Medical Practice in New Zealand
How I Survived Rationing, Government Run Health Care and “Death Panels”

Adam Abraham
May 11, 2010
Thankyou

- Naomi Greenstone
- Jean Kutner
- The entire staff at Garfield-Lowry clinic
Lecture Summary

- Why?
- What was it like?
- Subjective and objective comparison of the health care systems in both countries
- Brief slide show
- Questions???
Why Go?

- Opportunity to experience new culture
- Opportunity to practice medicine in a different medical culture
- Chance to enhance clinical skills
- Timing was right
Practice Location

- Gisborne, New Zealand
- On Poverty Bay, Northeast corner of the North Island
- 6 hour drive from Auckland
- 2.5 hour drive to nearest population center
- First large community to see the sun each day
Population Demographics

- Logging, farming and viticulture community of 35,000
- Isolated geographically and relatively economically depressed
- Approximately 50% Maori
  - Whale Rider filmed 15 miles North
Maori

- Indigenous Population of New Zealand
- Settled the country around 1300 AD
- First significant contact with Europeans in early-mid 1800s
- 1840-1890
  - Maori population drops from 100,000 → 40,000
  - Maori lose 95% of land holdings to Europeans
  - European Population increases from 2,000 → 700,000
NZ Health Disparities

- 650,000 New Zealanders identify themselves as Maori (14% of population)
- Maori culture has undergone a revival from the 1960s → today
  - Increased interest in Maori culture, arts, language
  - Government of New Zealand has tried to redress abuses of the past
- Maori remain socioeconomically disadvantaged and this adversely impacts health
<table>
<thead>
<tr>
<th></th>
<th>Maori</th>
<th>Caucasians</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Life Expectancy (Males)</strong></td>
<td>69 yrs</td>
<td>77 yrs</td>
</tr>
<tr>
<td><strong>General Health Perception (SF-36)</strong></td>
<td>73.3</td>
<td>77.3</td>
</tr>
<tr>
<td><strong>Diabetes Prevalence</strong></td>
<td>6.2%</td>
<td>2.4%</td>
</tr>
<tr>
<td><strong>Diabetes complications lower limb amputation (Rate/100,000 w/ diabetes)</strong></td>
<td>33.1</td>
<td>6.7</td>
</tr>
</tbody>
</table>
Efforts to Address Health Disparities

- Ongoing throughout the country
  - Cultural Competency
  - Maori Health Manager
My Job

► “Medical Consultant”
► 5 Days/Week rounds with house surgeons on med ward and MICU patients
  ▪ Primary responsibility for patient care and medical education
► Call 1:3 to 1:5 nights and weekends
  ▪ Supervise admissions to service
  ▪ Be available for hands-on care if necessary
  ▪ Answer questions from community GPs
► See patients in medicine referral clinic 3 half-days/week
► Perform cardiac treadmill stress tests
Gisborne Hospital Inpatient Resources

- Built in 1985
- Inpatient services include ED, gen med, gen surg, pediatrics, ob/gyn, psych, pall care, PT/OT, audiology, radiology, anesthesia
- 1 wing gen med, 1 wing pall care/Rehab, 2 surg wings, separate peds area
- 3 bed CCU, 3 bed ICU
- Lab on call access 24 hrs
- MRI/CT/X-ray/US on call access 24 hrs
- Medical services provided by senior physicians along with rotating “house surgeons”
- Funding via district health board
  - Physicians salaried
What Was Missing

- No subspecialty inpatient services on site
- No cardiac cath lab in hospital or nearby
- No proper reverse flow isolation rooms
- Echocardiograms only 2 days/week
- No nuclear medicine testing
- ED staffing mostly junior doctors without ED certification
- Ability to vent patients limited to 48 hrs
My Typical Work Weekday

►► Arrive at hospital at approximately 8:30
►► Round with house surgeon 8:30-9:30 to 11:30
  ▪ Not traditional UCH rounds
►► Tea break 10 AM (time permitting)
►► Post rounds reading/education
►► Lunch 12-1
►► PM Clinic 1-4:30 or treadmills
## What I Saw

<table>
<thead>
<tr>
<th>Age</th>
<th>Sex</th>
<th>Ethnicity</th>
<th>Reason for Referral</th>
<th>Date seen</th>
<th>Other Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>55 m</td>
<td>c</td>
<td>bicuspid aortic valve, reg</td>
<td>22-06</td>
<td>none</td>
</tr>
<tr>
<td>2</td>
<td>68 m</td>
<td>m</td>
<td>paralyzed l diaphragm</td>
<td>22-06</td>
<td>weight loss, abd pain, cachexia</td>
</tr>
<tr>
<td>3</td>
<td>71 m</td>
<td>m</td>
<td>dilated cardiomyopathy</td>
<td>22-06</td>
<td>depression, hip osteoarthritis</td>
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<tr>
<td>4</td>
<td>66 m</td>
<td>m</td>
<td>aortic regurgitation (mod)</td>
<td>22-06</td>
<td>edema, hypoproteinemia, hypertension</td>
</tr>
<tr>
<td>5</td>
<td>63 m</td>
<td>?</td>
<td>atypical chest pain</td>
<td>23-06</td>
<td>alcoholism, asthma</td>
</tr>
<tr>
<td>6</td>
<td>60 f</td>
<td>m</td>
<td>bronchiectasis flare</td>
<td>23-06</td>
<td>htn, dm, gout</td>
</tr>
<tr>
<td>7</td>
<td>40 m</td>
<td>m</td>
<td>cellulitis, le edema</td>
<td>23-06</td>
<td>dm, htn, lipids, smoking</td>
</tr>
<tr>
<td>8</td>
<td>69 f</td>
<td>c</td>
<td>bronchiectasis flare</td>
<td>23-06</td>
<td>smoking</td>
</tr>
<tr>
<td>9</td>
<td>45 m</td>
<td>c</td>
<td>chest pain, ? Angina</td>
<td>23-06</td>
<td>afib, gout, htn</td>
</tr>
<tr>
<td>10</td>
<td>85 m</td>
<td>c</td>
<td>chf, valvular dysfunction</td>
<td>23-06</td>
<td>cad, htn, ckd, aaa</td>
</tr>
<tr>
<td>11</td>
<td>88 m</td>
<td>c</td>
<td>chf, ? Nstemi</td>
<td>23-06</td>
<td></td>
</tr>
<tr>
<td>21**</td>
<td>34 m</td>
<td>m</td>
<td>severe aortic regurg, ane</td>
<td>29-06</td>
<td>none</td>
</tr>
<tr>
<td>22</td>
<td>61 f</td>
<td>c</td>
<td>palpitations</td>
<td>29-06</td>
<td>dm, ?cad, htn, hyperlipidemia</td>
</tr>
<tr>
<td>23</td>
<td>35 f</td>
<td>c</td>
<td>Lupus, non-specific sy</td>
<td>29-06</td>
<td>anxiety</td>
</tr>
<tr>
<td>24</td>
<td>55 f</td>
<td>m</td>
<td>abdominal pain</td>
<td>29-06</td>
<td>etoh, afib, pleural effusion, hypertension, hyperlipidemia</td>
</tr>
<tr>
<td>25</td>
<td>76 m</td>
<td>c</td>
<td>chest pain, ? Angina</td>
<td>29-06</td>
<td>cad, pd, anemia, renal stenosis</td>
</tr>
<tr>
<td>26</td>
<td>87 f</td>
<td>m</td>
<td>chf, pedal edema</td>
<td>29-06</td>
<td>dementia, afib, htn, mitral regurg</td>
</tr>
<tr>
<td>27</td>
<td>61 m</td>
<td>c</td>
<td>copd</td>
<td>29-06</td>
<td>hx spont pneumothorax, afib</td>
</tr>
<tr>
<td>28</td>
<td>84 f</td>
<td>c</td>
<td>ski</td>
<td>29-06</td>
<td>crf, afib, htn, dvt, rheumatic fever, ? Pmr, hyperthyroidism</td>
</tr>
<tr>
<td>29</td>
<td>m</td>
<td>c</td>
<td>sob</td>
<td>29-06</td>
<td>cad, chf</td>
</tr>
<tr>
<td>30</td>
<td>85 m</td>
<td>c</td>
<td>sob</td>
<td>29-06</td>
<td>etoh, pneumonia, gi bleed</td>
</tr>
<tr>
<td>31</td>
<td>43 f</td>
<td>m</td>
<td>sob, pleuritic pain</td>
<td>4-Jul</td>
<td>etoh</td>
</tr>
<tr>
<td>32</td>
<td>69 m</td>
<td>?</td>
<td>atypical chest pain</td>
<td>4-Jul</td>
<td>laryngeal cancer, tobacco, le edema, renal insufficiency</td>
</tr>
<tr>
<td>33</td>
<td>54 m</td>
<td>c</td>
<td>stemi, vach</td>
<td>3-Jul</td>
<td>htn, hyperlipidemia</td>
</tr>
<tr>
<td>34</td>
<td>74 f</td>
<td>m</td>
<td>acute ischemic stroke</td>
<td>3-Jul</td>
<td>htn</td>
</tr>
<tr>
<td>35</td>
<td>88 f</td>
<td>c</td>
<td>facial droop, ? Stroke</td>
<td>3-Jul</td>
<td>htn</td>
</tr>
<tr>
<td>36</td>
<td>74 m</td>
<td>?</td>
<td>sob</td>
<td>4-Jul</td>
<td>htn, avr, cad/cabg, pd, tobacco, chf, angina</td>
</tr>
<tr>
<td>37</td>
<td>27 m</td>
<td>c</td>
<td>new onset dm</td>
<td>4-Jul</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>86 m</td>
<td>c</td>
<td>cellulitis, le edema</td>
<td>3-Jul</td>
<td>dementia, incontinence, gait instability</td>
</tr>
<tr>
<td>39</td>
<td>29 m</td>
<td>c</td>
<td>bl pneumonia</td>
<td>3-Jul</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>66 m</td>
<td>m</td>
<td>chf</td>
<td>3-Jul</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>91 m</td>
<td>c</td>
<td>pneumonia</td>
<td>3-Jul</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>80 f</td>
<td>c</td>
<td>copd exacerbation</td>
<td>4-Jul</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>64 f</td>
<td>m</td>
<td>nstemi</td>
<td>3-Jul</td>
<td>diabetes, esrd</td>
</tr>
<tr>
<td>44</td>
<td>67 m</td>
<td>c</td>
<td>parkinson's, altered men</td>
<td>3-Jul</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>m</td>
<td>?</td>
<td>Peanut allergy vs. angi</td>
<td>3-Jul</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>f</td>
<td>m</td>
<td>positive ANA, nonspecifici</td>
<td>3-Jul</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>f</td>
<td>c</td>
<td>chronic diarrhea</td>
<td>3-Jul</td>
<td></td>
</tr>
</tbody>
</table>
Highlights of NZ Health Care System

► National Health Care System
► No-Fault System (Malpractice cases rare to none)
► System financed from bottom-up
► Training based on British model vastly different than US
National Health Care System

► Government determines funding for health care in annual budget
  ▪ 21 District Health Boards (DHBs) submit budget requests and receive funds for population

► Every citizen in NZ has health care coverage

► Private health coverage available

► Physicians in general are salaried
  ▪ Can earn extra through private system

► National pharmacy with formulary drugs
Drug Prices for 30 Most Commonly Prescribed Drugs, 2006–07

US is set at 1.0

Source: IMS Health.
No Malpractice!?

► Accident Compensation Committee (ACC) adjudicates and compensates those harmed by medical treatment
  ▪ Funded through tax revenues similar to Soc Sec
  ▪ Treatment does not have to be negligent

► Injured patients file claims and receive decisions within 9 months

► Payment for treatment and rehab (vocational retraining, home modification), lost earnings, one-time lump compensation and support for spouses and children
# Comparison US v NZ

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>NZ</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eligibility for compensation</strong></td>
<td>Negligence</td>
<td>Treatment Injury</td>
</tr>
<tr>
<td><strong>Decision Maker</strong></td>
<td>Lay jury</td>
<td>Administrative panel</td>
</tr>
<tr>
<td><strong>Administrative Costs</strong></td>
<td>Approximately 50%</td>
<td>&lt; 10%</td>
</tr>
<tr>
<td><strong>Average Payment</strong></td>
<td>High</td>
<td>Low (&lt; $30K US)</td>
</tr>
</tbody>
</table>
System Financed From Bottom-Up

- Not a single IM specialist in the town of 35,000 where I practiced
- Inpatient medical consultants were encouraged to develop an area of clinical expertise to help care for population
- Pay discrepancies are not as large
- Tighter control over use of resources
  - Oxygen not available for smokers
  - Some tests can’t be ordered by GPs
British Training Model

► Med school is 6 years beginning generally at age 18
► After med school trainees become “house surgeons” (similar to rotating internship)
  ▪ Generally 2-3 years, at times longer
  ▪ Training is not nearly as formalized as US
► “Registrar” years are like our residency programs
► Trainees are expected to spend some years at city centers, some years in rural areas and some time abroad
► Trainees can take time off or moonlight
# Comparison of US vs NZ Health Systems

<table>
<thead>
<tr>
<th></th>
<th>NZ</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coverage</strong></td>
<td>Everyone broad range of services</td>
<td>Public and Private Health Insurance, 50 million no insurance, benefit packages vary</td>
</tr>
<tr>
<td><strong>Revenues</strong></td>
<td>General taxes 80%, Co-payments, Private Insurance</td>
<td>Taxes, Insurance Premiums, Co-payments, Private insurance 35% of total expenditures</td>
</tr>
<tr>
<td><strong>Organization</strong></td>
<td>21 Government Run DHBs, Primary Health Organizations (PHOs)</td>
<td>No standardized organization (VA, Kaiser, University, Private Practice)</td>
</tr>
<tr>
<td><strong>Cost Control</strong></td>
<td>Government Dictated</td>
<td>??? (Variety of failed methods)</td>
</tr>
</tbody>
</table>
SO WHICH HEALTH SYSTEM IS BETTER???
Physician Satisfaction with Practicing Medicine

Percent of primary care doctors

New Zealand

- Very satisfied: 35%
- Satisfied: 54%
- Somewhat dissatisfied: 10%
- Very dissatisfied: 1%

United States

- Very satisfied: 15%
- Satisfied: 49%
- Somewhat dissatisfied: 30%
- Very dissatisfied: 6%

Sources: The Commonwealth Fund 2009 International Health Policy Survey of Primary Care Physicians in Eleven Countries; C. Schoen et al., "A Survey of Primary Care Physicians in Eleven Countries: Perspectives on Care, Costs, and Experiences, 2009." Health Affairs Web Exclusive, Nov. 5, 2009, w1171–w1183

Data collection: Harris Interactive, Inc.
Physician Views of Health System

Notes: *Respondents asked which statement expresses their overall view of their country’s health system: only minor changes are needed; fundamental changes are needed; system needs to be completely rebuilt

Sources: The Commonwealth Fund 2009 International Health Policy Survey of Primary Care Physicians in Eleven Countries; C. Schoen et al., "A Survey of Primary Care Physicians in Eleven Countries: Perspectives on Care, Costs, and Experiences, 2009." Health Affairs Web Exclusive, Nov. 5, 2009, w1171–w1183
Population Views of the Health Care System

Sources: 2007 Commonwealth Fund International Health Policy Survey; C. Schoen et al., "Toward Higher-Performance Health Systems: Adults’ Health Care Experiences In Seven Countries, 2007," Health Affairs 26, no. 6 (2007): w717–w734

Data collection: Harris Interactive, Inc.
<table>
<thead>
<tr>
<th>Category</th>
<th>New Zealand</th>
<th>U.S.</th>
<th>Australia</th>
<th>Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population (1000s of People)</td>
<td>4,061</td>
<td>293,655</td>
<td>20,111</td>
<td>31,946</td>
</tr>
<tr>
<td>Percentage GDP Spent on Health Care</td>
<td>8.4%</td>
<td>16.0%</td>
<td>9.2%</td>
<td>9.9%</td>
</tr>
<tr>
<td>Health Care Spending per Capita</td>
<td>$2,083</td>
<td>$6,102</td>
<td>$2,876</td>
<td>$3,165</td>
</tr>
<tr>
<td>Out-of-Pocket Health Care Spending per Capita</td>
<td>$359</td>
<td>$803</td>
<td>$582</td>
<td>$472</td>
</tr>
<tr>
<td>Spending on Pharmaceuticals per Capita</td>
<td>$174c</td>
<td>$752</td>
<td>$383f</td>
<td>$559</td>
</tr>
<tr>
<td>Spending on Long-Term Institutional Care Spending per Capita</td>
<td>$179c</td>
<td>$392</td>
<td>$183f</td>
<td>$409</td>
</tr>
<tr>
<td>Number of Practicing Physicians per 1,000 Population</td>
<td>2.2g</td>
<td>2.4</td>
<td>2.6g</td>
<td>2.1</td>
</tr>
<tr>
<td>Average Annual Number of Physician Visits per Capita</td>
<td>3.2g</td>
<td>3.9g</td>
<td>6.0</td>
<td>6.1g</td>
</tr>
<tr>
<td>Inpatient Hospital Spending per Capita</td>
<td>$553↑c</td>
<td>$1,636</td>
<td>$1,015↑f</td>
<td>$914</td>
</tr>
<tr>
<td>Hospital Spending per Inpatient Acute Care Day</td>
<td>$530↑c</td>
<td>$2,337</td>
<td>$1,015↑f</td>
<td>$862↑g</td>
</tr>
<tr>
<td>Number of Acute Care Hospital Beds per 1,000 Population</td>
<td>3.2f</td>
<td>2.8</td>
<td>3.6g</td>
<td>3.0g</td>
</tr>
<tr>
<td>Average Length of Stay for Acute Care</td>
<td>5.6f</td>
<td>5.6g</td>
<td>6.1g</td>
<td>7.3</td>
</tr>
<tr>
<td>Number of Long-Term Care Beds per 1,000 Population over Age 65</td>
<td>43k</td>
<td>49p</td>
<td>41g</td>
<td>99p</td>
</tr>
<tr>
<td>Mortality Amenable to Health Care (Deaths per 100,000 Population)</td>
<td>109</td>
<td>115</td>
<td>88</td>
<td>92</td>
</tr>
<tr>
<td>Percentage of Adults Who Reported Being Daily Smokers</td>
<td>22.0%</td>
<td>17.0%</td>
<td>17.7%</td>
<td>15.0%</td>
</tr>
<tr>
<td>Obesity (BMI &gt;30) Prevalence</td>
<td>20.9%</td>
<td>30.6%</td>
<td>na</td>
<td>22.4%</td>
</tr>
</tbody>
</table>
Comparison of Spending on Health, 1980–2007

Average spending on health per capita ($US PPP)

- U.S.
- New Zealand

Total expenditures on health as percent of GDP

Source: OECD Health Data 2009 (June 2009).
Magnetic Resonance Imaging (MRI) Machines per Million Population, 2007

- US: 25.9
- ITA: 18.6
- SWITZ: 14.4
- NZ: 8.8
- OECD Median: 8.5
- GER: 8.2
- UK: 8.2
- CAN: 6.7
- NETH**: 6.6
- FR: 5.7
- AUS: 5.1

** 2005
Source: OECD Health Data 2009 (June 2009).
Mortality Amenable to Health Care

Deaths per 100,000 population*

<table>
<thead>
<tr>
<th>Country</th>
<th>1997–98</th>
<th>2002–03</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>115</td>
<td>96</td>
</tr>
<tr>
<td>United States</td>
<td>115</td>
<td>110</td>
</tr>
</tbody>
</table>

* Countries’ age-standardized death rates before age 75; includes ischemic heart disease, diabetes, stroke, and bacterial infections.

Gaps in Hospital Discharge Planning and Transitional Care

Percent of adults with any chronic condition who were hospitalized in past 2 years

Sources: 2008 Commonwealth Fund International Health Policy Survey of Sicker Adults; C. Schoen et al., "In Chronic Condition: Experiences of Patients with Complex Health Care Needs, in Eight Countries, 2008." Health Affairs Web Exclusive, Nov 13, 2008

Data collection: Harris Interactive, Inc.
Personal Reflections

- Spectrum of illness similar between the US and NZ
- Use of resources dramatically different between US and NZ (oxygen/PET scans/”Death panels”)
- Work environment more collegial between trainees-attendings-patients-nurses
- No-fault system may actually go too far (no chart orders)
- In general patients appeared satisfied with the medical system
What I Learned

► New clinical skills
  ▪ Cardiac treadmill testing
  ▪ Thrombolysis for acute MI
  ▪ Management of acute stroke

► Gained confidence with old skills in new medical setting
  ▪ How to practice with limited resource availability
    ▪ Dx of CHF without BNP/Echo

► How to live like a Kiwi
What I Would Have Like to Have Learned and Did Not

► Procedural Skills (Intubation, Central Lines)
► A Specific Area of Expertise
Slide Show and Questions