Gender Shifts and Influences on the Culture of Physician Practice

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Gender Distribution - Canada

- In 2005, health occupations ranked fourth out of 10 industry categories in volume of women employed in Canada.

- In terms of *percentage of women employed*, the *health occupations category* was the highest of all, averaging around *80% of the total health workforce* being female across the last 20 years.

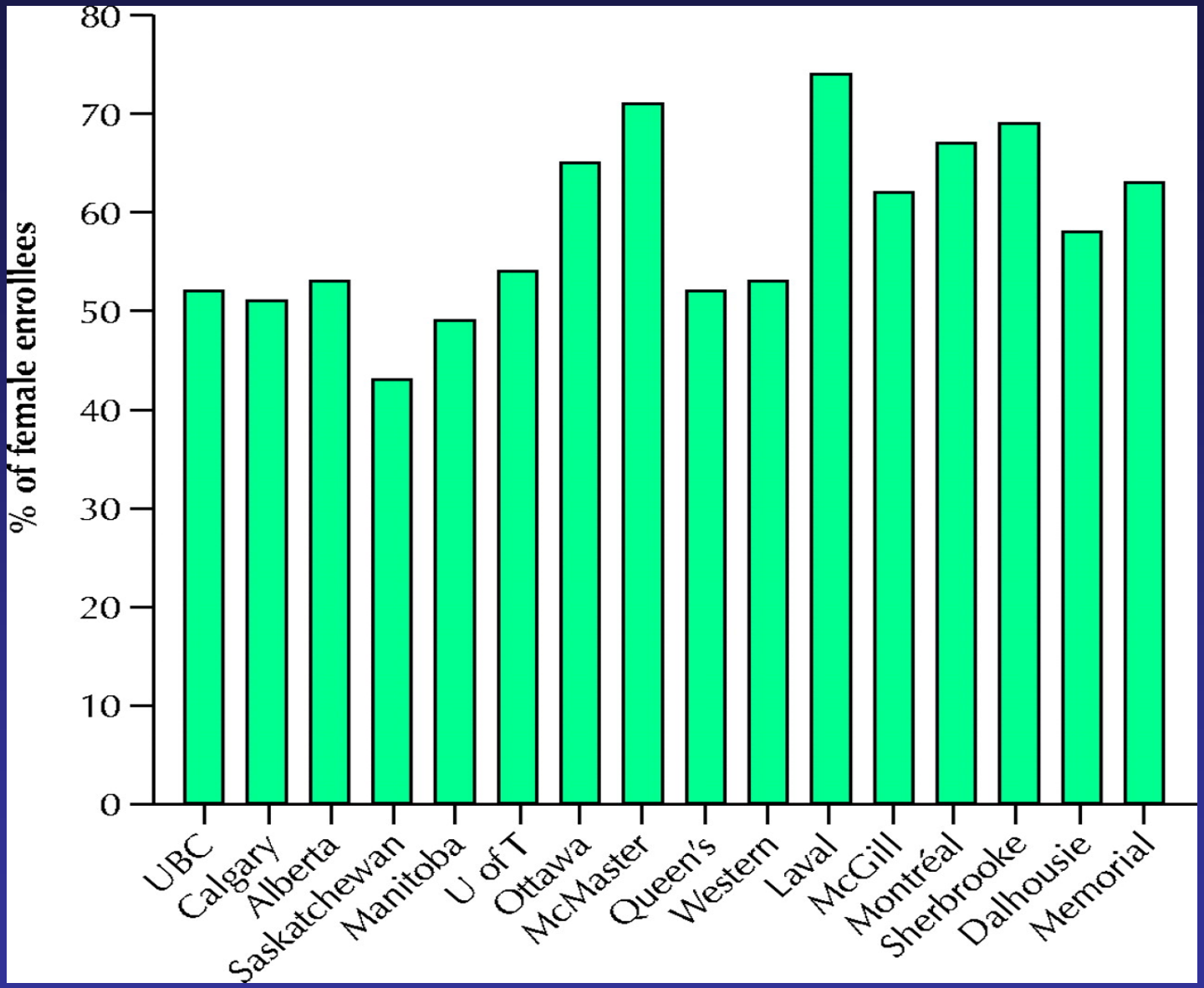
(Canadian Institute for Health Information, *Canada's Health Care Providers, 2007* (Ottawa: CIHI, 2007), 60)

Women in Physician Workforce

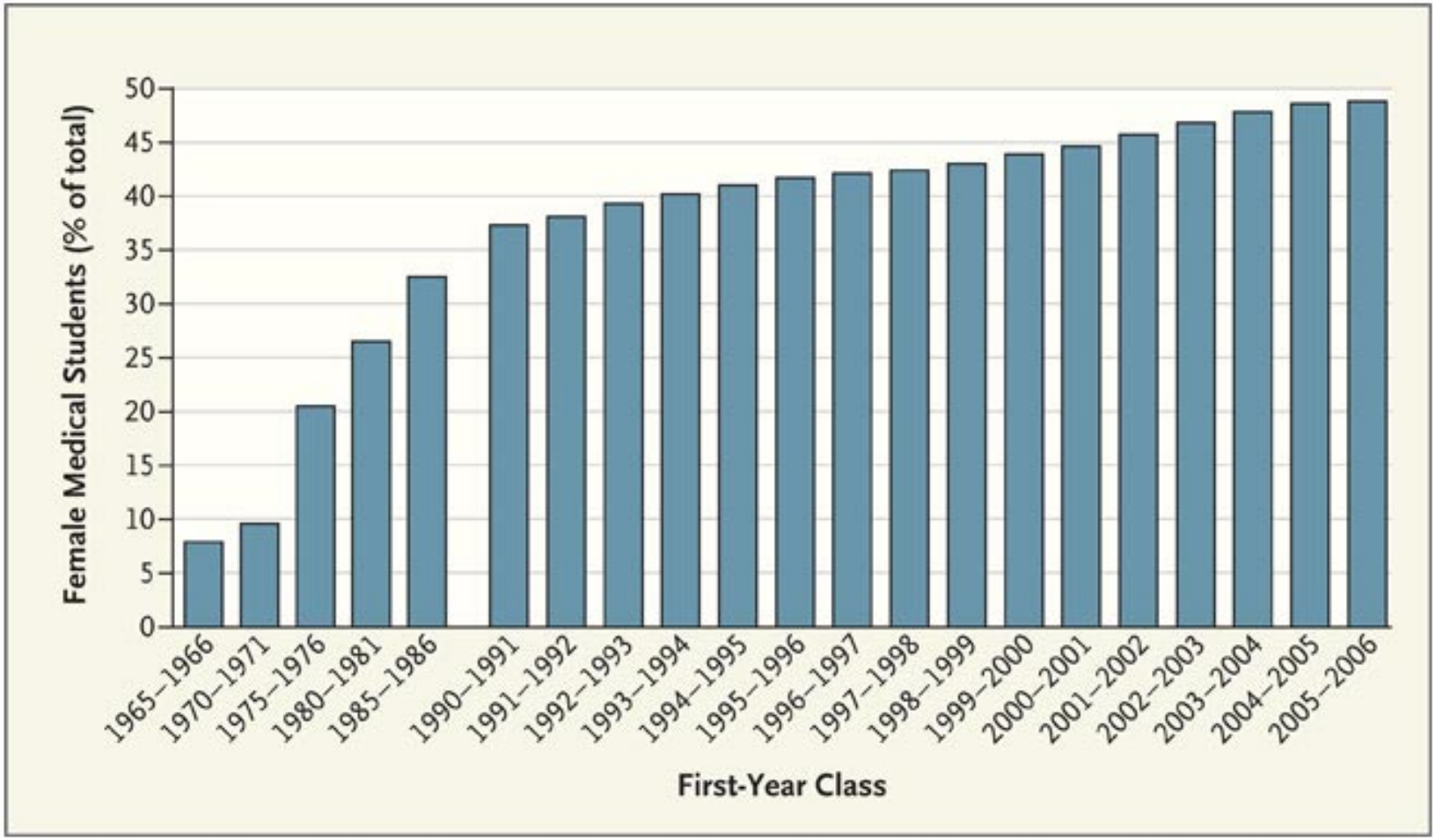
- Women enrolling into medical school
  - 1960 9.4%
  - 1970 17.8%
  - 1980 36.2%
  - 1990 44.4%
  - 2004 53.0%
- *By 2015*, women will make up *40% of MD supply*

Lorne Tyrrell and Dale Dauphinee. *TASK FORCE ON PHYSICIAN SUPPLY IN CANADA*. Prepared by the Canadian Medical Forum Task Force . 1999.

% women enrolled in Canadian medical schools in 2003



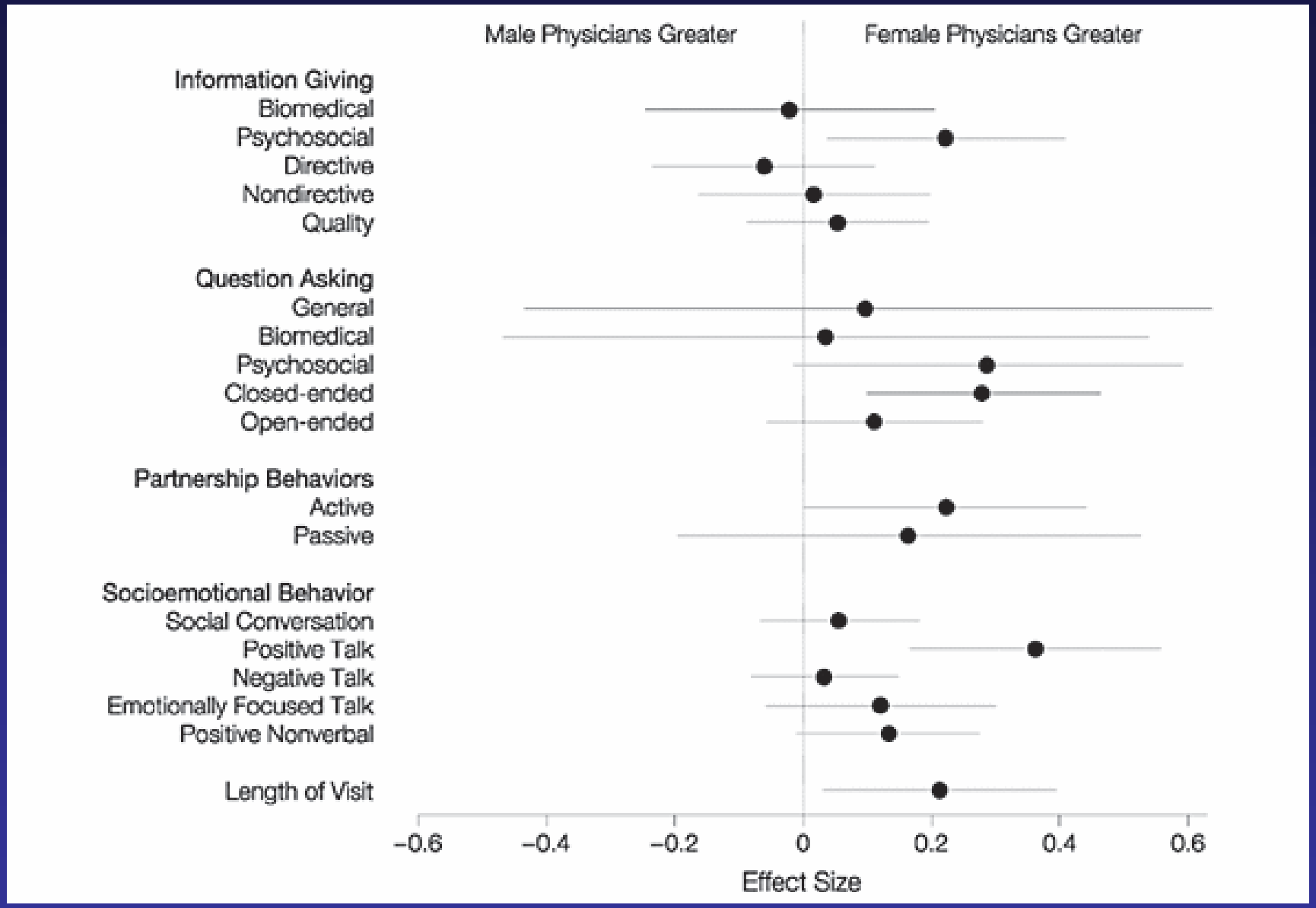
Burton, K. R. et al. CMAJ 2004;170:1385-1386



Proportion of Women Medical Students, 1965–2006.

(*Data are from the Association of American Medical Colleges*)

Jagsi, Tarbell, and Weinstein. Becoming a Doctor, Starting a Family — Leaves of Absence from Graduate Medical Education. *NEJM* 2007; 357:1889-1891



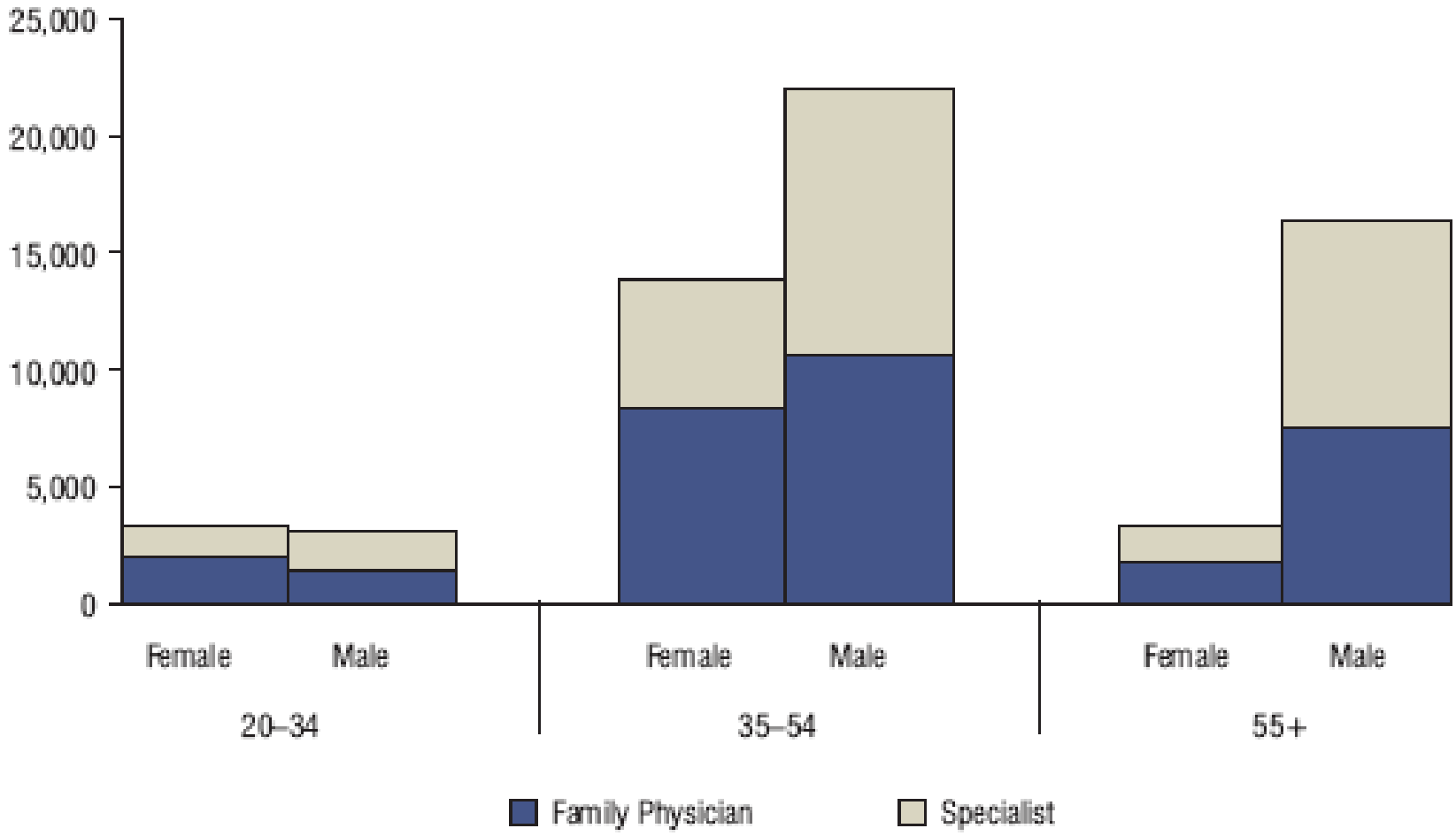
Estimated Pooled Gender Effect Sizes for Categories of Patient-MD Communication

(Error bars indicate 95% confidence intervals)

Roter DL, Hall JA, Aoki Y. Physician gender effects in medical communication: a meta-analytic review. *JAMA* 2002;288:756–64

Figure 3.9

Number of Physicians, by Age Group and Sex, 2006



Source: Scott's Medical Database, Canadian Institute for Health Information.

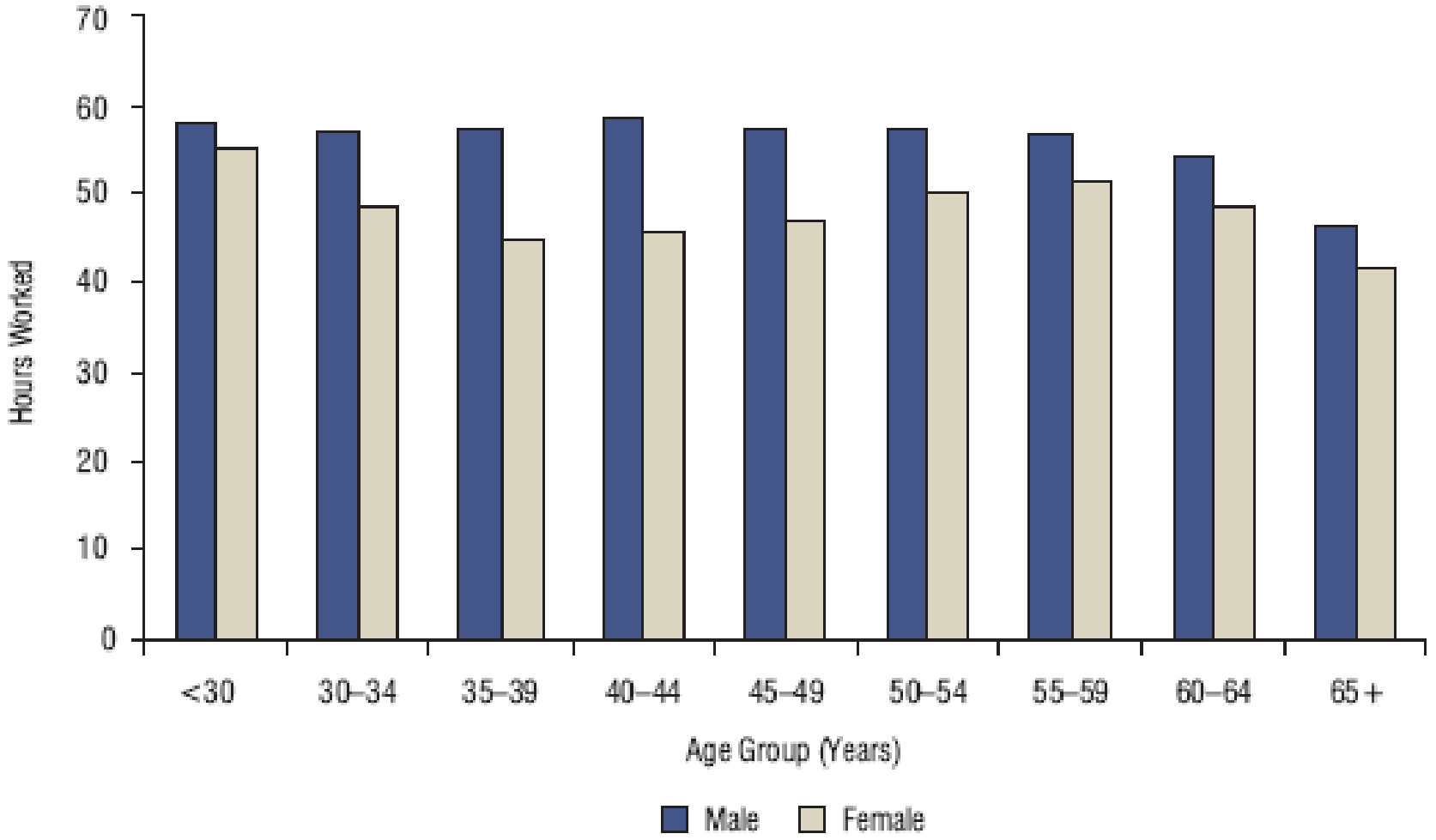
Women in Physician Workforce

- Women physicians practice an average of 48.2 hours/week
- Male physicians average 55.5 hours/week.
- Women frequently carry major responsibilities of coordinating and providing home support and child care.
- Medical school enrolment should be increased 4-5% to adjust for the effects of increased enrolment of women in medical schools.

L Tyrrell and D Dauphinee. *TASK FORCE ON PHYSICIAN SUPPLY IN CANADA*. Canadian Medical Forum Task Force. 1999.

Figure 3.11

Physicians' Average Weekly Hours Worked, by Sex and Age Group, 2000



Source: The 2001 Janus Survey, College of Family Physicians of Canada.

Table 2. Number of Respondents and Number of Hours Respondents Spent Seeing Patients

	No. of Hours Worked* (No. of Respondents)					
	Men			Women		
Year of Survey	All†	Parents	Nonparents	All†	Parents	Nonparents
1999	34 (101)	33 (53)	36 (48)	30 (111)	28 (43)	30 (68)
2000	31 (82)	31 (36)	30 (46)	25 (101)	23 (37)	27 (63)
2002	31 (75)	34 (26)	29 (49)	26 (97)	24 (42)	27 (55)

*Numbers of hours are given as means.

†The sum of parent and nonparent respondents does not always equal the number in the "All" column because all respondents did not answer the question on parental status.

Jacobson, Christine C, Josephine C. Nguyen, Alexa B. Kimball. Gender and Parenting Significantly Affect Work Hours of Recent Dermatology Program Graduates. *Arch Dermatol*. 2004;140:191-196.

NEW MODELS OF CARE

- **Nurse practitioners (NPs)** - considered key in new models of multidisciplinary team care involving, skill substitution, health prevention and promotion
- Core competencies for NPs are fairly consistent across Canada - lack of regulation and certification may impede the more intensive use of this group
- In collaborative settings, the relationship between physician and NPs is critical, - perceptions categorizing NPs as 'doctor assistants' or as being unsuitable to serve as the primary provider of health services persist

(Canadian Labour and Business Centre and Canadian Policy Research Networks, *Canada's Physician Workforce: Occupational Human Resources Data Assessment and Trends Analysis—Executive Summary* (Canadian Labour and Business Centre and Canadian Policy Research Networks, 2005), 9, 10)

NEW MODELS OF CARE

- **Physician Assistants (PAs)** - trained to provide medical care under the supervision of a physician
- There is currently only one PA training program in Canada, affiliated with the Canadian Armed Forces, but creating PA training programs is under discussion in at least three jurisdictions
- In Canada, how their role would compare with that of NPs - practical and philosophical differences in how PAs and NPs train and work
- As with NPs, midwives and other health care professionals, the issues of liability and funding still need to be resolved

Extra Slides

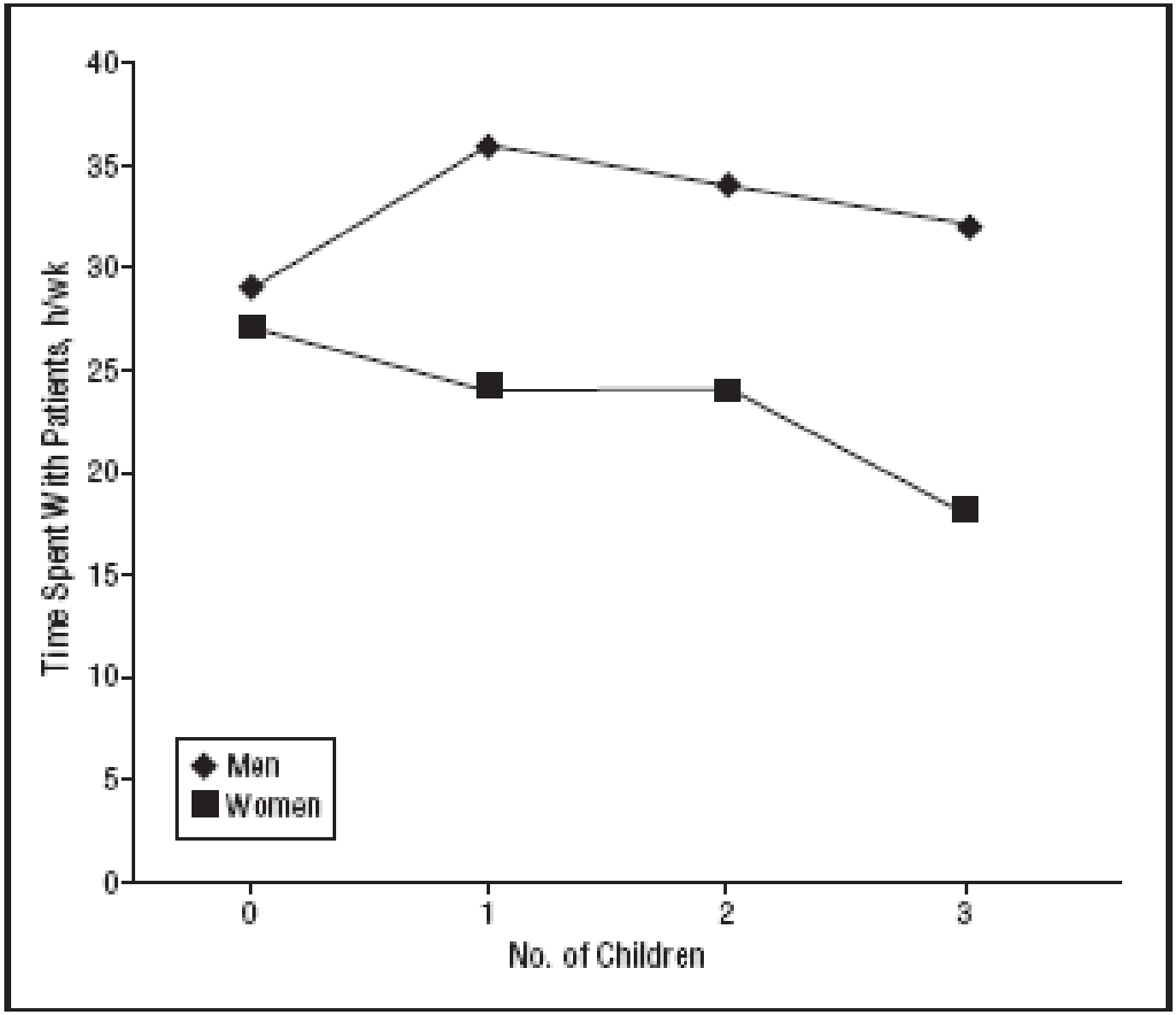


Figure 2. Men and women dermatologists' mean number of hours spent with patients per week relative to their number of children.

Jacobson, Christine C, Josephine C. Nguyen, Alexa B. Kimball. Gender and Parenting Significantly Affect Work Hours of Recent Dermatology Program Graduates. *Arch Dermatol*. 2004;140:191-196.

Table 3. Multiple Linear Regression of Number of Hours per Week Spent Seeing Patients, Including Second-Order Interaction Between Parental Status and Gender

	Estimate (SE)	*t* Value	*P* Value
Intercept	33.81 (8.49)	3.98	<.01
Sex	–2.17 (2.56)	–0.85	.40
Age	–0.14 (0.25)	–0.57	.57
Marital status	–0.03 (2.34)	–0.01	.99
Parental status	4.99 (3.46)	1.44	.15
Interaction between gender and parental status	–7.63 (4.14)	–1.84	.07

Jacobson, Christine C, Josephine C. Nguyen, Alexa B. Kimball. Gender and Parenting Significantly Affect Work Hours of Recent Dermatology Program Graduates. *Arch Dermatol*. 2004;140:191-196.

Evolving Models of Care

- One of the key aspects to new models of care will be the delivery of care through physician group practices involving inter-professional teams

- Family physicians, specialists, registered nurses (RNs), nurse practitioners (NPs) as core members as well as other health care providers such as physiotherapists, pharmacists, social workers, and dieticians.

(Canadian Labour and Business Centre and Canadian Policy Research Networks, *Canada's Physician Workforce: Occupational Human Resources Data Assessment and Trends Analysis—Executive Summary* (Canadian Labour and Business Centre and Canadian Policy Research Networks, 2005), 9)

Lifestyle Changes of Physicians

- The pattern of practice is changing for all physicians—male and female.
- Increasingly, physicians are recognizing the need to balance work with family and community needs.
- The long hours that housestaff have traditionally worked are being questioned.
- These efforts have resulted in changes in employment contracts for residents.

1) CMA policy on Physician Health and Well-being 1998. 158, 1191–1200
2) CAIR Position Paper – Resident Well Being – June, 1998

Lorne Tyrrell and Dale Dauphinee. *TASK FORCE ON PHYSICIAN SUPPLY IN CANADA*. Prepared by the Canadian Medical Forum Task Force . 1999.

Table 3. Summary of Effects of Physician Gender on Categories of Patient-Physician Communication

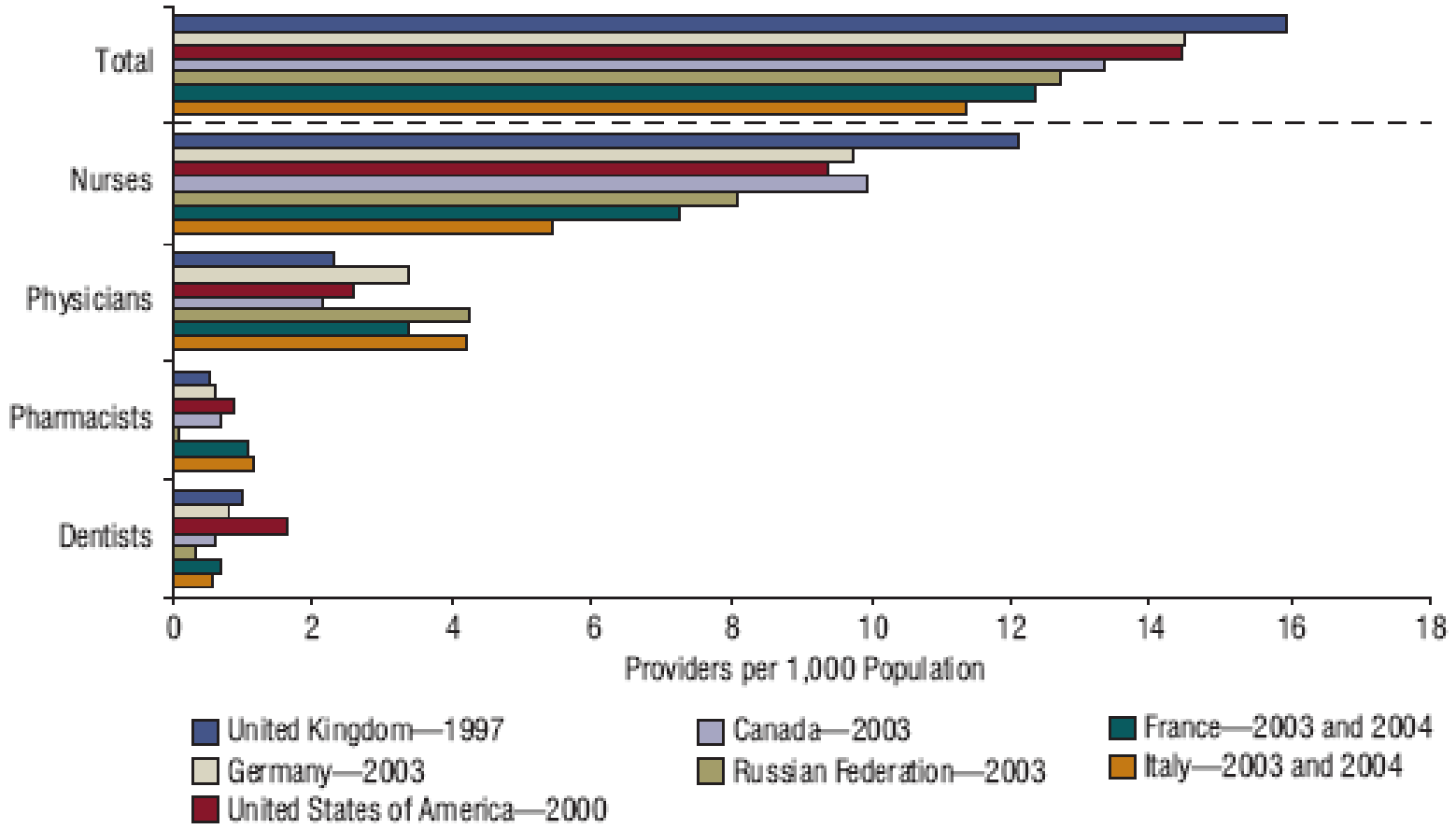
Category of Physician Communication	Total No. of Studies	No. of Significant Studies	Pooled Significance Level		Pooled Effect Size (Cohen *d*)			*P* Value for Heterogeneity†
			Combined *z* Score	*P* Value	Estimate (95% Confidence Interval)	*P* Value	Model*	
Information giving								
Biomedical	9	2	−0.31	.76	−0.02 (−0.25 to 0.21)	.85	Random (0.29)	<.001
Psychosocial	10	5	3.81	<.001	0.22 (0.04 to 0.41)	.02	Random (0.21)	.008
Directive	9	3	−1.42	.16	−0.06 (−0.24 to 0.11)	.49	Random (0.16)	.06
Nondirective	5	1	0.88	.38	0.02 (−0.16 to 0.20)	.86	Fixed	.65
Quality	6	0	0.64	.52	0.05 (−0.09 to 0.20)	.47	Fixed	.98
Question asking								
General	5	3	0.28	.78	0.10 (−0.44 to 0.63)	.72	Random (0.51)	<.001
Biomedical	3	2	−0.65	.52	0.04 (−0.47 to 0.54)	.89	Random (0.41)	<.001
Psychosocial	6	3	2.93	.003	0.29 (−0.02 to 0.59)	.06	Random (0.28)	.01
Closed-ended	4	1	1.70	.09	0.28 (0.10 to 0.46)	.003	Fixed	.23
Open-ended	6	1	0.92	.36	0.11 (−0.06 to 0.28)	.19	Fixed	.11
Partnership behaviors								
Active	12	8	3.99	<.001	0.22 (0.00 to 0.44)	.05	Random (0.30)	<.001
Passive	5	1	1.33	.18	0.17 (−0.19 to 0.53)	.37	Random (0.31)	.03
Socioemotional behavior								
Social conversation	7	1	0.93	.35	0.06 (−0.07 to 0.18)	.36	Fixed	.21
Positive talk	14	6	6.21	<.001	0.36 (0.17 to 0.56)	<.001	Random (0.27)	.001
Negative talk	9	2	0.21	.84	0.03 (−0.08 to 0.15)	.56	Fixed	.47
Emotionally focused talk	13	5	1.95	.05	0.12 (−0.06 to 0.30)	.19	Random (0.23)	.008
Positive nonverbal	6	2	2.32	.02	0.13 (−0.01 to 0.28)	.07	Fixed	.22
Length of visit	17‡	12	10.15	<.001	0.21 (0.03 to 0.40)	.02	Random (0.35)	<.001

*Estimated SD for random-effects mean.
†Heterogeneity *P* value <.10 is considered evidence of presence of substantial heterogeneity.
‡Five estimates for different specialties were extracted from Cypress.[26]

From Nicola and Demmel. The impact of gender stereotypes on the evaluation of general practitioners' communication skills. *Patient Education and Counseling* 2007; 69:200-205.

Figure 3.7

Distribution of Health Care Providers Within G8 Countries (Excluding Japan), per 1,000 Population, 1997 to 2004

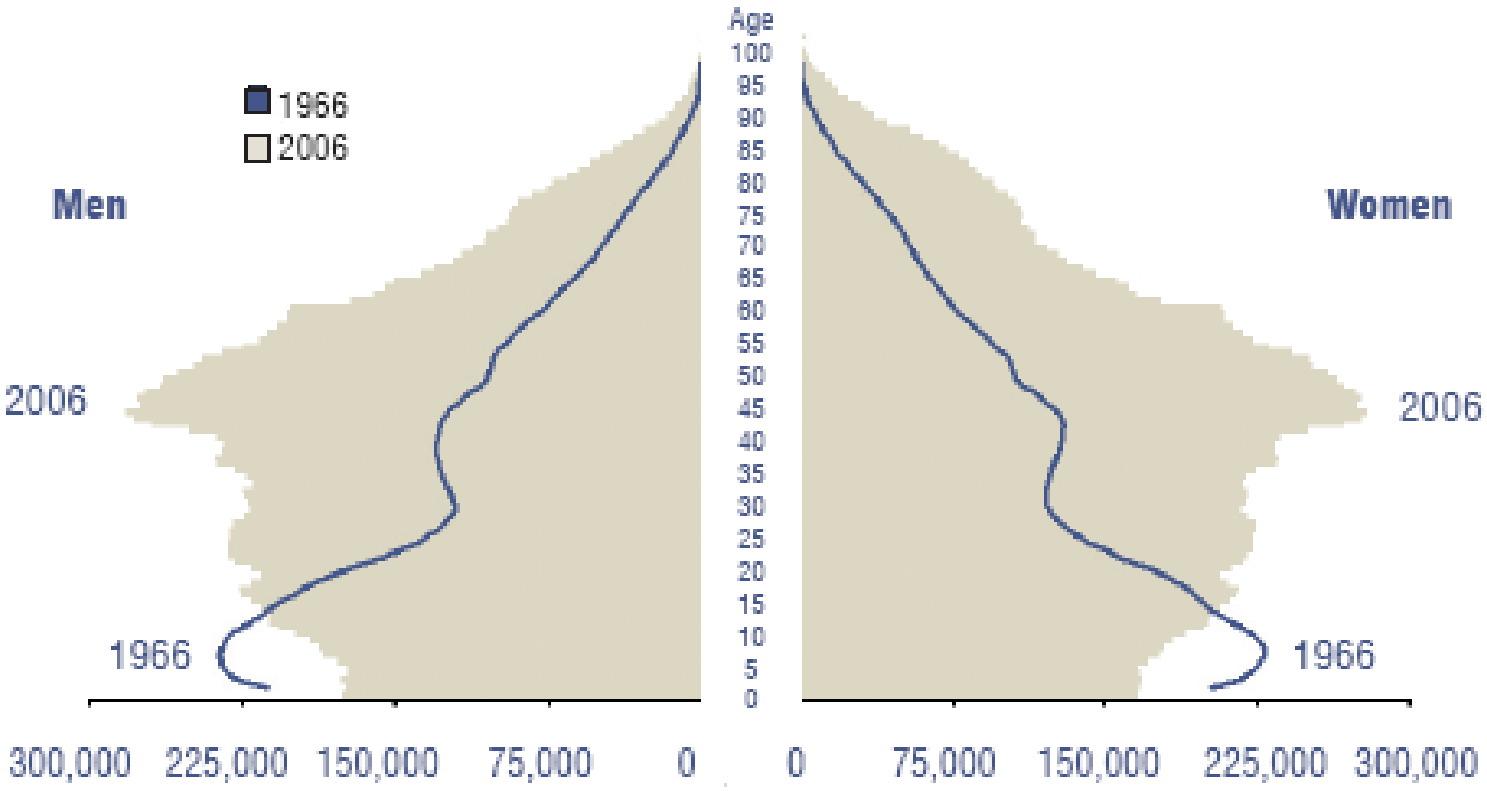


Note: Japan not included within the G8 countries; data not available.

Source: World Health Statistics 2007 and *The World Health Report* 2006 Edition, World Health Organization.

Figure 3.12

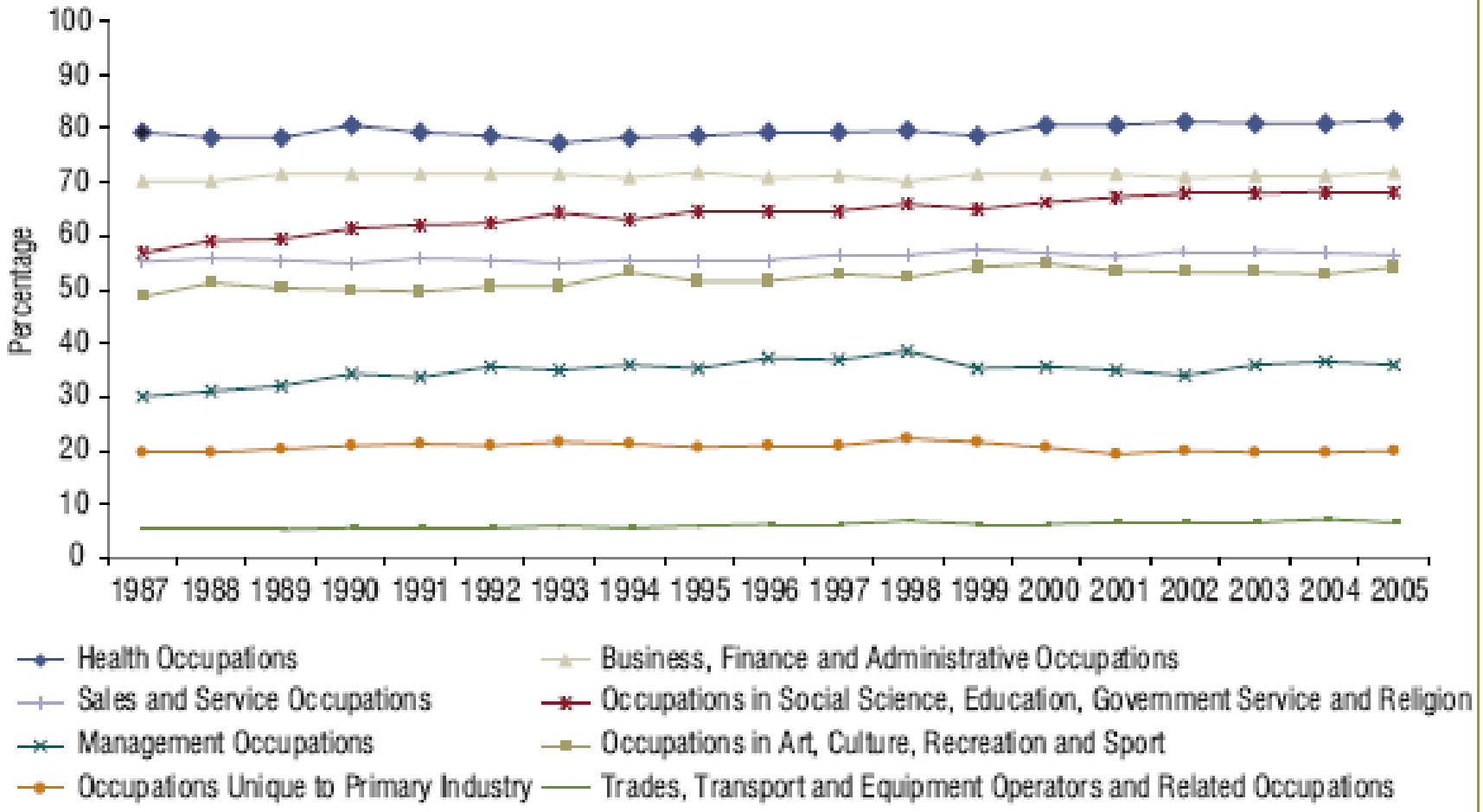
Population of Canada, 1966 and 2006, by Age and Sex



Sources: Adapted from *The Daily*, October 26, 2006, Census of the Population 2006 and Historical Census of Population, Statistics Canada.

Figure 3.8

Percentage of Women Employed Across Industries, Canada, 1987 to 2005



Source: Labour Force Survey, Statistics Canada, 2005.

Sex Split of Specific Health Occupations

- Occupations with the highest proportion of women:
  - nursing professions
  - dental assistants
  - hygienists and therapists
  - dietitians and nutritionists
  - audiologists and speech-language pathologists.
- Predominately male occupations:
  - physician groups
  - Optometrists
  - Chiropractors
  - dentists and denturists
  - ambulance attendants.

(Canadian Institute for Health Information, *Canada's Health Care Providers, 2007* (Ottawa: CIHI, 2007), 60)

Percent Female of Health Occupations, 2001

• All Occupations	47
• Health Related – Total	77
• Dental Assistants/Hygienists	98
• RNs	94
• Med Lab Technologists	82
• Physiotherapists	79
• Social Workers	79
• Psychologists	67
• Pharmacists	57
• Sr Mgrs-Health, Commun Servs	51
• Physicians	30
• Chiropractors	28
• Dentists	27

(Canadian Institute for Health Information, *Canada's Health Care Providers, 2007* (Ottawa: CIHI, 2007), 61)

Gender Split in Medical School Graduates

MD Workforce	% female
2001	30.1
2006	33.3
2015	40.0

(Canadian Institute for Health Information, *Canada's Health Care Providers, 2007* (Ottawa: CIHI, 2007), 62)

THE CANADIAN PHYSICIAN WORKFORCE

- The three most frequent first-choice post-graduate programs are family medicine, surgery, and internal medicine.
- While surgery is dominated by men, family medicine is the major first choice among women, who made up at least 50% of family physician trainees in the past decade.
- Although internal medicine, psychiatry, and anesthesia are a first choice among about the same numbers of women and men, a greater proportion of women choose obstetrics/gynecology and pediatrics, while a far greater proportion of men make diagnostic radiology their first choice
- The most notable divergence between available positions and applicant first choice is in family medicine.

(Canadian Labour and Business Centre and Canadian Policy Research Networks, *Canada's Physician Workforce: Occupational Human Resources Data Assessment and Trends Analysis—Executive Summary* (Canadian Labour and Business Centre and Canadian Policy Research Networks, 2005), 2, 3)

THE CANADIAN PHYSICIAN WORKFORCE

- Practice entry has remained relatively stable for laboratory medicine and surgical specialties, fluctuated somewhat for medical specialties, and declined sharply for family medicine in the early 1990s
- Overall, nearly as many women as men entered practice in 2003 – 781 versus 789
- Women outnumber men as new family physicians by nearly 40%, which, in light of differences in practice intensity, further limits effective supply.

Extra Slides

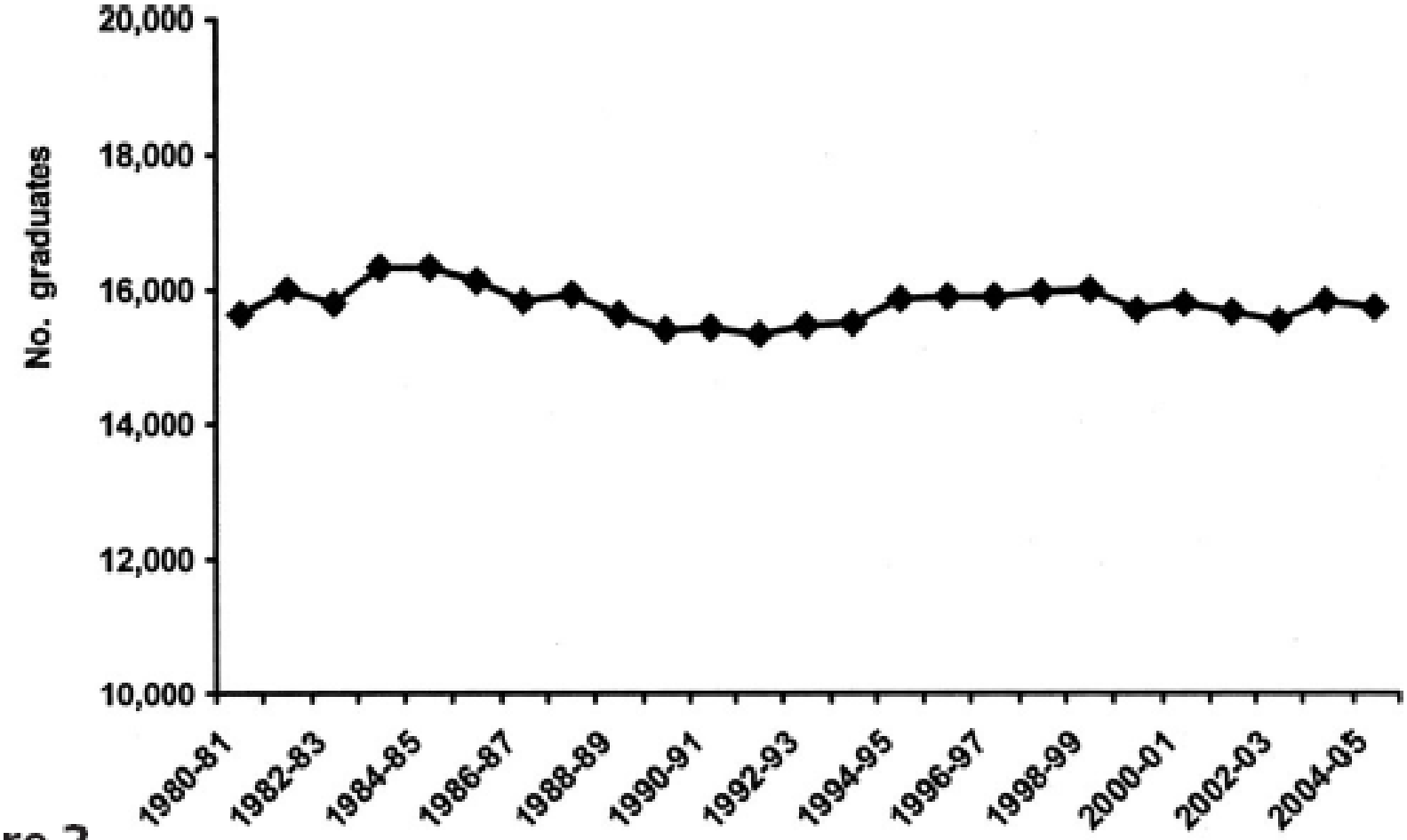


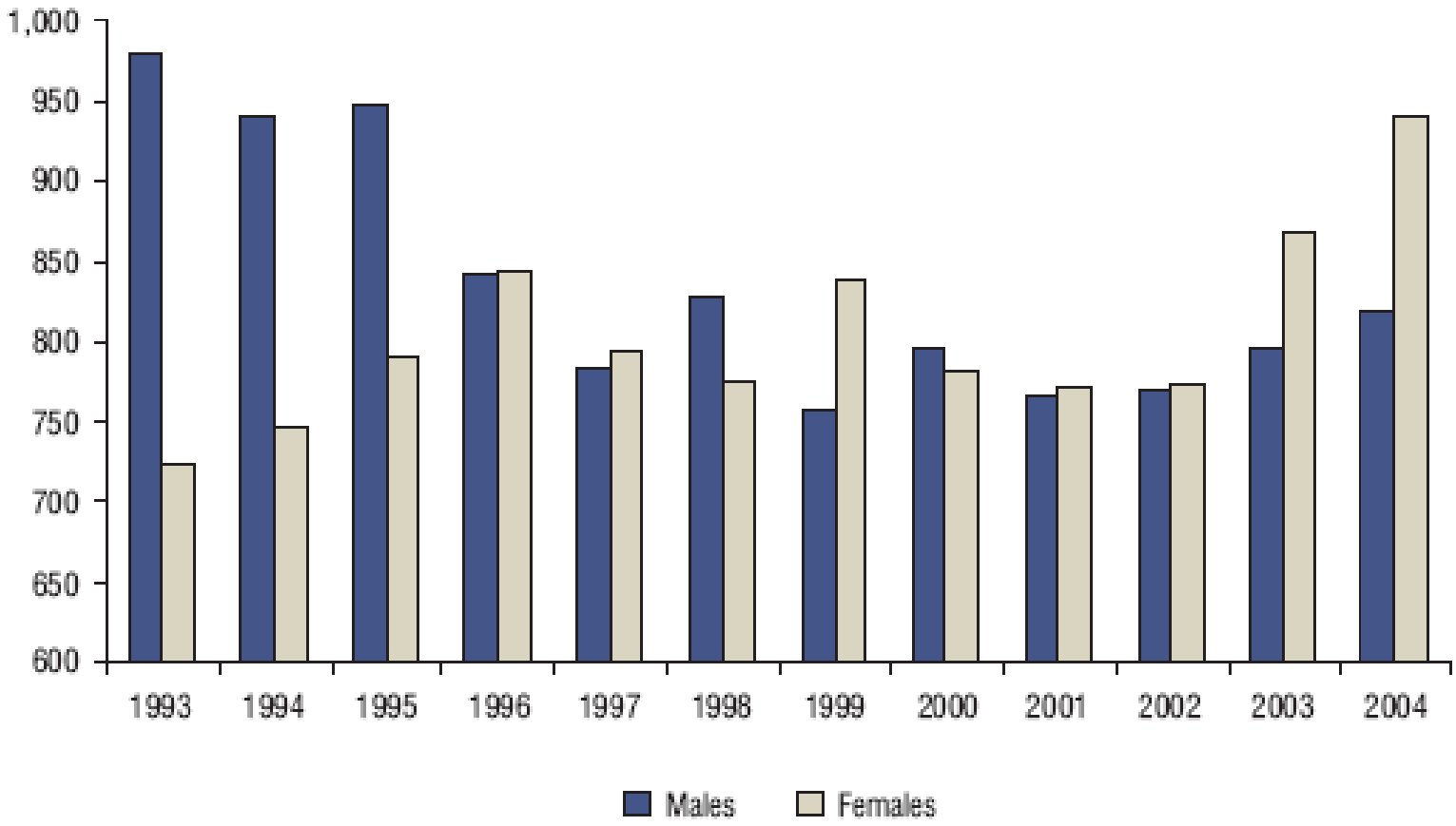
Figure 2

Graduates of allopathic medical schools in the United States, 1980–2005.

Salsberg and Grover. **Physician Workforce Shortages.** ***Acad Med***. 2006; 81:782–787

Figure 3.10

Count of Graduating Physicians, by Sex, 1993 to 2004



Note: Scale does not start at zero.

Source: Health Personnel Database, Canadian Institute for Health Information.

THE CANADIAN PHYSICIAN WORKFORCE

- Overall, men outnumber women by more than 2:1, and more so in older physician cohorts
- Women make up an increasing proportion of younger physicians, and in the youngest age group they slightly outnumber men
- If present trends continue, women are projected to make up 40% of the physician workforce by 2015. With the exception of obstetrics and gynecology, the specialties tend to be dominated by males, while female specialists tend to be in clinical rather than in surgical specialties.

(Canadian Labour and Business Centre and Canadian Policy Research Networks, *Canada's Physician Workforce: Occupational Human Resources Data Assessment and Trends Analysis—Executive Summary* (Canadian Labour and Business Centre and Canadian Policy Research Networks, 2005), 2, 3)

Women in Physician Workforce

- 1998 – Women in specialties
  - Family Medicine 55.6%
  - Pediatrics 54.5%
  - Obs&Gyn 73.3%
  - Laboratory Medicine 60%
  - Medical Specialty Trainees 43.2%
  - Surgical Specialty Trainees 28.9%

Lorne Tyrrell and Dale Dauphinee. *TASK FORCE ON PHYSICIAN SUPPLY IN CANADA*. Prepared by the Canadian Medical Forum Task Force . 1999.