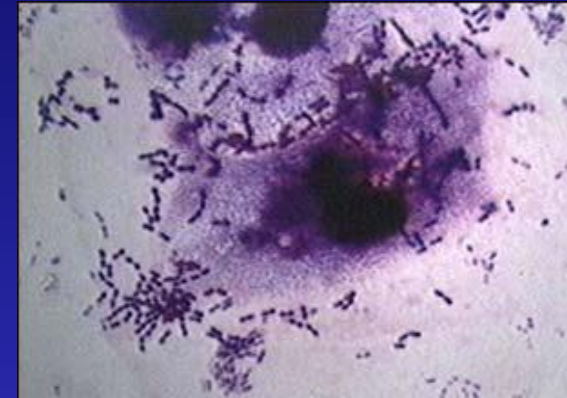


INFECTIOUS DISEASES IN THE ARCTIC AND INTERNATIONAL COMPARISONS

Anders Koch, Senior Researcher, Ph.D. MPH
Department of Epidemiology Research
Statens Serum Institut



TUBERCULOSIS 1900 - 1956



Coughing man (tuberculosis)
Alfred Berthelsen 1902



Bed hall for TB patients
Jakobshavn 1936

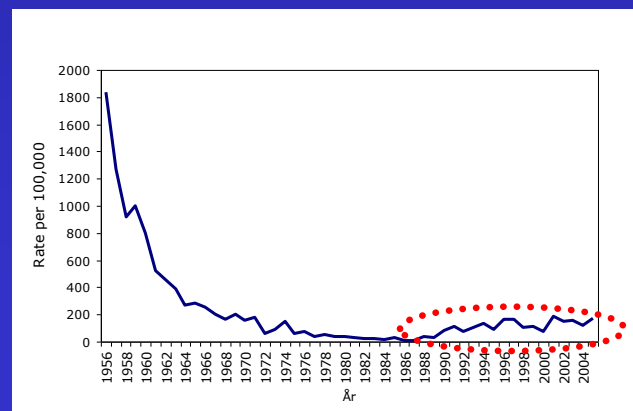
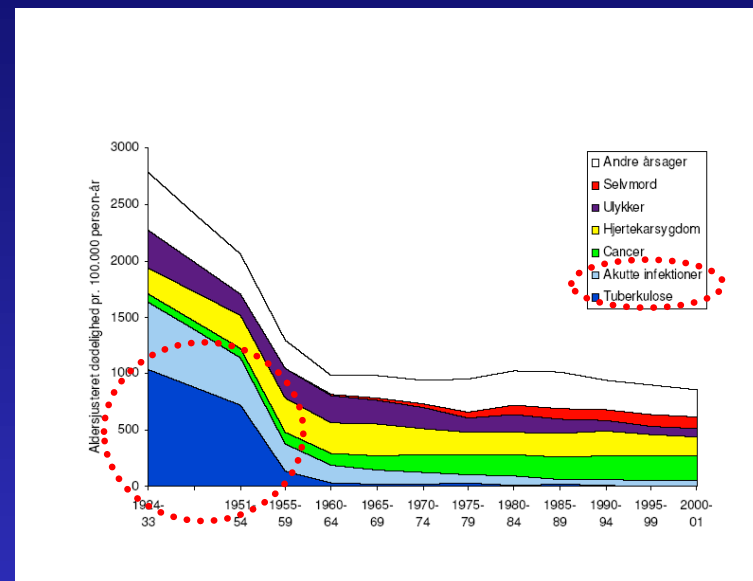
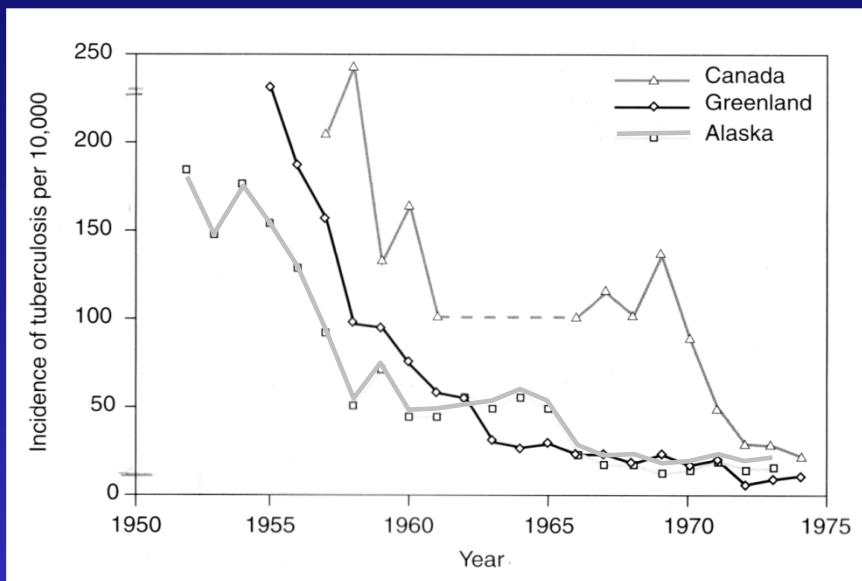


Queen Ingrid's Sanatorium 1954



Tuberculosis ship 'Misigssut' 1956

TUBERCULOSIS 1950 -



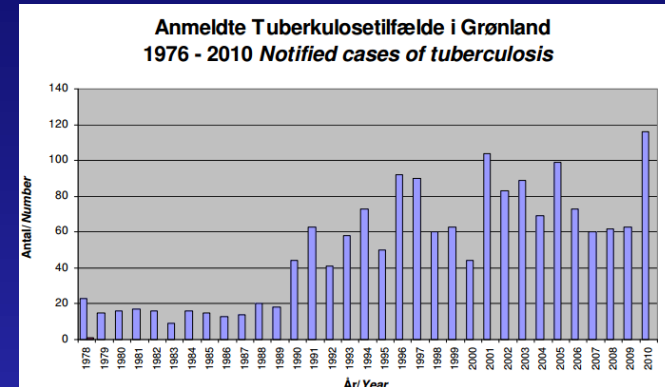
HIGHLY PREVALENT INFECTIOUS DISEASES IN NATIVE ARCTIC POPULATIONS

- Many of the same infections as in other countries!
- Tuberculosis
- Respiratory tract infections
- Otitis media
- Invasive pneumococcal disease
- Hepatitis B infection
- Sexually transmitted infections
- Viral associated cancers (Nasopharyngeal carcinoma, cervical cancer)

TUBERCULOSIS



- Unknown causes for recent increase
- Public health efforts limited effect
- Not linked to HIV-epidemic
- No non-tuberculous mycobacteria
- Particular research possibilities (vaccines, MTB antigens)



**Illit aamma sakiallulersinnaavutit
Tuberkulose kan også ramme dig**

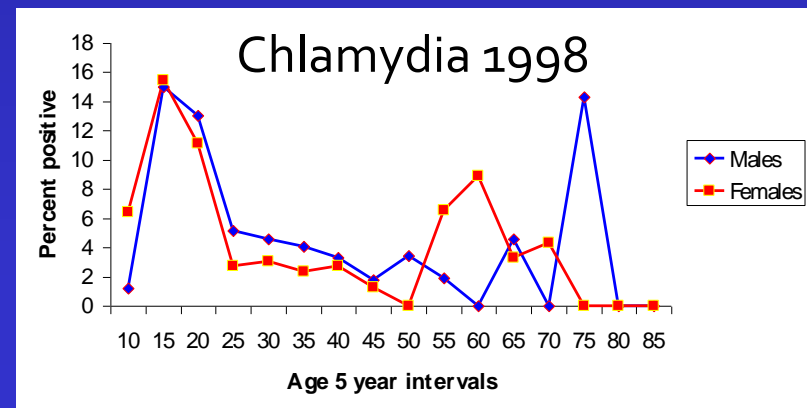
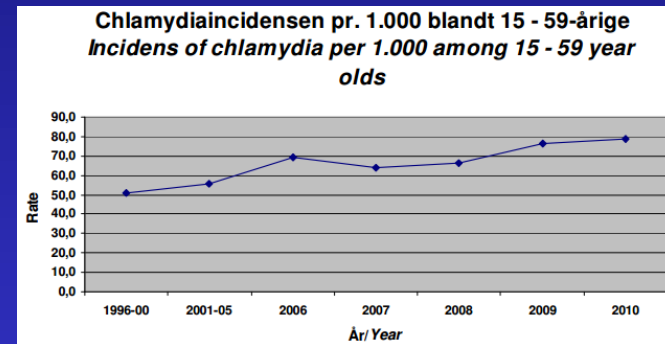
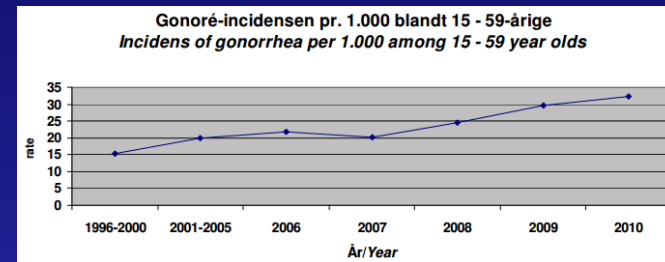
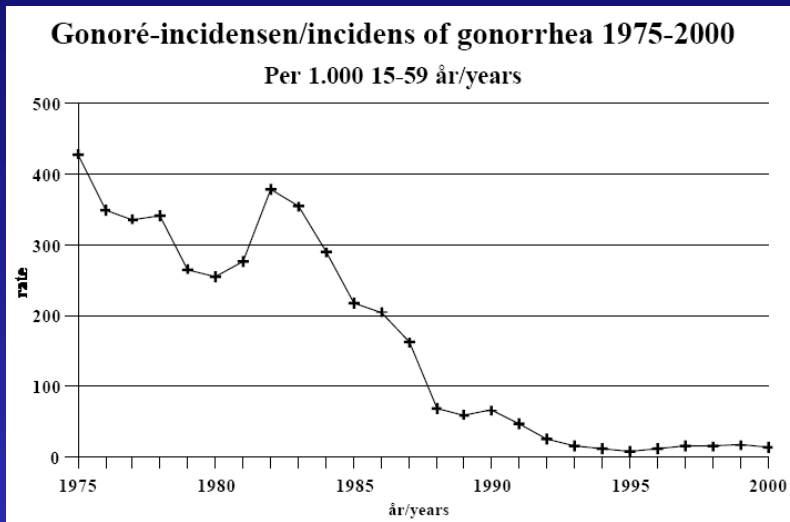


HEPATITIS B

- Hepatitis B infection frequent (7% chronic infected)
- Less severe long term clinical impact (cirrhosis and liver cancer) than in many other populations
- Causes of milder course unknown
- New 'Arctic' B₆ subgenotype identified, related to benign Japanese subgenotype B₁
- Expression of migration?



SEXUALLY TRANSMITTED DISEASES



MAIN RESEARCH QUESTIONS

INFECTIOUS DISEASES

- Distribution
 - Change over time
 - Climate changes
- Risk factors
 - Environment
 - Genetic disposition
- Long-term effects
 - Association with chronic diseases
- Prevention

STATENS SERUM INSTITUT - RESEARCH IN GREENLAND



- Prevention and control of infectious diseases, biological threats and congenital disorders
- Long-standing health research in Greenland
- Section for Health Research in Greenland
- Infectious diseases, cancer, asthma and allergy



THESES AND (SOME) RESEARCH AREAS

- Ph.D. theses

1.	2000	Anders Koch	Respiratory tract infections
2.	2003	Tyra Krause	Asthma and allergi
3.	2005	Jeppe Friborg	Epstein-Barr virus and cancer
4.	2006	Lone N. Møller	Trichinellosis
5.	2010	Trine Boysen	Epstein-Barr virus and pernicious anemia
6.	2010	Bolette Søborg	Tuberculosis
7.	2011	Malene Børresen	Hepatitis B virus
8.	2012	Ramon G. Jensen	Otitis Media
9.	2014	Johan E. Navne	Pneumococci
10.	2015	Sascha W. Michelsen	TB-antigen-recognition
11.	2016	Karen B. Mortensen	TB in East Greenland

- MPH thesis

1.	2009	Anders Koch	Otitis media
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- University theses

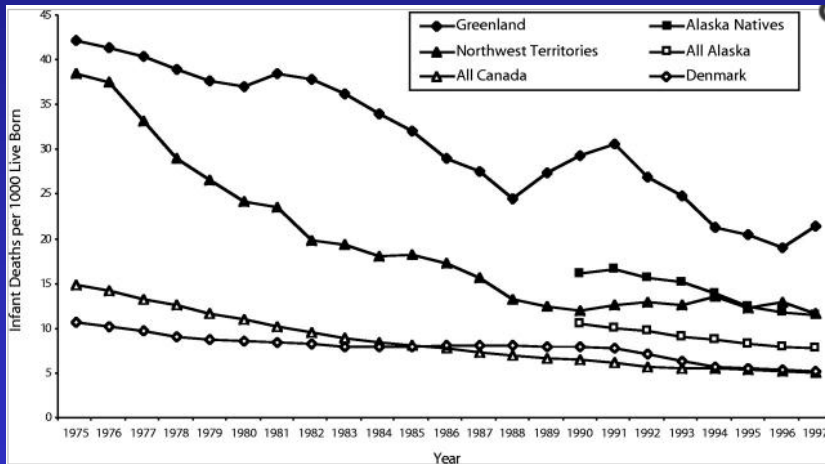
–	2000 -	Vaccinations, antibiotics, atopic dermatitis, invasive bacterial infections, respiratory tract infections, allergy, tuberculosis	
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STUDY TYPES AND RESOURCES

- Field studies
 - Cohort studies
 - Cross sectional studies
- Register-based studies
 - CPR, Cancer Registry, Inpatient registry, Microbiological databases, National reporting systems, etc.
- Biobank studies
 - Biological material from field studies
 - PKU-cards and routine samples submitted to SSI
 - National Biobank
 - Blood from app. 42,000 persons living in Greenland
 - Web information



LARGE AND SMALL SCALE STUDIES



Infant mortality rates in the Arctic regions of North America, 1975–1997.

ENGLAND Leder Pilivik Gallerier ICECAM Vejret Buuarsikkut NY: Husker

Q-feber, også kaldet gedeinfluenza, findes i kvægbesætninger og smitter fortrinsvis mennesker, der arbejder med dyr. Foto: Michael Kooren/Reuters/Scanpix)

Gedeinfluenza er kommet til Grønland

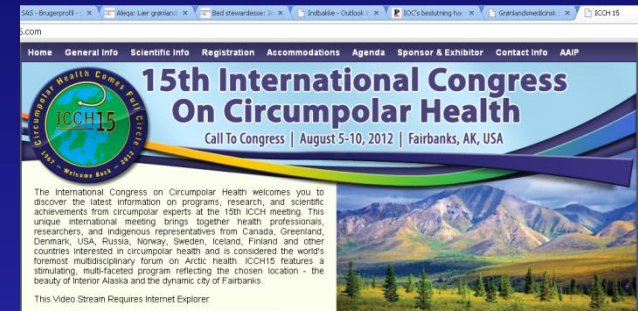
Læger har fundet det første tilfælde af sygdommen Q-feber, også kaldet gedeinfluenza. Sygdommen findes i kvægbesætninger, og det er en gåde hvordan sygdommen er kommet til Grønland.

MAIN COLLABORATORS

- Queen Ingrids Hospital & Health Center, Nuuk
- Sisimiut & Tasiilaq Hospitals
- Rigshospitalet, Dept. of Otorhinolaryngology
- National Institute of Public Health
- CDC, Anchorage, Alaska
- And hopefully many others in the future!



INTERNATIONAL UNION FOR CIRCUMPOLAR HEALTH



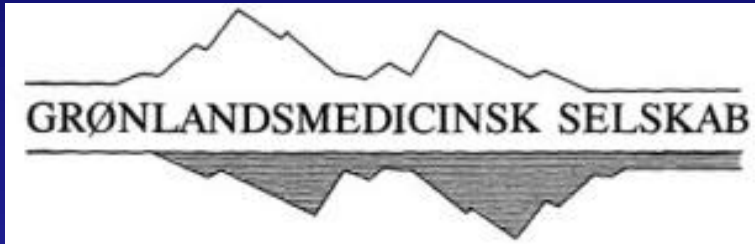
- Umbrella body for Arctic scientific societies
 - USA, Canada, Greenland/Denmark, Scandinavia, Russia
- Organiser of iCircumpolar ICCH congresses every three years
 - Oulu 2015 & Greenland/Denmark 2018
- International Board
 - President Jon Ojvind Odland, Vice President Anders Koch

IUCH INFECTIOUS DISEASE WORKING GROUPS

- Viral hepatitis (2006)
 - *Helicobacter pylori* infection
 - Tuberculosis
 - Climate change and infectious diseases
-
- Yearly meetings (September) Copenhagen
 - Participation free, all are welcome
 - www.arcticinfdis.com



THANK YOU FOR YOUR ATTENTION



www.gmsnet.dk



Grønlandsmedicinsk Selskab x
www.gmsnet.dk



Medlemsskab

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Medlemsskab
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Kvartalets tal
NUNAMED
ICCH-kongresserne
IUCH
Fonden
Finansiering
Forskningsråd
Publikationer/Afhandlinger
Links og datakilder

Webmaster ako@ssi.dk

Alle er velkomne som medlemmer af Grønlandsmedicinsk Selskab. Kontingentet er pt. på 375 kr. for læger, 275 kr. for ikke-læger og 175 kr. for studerende og medlemmer over 70 år. Kontingentet opkræves via DADL for læger, og direkte for andre medlemmer.

Som medlem modtager man

- Selskabets **elektroniske nyhedsbrev**
- 'Kvartalets Tal' - et kvartårligt nyhedsbrev med et aktuelt forskningsresultat fra Grønland
- **Nakorsanut** - tidsskrift for den Grønlandske Lægekredsforening
- **International Journal of Circumpolar Health** (tidligere Arctic Medical Research) forefindes nu i elektronisk form. Tidsskriftet er tidligere sendt til medlemmerne, men E-Alerts kan fås ved tilmelding til [denne side](#).
- **Polarfronten** findes tilsvarende i elektronisk form. Tilmelding til gratisabonnement kan fås ved link til [denne side](#).

Hvis du vil være medlem, send venligst en mail til selskabet på mail@gmsnet.dk, alternativt formand og webmaster Anders Koch, ako@ssi.dk med oplysning om

- Navn
- Stilling og uddannelse
- Adresse
- Postnr. og by
- E-mail
- samt evt. kommentarer.

Velkommen i Selskabet!

