

TB and Pacific peoples: a syndemic perspective

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If there is a syndemic why aren't we seeing it?

- ▶ The first TB project
- ▶ Syndemics
- ▶ TB and DM
- ▶ TB and DM in Mexico
- ▶ TB and DM in the Pacific
- ▶ Why not?

Political ecology of TB students & friends at Presentation Day for Public health workers, Auckland, 30 August 2006 – part of the development focus of research



Jody Lawrence:
TB & an African
group



Kathy Pikolz ARPH:
Introduces TB in
Auckland



Jill Miller,
ARPHS:
Organiser



Anneke
Anderson:
TB & Asian
peoples



Alison Searle:
Pakeha TB



Moana Oh: TB
and Treaty of
Waitangi



Debbie Dunsford:
TB History in NZ



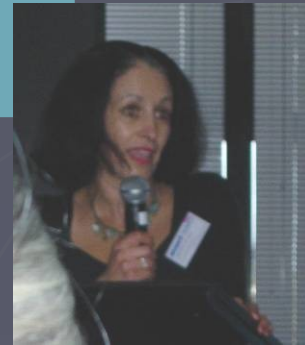
Audience



Roannie
Ng Shiu:
TB &
Pacific
Peoples



Catherine
Finn:
Historical
Maori TB



Bette Swan:
Lung Health

Burning Issues

- ▶ Major generational differences in how TB is regarded
- ▶ Immigration status is a big issue for PI TB
- ▶ Transmission in NZ



TB and leprosy clinic sign in Apia (at the back of the hospital)

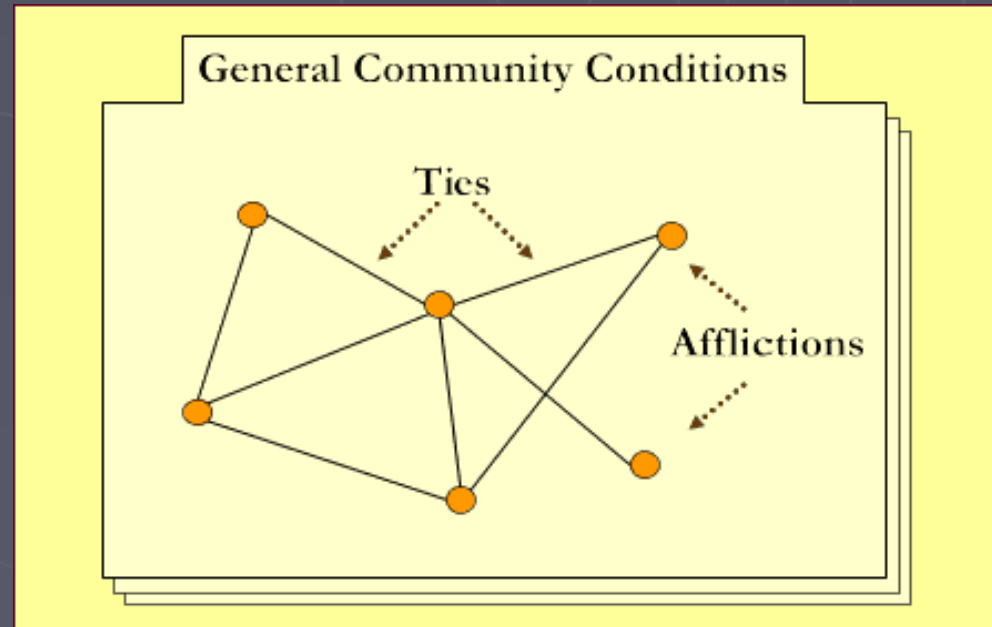
Photo, Roannie Ng Shiu

What is a syndemic orientation?


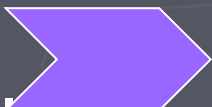
- ▶ A framework for examining situations where multiple health and social issues cluster
- ▶ Syndemic specifically describes
 - *“two or more afflictions acting synergistically, contributing to excess burden of disease in a population”* (CDC Syndemic Prevention Network 2005)

Identified syndemics

- ▶ TB- HIV/AIDS
- ▶ TB-Fire-HIV/AIDS
(Wallace and Wallace)
- ▶ SAVA (Singer)-
- ▶ 1918 Flu/Whooping Cough (Herring)
- ▶ Chagas Disease/Rheumatic Fever/Heart Failure



TB and Diabetes: Linkages

- ▶ DM  TBI to TBD
- ▶ TB  DM
- ▶ Mutual causality
- ▶ Treatment interactions
- ▶ Underlying conditions

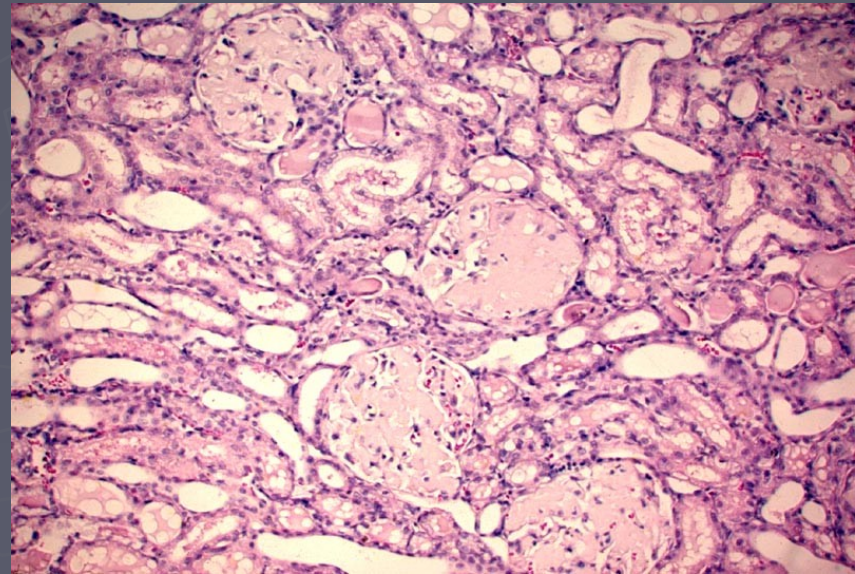
DM leading to TB

- ▶ Epidemiologically – Root 1934, Jeon and Murray 2008, Stevenson 2007)
- ▶ Estimated 3.11 relative risk of TB among diabetics
- ▶ Heterogeneous effects – population, age



TB leading to DM??

- ▶ Much more controversial
- ▶ DM often diagnosed first
- ▶ But chronic inflammation of TB leading to amyloidosis of islet cells in pancreas



Mutual Causation: Vitamin D?

- ▶ Inverse relationship between high 25-HOD levels and Type 2 DM
- ▶ Decreased stimulation of pancreatic insulin production
- ▶ Low Vit D – lower effective cellular immunity
- ▶ But possible multiple levels of interaction including chronic inflammation

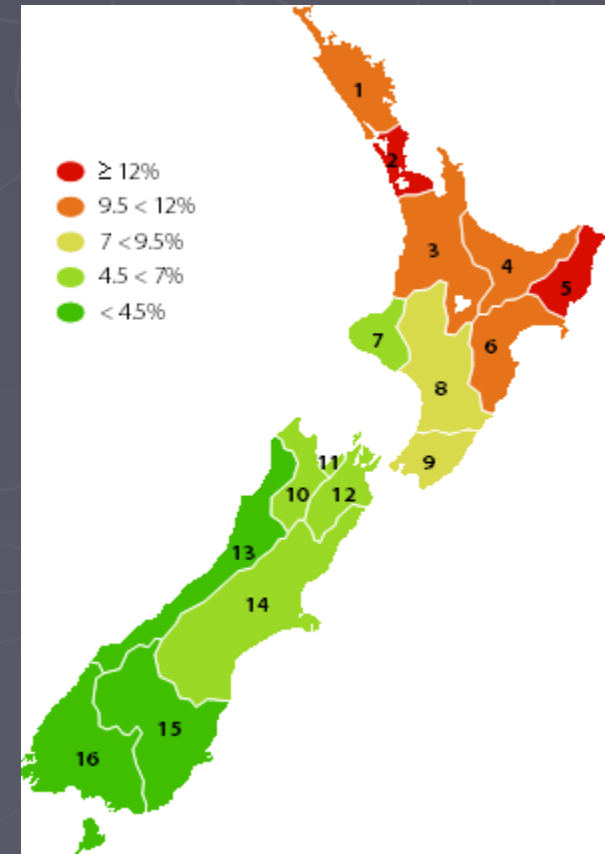
Treatment interactions

- ▶ Lower uptake of rifampicin by patients with DM
- ▶ Results in increased resistance plus worse outcomes
- ▶ Problem of renal insufficiency, renal transplants



Underlying conditions: smoking, household crowding, poverty

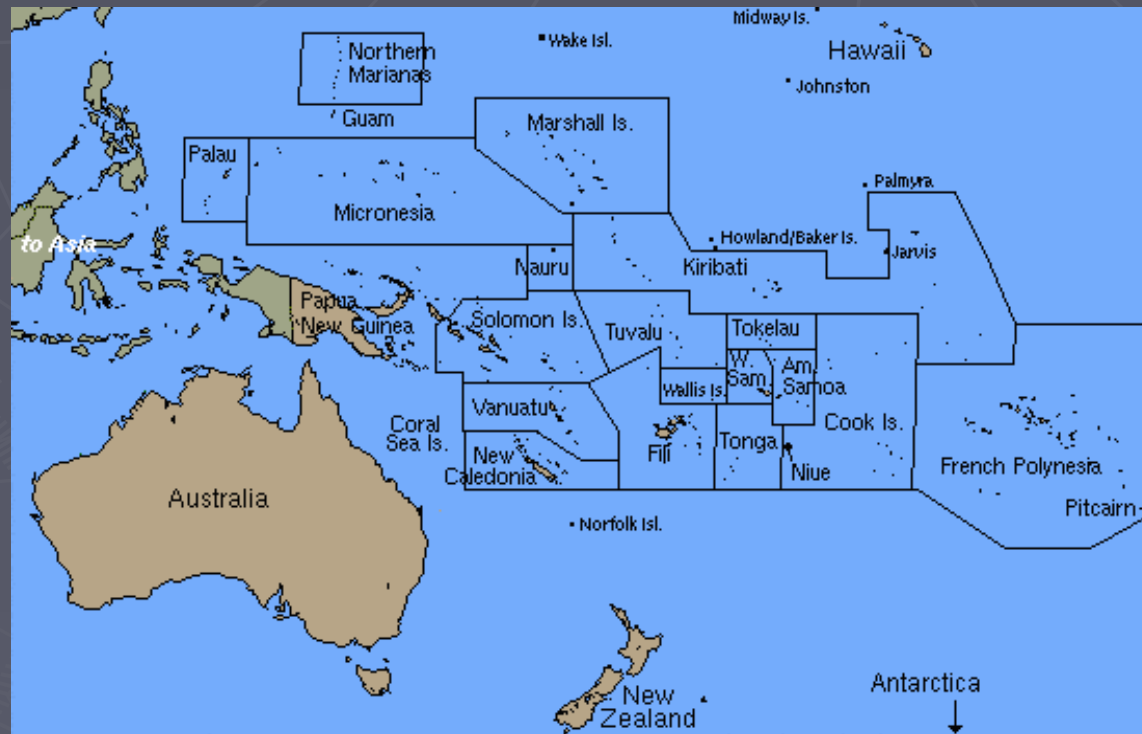
- ▶ Tobacco and TB – host immunity?
- ▶ DM also associated with smoking
- ▶ In NZ household crowding and TB cluster, poverty and DM cluster
- ▶ Multiple linkages from the cellular to social levels.



The Mexican-American comparison

- ▶ Texas border region: positive association between DM and TB (OR 2x TB risk for DM patients)
- ▶ TB-DM cases – Hispanic females, >40 yrs ct. to TB cases – males, homeless, incarcerated
- ▶ TB-DM – atypical symptoms, more often pulmonary, contagious for longer
- ▶ Relative poverty, underlying social conditions

The implications for the Pacific



So why aren't we seeing it?

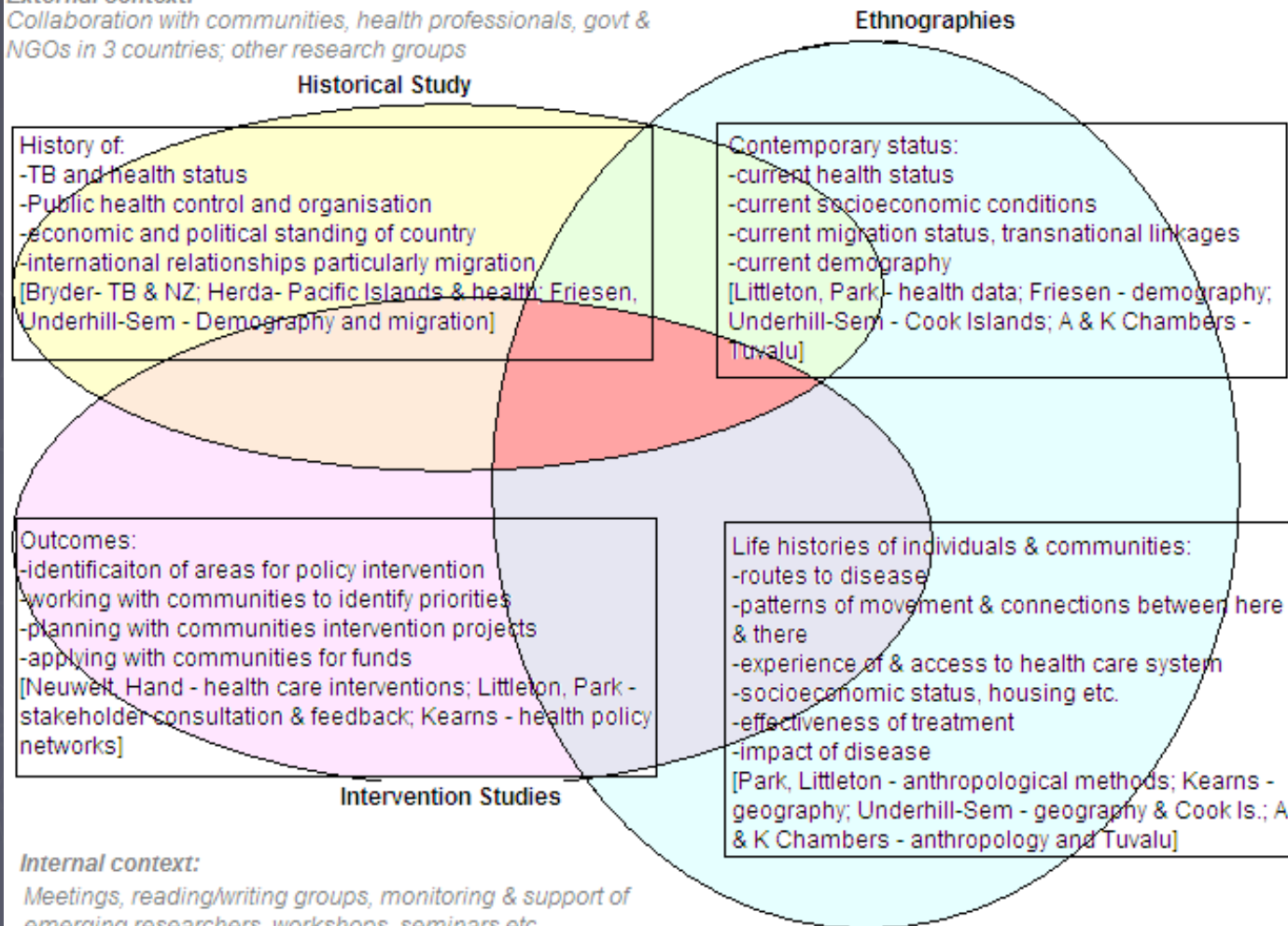
- ▶ Age confounding
- ▶ Difficulty of diagnosis
- ▶ “Pacific” vs specific Pacific Islands
- ▶ Bureaucratic structures

“experts in TB and experts in HIV infection live in different worlds, obtain grants from different sources, write for different journals, and go to different meetings. This great divide applies to clinical care, research, and training; it is lessened by the overlap between the two diseases but not as much as it should be.” (Bartlett)

Conclusion

External context:

Collaboration with communities, health professionals, govt & NGOs in 3 countries; other research groups



Internal context:

Meetings, reading/writing groups, monitoring & support of emerging researchers, workshops, seminars etc.