Primary Care Organization and Performance

Comparison of Models Study

Supported by the Ontario Ministry of Health and Long Term Care

SOINS CONTINUS Bruyère CONTINUING CARE

INSTITUT DE RECHERCHE ÉLISABETH-BRUYÈRE RESEARCH INSTITUTE

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Roadmap

- Background
- Theory Based Evaluation
- Results
  - Comparing models
  - Factors associated with performance
  - Equity
- Discussion

Models

	Community Health Centre (CHC)	Fee for service (FFS)		Family Health Network (FHN)	Health Service Organization (HSO)
		Fee for Service	Family Health Groups (FHG)[a]		
Year introduced	1970s	-	2004	2001	1970s
Group size	Groups practice – Unspecified size	1 Physician	Minimum 3	Minimum 3	Minimum 3
Physician remuneration	Salary	FFS	FFS and incentives	Capitation[b] with a 10% FFS component, and incentives	Capitation[b] and incentives
Patient enrolment	Required No roster size limit	Not required	Required No roster size limit	Required Disincentive to enrol >2,400[c]	Required Disincentive to enrol >2,400[c]
Access	No specified requirements	No specified requirements	THAS[d] Extended hours[e]	THAS Extended hours[e] Access bonus[f]	THAS Extended hours[e] Access negation[g]
Multi-disciplinarity[h]	Significant	None	None	Some	Some
Assistance for Information Technology	Some	None	None	Yes	None
Preventive incentives[i]	None	None	Few	Yes	Yes
Objectives/Priorities	Responsiveness to population needs, multi-disciplinarity, prevention, focus on underserved, community governed[18]	-	Accessibility[19]	Accessibility, comprehensiveness, doctor-nurse collaboration, use of technology	Responsiveness to population needs, multi-disciplinarity, health promotion, cost effectiveness[20]

Research questions

1. Compare the performance of models of primary care delivery
    - Health Service Delivery
    - Technical Quality of Care
2. Evaluate what organizational factors explain the difference?

Design

- Cross sectional mixed methods study
- Sample of 137 Primary care practices in four models of primary care delivery

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Theory Based Evaluation

Theory based evaluation

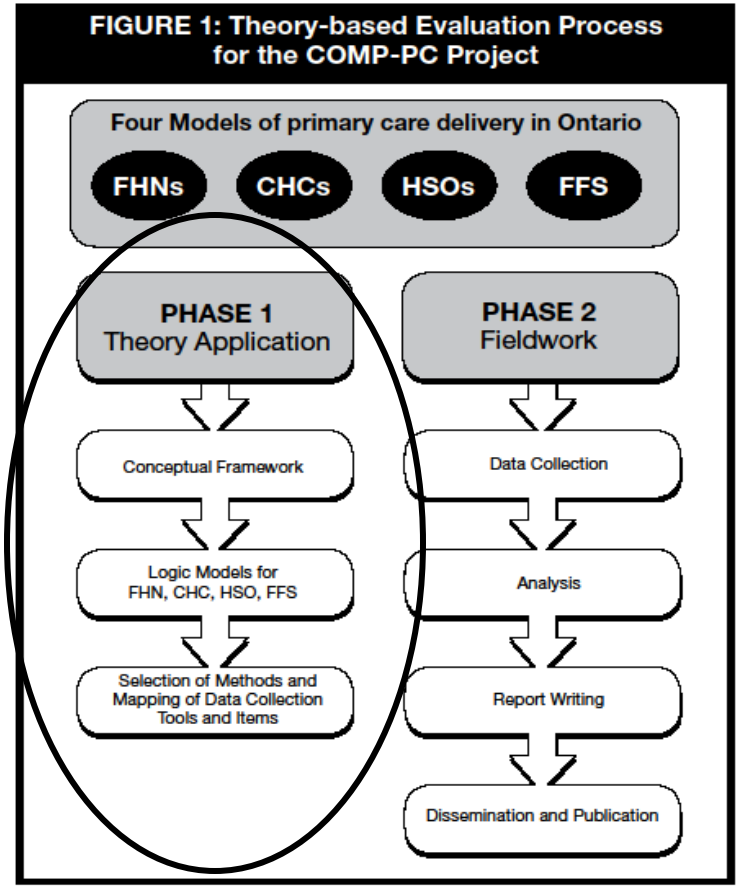
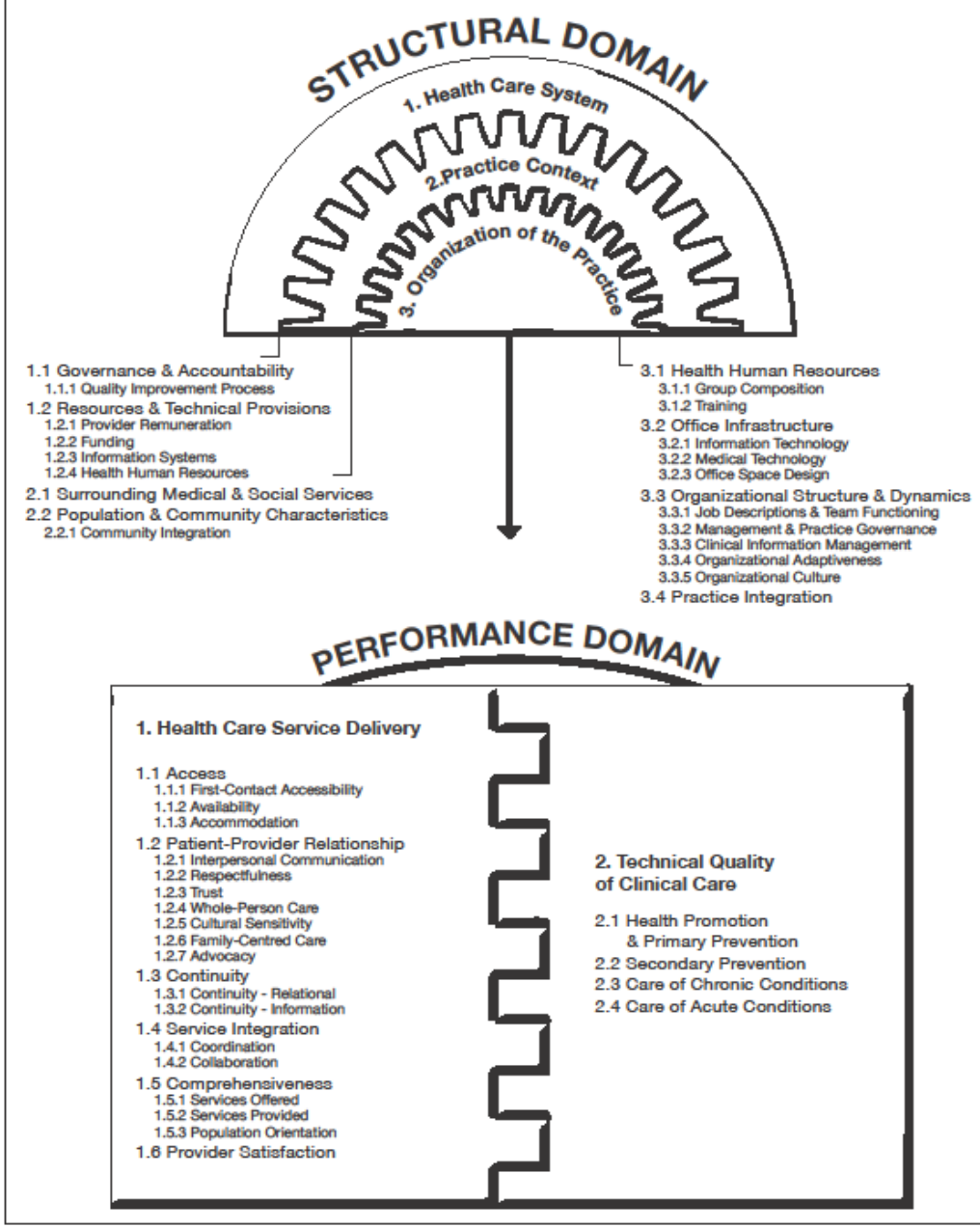
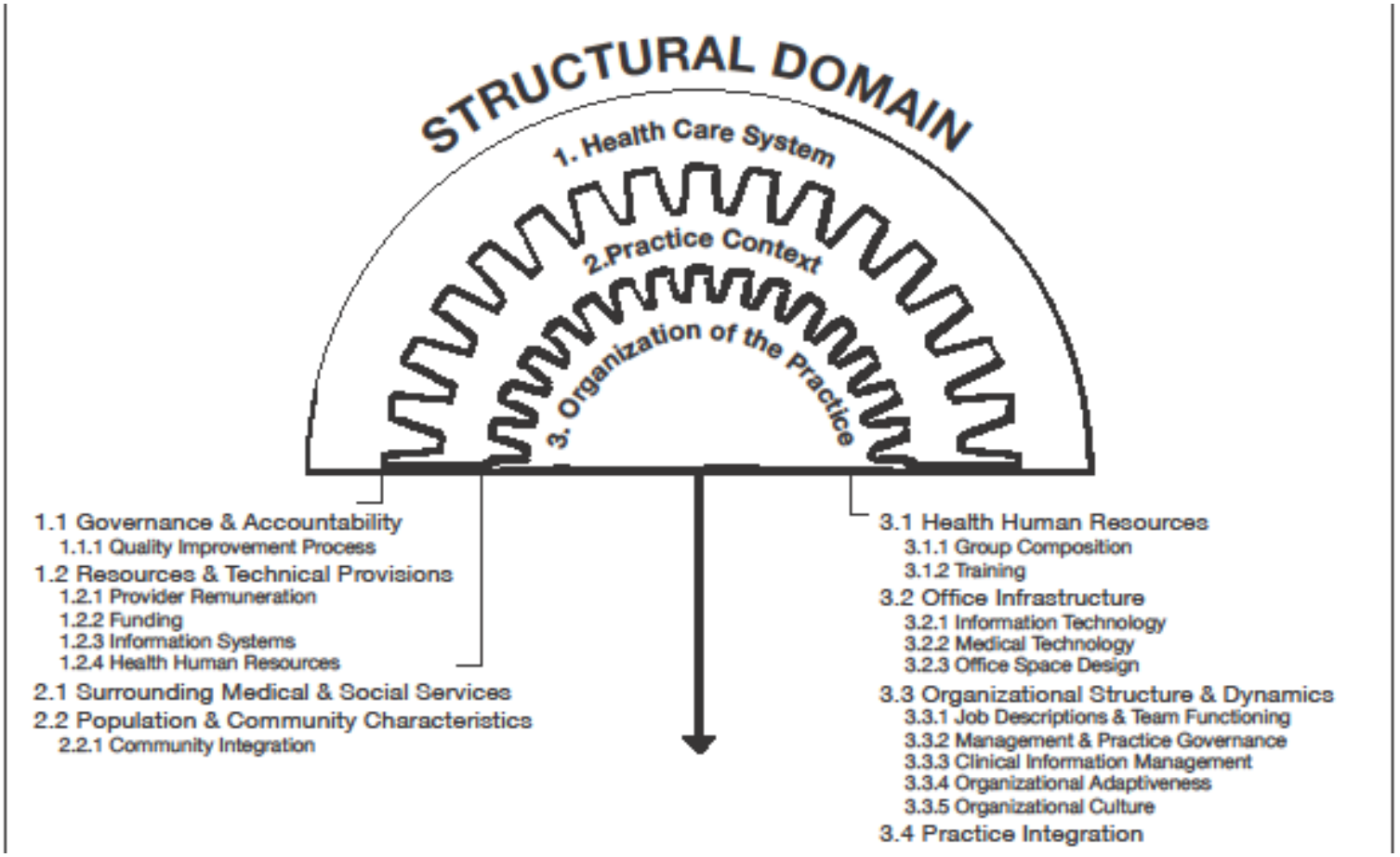


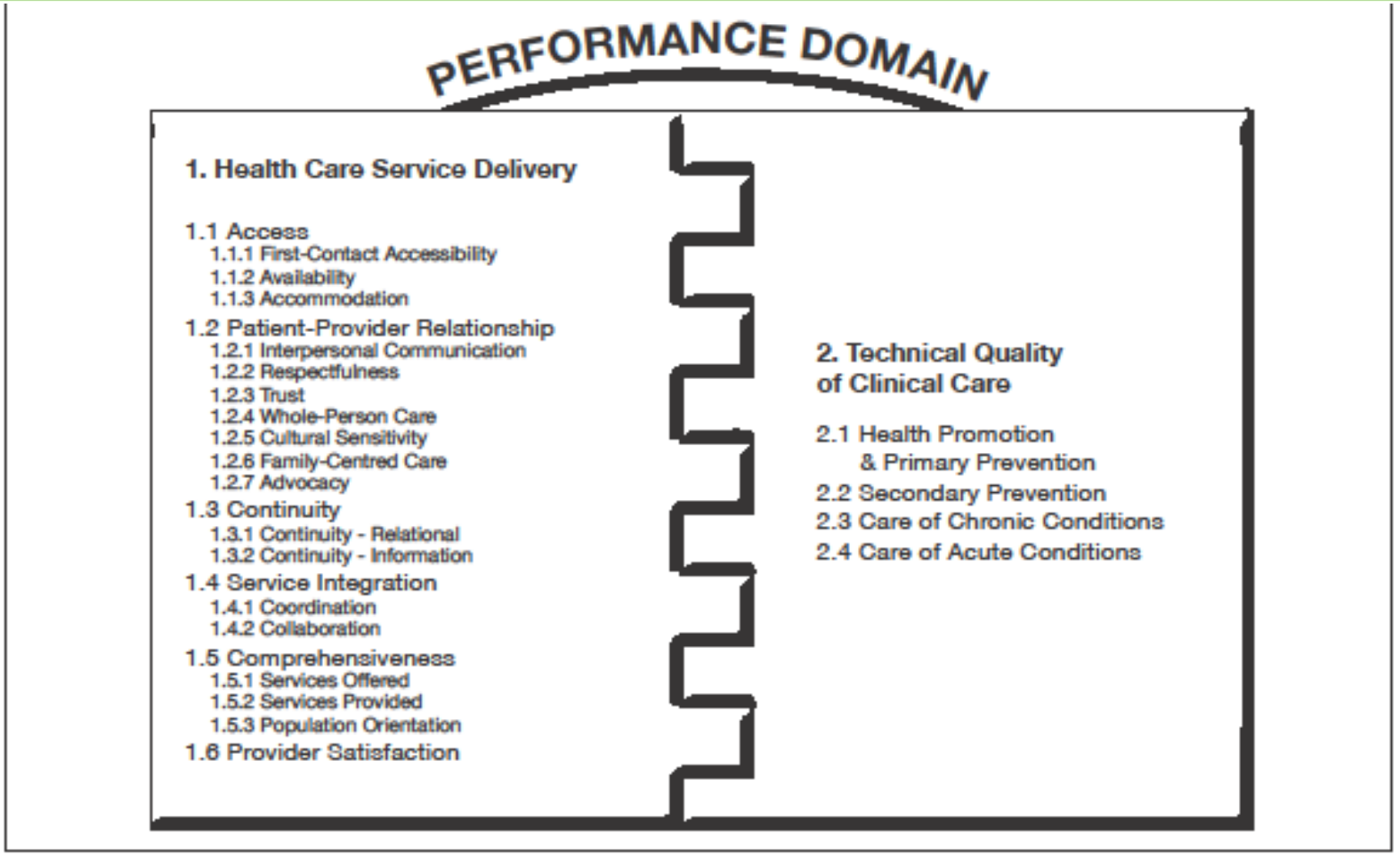
FIGURE 2: Conceptual Framework for Primary Care Organizations



Structural Domain



Performance domain



Study tools

- Organizational survey (1 per site)
  - PCAT measures of comprehensiveness.
  - Economic and governance information (team structure, sources of income, salaries and costs.)
- Provider survey (≥ 50% PCPs at a site)
  - Demographics (including training and FTE worked)
  - Provider's experience of practice performance

Study tools

- Patient waiting room survey (35-50 per site)
  - Before the visit (experience of primary care)
  - After the visit (report of consultation)
- Chart audit (30 per site)
  - Technical quality of care

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Dimensions

Health Service Delivery	Technical Quality of Care Delivery
Access	**Health promotion**
First contact accessibility scales	Healthy foods and unhealthy foods
First contact utilization scale	Home safety
Patient-Provider Relationship	Family conflicts
Humanism scale	Exercise
Trust scale	Tobacco/smoking
Cultural competency scales	Alcohol consumption
Family centeredness scales	How to prevent falls
Continuity	**Chronic Disease Management**
Ongoing care scale	Diabetes
Comprehensiveness	Coronary artery disease
Services offered	Congestive heart failure
Community orientation scale – Reach out	**Prevention**
Community orientation scale – Needs ass	Influenza immunization
Community orientation scale – Monitor	Hearing and vision screening
Community orientation scales	Breast, cervical and colorectal ca screening

Participation

Model	CHC	HSO	FHN	FFS	Overall
Practices					
Eligible	51	65	94	155	365
Participated	35	32	35	35	137
Response rate (%)	69	49	37	23	45
Providers					
Participated	182	42	81	58	363
Patients					
Eligible	1591	1590	1583	1758	6522
Participated	1219	1273	1494	1375	5361
Response rate (%)	77	80	85	74	79
Chart abstraction	1050	958	1050	1050	4,108

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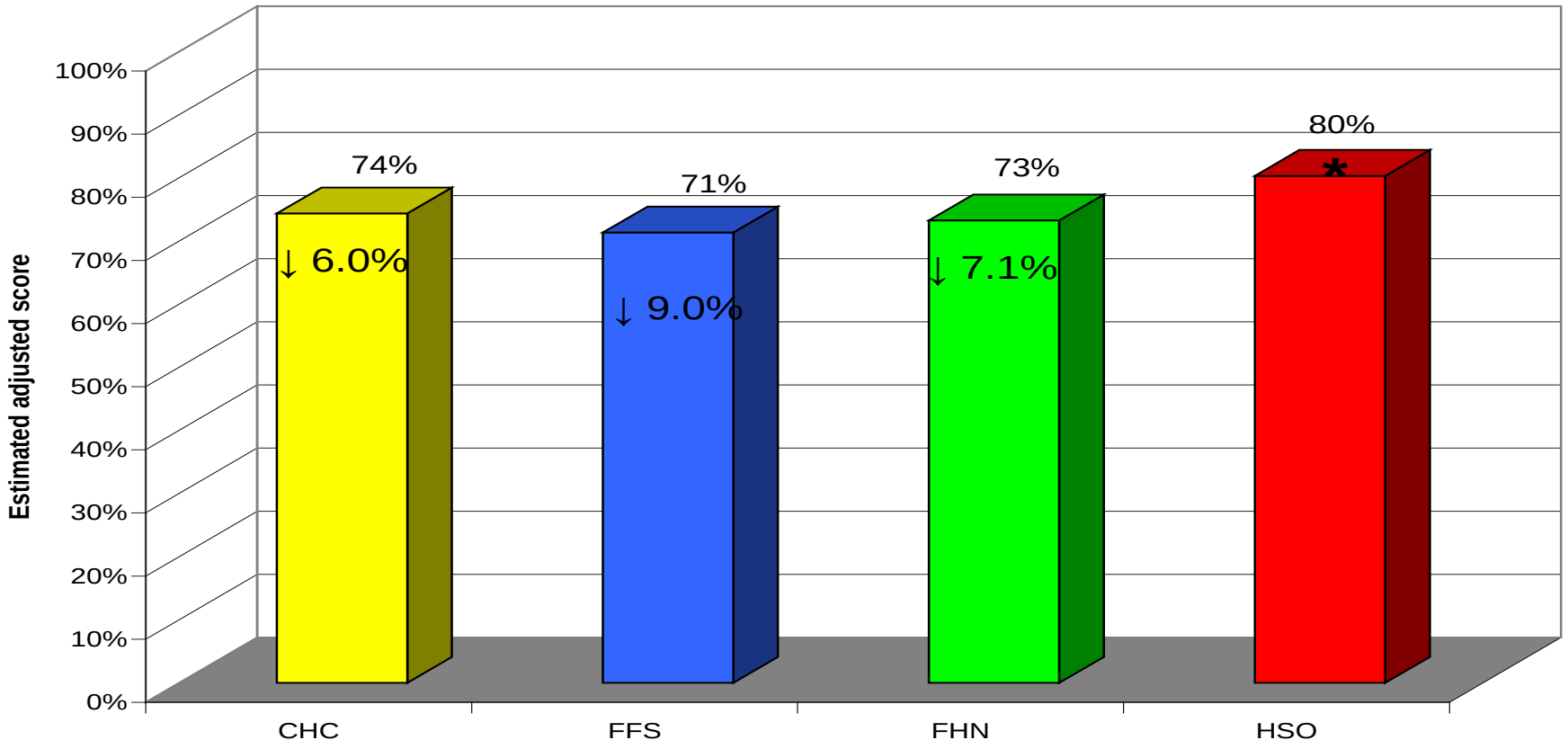
First Contact Accessibility (PCAT)

- When your PCP is *open* and you get sick, would someone from this office see you the same day?
- When your PCP is *open*, can you get advice quickly over the phone if you need it?
- When your PCP is *closed*, is there a phone number you can call if you get sick?
- When your PCP is *closed* and you get sick *during the night*, would someone from this office see you that night?

First Contact Accessibility

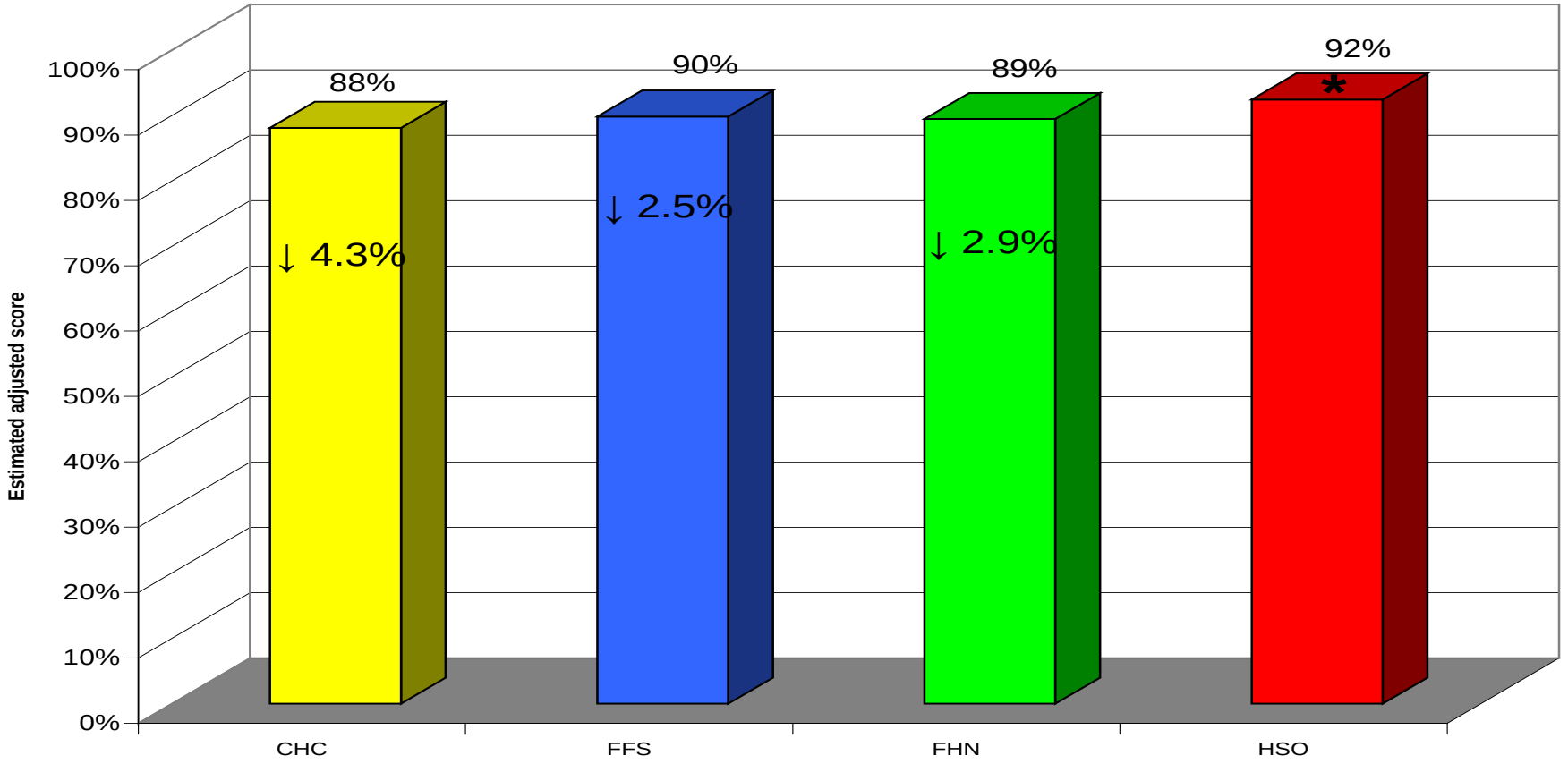


Estimated accessibility for patients: age 50; good-excellent health, at least college education, working, 10 days with mental/physical limitations

Relational Continuity (PCAT)

- When you go to your provider's office are you taken care of by the *same* doctor or nurse practitioner each time?
- If you have a question, can you call and talk to the doctor or nurse practitioner who knows you best?
- Does your provider know you very well as a *person*, rather than as someone with a medical problem?
- Does your provider know what problems are most important to you?

Relational Continuity

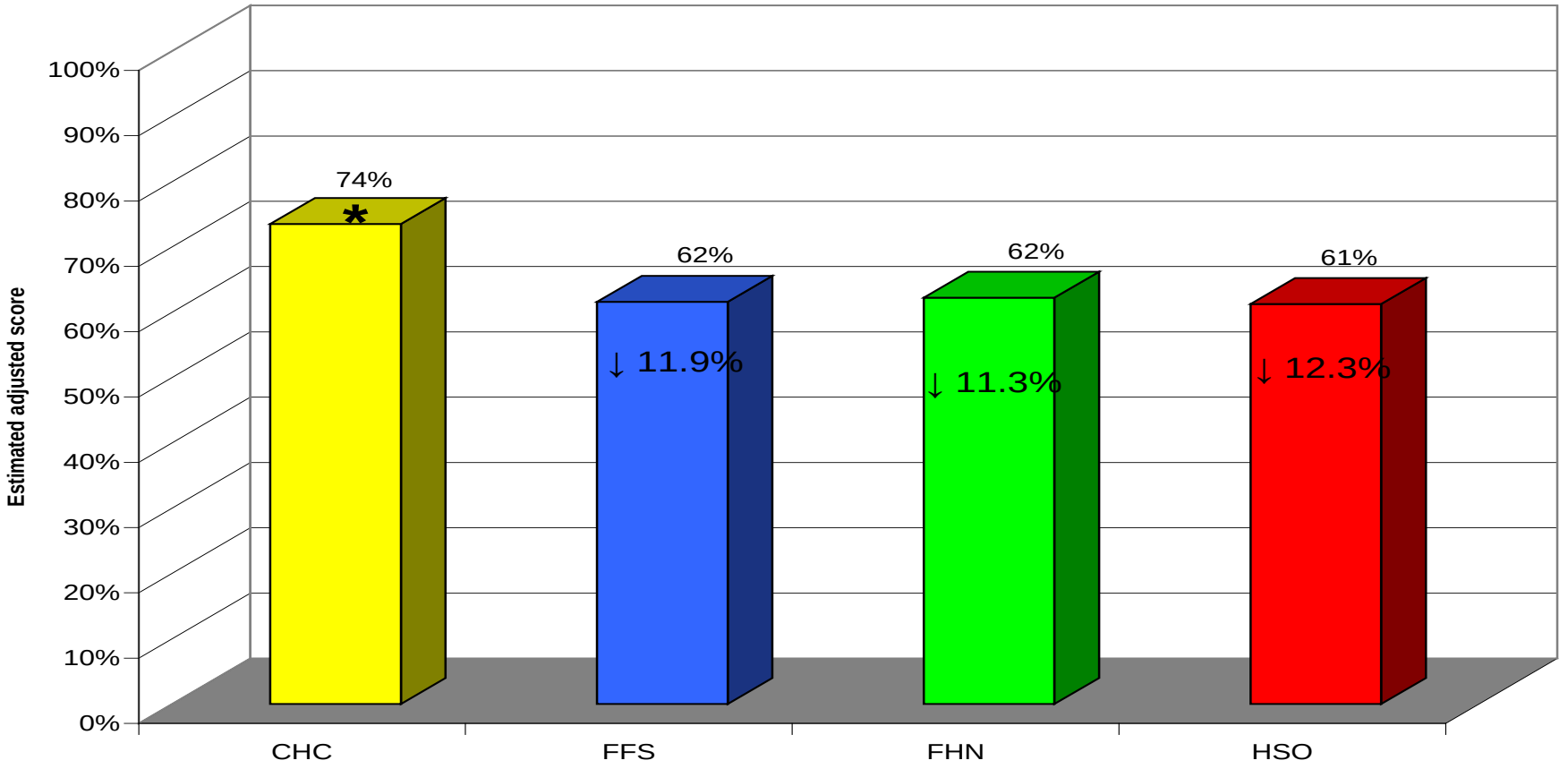


Estimated relational continuity for patients: women; age 50, with chronic disease

Comprehensiveness - PCAT

Obstetric / Gynecological:	Social:
1) Antenatal care (prenatal?) 2) PAP smear 3) Preparation for delivery and delivery (off site) of babies 4) Family planning/ birth control services	1) Nutrition counseling 2) Alcohol or drug abuse counseling 3) Counseling for behavioral or mental health problems
Procedural:	**Diagnostic procedures:**
1) Suturing 2) Allergy shots 3) Wart treatment 4) Splinting for a sprained ankle 5) Removal of an ingrown toenail	1) Sigmoidoscopy 2) ECG/EKG 3) Spirometry

Comprehensiveness



Estimated comprehensiveness for practices with rurality of "0".

Community Orientation (Reach out) - PCAT

Does your practice site use any of the following activities to reach out to the population in the community you serve?

- Networking with provincial and local agencies involved with culturally diverse groups
- Linkages with religious organizations/services
- Involvement with neighbourhood groups/leaders
- Outreach workers
- Other

Community Orientation (Assess Needs) - PCAT

Does your practice site use the following types of data to determine what programs/services are needed by the communities you serve?

- Mortality data
- Public health communicable disease data (e.g., STDs, TB
- Community immunization rates
- Public health data on health or occupational hazards
- Clinical data from your practice
- Other

Community Orientation (Monitor) - PCAT

Does your practice site use the following methods to monitor and/or evaluate the effectiveness of services/programs if offers?

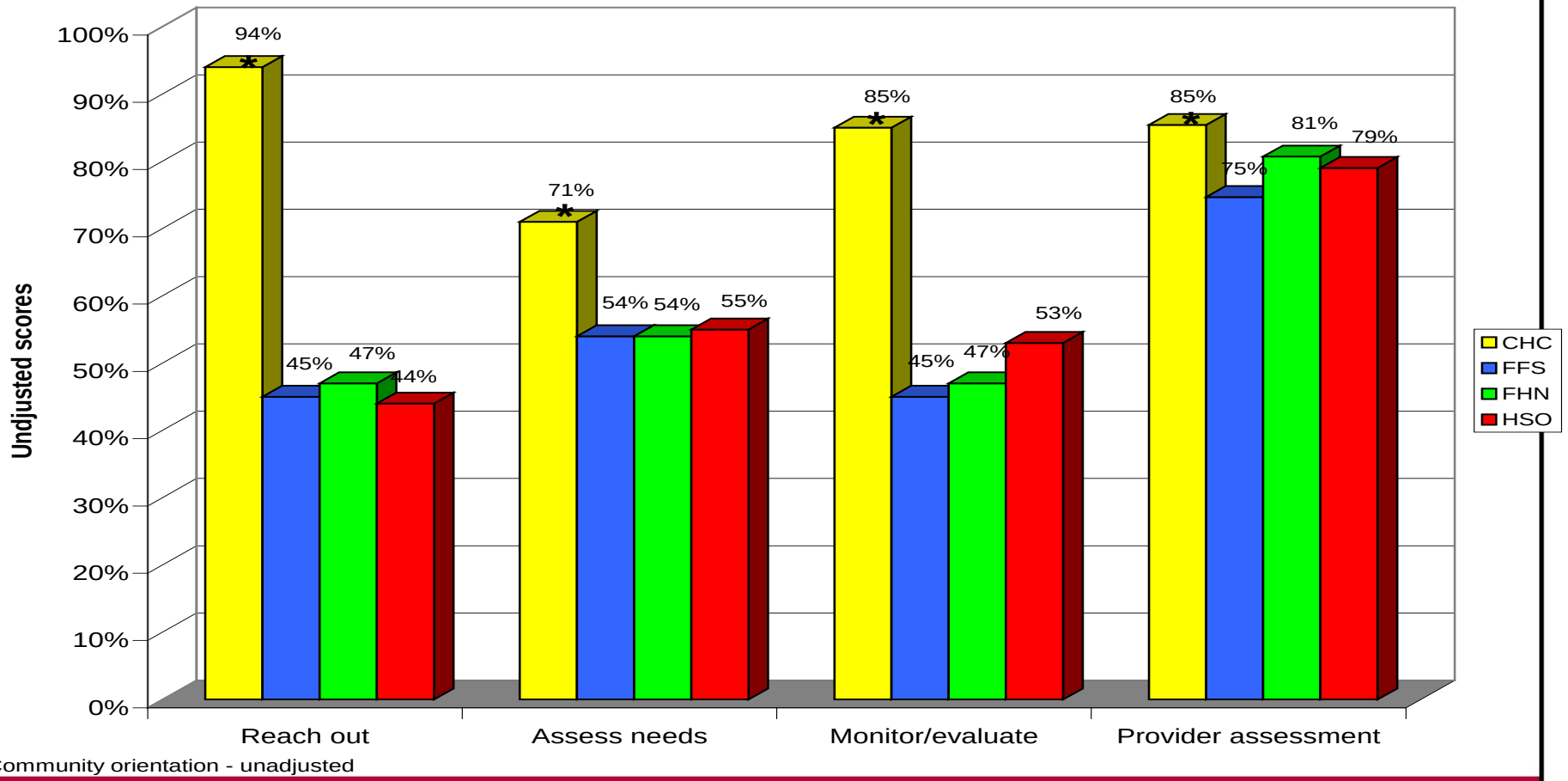
- Surveys of the practice patients
- Community surveys
- Feedback from community organizations or community advisory boards
- Feedback from the practice staff
- Analysis of local data or vital statistics
- Systematic evaluations of the practice programs and services provided
- Community health workers
- Have a patient on the Board of directors or advisory committee
- Other

Community Orientation (Monitor) - PCAT

The following questions are regarding community orientation

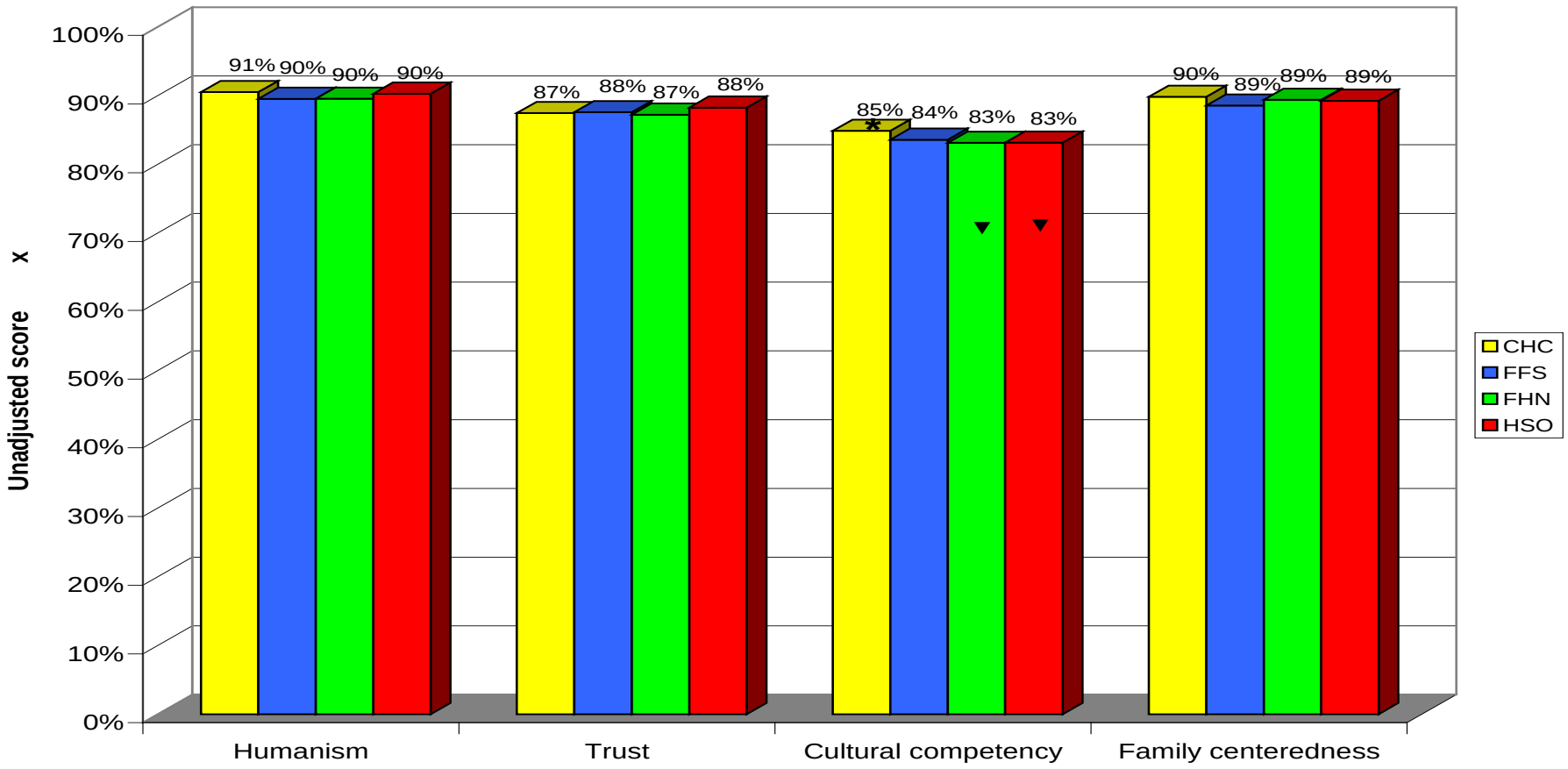
- Do you make home visits?
- Do you think you have adequate knowledge about the health problems of the community you serve?
- Do you get opinions and ideas from people that might help to provide better health care? Are you able to change health care services or programs in response to specific health problems in the community?
- All four questions reworded to reflect views of individual providers rather than the practice as a whole.

Community Orientation



Community orientation - unadjusted

Patient Provider Relationship



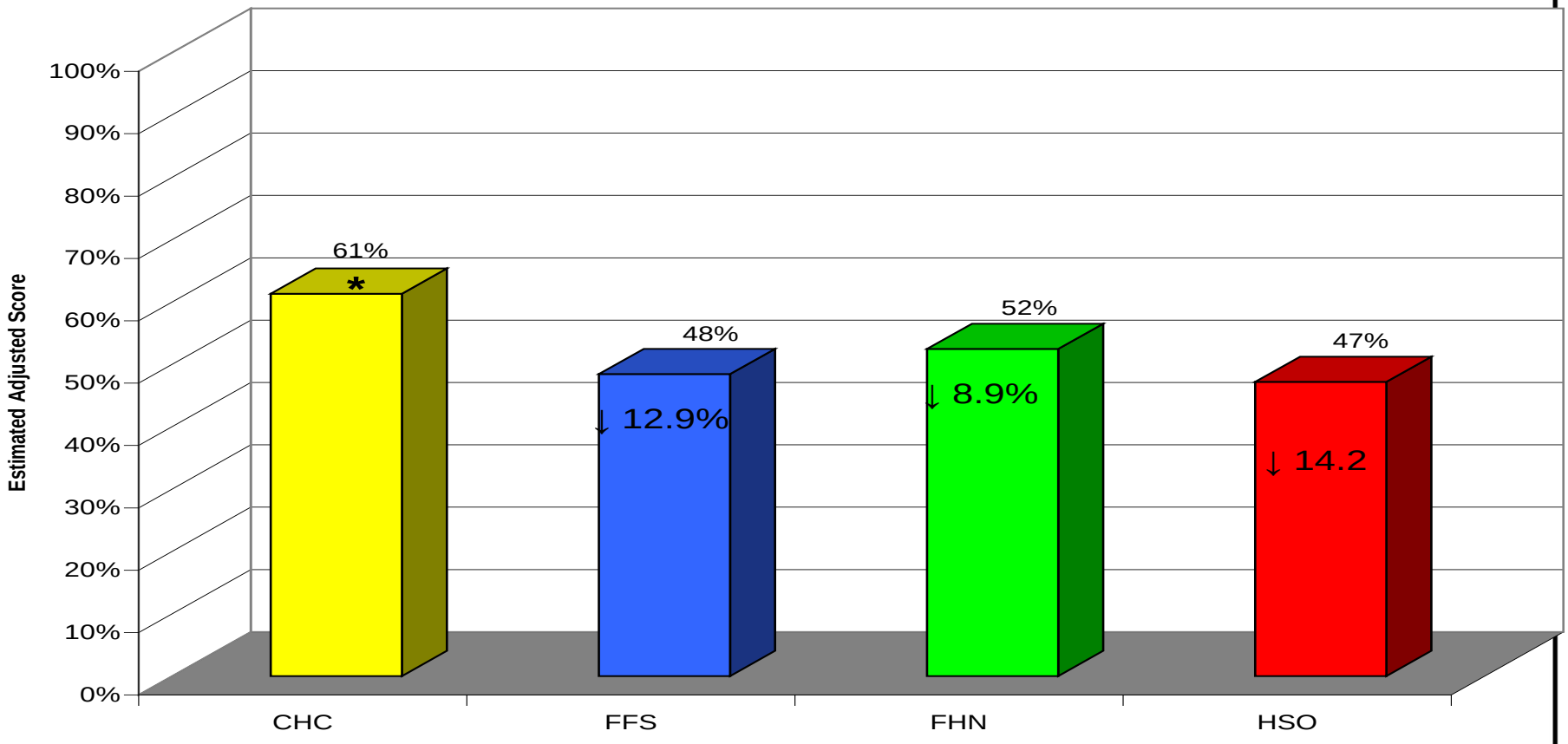
Summary - HSD

	CHC	FFS	FHN	HSO
First Contact Accessibility	▼	▼	▼	▲
Relational continuity	▼	▼	▼	▲
Comprehensiveness	▲	▼	▼	▼
Community orientation	▲	▼	▼	▼
Cultural competency	▲	-	▼	▼
Family Centeredness	-	-	-	-
Trust	-	-	-	-
Humanism	-	-	-	-

Health promotion (CTFPHC)

- Healthy foods and unhealthy foods
- Home safety
- Family conflicts
- Exercise
- Tobacco/smoking
- Alcohol consumption
- How to prevent fallsa

Health Promotion

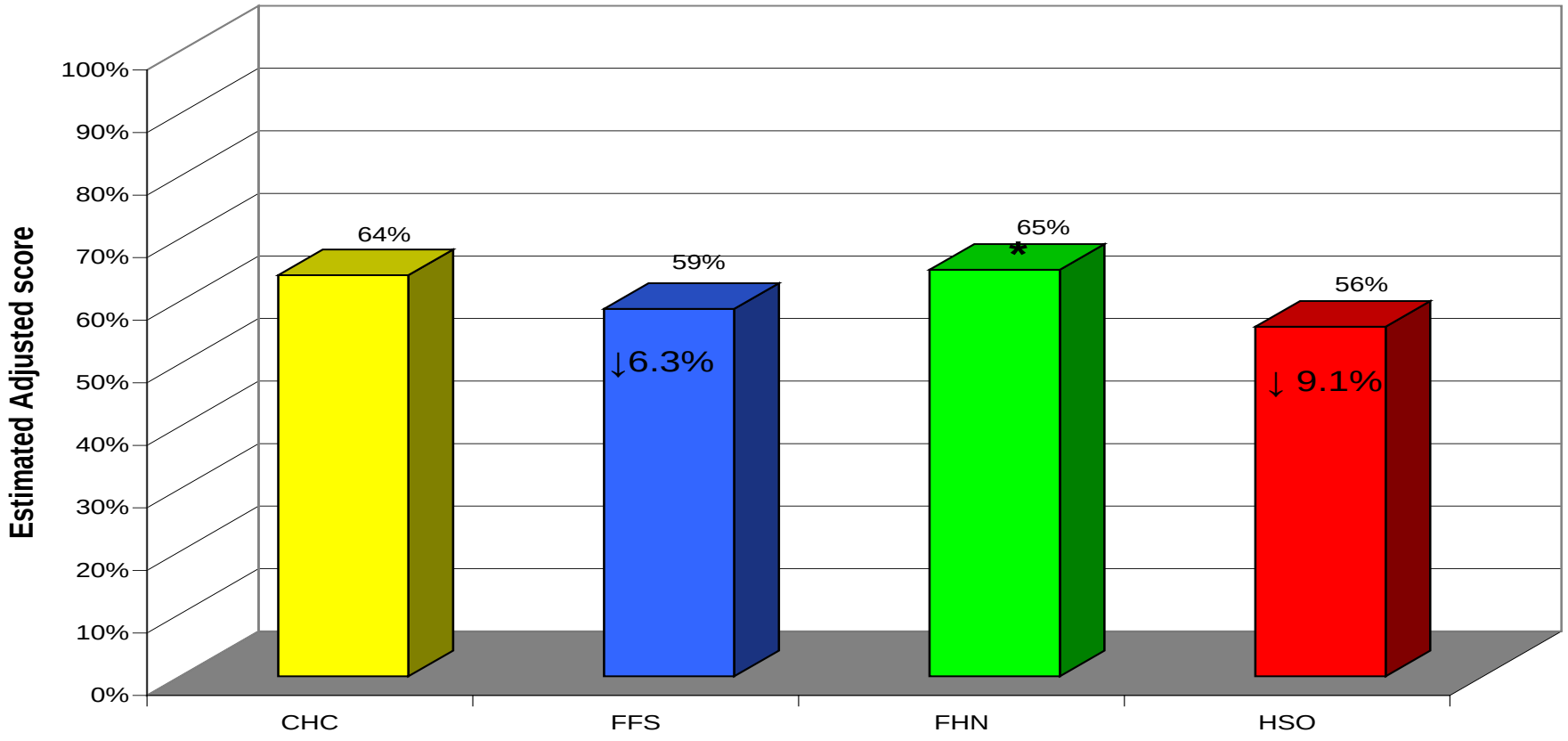


Estimated Health Promotion for patients: women

Prevention care (CTPHC)

Prevention	Manoeuvre	Eligibility in this study	Recommended Frequency	Grade level	Score
Cervical cancer screening	Papanicolaou smear	Females 17-69	Annual (high risk) or every 3 years	B	1
Breast cancer screening	Mammography and clinical breast exam	Females 50-69 years	Annual or biannual	A A	.5 each
Influenza immunization	Immunization with influenza vaccine	Higher risk of influenza	Annual	A	1
Colorectal cancer screening	Fecal occult blood testing or Flexible sigmoidoscopy	50 years or older	Annual or biannual	A (FOB) B (FS)	1
Visual impairment screening	Eye exam	65 years or older	Unspecified	B	1
Auditory impairment screening	Hearing exam	65 years or older	Unspecified	B	1

Prevention

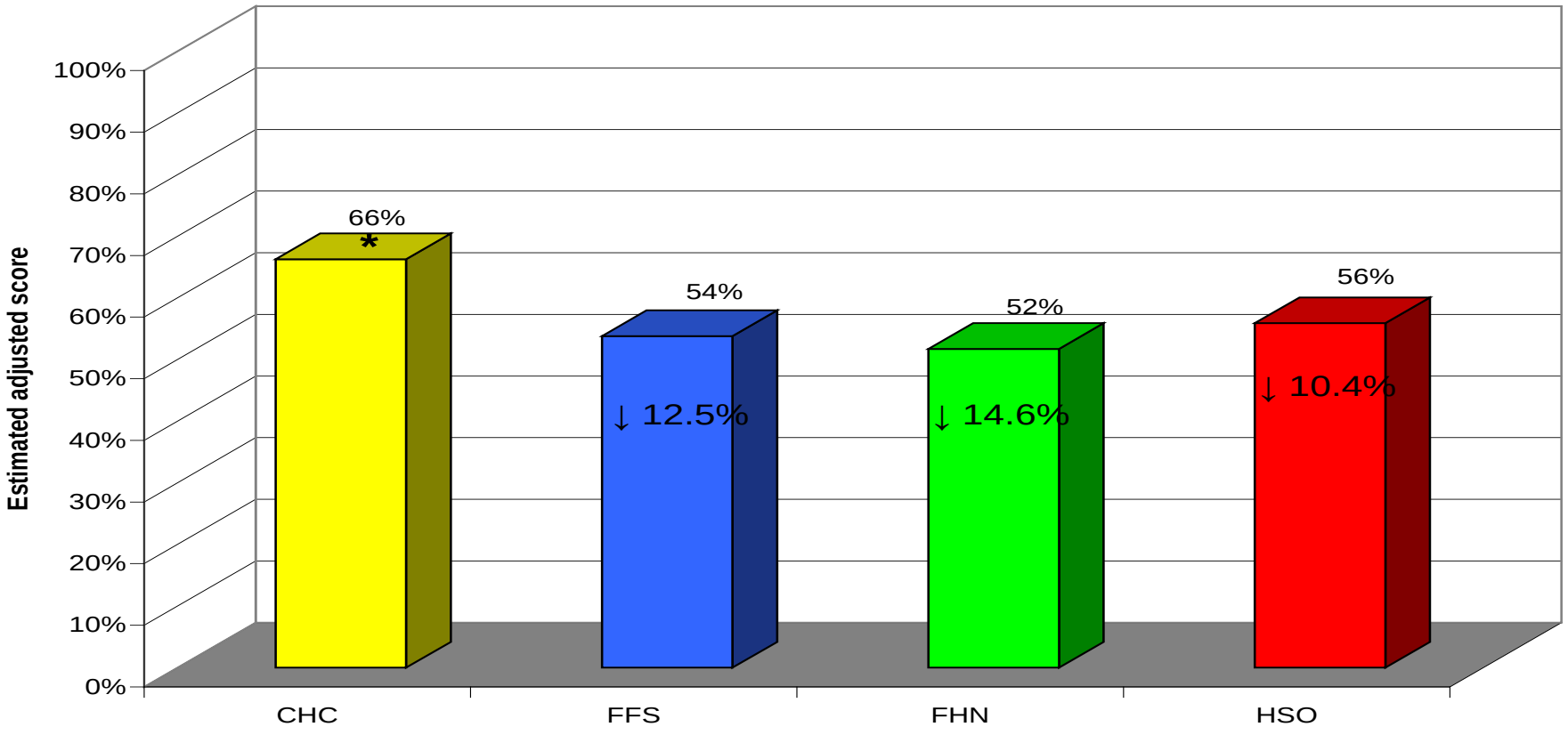


Estimated Preventive care for patients: women; ages 50-64

Chronic Disease Management

Manoeuvres	Diabetes	CAD	CHF
Foot exam in previous 2 years	X		
Eye Exam in previous 2 years	X		
ACEI/ARB in previous 2 years	X		X
2 HbA_{1c} tests in the previous 1 year	X		
Aspirin in previous 2 years		X	
Beta blocker in previous 2 years		X	X
Statin in previous 2 years		X	
Target HbA_{1c} ($\leq$ 7.0%)	X		
Average HbA_{1c}	X		

Chronic Disease Management

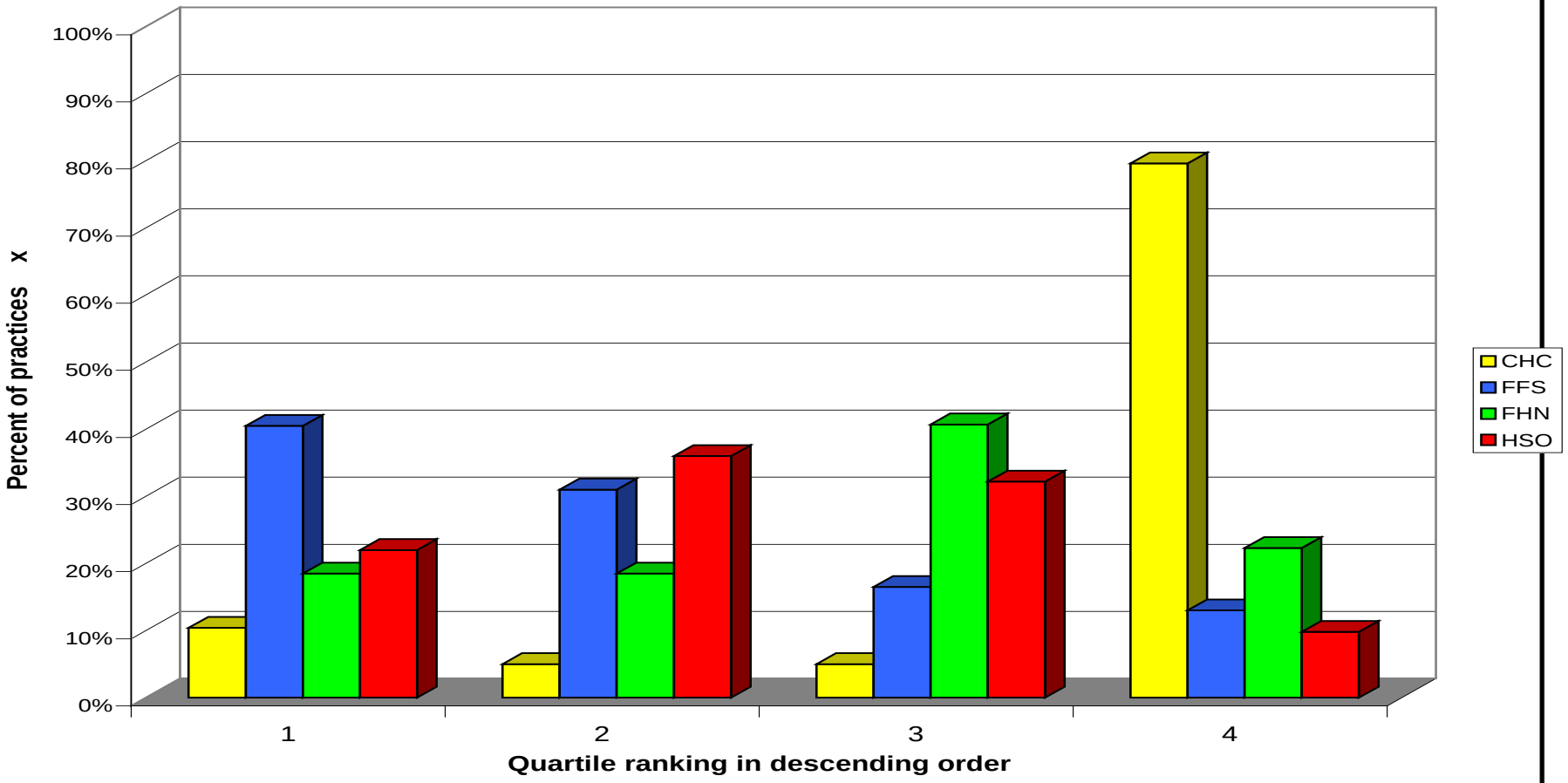


Estimated Chronic Disease Management for patients: women; age 50

Summary – Technical Quality of Care

	CHC	FFS	FHN	HSO
Health promotion	▲	▼	▼	▼
Prevention	-	▼	▲	▼
Chronic Disease Management	▲	▼	▼	▼

Efficiency – Cost per patient



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Patient factors

	Accessibility	Continuity	Comprehen-siveness	Health promotion	Prevention	CDM
Patient factors						
Age (older)	↑	↑		↓	↓	↑ - ↓
Male				↑	↓	↑
Education (higher)	↓	↓				
Health indicators (better)	↑	↓				
English speaking	↑					
Frequent visits (higher)	↑					
Working/# works worked	↓	↓				
Receives care from NP		↑				
Duration with practice		↑				

Visit and contextual factors

	Accessibility	Continuity	Comprehen-siveness	Health promotion	Prevention	CDM
Visit specific information						
Visits with regular provider				↑		
Visit - general check up CDM				↑		
Setting						
Rurality (more rural)	↓		↑			
Hospital distance > 10 km			↑			

Provider and Organizational factors

	Accessibility	Continuity	Comprehen-siveness	Health promotion	Prevention	CDM
Organizational factors						
Physician age (older)	↑					
Female family physicians				↑	↑	
Canada trained physicians	↑					
No. of family physicians			↑			↓
Presence of Nurse practitioner						↑
No. of nurses		↓		↑		
Allied health providers			↑			
On call hours available	↑					
Open on week end		↓				
Average booking interval				↑		
Clinical workload (#pts/MD)				↓	↓	↓
IT reminder system					↑	

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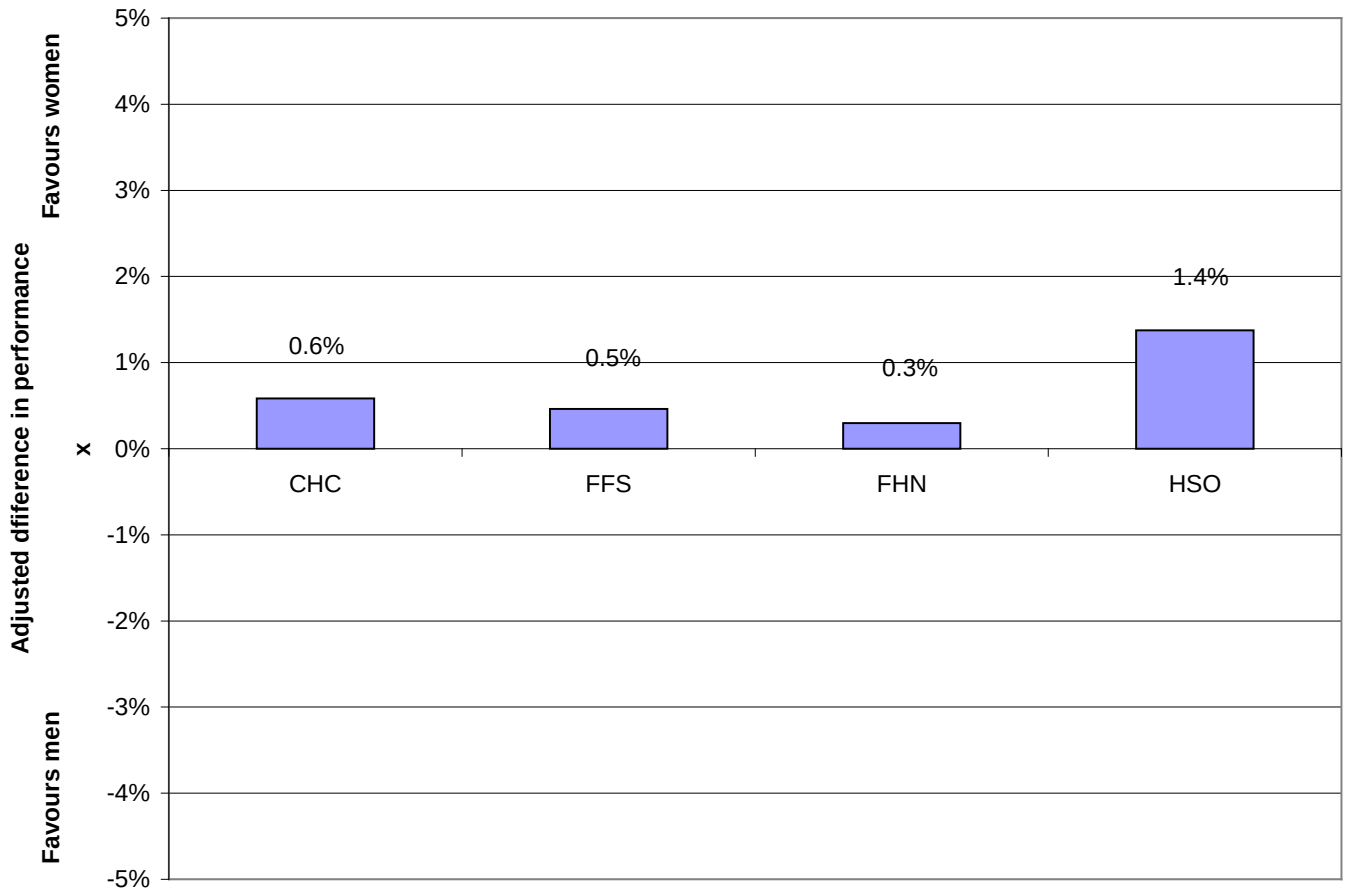
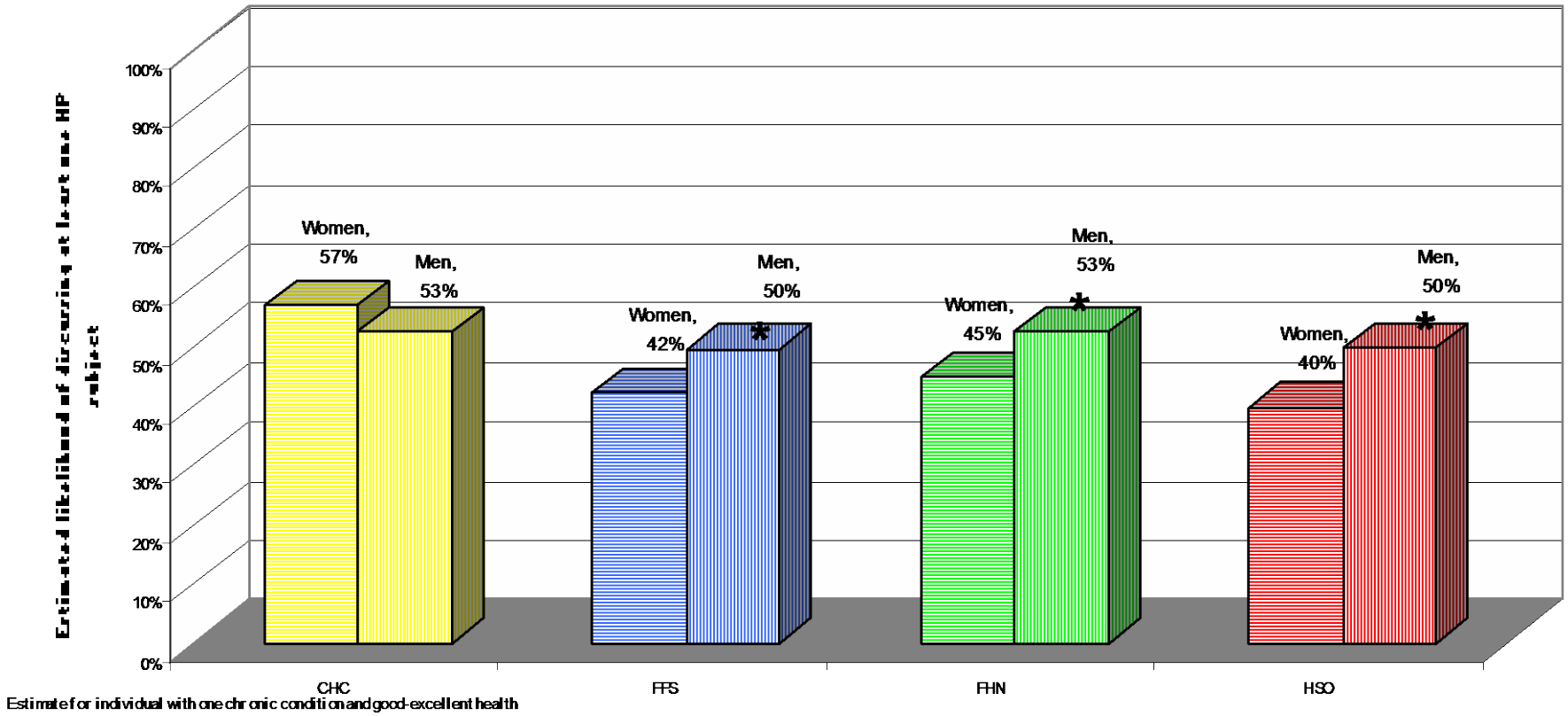
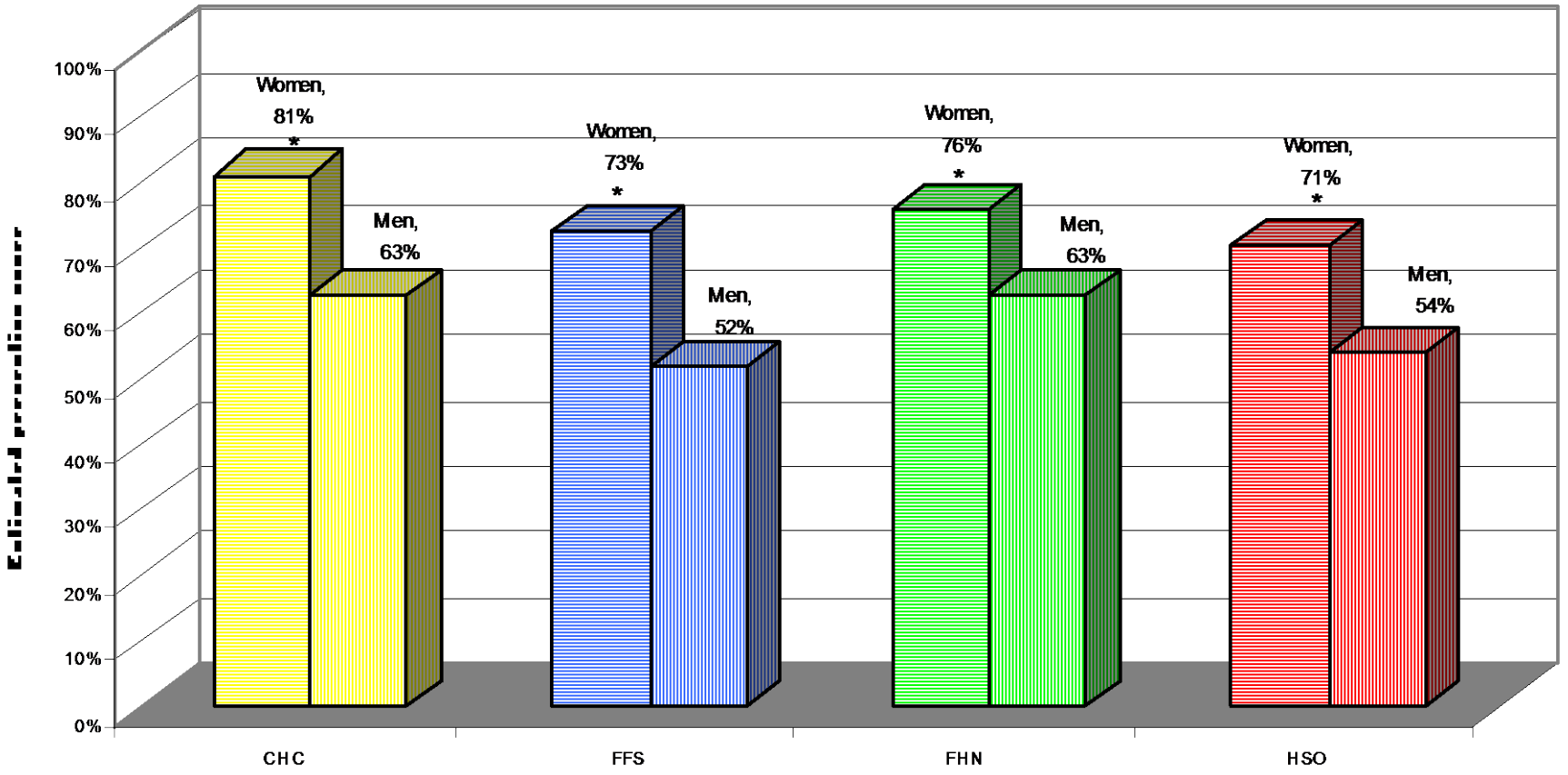
Sex differences in HSD (PCAT score)



Sex differences in Health Promotion

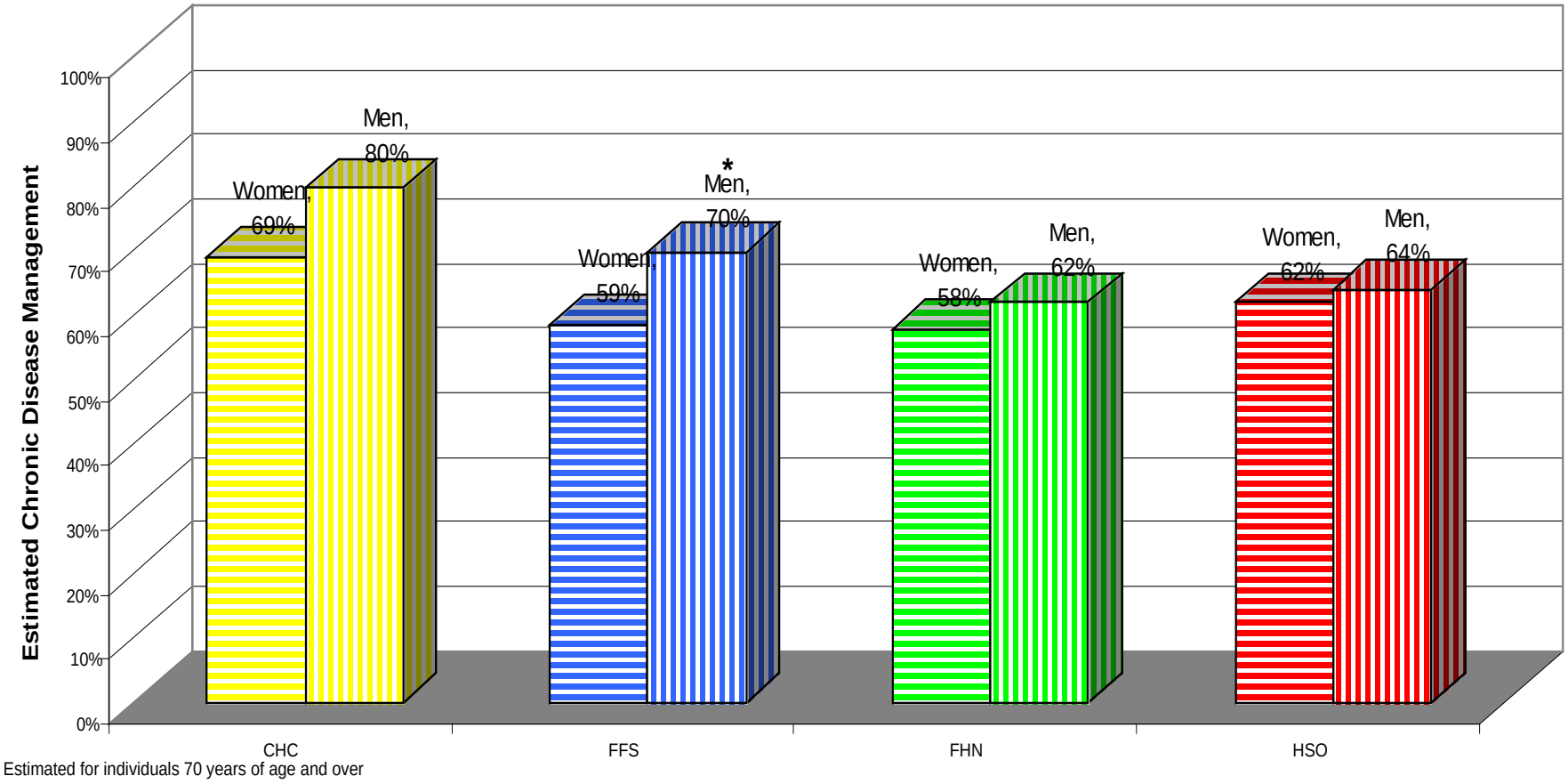


Sex differences in Prevention



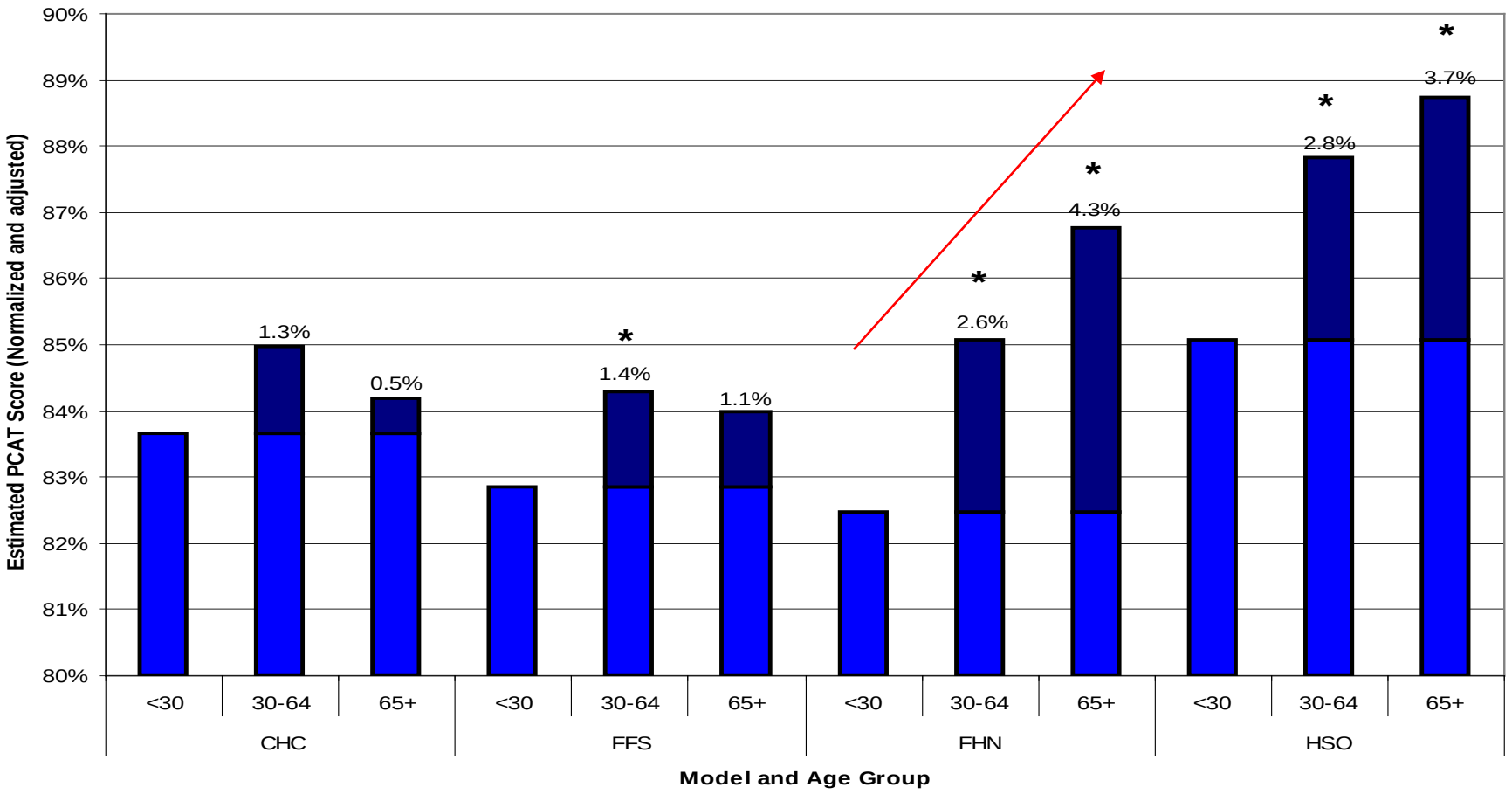
Estimated for individuals younger than 50 years of age

Sex differences in CDM

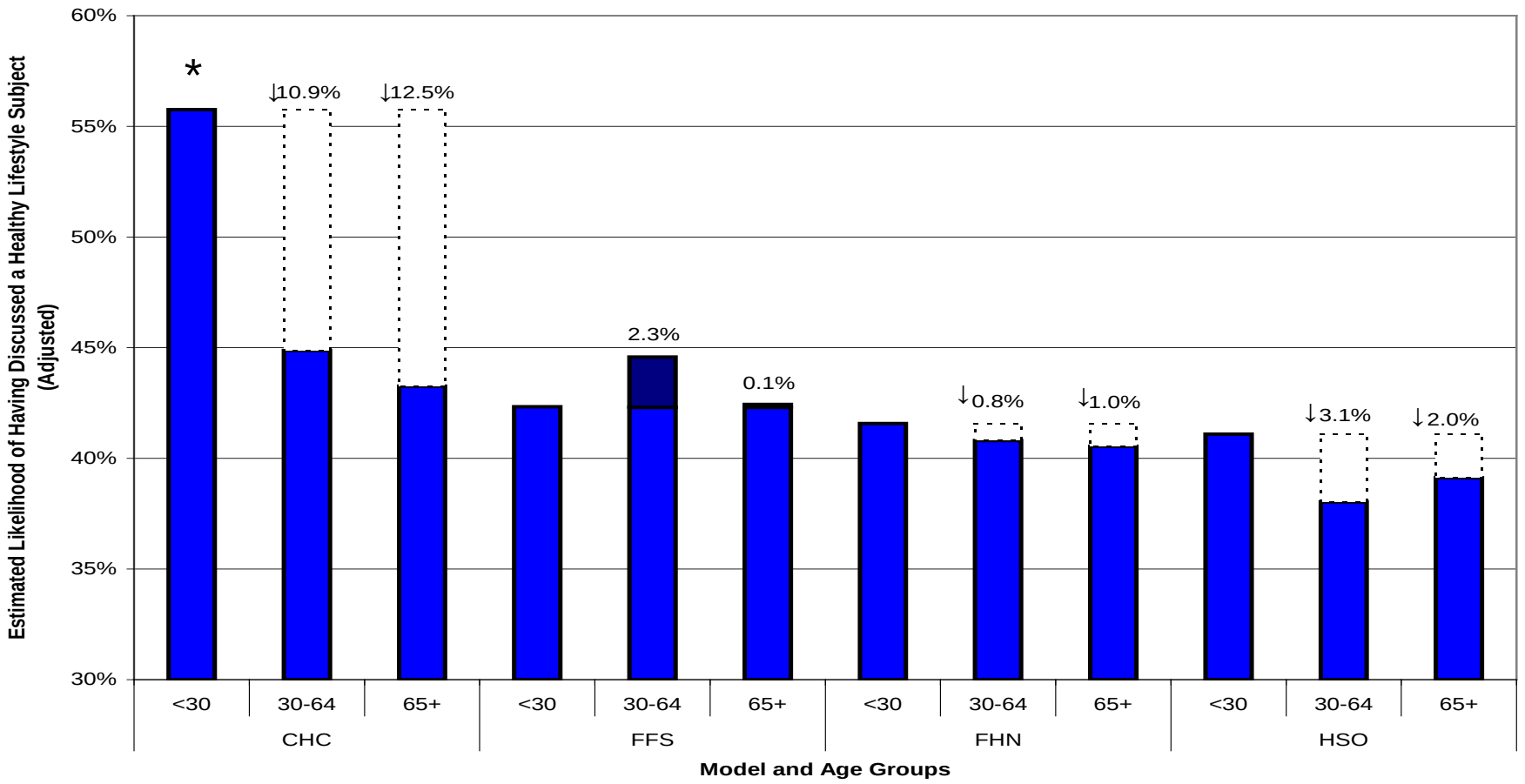


Estimated for individuals 70 years of age and over

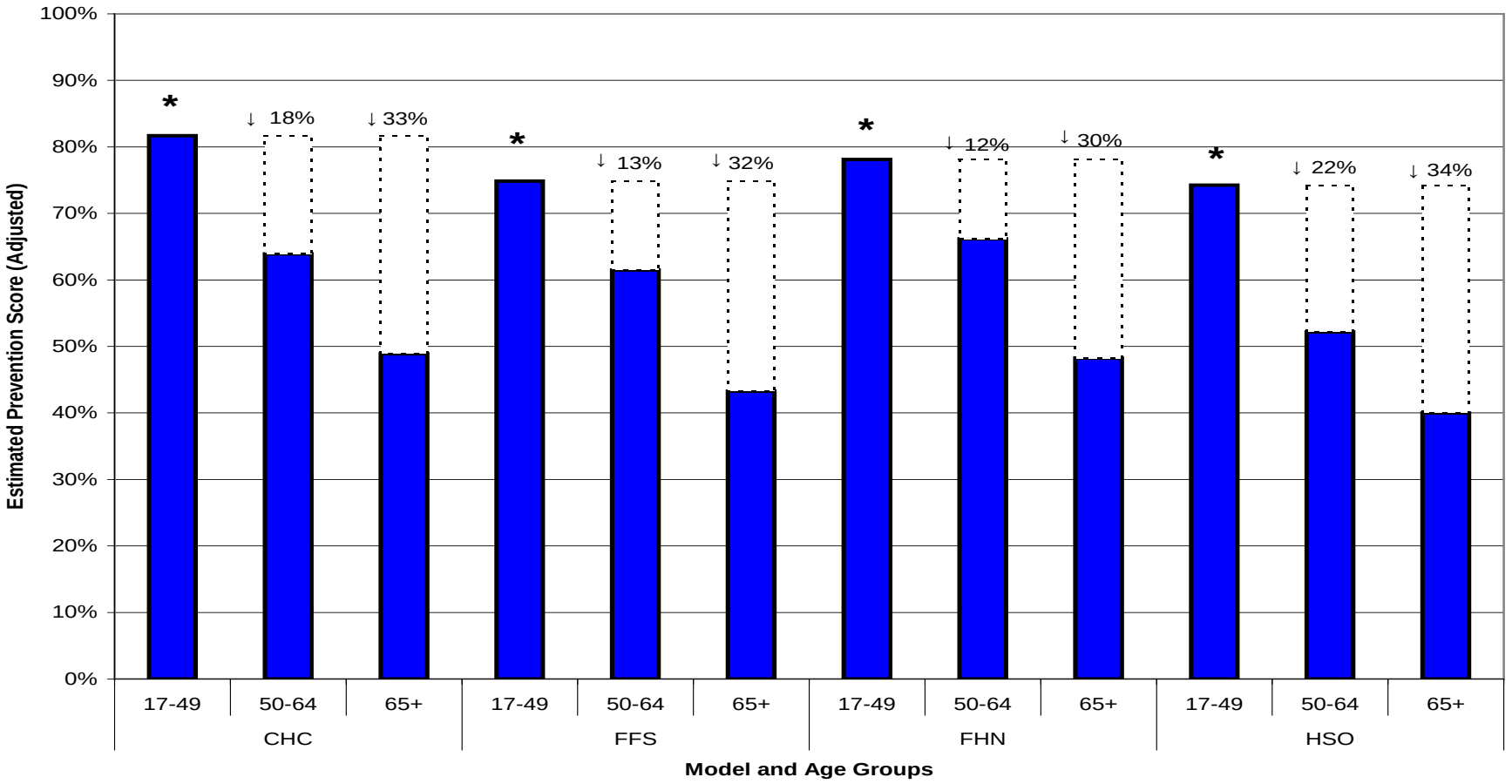
Age differences in HSD (PCAT)



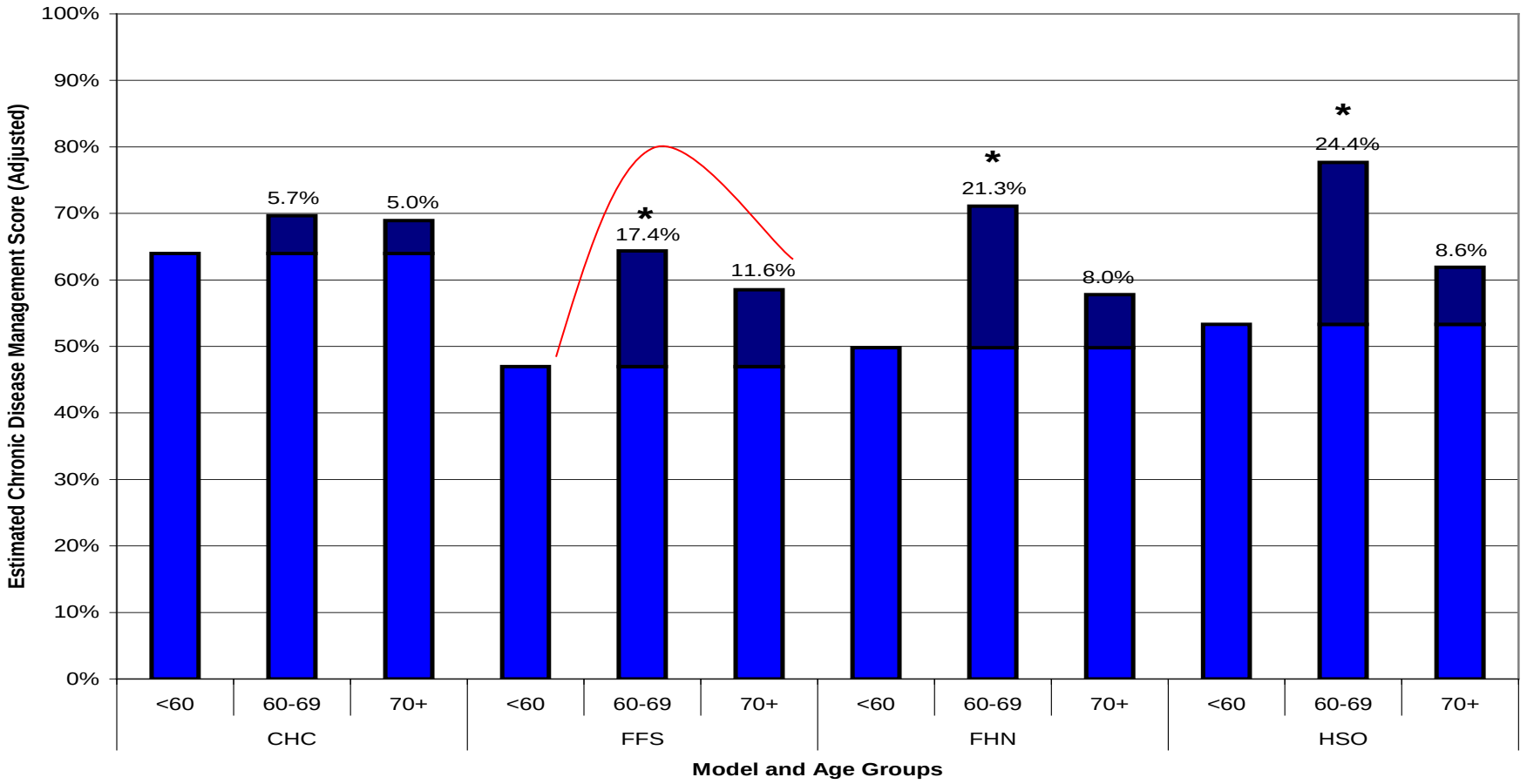
Age difference in Health Promotion



Age difference in Prevention



Age difference in CDM



Limitations

- Ontario based, cross-sectional survey
- Model maturity
- FFS representativeness

Conclusions

- Differences in performance exist across models
- Organizational factors can be identified that impact performance
  - Clinical workload
  - Female providers
  - Presence of nurse practitioners and allied health workers

Discussion