

Integrated Health Systems: Promise And Performance

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Learning Objectives

- Identify the core features of integrated delivery systems and evidence on performance
- Identify the different types of integration
- Understand the factors associated with successful integration
- Recognize the barriers to successful integration and how to deal with them
- Understand the importance of clinical integration and how to achieve it
- Learn about some assessment tools

Worldwide Healthcare Delivery Challenges

- Rising costs
- Troublesome variations in quality
- More diverse and informed consumers
- Concerns about value for the investment

An Organizing Principle

The largest limiting factor is not lack of money or technology or information or people but, rather the lack of an *organizing principle* that can link money, people, technology and ideas into a *system* that delivers more cost-effective care (I.e. more value) than current arrangements

Organized Delivery Systems— Definition

“A network of organizations that provides or arranges to provide a coordinated continuum of services to a defined population and is willing to be held clinically and fiscally accountable for the outcomes and health status of the population served.”

S.M. Shortell, R.R. Gillies, and D.A. Anderson, et al.,
Remaking Health Care in America, San Francisco:Josey-Bass (1996) , p. 7.

Types of Integration

Vertical = Ownership of the various stages of the production process

Virtual = Arms length relationships through alliances, joint ventures, and partnerships

Types of Integration

Functional = The extent to which key support functions and activities (e.g. financial management, human resources management, information technology management, strategic planning, quality improvement) are coordinated across operating units so as to add the greatest overall value to the system.

Physician = The extent to which physicians and the organized delivery systems with which they are associated agree on the aims and purposes of the system and work together to achieve mutually shared objectives.

Clinical = The extent to which patient care services are coordinated across people, functions, activities, and sites over time so as to maximize the value of services delivered to patients.

Source: S.M. Shortell, R.R. Gillies, D.A. Anderson, et al. Remaking Healthcare in America: The Evolution of Organized Delivery Systems, 2nd edition, San Francisco: Jossey-Bass, 2000.

System Self-assessment of Ideal Elements in a Health Care System

1. Focuses on meeting the population's health needs.
2. Matches services, capacity to meet the population's needs.
3. Coordinates and integrates care across the continuum.
4. Has information systems to link patients, providers, and payers across the continuum of care.

Elements (Cont.)

5. Is able to provide information on cost, quality outcomes, and patient satisfaction to multiple stakeholders.
6. Uses financial incentives and organizational structure to align governance, management, physicians, and other caregivers in support of achieving shared objectives.

Elements (Cont.)

7. Is able to improve continuously the care that it provides.
8. Is willing and able to work with others to ensure that the community's health objectives are met.

Some Core Features of ODSs

- **Medical Groups**
 - Common vision
 - Shared culture
 - Accountable leadership
- **Healthcare Teams**
 - “Microsystems”
 - Patient is a key member of the team
- **Defined Populations**
 - Facilitates matching resources to needs
 - Facilitates disease prevention and health promotion

Core Features (Cont.)

- **Aligned Financial and Payment Incentives**
 - Facilitates prudent use of resources
 - Eliminate wasteful practices that do not benefit the patient
- **Medicine–Management Partnership**
 - Evidence-based medicine meets evidence-based management
 - Complementary skills and knowledge
- **Enhanced Information Management Capability**
 - ODSs have the resources to invest and the population base to capture the benefits
 - Payoff is in the clinical application

Core Features (Cont.)

- Accountability
 - To multiple groups

Core Features of ODSs

Core Feature	Missing	Low	High
Medical Group	0	1 _____>	10
Health Care Team	0	1 _____>	10
Defined Population	0	1 _____>	10
Aligned Financial/Payment Incentives	0	1 _____>	10
Medicine-Management Partnership	0	1 _____>	10
Information Technology Capability	0	1 _____>	10
Accountability	0	1 _____>	10

Effectiveness

New and Emerging Evidence on Multi-Specialty Groups

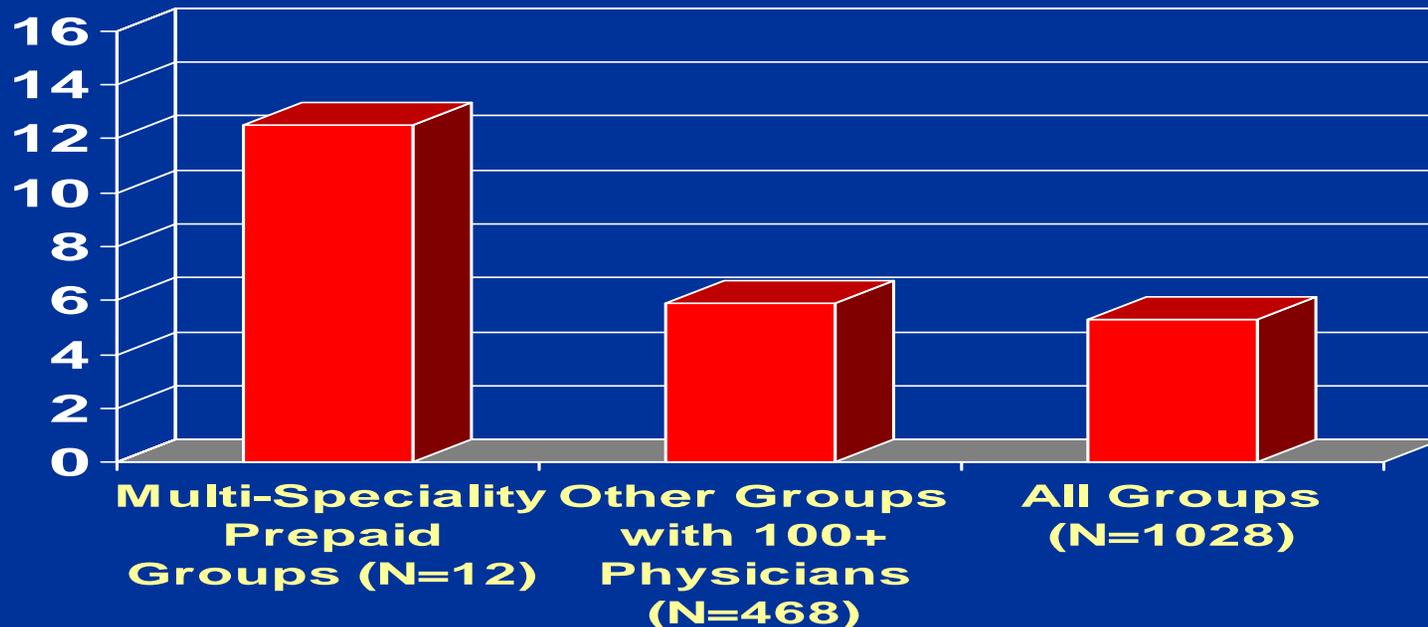
- Multi-specialty groups more likely to use recommended evidence based care management processes for patients with chronic illness¹
- Multi-specialty groups more likely to report a positive financial outcome from their investment¹
- Groups affiliated with or owned by HMOs or hospital/health systems use more recommended processes than free-standing groups²

Effectiveness (Cont.)

- Health plans closely affiliated with tightly managed physician groups or that employ their own physicians perform significantly better on clinical performance measures with no difference on patient satisfaction in comparison with other types of provider delivery systems³
- Kaiser-Permanente consistently rated best in California in providing breast and cervical cancer screening, comprehensive diabetes care, cholesterol management, and follow-up care after hospitalization for mental illness.¹ K-P Northern California 15% decline in cardiovascular death rate between 1990 and 1998 largely due to a coordinated strategy of implementing guidelines.⁴

Figure 1

Physician Organization Care Management Index¹ (0 to 16)

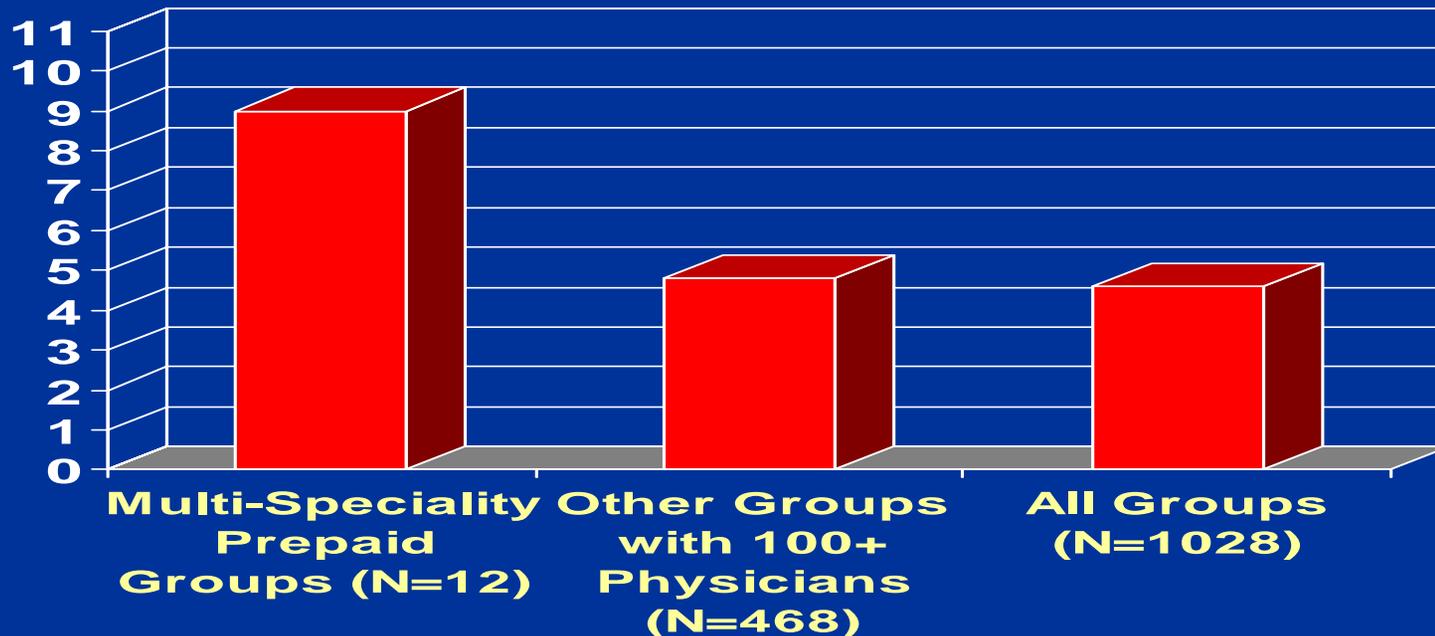


¹Use of disease registries, patient self-management focus, guidelines, automated reminders, performance feedback, etc.

Source: National Study of Physician Organizations and the Management of Chronic Illness, School of Public Health, University of California, Berkeley, November, 2002.

Figure 2

Chronic Care Management Index² (0 to 11)

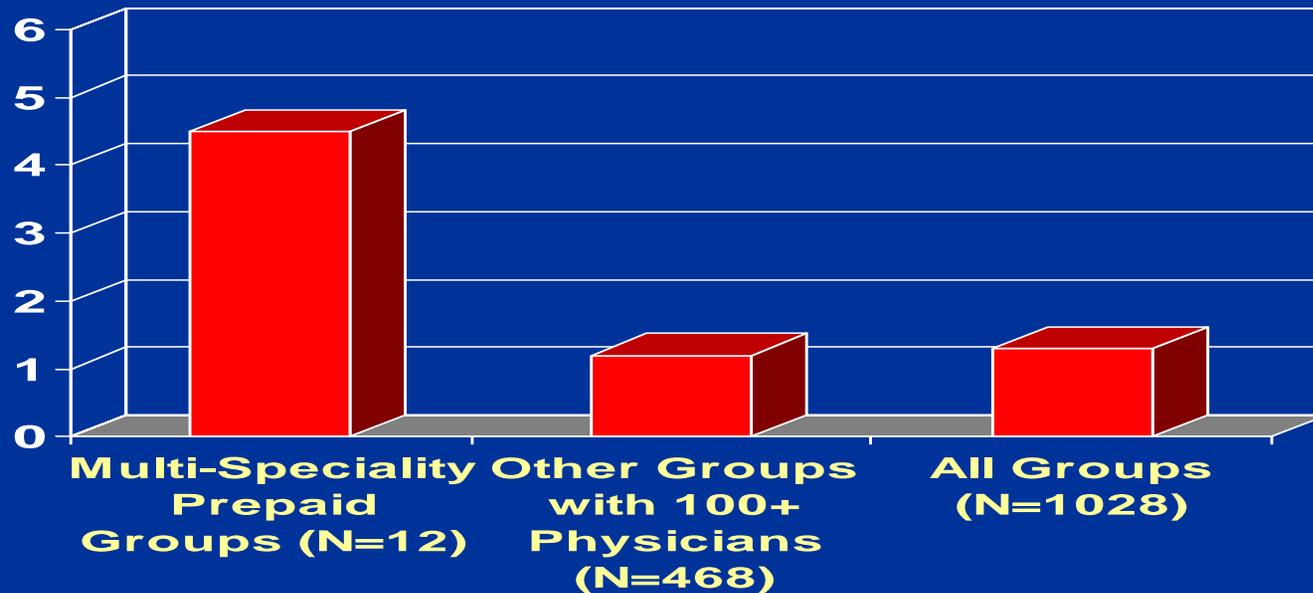


²Patient self-management, linkages to community resources, delivery system re-design, decision support tools, etc. (Wagner et al, 1996, 2001).

Source: National Study of Physician Organizations and the Management of Chronic Illness, School of Public Health, University of California, Berkeley, November, 2002.

Figure 3

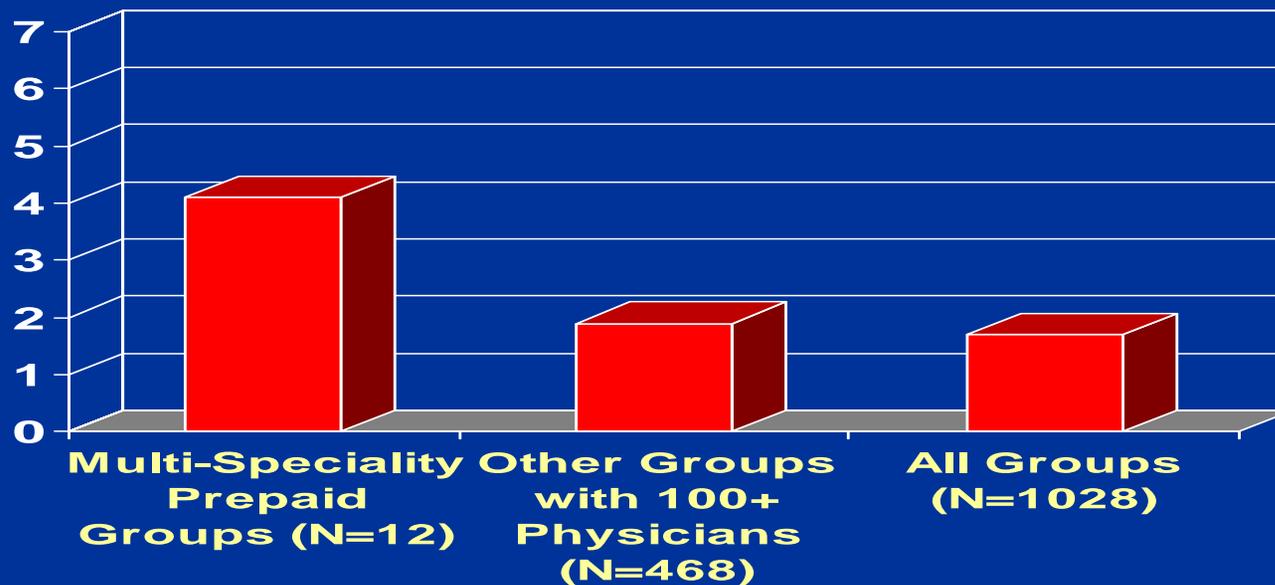
Clinical Information Technology Index³ (0 to 6)



³Standardized problem list, laboratory findings, medications prescribed, radiology findings, progress notes, medication ordering reminders and / or drug interaction information

Source: National Study of Physician Organizations and the Management of Chronic Illness, School of Public Health, University of California, Berkeley, November, 2002.

Figure 4 External Incentives Index⁴ (0 to 7)



⁴Bonuses from health plans, public recognition, better contracts with health plans, quality reporting on HEDIS data, clinical outcome data, results of quality improvement projects, patient satisfaction data.

Source: National Study of Physician Organizations and the Management of Chronic Illness, School of Public Health, University of California, Berkeley, November, 2002.

Table 1

Perceived Financial Impact of Investment

	Multi-specialty Prepaid Groups (N=12)	Other Groups with 100+ Physicians (N=468)	All Groups (N=1028)
Asthma	41.7%	32.8	27.0
Congestive Heart Failure	75.0	36.8	29.5
Depression	27.3	14.6	13.5
Diabetes	75.0	42.0	37.7
Smoking Cessation Programs for Patients	100%	42.8	39.9

Source: National Study of Physician Organizations and the Management of Chronic Illness, School of Public Health, University of California, Berkeley, November, 2002.

Table 2

Comparative Performance of CAPP Groups

MEDICAL GROUPS ONLY	1 CAPP member N=18	0 Not CAPP member N=720
	Mean	Mean
Physician Org Care Management Index	10.36***	5.20
Diabetes POCMI	3.17***	1.69
Asthma POCMI	2.56***	1.16
CHF POCMI	2.78***	1.27
Depression POCMI **	1.06**	0.49
Registry Index	2.62***	1.11
Case Management Index	2.73***	1.31
Guidelines Index *	1.95**	1.17
Feedback Index	2.22***	0.99
Clinical IT Index	4.06	1.64

** $p \leq 0.01$ *** $p \leq 0.001$

Health plans with a higher percentage of enrollees receiving care from staff and group model physician practices performed significantly better in regard to:

- Women's Health Screening Exams (Breast Cancer, Cervical Cancer)
- Immunization Rates
- Heart Disease Screening
- Diabetes Screening

No difference in patient satisfaction

Source: Gillies, Chenok, Shortell, et al. "The Impact of Health Plan Delivery System Organization on Clinical Quality and Patient Satisfaction," Health Services Research, forthcoming, 2006.

Barriers to Clinical Integration

- Lack of a specific strategy and implementation plan
- Lack of or mis-alignment of internal incentives
- Lack of cooperative working relationships with physicians
- Dispersed geography
- Institutional autonomy of hospitals
- Employee fears of job loss and physician fears of autonomy loss
- Inadequate information systems—lack of standardization

Four Dimensional Framework for Achieving Sustainable Quality Improvement and Clinical Integration^a

Strategic x	Cultural x	Technical x	Structural =	Results
0	1	1	1=	No significant results on anything really important
1	0	1	1=	Small, temporary effects; no lasting impact
1	1	0	1=	Frustration and false starts
1	1	1	0=	Inability to capture the learning and spread it throughout the organization
1	1	1	1=	Lasting organization-wide impact

^a0 = absent; 1 = fully present.

Source: Adapted from S.M. Shortell et al. (1996, 159).

Key Success Factors

Strategic dimension—emphasizes that clinical integration must focus on strategically important issues facing the system, not on peripheral activities. Clinical integration must be seen as a core strategic priority of the system.

Structural dimension—refers to the overall organizational structure of the system to support clinical integration efforts. This includes the use of committees, councils, task forces, work groups, service line management, and related arrangements for implementing and diffusing clinical integration efforts throughout the system.

Key Success Factors (Cont.)

Cultural dimension—refers to the underlying beliefs, values, norms, and behavior of the system, which either supports or inhibits clinical integration work.

Technical dimension—refers to the extent to which people have the necessary training and skills to achieve clinical integration objectives. It also includes the organization's information technology capabilities.

Strategic Factors

- Importance of central focus
- Explicit implementation plan
- Performance appraisal and reward system
- Population-based planning

Structural Factors

- Assess overall structure at both macro (governance and management across facilities and sites) and micro (patient care delivery arrangements) levels
- Assess and redesign work flow processes

Cultural Factors

- Results oriented, learning oriented, change oriented
- Strong CQI/TQM commitment
- Team training
- Clinical leadership development

Technical Factors

- Information Systems
- Re-engineering
 - Based on a CQI/TQM base
 - Focus on core processes
 - Capitalize on strong information systems

Clinical Integration

What works?

- Make it a daily priority, allocate resources, and keep score!
- Establish system-wide initiatives in areas where progress can be made
- Address core processes
- Draw on the strength of your information systems
- Invest in the “micro-system”
- If you own a health plan, involve it in all aspects of system operations

Footnotes:

1. Shortell and Schmittdiel, (2004) "Prepaid Groups and Organized Delivery Systems: Promise, Performance, and Potential," in Toward A 21st Century Health System: The Contributions and Promise of Pre-paid Group Practice, Enthoven and Tollen (Editors) San Francisco: Jossey-Bass.
2. Casalino et al. (2003). "External Incentives, Information Technology, and Organized Processes to Improve Health Care Quality for Patients with Chronic Diseases." Journal of the American Medical Association **289**(4): 434-441.
3. Gillies, Chenok, Shortell, et al. "The Impact of Health Plan Delivery System Organization on Clinical Quality and Patient Satisfaction," Health Services Research, forthcoming, 2006.
4. Levin, E. (2002). "K P Success in Reducing Mortality Rates from Cardiovascular Disease," American Heart Association Meetings.

Summary Points

- The key to the success of integrated health systems is achieving clinical integration
- The key to improving value of the healthcare investment is in achieving clinical integration of care
- Key success factors involve strategic, structural, cultural, and technical dimensions needed to implement required “Design Rules” and to overcome barriers
- There is emerging evidence that more integrated systems of care provide higher quality of care