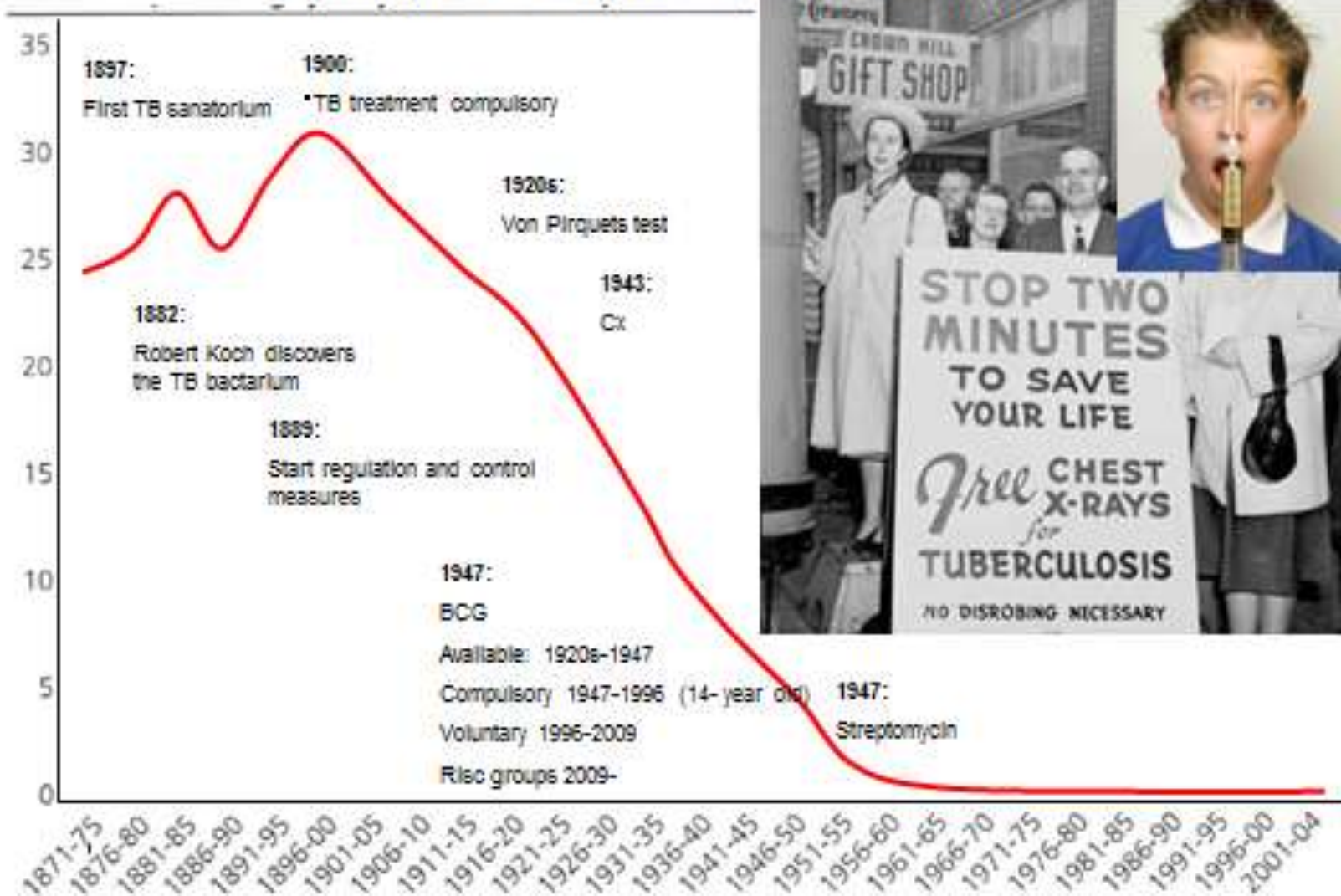


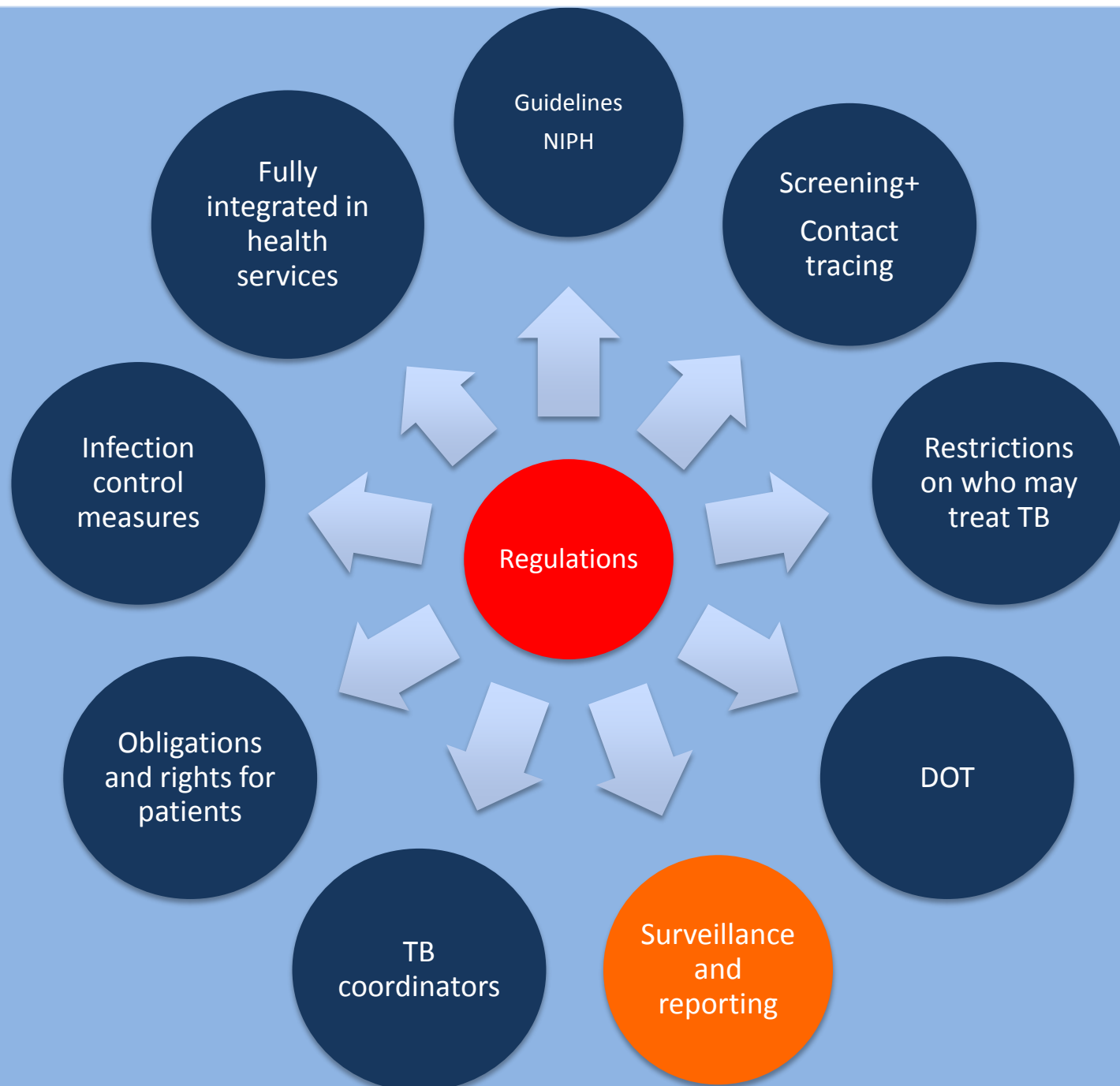
# TB Control in Norway

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Dept. dir. Karin Rønning MD,  
Norwegian Institute of Public Health  
St. Petersburg 03.march2013

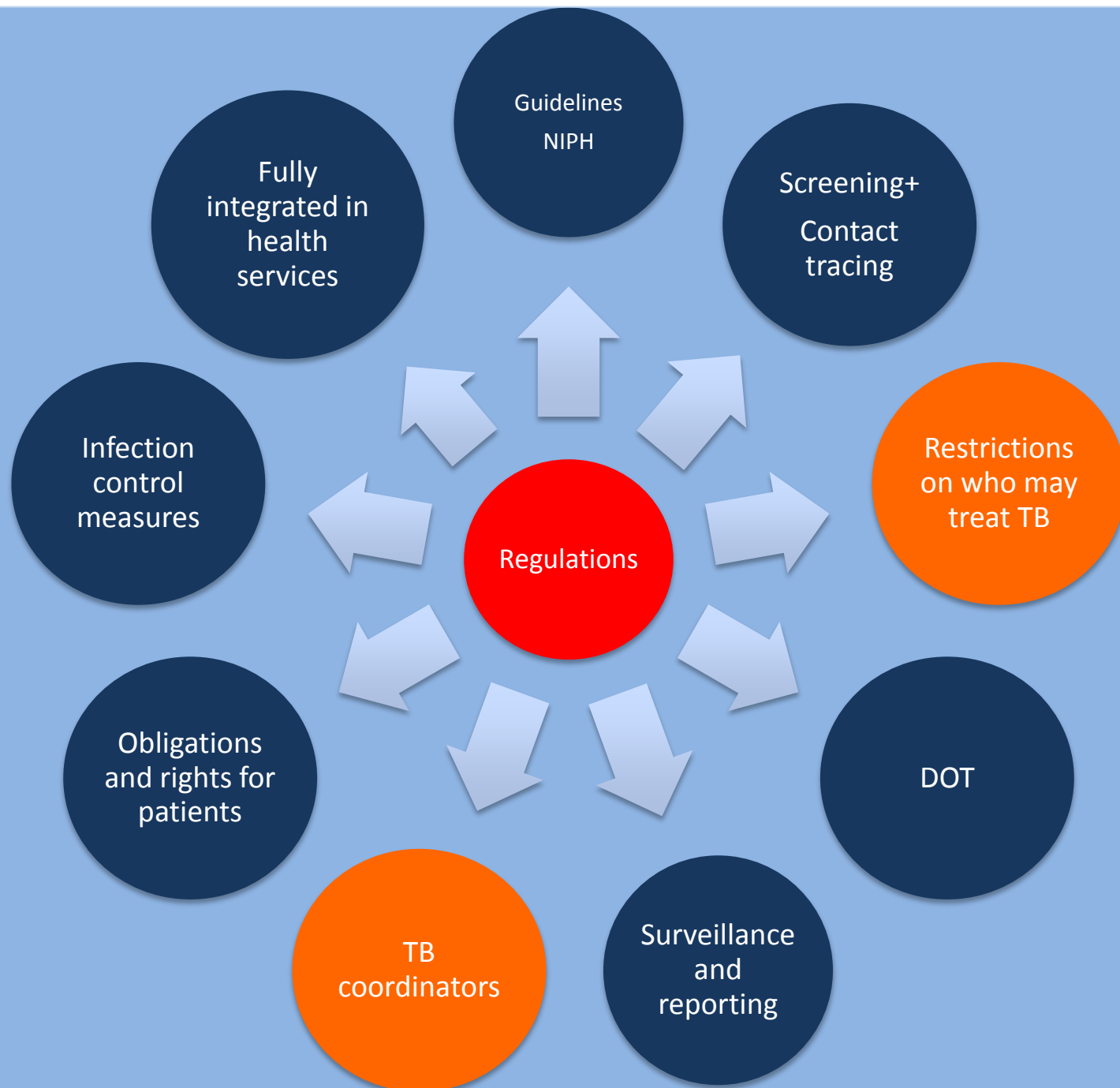
## Mortality of TB in Norway (per 10.000)





# TB surveillance and control

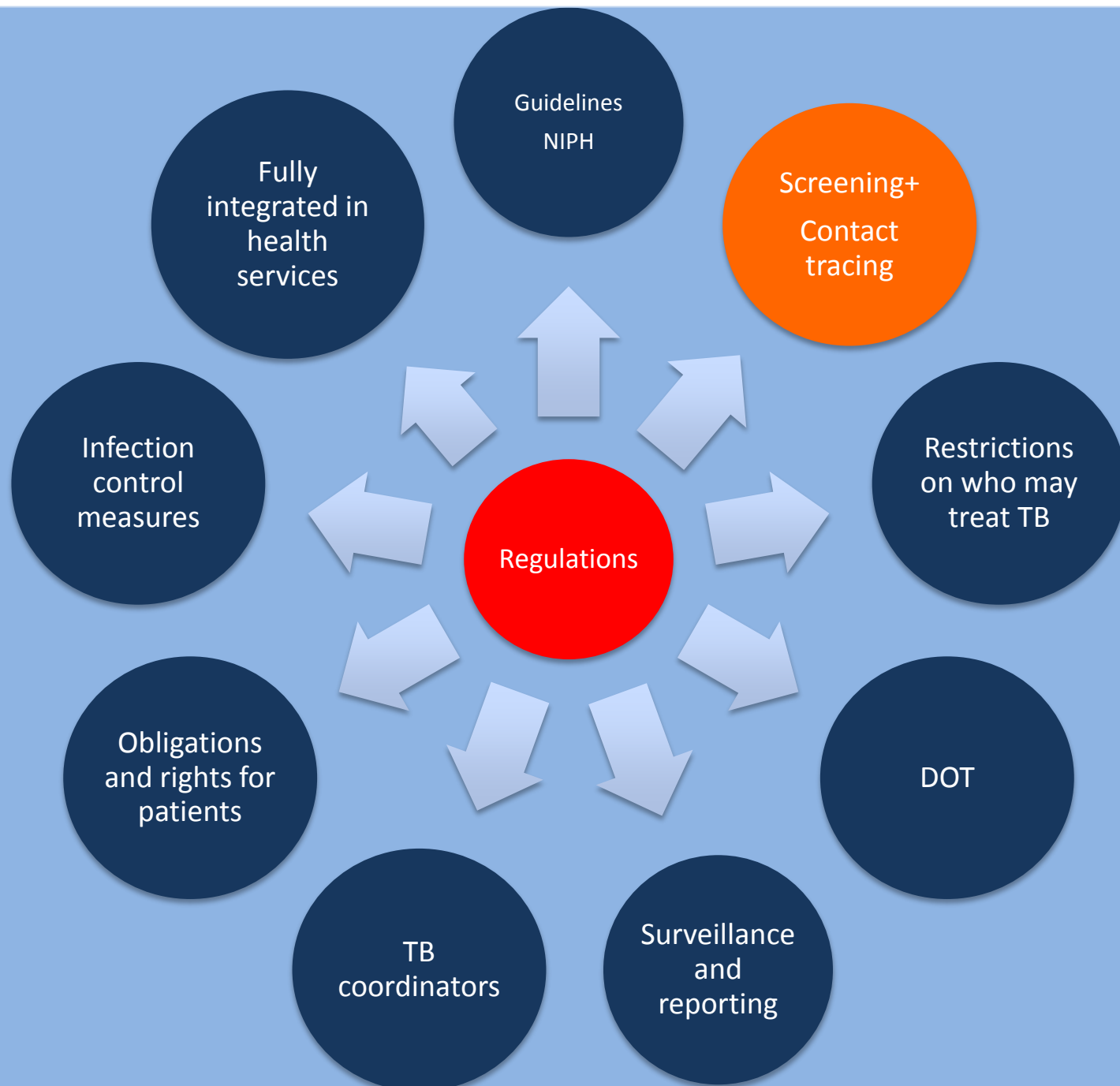
- Mandatory nominative notification
  - all cases active TB
  - +Latent TB if put on treatment
  - treatment outcome
  - TB hiv coinfection notified (from 2012)
- All culture + cases DST
- All culture + cases genetically tested for cluster notification (MIRU VNTR from 2011)
- BCG only to risk groups from 2009
  - Newborn with parent(s) from HI TB countries



# ..TB surveillance and control

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- Treatment restricted to public hospitals
  - Infectious diseases
  - Chest physicians
  - Pediatricians
- TB medication delivered from hospital pharmacies only
- TB coordinators (nurses) at all hospitals treating TB
  - Individual Treatment plans
  - Link between hospital physician and municipal health services providing DOT



# TB screening

- Screening of all immigrants from high incidence countries (> 40/ 100 000 / yr)
  - going to stay in Norway > 3 months
- Screening of all stayed in HIC > 3 months last 3 years **if to work** in health, care, with children
- Screening methods:
  - Cx  $\geq$  15 years (active lung TB)
  - Mtx for latent TB of all but students, migrant workers and immigrants age >35
  - IGRAs as confirming test «two step approach»



# Screening for latent TB

## Two-step approach:

1) Mantoux.

If positive:

2.) IGRA

(Quantiferon, T Spot TB)





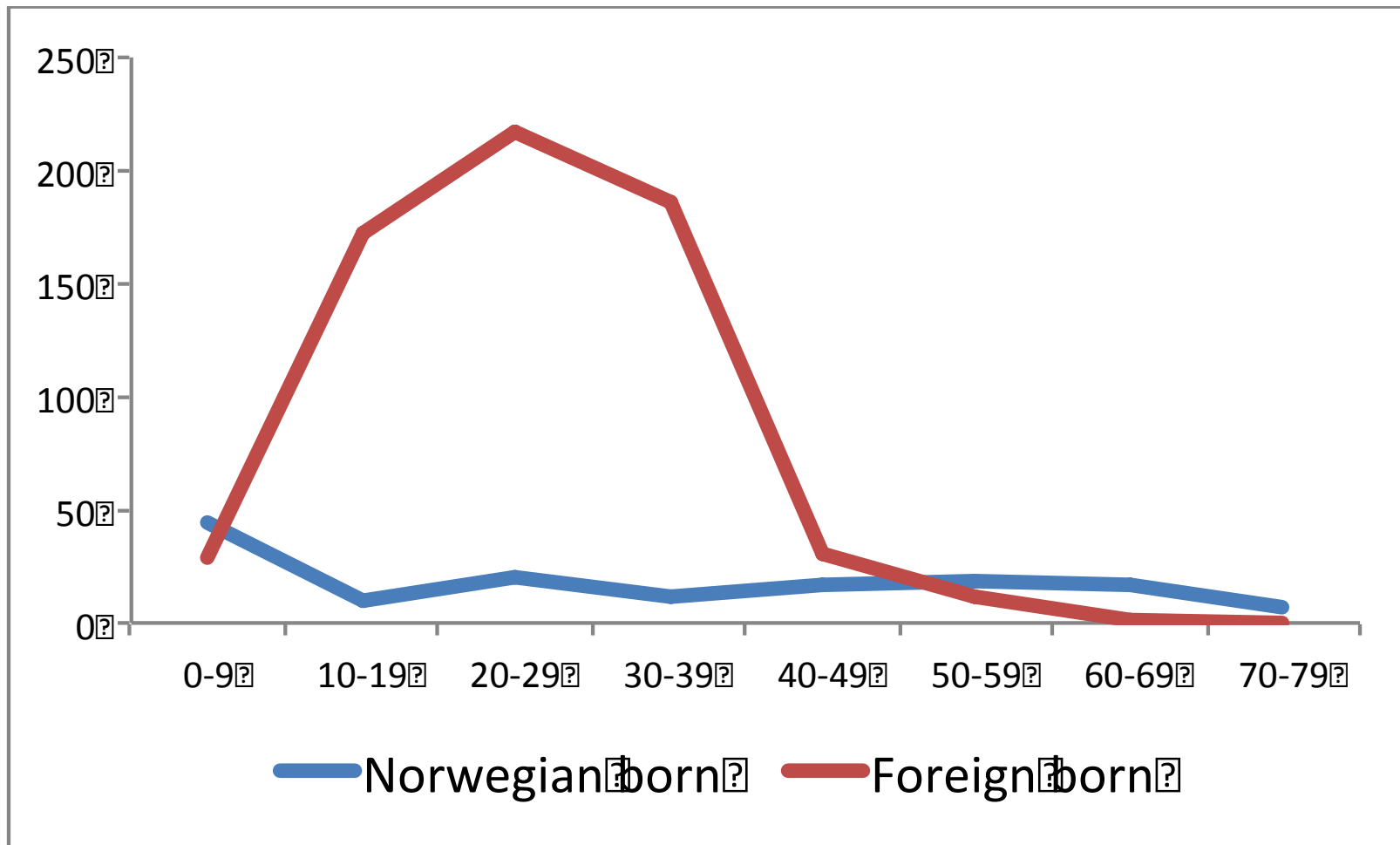
# Treatment of LTBI-

## Treat the pool of latent TB infection

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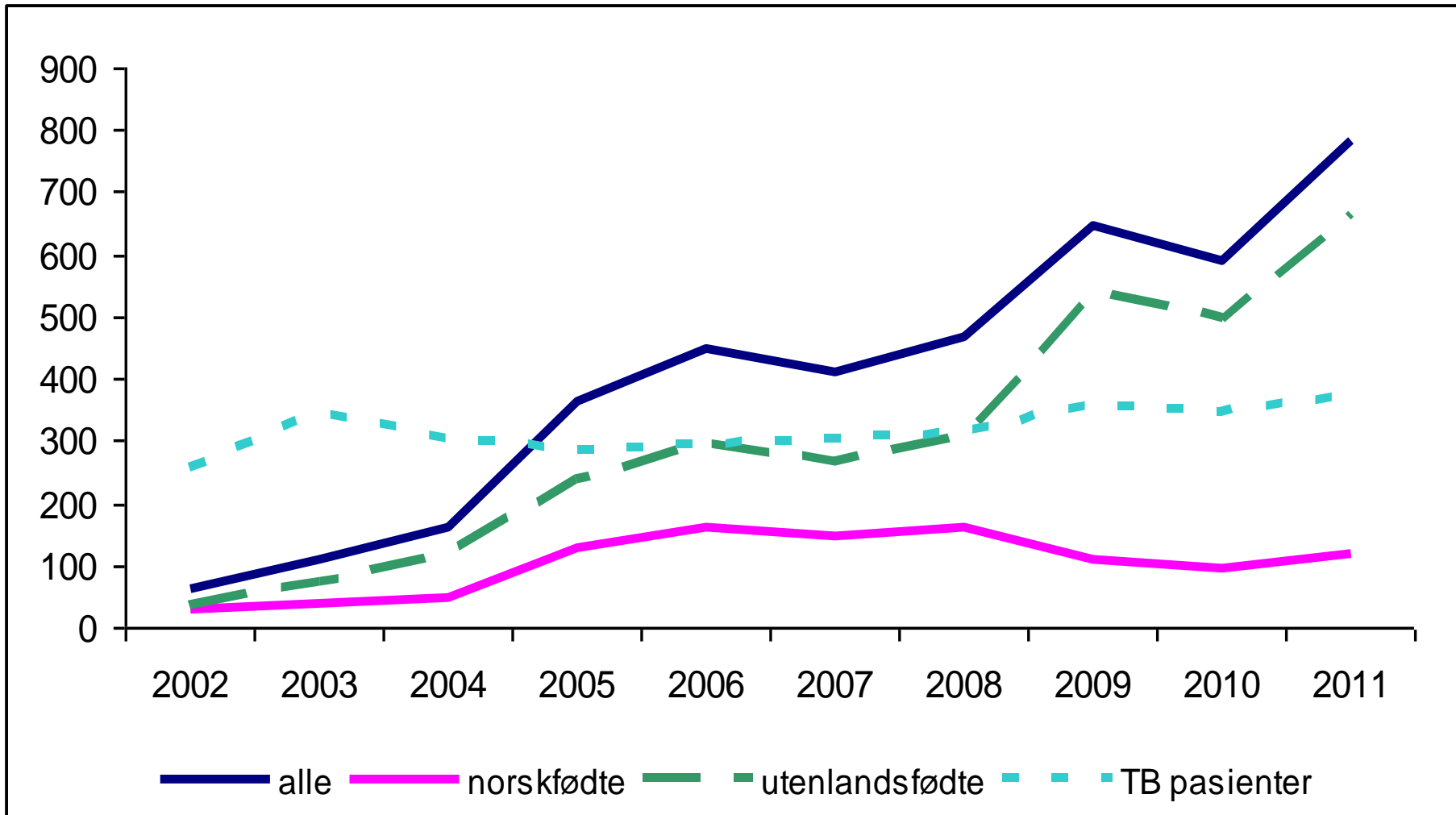
- "New" strategy from 2010
- Contacts to an infectious index case if sign of transmission
- Treatment of people <35 with positive TST and IGRA
  - If at risk (individual predisposing conditions like hiv, age<5, organ transplant, treatment with biological medications...)

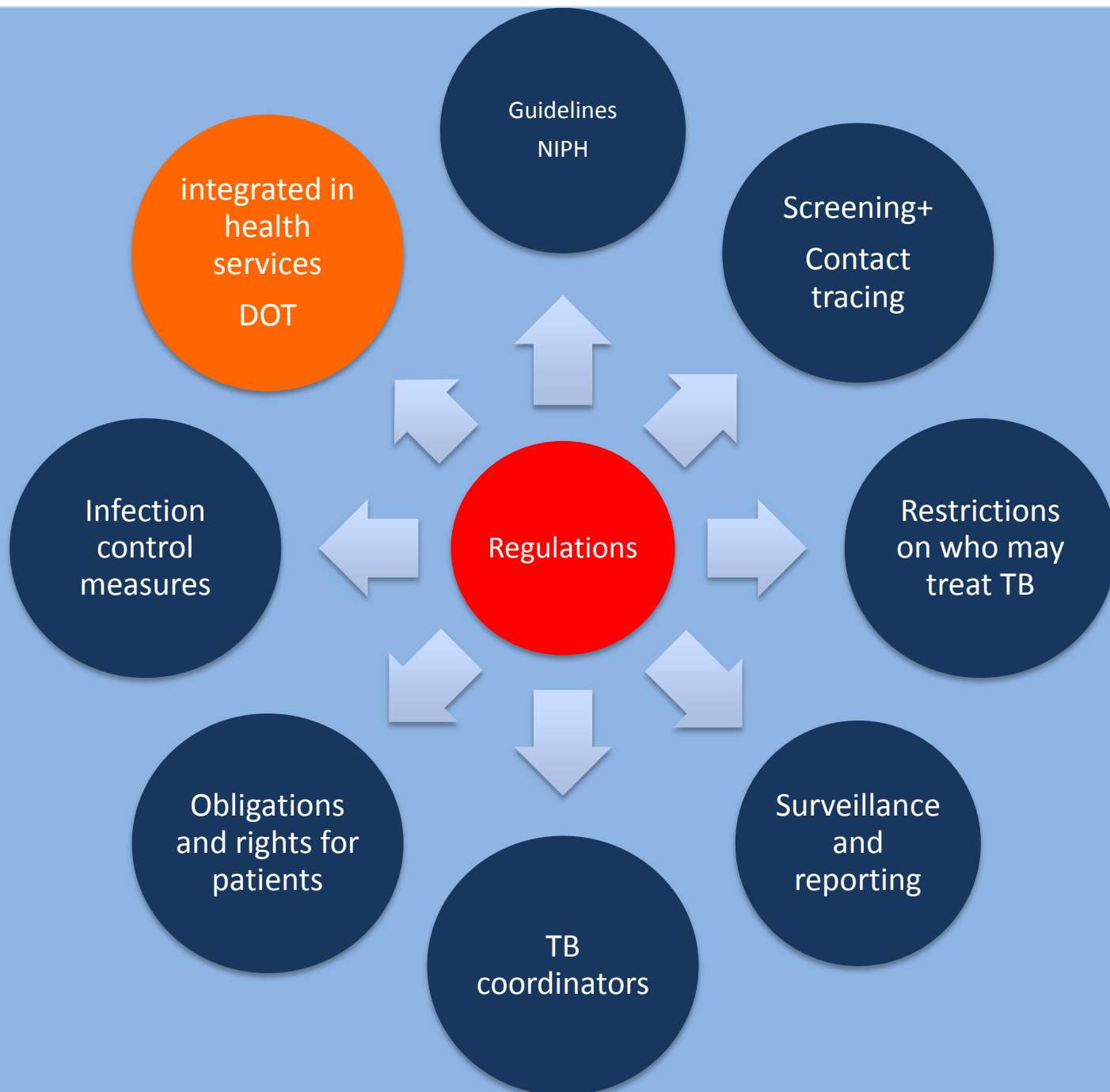
# Preventive treatment by origin and age- MSIS 2012, n= 794.



# Treatment of LTBI

## MSIS 2002 -2011



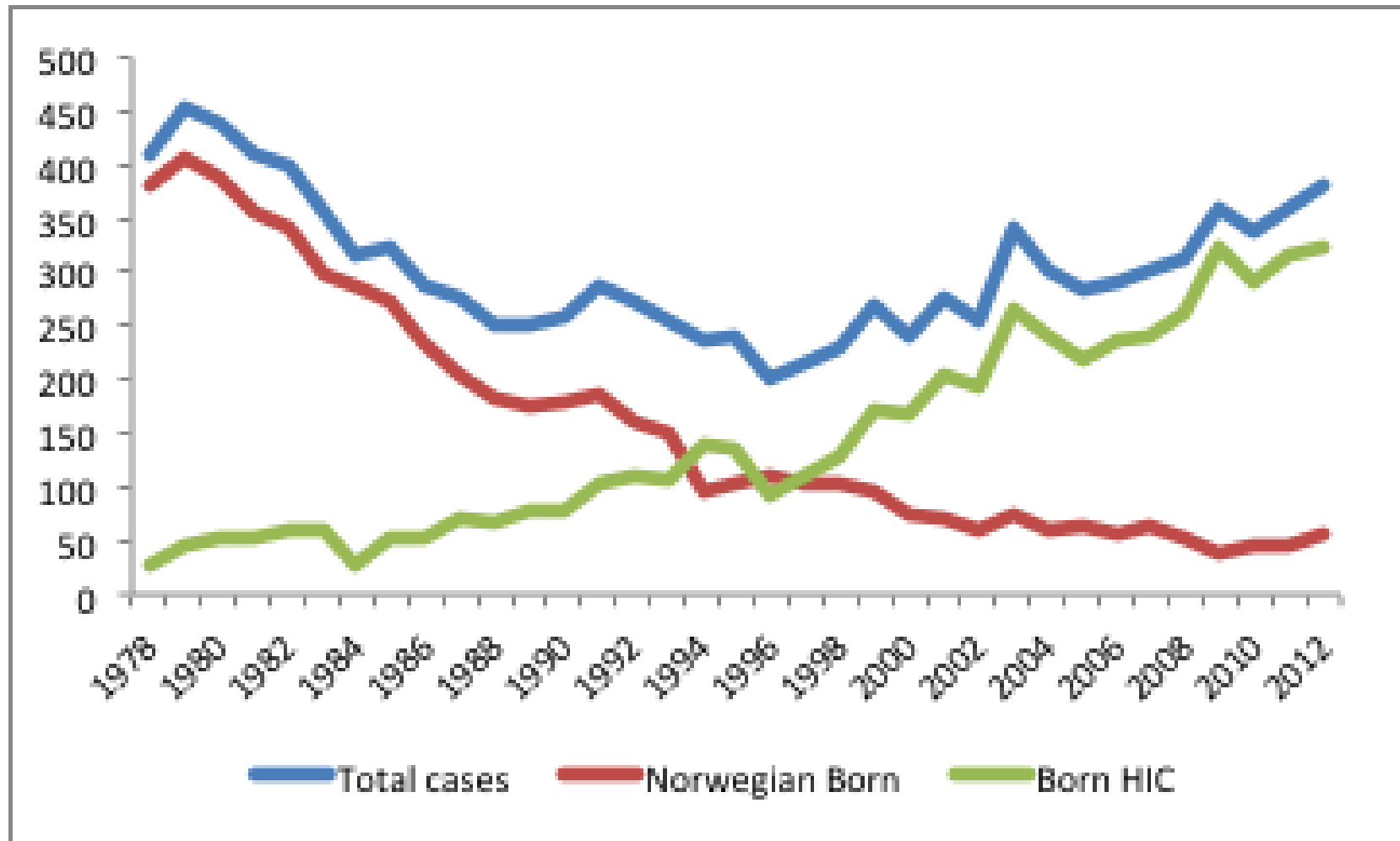


# Organization and financing of TB treatment

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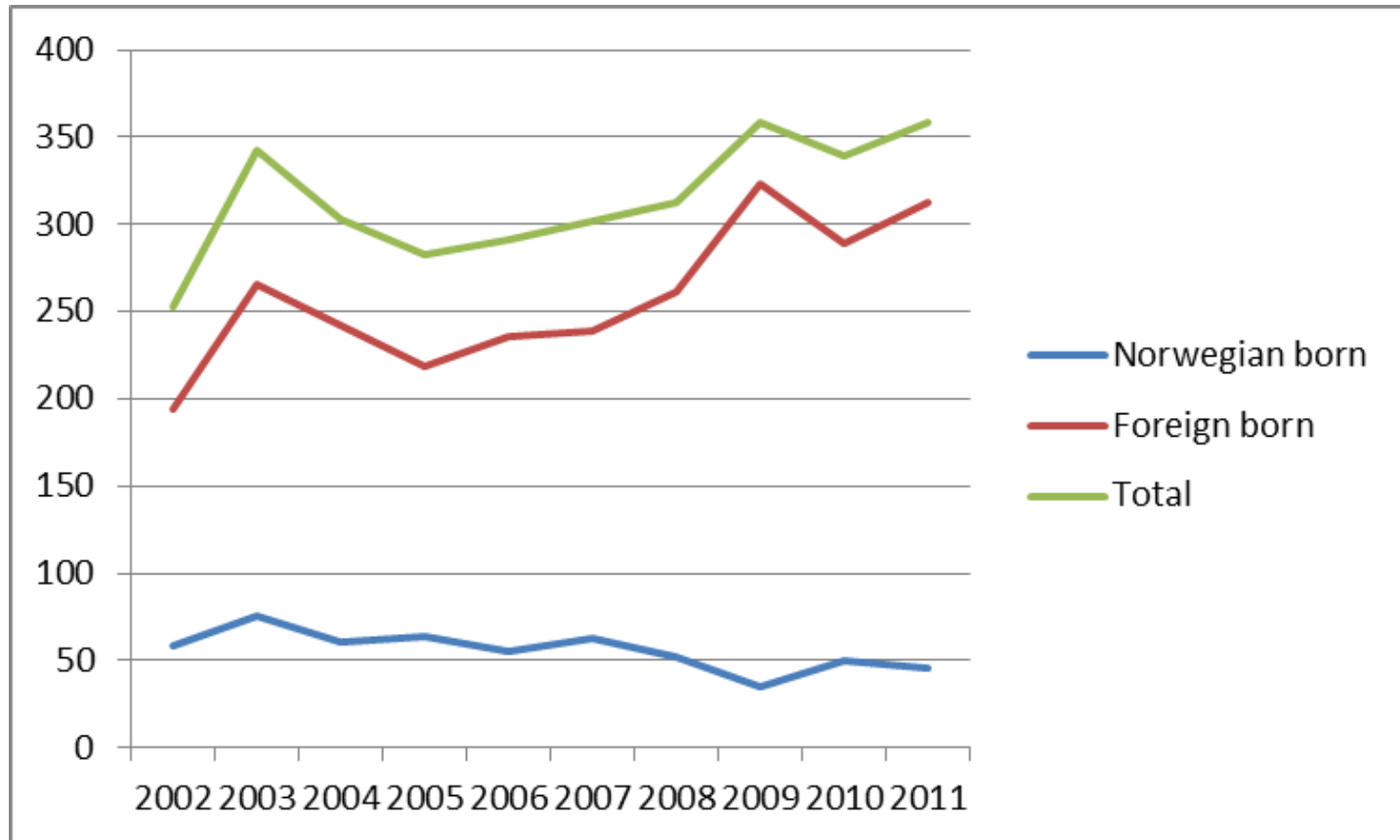
- Integrated in ordinary health care services
- **Control and treatment of TB free for all patients,** including travel charges
- **DOT is the general rule**
  - provided by community nurses in patients home
  - adjustments when necessary
- **Illegal migrants granted permission to stay until treatment is completed**
  - Social benefits according to needs

# TB notified MSIS 1978-2012 by origin



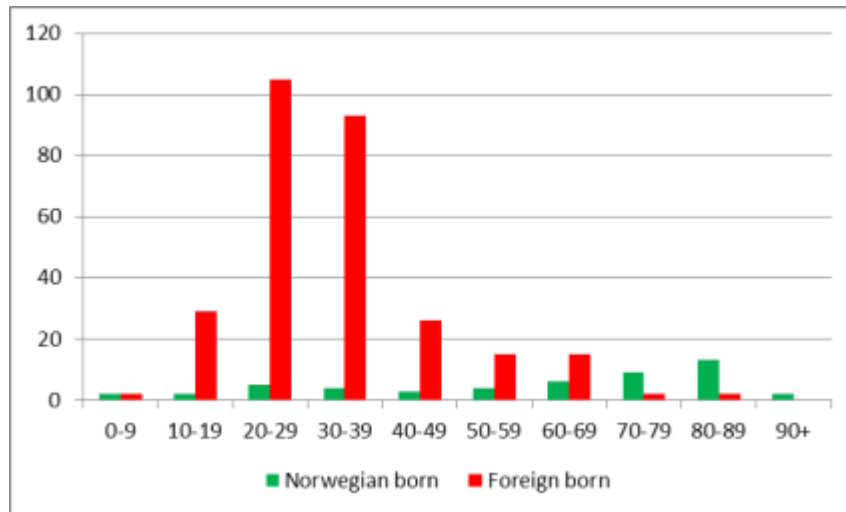


# TB in Norway 2002-2011- (cases)

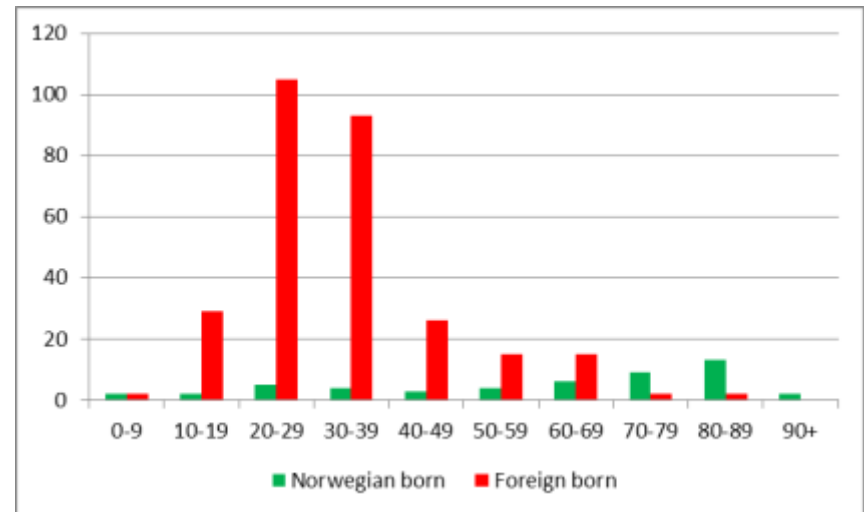


# Age distribution

2010



2011

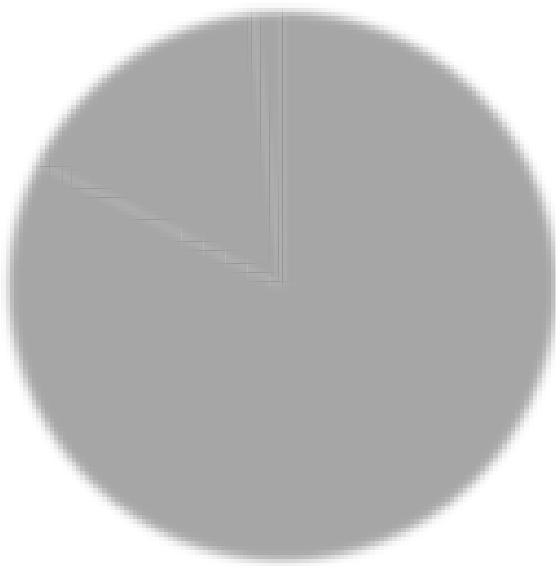


# IR/ 100´ in migrant TB patients in Norway and in their country of origin

Country of birth	IR Norge, mean 2008 - 11	IR Country of origin, 2011 (WHO)
Somalia	412	286
Norway	1	7
Philippinens	142	270
Eritrea	229	97
Etiopia	283	258
Pakistan	113	231
Thailand	92	124
Afghanistan	117	189

# Pulmonary TB/ EPTB by origin

## Norwegian born



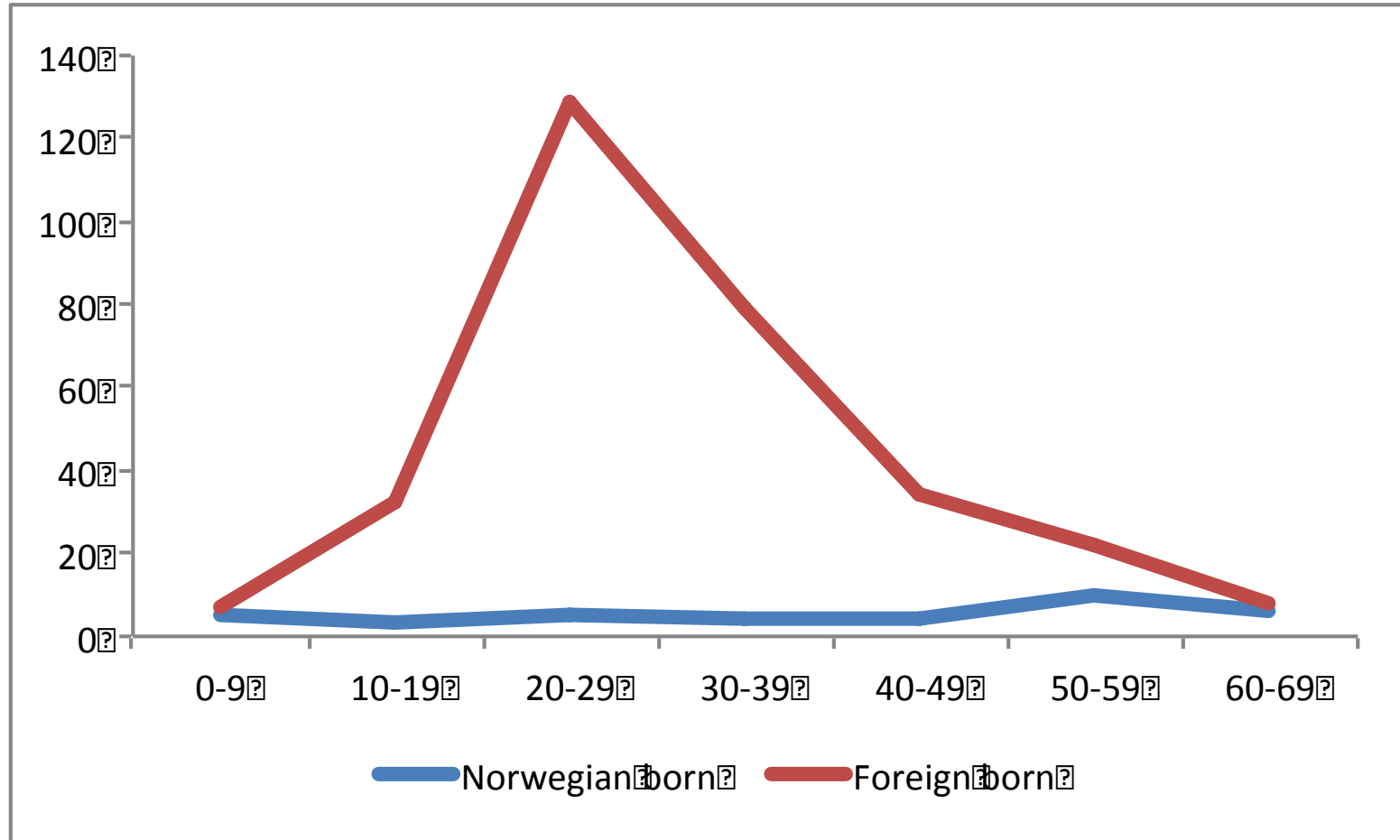
Pulmonary? EPTB? UNK?

## Foreign born

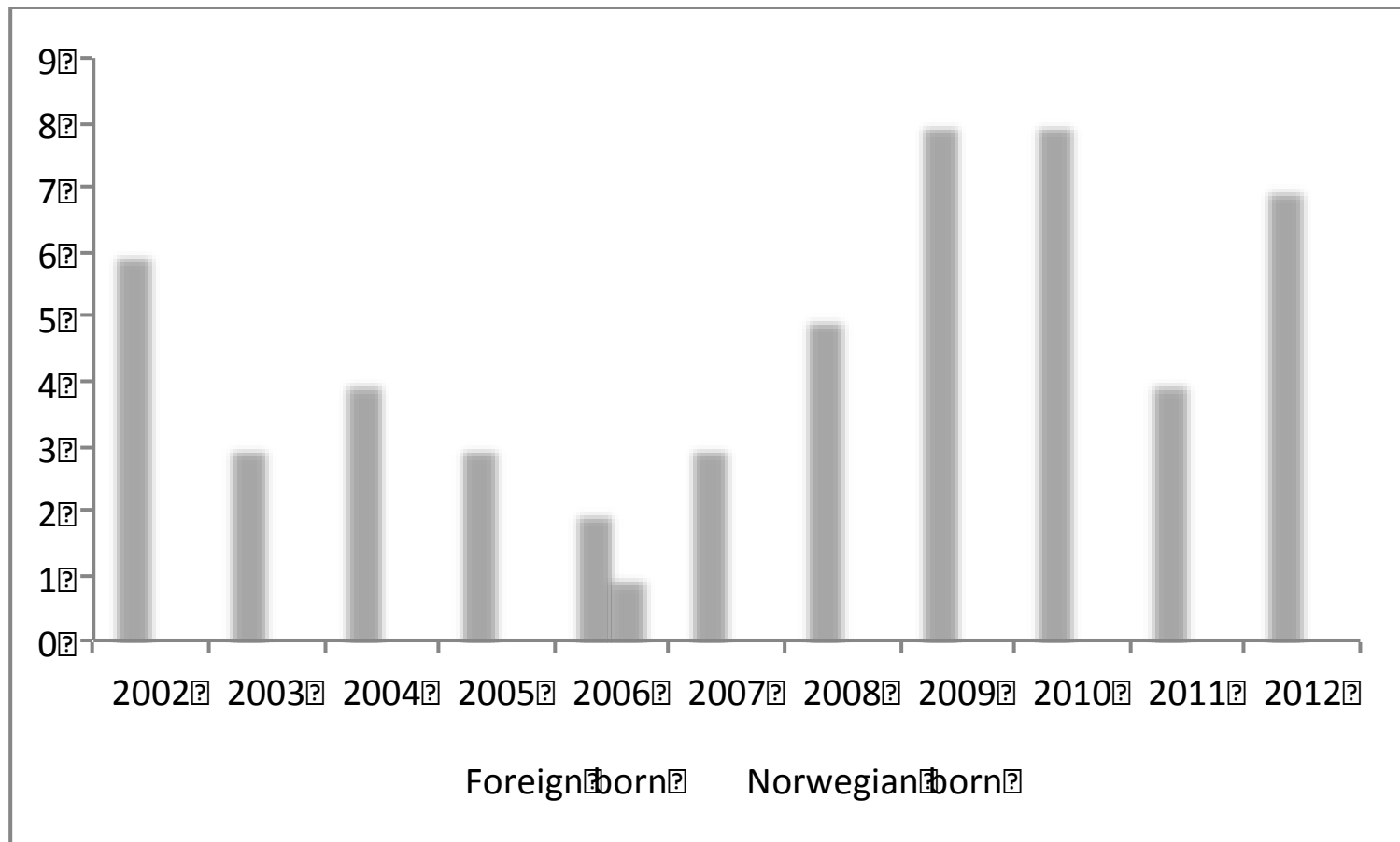


■ Pulmonary ■ EPTB ■ UNK

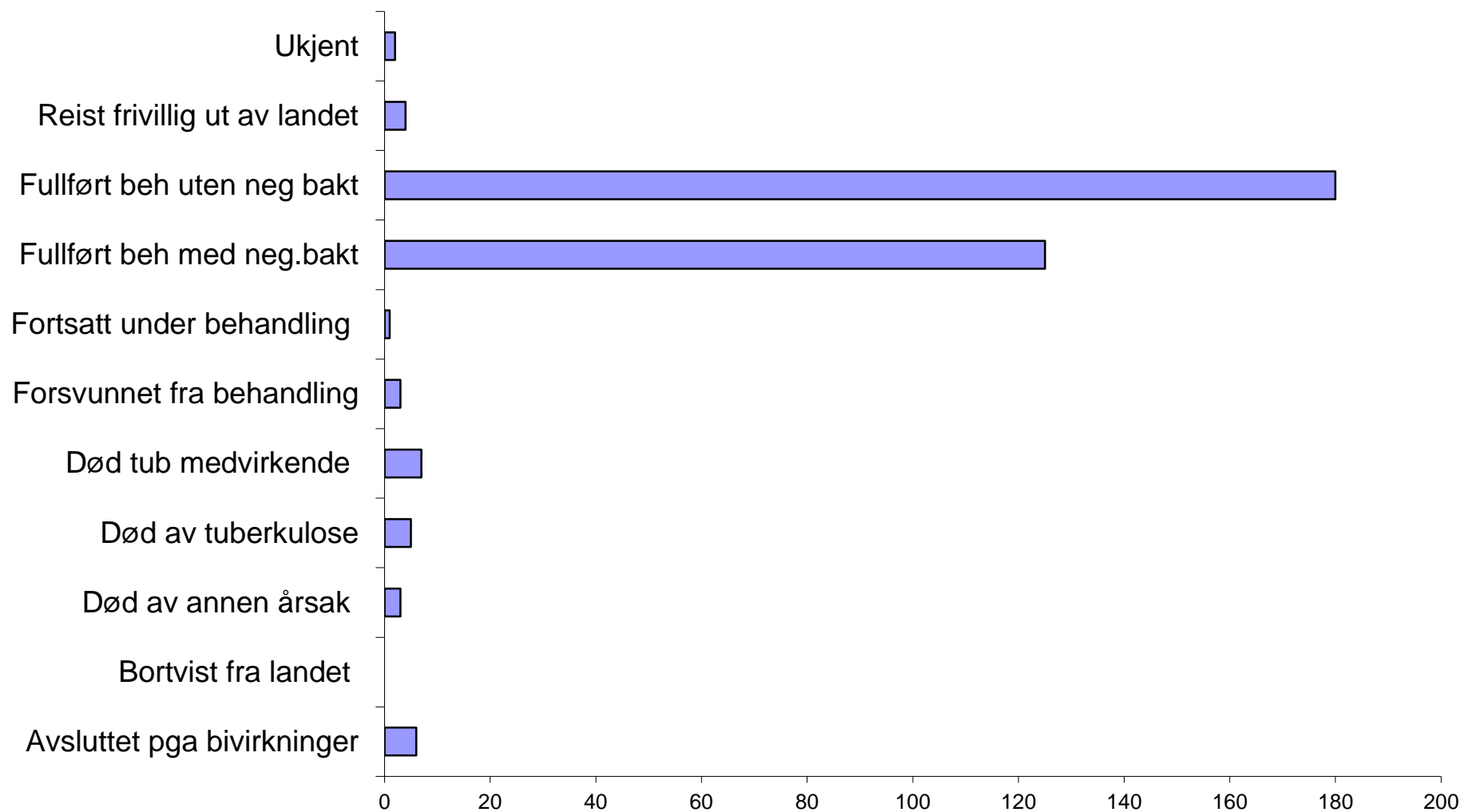
# TB- Age groups by country of origin 2012 (in numbers)



# MDR TB by origin 2002-2012, numbers



# Behandlingsresultat av TB tilfeller meldt MSIS 2010. 94% vellykket



# Conclusion

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- 90% TB cases in migrants
- Low TB incidence in children
- Only 20% of cases are clustered (MIRU-VNTR)
- No «production» of MDR TB in Norway



- Little ongoing transmission in Norway