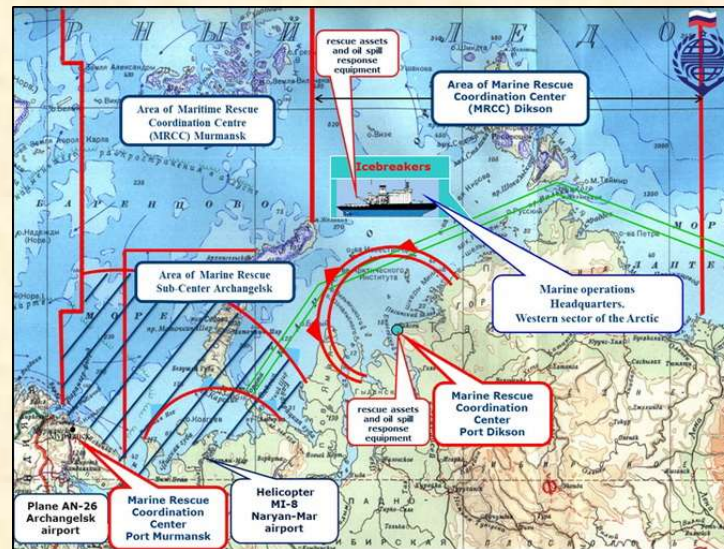
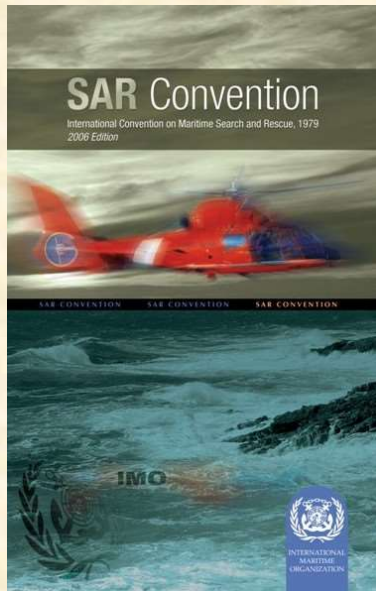
Medevac operations lack medical expertise

Conclusions 7



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Extrapolations for the Northern Sea Route

Challenges:

- MRCC – medical expertise is vital
- Special preparedness issues in Ambulance & Emergency services
- Clinical medicine – off the beaten track
- Telemedicine – one possibility

