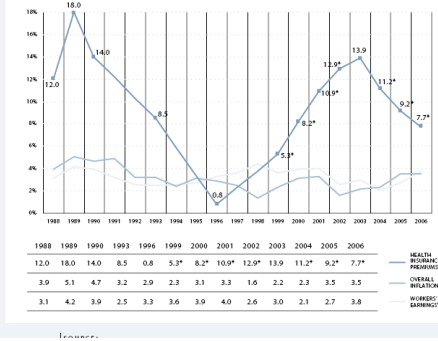


# Managed Care

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EXHIBIT 1.1  
Percentage Increase in Health Insurance Premiums Compared to Other Indicators, 1988-2006



# History

- Characteristics have existed for years – Kaiser prepaid health dates to the 1930s
- State regulations were passed to prevent 'contract' medicine
  - Prevented hospital admitting privileges for MDs in contract plans
  - 1/2 states at some pt has bans on consumer controlled plans
  - 17 states legislated FFS

# HMO Act 1973

- Nixon era cost-containment initiative
- Major components
  - Established standards for federally recognized HMOs
  - Grants to start HMOs
  - Required firms w/ 25+ employees to offer an HMO alternative to indemnity insurance (since repealed)
  - Limited many state restrictions on HMOs

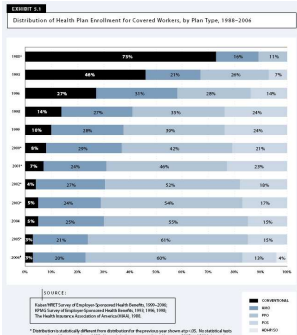
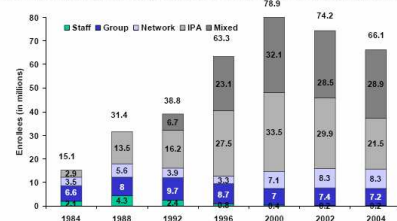
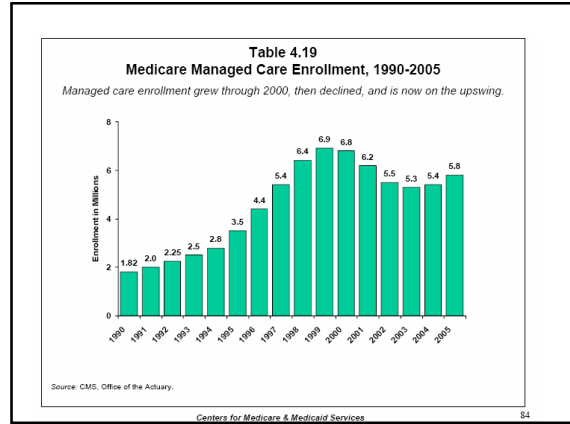
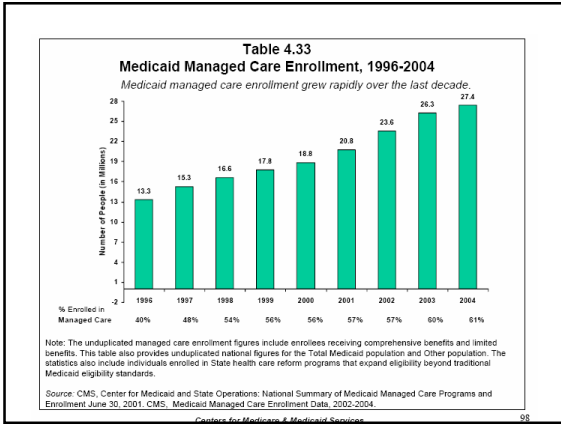


Table 1.18  
Managed Care Enrollment by Type of Plan, 1984-2004

Mixed model HMO plans grew rapidly before 2000 and declined less rapidly after 2000.



Note: Plans analyzed are comprehensive HMO plans. Traditional HMOs and point of service plans are included; managed care carveouts for selected services such as behavioral health are not included. Enrollment includes group and commercial plans, Medicare, Medicaid, Federal Employee group health program, and others.  
Source: Kaiser Family Foundation, Trends & Indicators in the Changing Health Care Marketplace, 2005 Chartbook.



- ## Managed care models
- HMO
    - Provides care for enrolled patients for fixed fee per month
    - MD salaried
    - Assumes risk of over use. HMO has better incentive to monitor care
    - Types
      - Group – collection of different groups provide all types of care
      - Staff model – HMO hires the Docs, can only see doc on staff.
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- Preferred provider organization
    - Coverage is provided to participants through a network of physicians (hospitals and physicians)
    - Negotiate w/ providers over costs
    - Essentially FFS but w/ negotiated fees for in-network providers
    - Enrolled can go outside the network, but at much higher costs
  - IPA – Independent practice association
    - Independent MDs who are strung together to provide care in HMO/PPO type arrangements
    - Patient care provided on a capitated basis
  - POS –point of service
    - Strong financial incentives to use in network
    - can be HMO/PPO/FFS
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**TABLE 1** Characteristics of Insurance Policies

Dimension	Indemnity Insurance	Managed Care		
		PPO	IPA/Network HMO	Group/Staff HMO
Qualified providers	Almost all	Almost all (Network)	Network	Network
Choice of providers	Patient	Patient	Gatekeeper (in network)	Gatekeeper (in network)
Payment of providers	Fee-for-service	Discounted FFS	Capitation	Salary
Cost sharing	Moderate	Low in network; High out of network	Low in network; High out of network	Low in network; High/all out of network
Role of insurer	Pay bills	Pay bills; Form network	Pay bills; Form network; Monitor utilization	Provide care
Limits on utilization	Demand-side	Supply-side (price)	Supply-side (price, quantity)	Supply-side (price, quantity)

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- ## Mechanisms to reduce costs
- Gatekeeping
    - Receive all primary care from designated physician
    - Physician refers patients to specialists, hospitals
    - 'Mandatory authorization'
  - Capitation
    - Per member per month fees for gatekeeping services
    - Changes incentives for physicians to monitor care
  - Withholds
    - MC plan make projections about speciality costs
    - Specialists receive x% of costs at time of service, x<100
    - With costs over-runs, specialists do not get holdbacks
  - Utilization review
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## Research questions

- Use of services?
- Prices?
- Quality of care (measurable outcomes)?
- Spillovers into non-managed care sector?

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**EXHIBIT 1**  
Quality-of-Care Findings: HMOs Compared With Non-HMOs

Finding	Number of findings	Studies
14 favorable To HMOs	F s	5 Chernew et al. 1998; Escarce et al. 1999; Potosky et al. 1997
	F s, ns	9 Every et al. 1998; Levinson and Ullman 1998; McCormick et al. 1999; Oleske et al. 1998; Oleske et al. 2000; Potosky et al. 1997; Riley et al. 1999; Shapiro et al. 1999; Soumerai et al. 1999; Spetz et al. 2001
	F/M s, ns	0
	F ns	2 Kreindel et al. 1997; Lee-Feidstein et al. 2000
	Mixed	4 Kelleher et al. 1997; Obst et al. 2001; Roetzheim et al. 2000 (Cancer); Roetzheim 1999
	Same	9 Holtzman et al. 1998; Levinson et al. 1998; Merrill et al. 1999; Oleske et al. 2000; Philbin et al. 1998; Picken et al. 1998; Ray et al. 1998; Retchin et al. 1997 (9 July); Spetz et al. 2001
17 unfavorable	UF ns	3 Escarce et al. 1999; Lee-Feidstein et al. 2000; Mukamel et al. 2000
	UF/M s, ns	2 Retchin 1997b; Roetzheim et al. 2000; Roetzheim 1999
	UF s, ns	5 Experton et al. 1999; Guadagnoli 2000; Ni et al. 1998; Roetzheim et al. 2000 (Cancer); Roetzheim 1999; Sada et al. 1998
	UF s	8 Erickson 2000 (19 April); Erickson 2000 (June); Escarce et al. 1999; Hadley and Mitchell 1997; Potosky et al. 1999; Schwartz et al. 1998; Smith et al. 1999
	Total	47

SOURCES: Peer-reviewed literature, 1997 through mid-2001. See endnotes in text.  
NOTE: For an explanation of the findings codes, see text.

Fairly even distribution of Favorable and unfavorable Results for specific diseases

**EXHIBIT 2**  
Quality-of-Care Findings, By Disease/Condition Category, HMOs Compared With Non-HMOs

Finding	Number of Findings	Cancer		Heart		Other	
		Number of Findings	Studies	Number of Findings	Studies	Number of Findings	Studies
F s	1	Potosky et al. 1997	4	Chernew et al. 1998; Escarce et al. 1999	0	0	0
F s, ns	2	Philbin et al. 1997; Ray et al. 1999	3	Every et al. 1998; McCormick et al. 1999; Soumerai et al. 1999	4	Lachman and Ullman 1998; Chirba et al. 1998; Shapiro et al. 1999; Spetz et al. 2001	0
F ns	1	Lee-Feidstein et al. 2000	1	Hornor et al. 1997	0	0	0
Mixed	2	Roetzheim et al. 2000 (Cancer); Roetzheim 1999	0	0	2	Kelleher et al. 1997; Ost et al. 2001	0
Same	1	Merrill et al. 1999	2	Philbin and Oleske 1998; Picken et al. 1998	6	Holtzman et al. 1998; Levinson and Ullman 1998; Oleske et al. 2000; Philbin et al. 1998; Ray et al. 1998; Spetz et al. 2001	0
UF ns	1	Lee-Feidstein et al. 2000	2	Escarce et al. 1999; Manning 2000	0	0	0
UF/M s, ns	2	Roetzheim et al. 2000 (Cancer); Roetzheim et al. 2000 (Cancer); Roetzheim et al. 1999	0	0	0	0	0
UF s, ns	1	Roetzheim et al. 2000 (Cancer); Roetzheim et al. 2000 (Cancer); Roetzheim et al. 1999	3	Guadagnoli et al. 2000; Ni et al. 1998; Sada et al. 1998	1	Experton et al. 1999	0
UF s	2	Hadley and Mitchell 1997; Potosky et al. 1999	4	Erickson et al. 2000 (19 April); Erickson et al. 2000 (June); Erickson et al. 2000	2	Schwartz et al. 1998; Smith et al. 1999	0
Total	13	19	15	15			

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**EXHIBIT 5**  
Satisfaction Findings: HMOs Compared With Non-HMOs

Finding	Number of findings	Studies
Same	2	Flocke et al. 1997; Long and Coughlin 2001
UF ns	1	Newacheck et al. 2001
UF/M s, ns	3	Reschovsky et al. 2000; Safran et al. 2000; Tudor et al. 1998
UF s, ns	3	Pina 1998; Safran et al. 2000
UF s	2	Gawande et al. 1998; Shi 2000
Total	11	

Clear pattern on satisfaction and preventative services

**EXHIBIT 6**  
Prevention Findings: HMOs Compared With Non-HMOs

Finding	Number of findings	Studies
F s, ns	7	Carrasquillo et al. 2001; Gordon et al. 1998; Potosky et al. 1998; Reschovsky et al. 2000; Weirick and Beauregard 1997
F ns	1	Phillips et al. 1998
Same	1	Alessandrini et al. 2001
UF ns	1	Newacheck et al. 2001
Total	10	

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## Miller and Luft

- Compared with non-HMOs, HMOs had roughly comparable quality of care, more prevention activities, less use of hospital days and other expensive resources, and lower access and satisfaction ratings.
- **Here is the kicker**

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- *“In a majority of with direct HMO versus non-HMO comparisons, HMO enrollees either were younger or had a pattern of somewhat fewer co-morbidities. In general, the studies we included attempted to control for such differences, but such controls may be inadequate...”*

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## Cutler et al. (RAND)

- Look at HMO/non HMO
- Focus on two diseases
  - IHD ischemic heart disease (blockages of vessels supplying the heart)
  - Heart attack
- Forces to much greater degree similarity of patients in the two groups

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- Firm data – provider in MA that runs indemnity plan, PPO, HMO
  - Restrict sample to non Medicare population
- State inpatient data – census of hospital discharges
  - Larger sample but no outpatient data set

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TABLE 3 Heart Attack (AMI) Reimbursement and Treatment by Plan

Plan	Average Reimbursement (Unadjusted)	Treatment Regimen				Average Reimbursement (Adjusted)
		Medical Management	Cardiac Catheterization	Bypass Surgery	Angioplasty	
Indemnity	\$38,502	\$26,601	\$38,448	\$97,347	\$41,597	\$39,410
BC/BS PPO	26,483 [69%]	—	—	—	—	—
HMO	23,632 [61%]	16,318 [61%]	17,604 [46%]	55,826 [57%]	24,181 [58%]	22,836 [58%]

Treatment Shares—Firm Data

Indemnity	—	63%	9%	12%	16%	—
HMO	—	55	12	14	19	—

Big difference in costs

Some difference in procedure use

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TABLE 4 Ordinary Least-Squares Estimates of the Effect of Insurance on Treatments and Reimbursement for Heart Attacks (AMIs)

Variable	Firm Data		State Data		
	Treatment Regimen		Reimbursement Treatment	Treatment Regimen	
	Cardiac Catheterization	Coronary Revascularization	In(Reimbursement)	Cardiac Catheterization	Coronary Revascularization
Insurance					
HMO	.040 (.036)	.020 (.034)	-.554** (.060)	-.023 (.016)	-.013 (.016)
Non-HMO managed care	—	—	—	.026 (.018)	.011 (.019)

Not trivial differences  
In use, but models have low power

Este es muy grande

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TABLE 9 Accounting for the Differences in Costs for Heart Disease Patients

Factor	Acute Myocardial Infarction (AMI)	Ischemic Heart Disease (IHD)
Indemnity—HMO	\$14,870	\$371
<b>Difference Attributable to</b>		
Prices	\$16,596 [112%]	\$358 [96%]
Quantities	-2,309 [-16%]	22 [6%]
Covariance	583 [4%]	-9 [-2%]

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## Avg. Annual Premiums, EPHI (2005)

	HMO	PPO	POS	Indem.
Single	\$3,768	\$4,152	\$3,912	\$3,780
Family	\$10,452	\$11,088	\$10,800	\$9,984

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**EXHIBIT 1.2**  
Percentage Increase in Health Insurance Premiums, by Plan Type, 1988-2006

	1988	1993	1996	1999	2000	2001	2002	2003	2004	2005	2006
Conventional	12.4%	9.1%	1.9%	6.0%	9.5%*	11.3%	13.8%*	14.3%	11.1%	5.0%*	8.4%
HMO	8.4	7.7	-0.2	5.6	7.6*	10.4	13.5*	15.2	12.0*	9.4*	8.6
PPO	20.3	7.2	1.0	5.4	8.5*	11.6	12.7*	13.7	10.9*	9.4*	7.3*
POS	^	5.2	1.1	4.6	7.8*	9.9	12.2*	13.2	11.3	9.1	8.4
HDHP/SO	^	^	^	^	^	^	^	^	^	^	4.8
<b>ALL PLANS</b>	<b>12.0%</b>	<b>8.5%</b>	<b>0.8%</b>	<b>5.3%*</b>	<b>8.2%*</b>	<b>10.9%*</b>	<b>12.9%*</b>	<b>13.9%</b>	<b>11.2%*</b>	<b>9.2%*</b>	<b>7.7%*</b>