



CALIFORNIA  
HEALTHCARE  
FOUNDATION

SNAPSHOT

# The State of Health Information Technology in California: Use Among Hospitals and Long Term Care Facilities

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2008

# Introduction

For hospitals and long term care facilities, full utilization of health information technology (HIT) offers an opportunity to improve quality, prevent treatment errors, and boost the efficiency of the care they provide.

However, as the findings in this snapshot show, the vast majority of California hospitals and long term care facilities have been slow to implement HIT. Barriers include the cost of new technologies, acceptance of them by staff, and a dearth of technology products that can readily be integrated into existing information systems.

## AMONG THE SNAPSHOT HIGHLIGHTS:

- Only 13 percent of hospitals have fully implemented electronic health records (EHRs). Without full implementation, hospitals will continue to encounter challenges in sharing and using clinical information and coordinating patient care.
- Only 12 percent of hospitals have fully implemented bar coding to track pharmaceuticals, and 25 percent of hospitals use this technology to track lab specimens.
- The initial cost of information technology tops a long list of HIT barriers, followed by staff acceptance of new technologies and an absence of well-trained clinical staff for process redesign.
- Only about one-fifth of long term care facilities use HIT for clinical purposes. The large majority use it exclusively for business or administrative purposes.

Until the business case for adopting HIT becomes more apparent—and the tools become more user-friendly and useful—the safety, efficiency, and quality advantages that HIT can foster will continue to elude these institutions.

## Health Information Technology

### CONTENTS

#### HIT in Hospitals

Use of EHRs .....	3
EHR Uses .....	4
Accessibility of EHRs .....	5
Use of Electronic Patient Tracking/ White Board .....	6
Use of Bar Coding .....	7
Sharing of Electronic Patient Information .....	8
Fully Implemented RFID Systems .....	9

#### HIT Financing in Hospitals

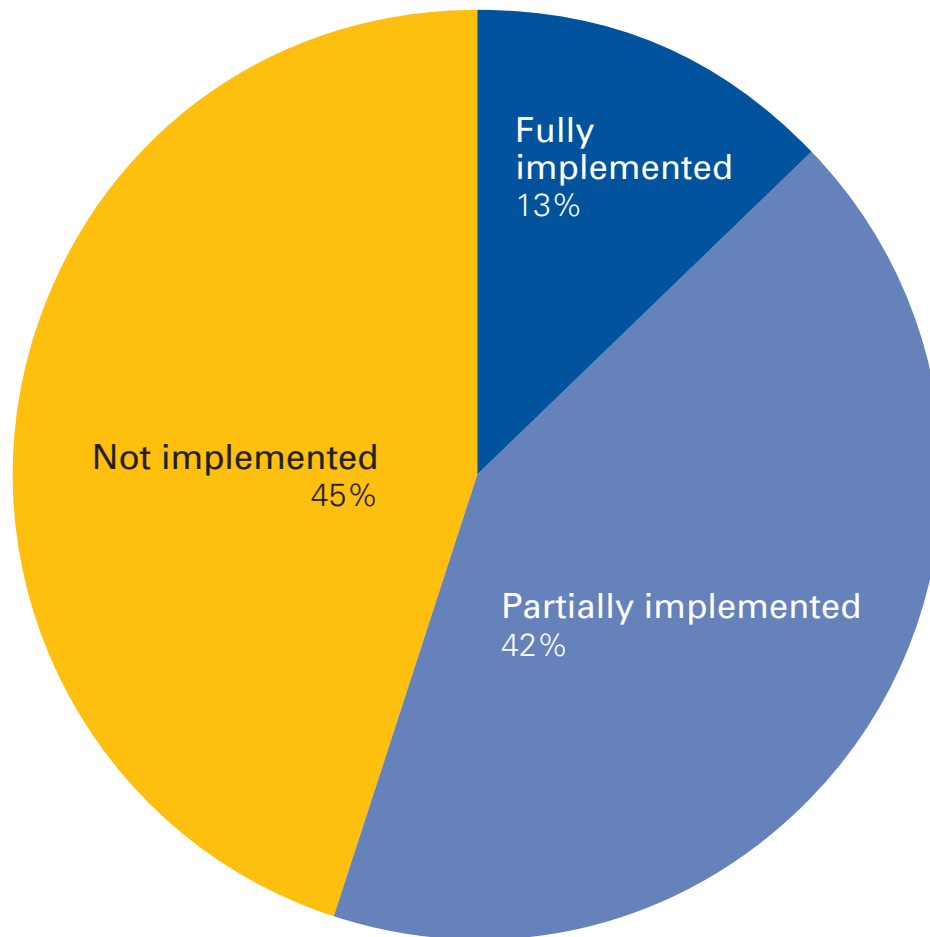
Financing HIT Systems .....	10
Capital Investment/Spending for HIT ..	11
Projected Capital Investment/ Spending for HIT .....	12
Investment in HIT Operations .....	13
Projected Spending on HIT Operations	14
Barriers to HIT Adoption .....	15

#### HIT in Long Term Care Facilities

Implementation of HIT .....	16
Use of HIT .....	17
Barriers to HIT Adoption .....	18
Top Clinical IT Priorities .....	19

#### Sources and Methodologies ..... 20 |

## Use of EHRs in Hospitals, California, 2007



### Health Information Technology in Hospitals

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Thirteen percent of hospitals reported that they have fully implemented an electronic health record (EHR) system.

Source: American Hospital Association and California Hospital Association. Health Information Technology Surveys. 2006/2007.

## EHR Uses in Hospitals, California, 2007

USE	IMPLEMENTED		CONSIDERING IMPLEMENTING		NOT IMPLEMENTED
	Fully	Partially	Testing	Yes, within 3 years	
Access to patient demographics	60%	29%	1%	7%	4%
Review lab results	55%	35%	2%	6%	3%
Enter lab orders	50%	35%	2%	8%	5%
Enter pharmacy orders	39%	36%	4%	17%	5%
Access to medical history/physical	36%	41%	3%	16%	4%
Review radiology images (including PACS*)	36%	42%	4%	11%	7%
Access to current medical records (observations, orders)	34%	47%	1%	15%	4%
Real-time drug interaction alerts	31%	39%	3%	23%	4%
Access to patient flow sheets	25%	46%	3%	22%	4%

### Health Information Technology in Hospitals

Thirty-one percent of hospitals reported that they have fully implemented an EHR feature that enables them to receive real-time drug interaction alerts.

\*Picture archiving and communication system.

Source: American Hospital Association and California Hospital Association. Health Information Technology Surveys. 2006/2007.

## Accessibility of EHRs at Various Hospital Locations, California, 2007

USE	IMPLEMENTED		CONSIDERING IMPLEMENTING		NOT IMPLEMENTED
	Fully	Partially	Testing	Yes, within 3 years	
Emergency department	46%	15%	2%	30%	8%
Hospital inpatient departments	44%	17%	1%	32%	6%
On-site clinics	42%	17%	1%	29%	12%
On-site MD offices	37%	15%	1%	33%	15%
Off-site clinics	34%	18%	1%	29%	18%
Off-site MD offices	33%	18%	2%	33%	13%
Other outpatient settings	29%	17%	2%	37%	16%
Post-acute care settings	22%	10%	1%	42%	25%

### Health Information Technology in Hospitals

Forty-six percent of hospitals reported that they have fully implemented EHRs in the emergency department, 44 percent in inpatient departments, and 42 percent in on-site clinics.

Source: American Hospital Association and California Hospital Association. Health Information Technology Surveys. 2006/2007.

# Use of Electronic Patient Tracking/White Board in Hospitals, California, 2007

USE	IMPLEMENTED		CONSIDERING IMPLEMENTING		NOT IMPLEMENTED
	Fully	Partially	Testing	Yes, within 3 years	
Emergency department	31%	42%	5%	12%	11%
Surgery	6%	45%	5%	30%	14%
Nursing units	6%	42%	5%	33%	14%
Hospital-wide	5%	42%	5%	32%	17%

## Health Information Technology in Hospitals

Thirty-one percent of hospitals reported that they use an electronic patient tracking system or electronic white board in their emergency department.

Source: American Hospital Association and California Hospital Association. Health Information Technology Surveys. 2006/2007.

## Use of Bar Coding in Hospitals, California, 2007

USE	IMPLEMENTED		CONSIDERING IMPLEMENTING		NOT IMPLEMENTED
	Fully	Partially	Testing	Yes, within 3 years	
Lab specimens	25%	44%	1%	25%	6%
Tracking pharmaceuticals	12%	34%	5%	43%	6%
Pharmaceutical administration	11%	7%	4%	73%	5%
Supply chain management	14%	13%	2%	63%	9%
Patient identification	19%	35%	4%	35%	7%

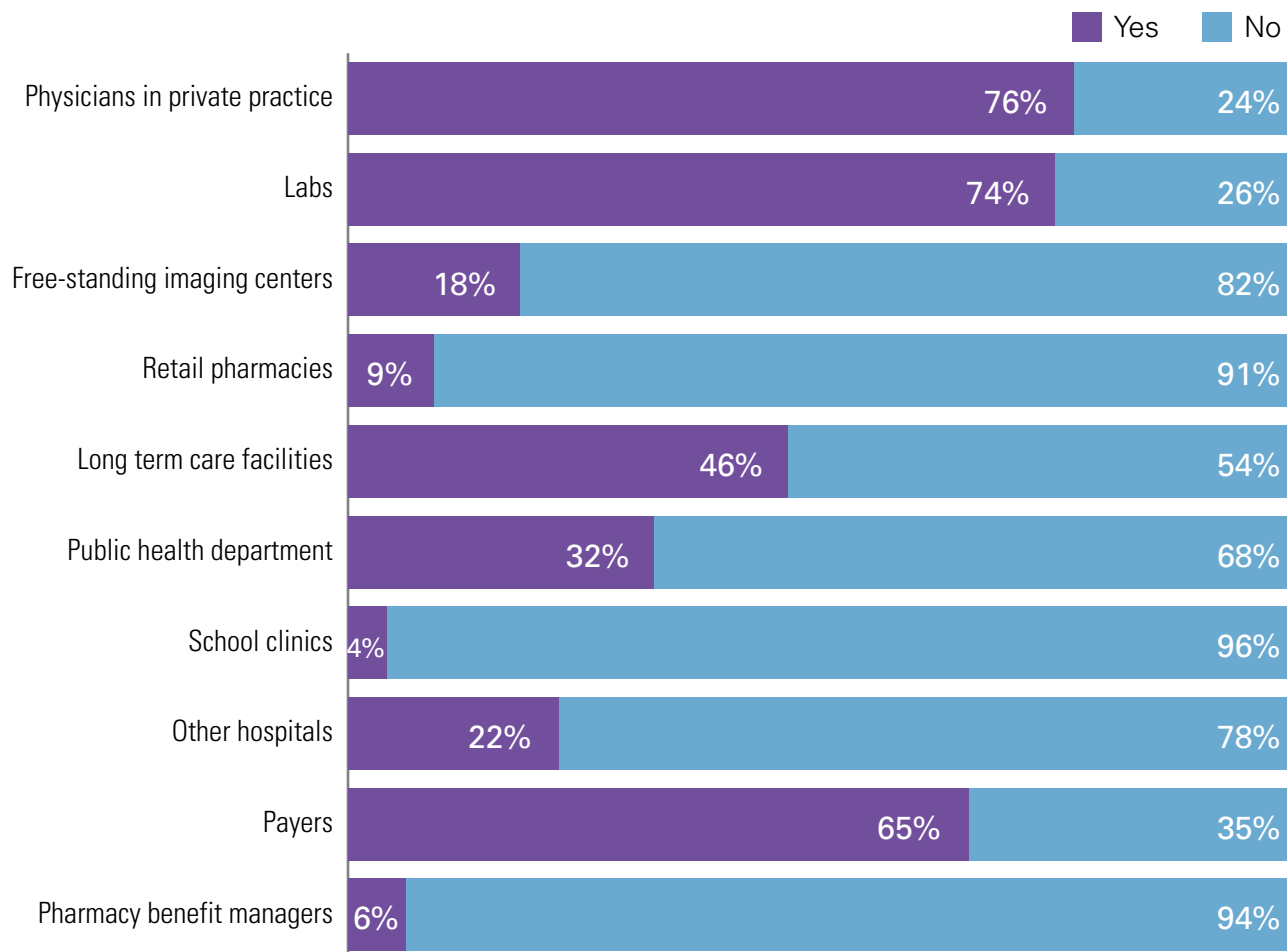
### Health Information Technology in Hospitals

Twenty-five percent of hospitals reported that they have fully implemented bar coding for laboratory specimens. Fewer use bar coding for pharmaceuticals or patient tracking.

Source: American Hospital Association and California Hospital Association. Health Information Technology Surveys. 2006/2007.

# Hospital Sharing of Electronic Patient Information with MDs/Labs, California, 2007

SHARE WITH...



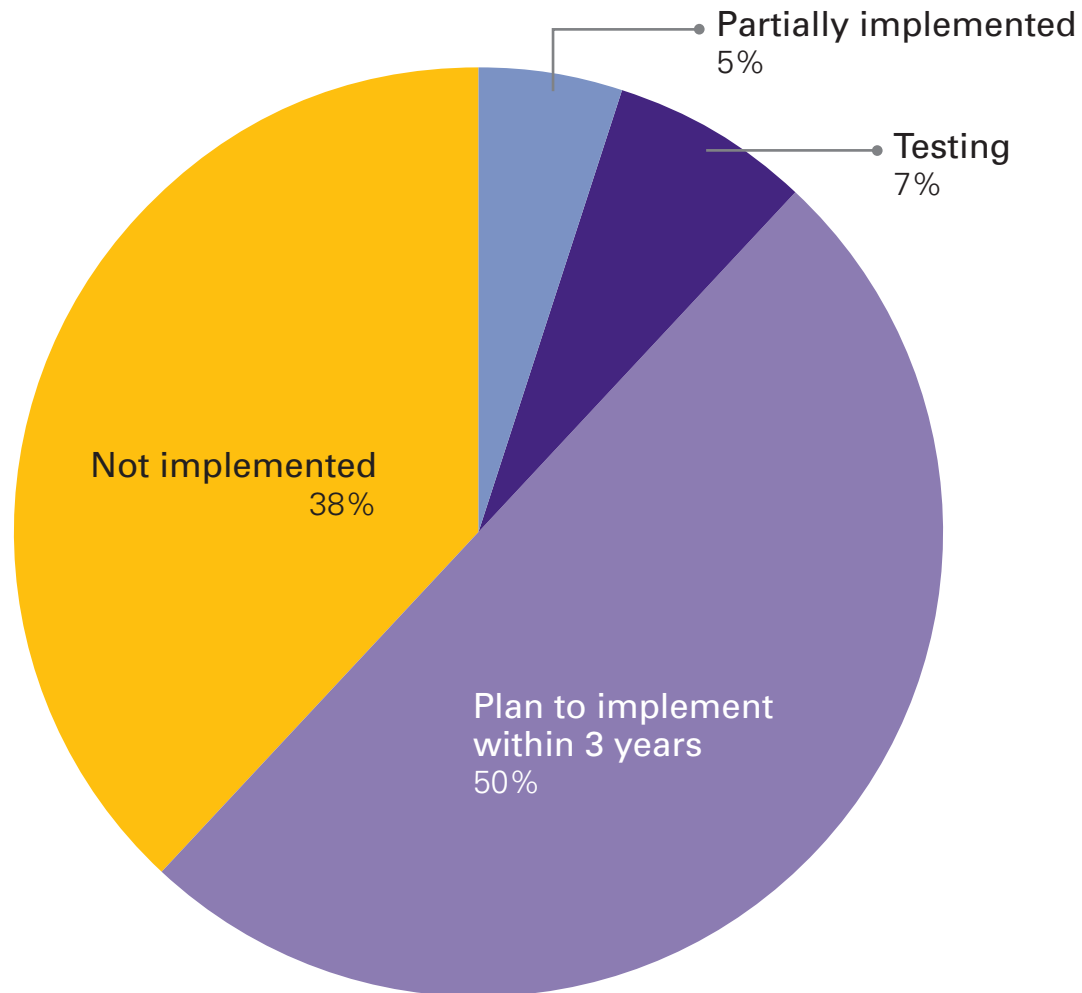
## Health Information Technology in Hospitals

Three-quarters of hospitals reported that they share electronic, patient-specific health care information with physicians in private practice and with labs.

Source: American Hospital Association and California Hospital Association. Health Information Technology Surveys. 2006/2007.



## Radio Frequency Identification Systems (RFID) in Hospitals, California, 2007

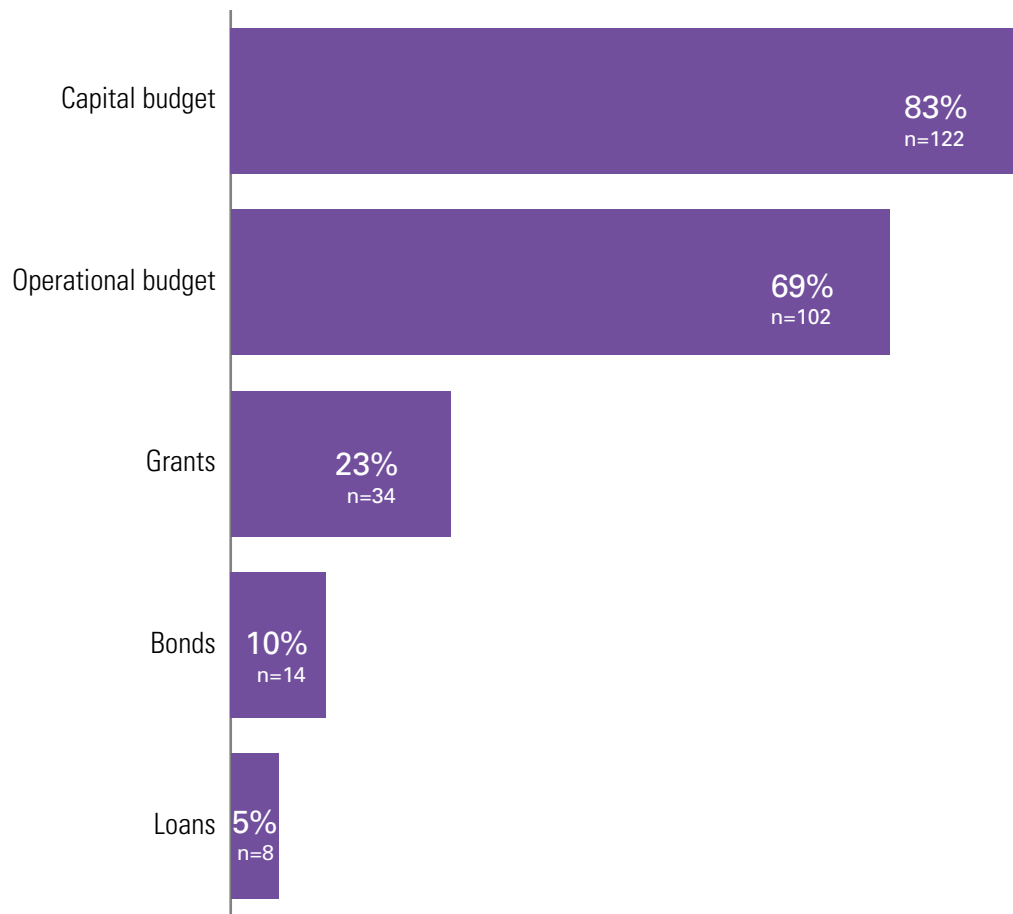


### Health Information Technology in Hospitals

No hospitals reported having a fully implemented RFID system, but half plan to implement one within three years.

Source: American Hospital Association and California Hospital Association. Health Information Technology Surveys. 2006/2007.

# How Hospitals Fund HIT Systems, California, 2007



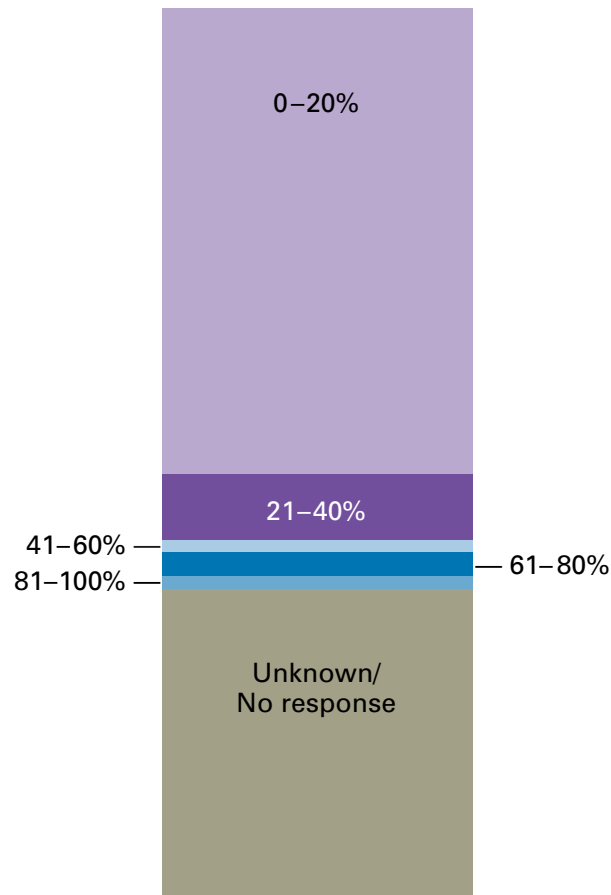
Source: American Hospital Association and California Hospital Association. Health Information Technology Surveys. 2006/2007.

## Health Information Technology Financing in Hospitals

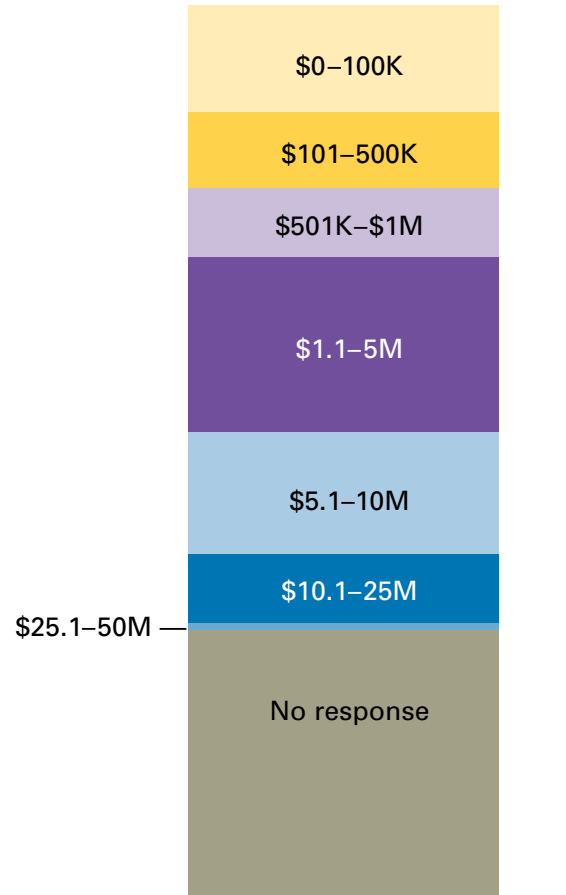
The great majority of hospitals reported that they finance their HIT systems in part through their capital budget. Nearly one-quarter rely in part on grants.

# Capital Investment and Spending for HIT in Hospitals, California, 2007

HIT as a Percent of Total Capital Investment  
in Prior Year  
(n=147)



Total HIT Expenditures  
in Prior Year  
(n=117)

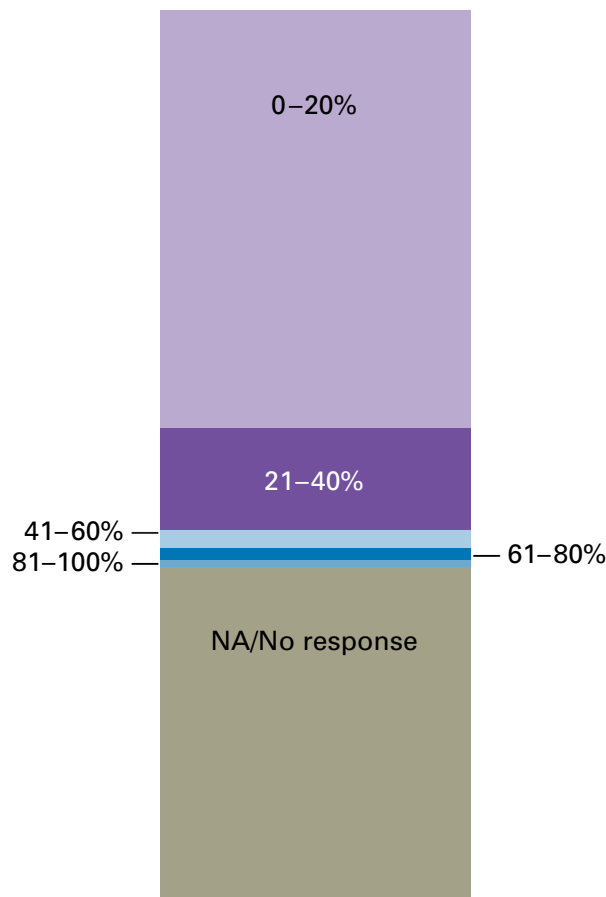


Most hospitals reported spending up to 20 percent of all their capital investment on HIT in the last fiscal or calendar year. Most hospitals spent \$1.1 to \$5 million on HIT in the last year.

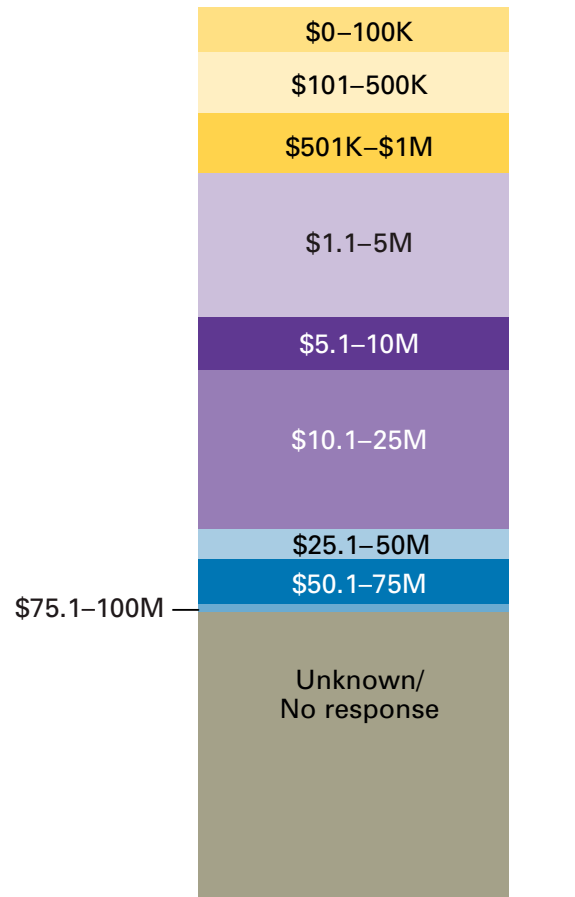
Source: American Hospital Association and California Hospital Association. Health Information Technology Surveys. 2006/2007.

# Projected Capital Investment and Spending for HIT in Hospitals, California, 2007

HIT as a Percent of Total Expected Capital Investment in the Next 3 Years  
(n=147)



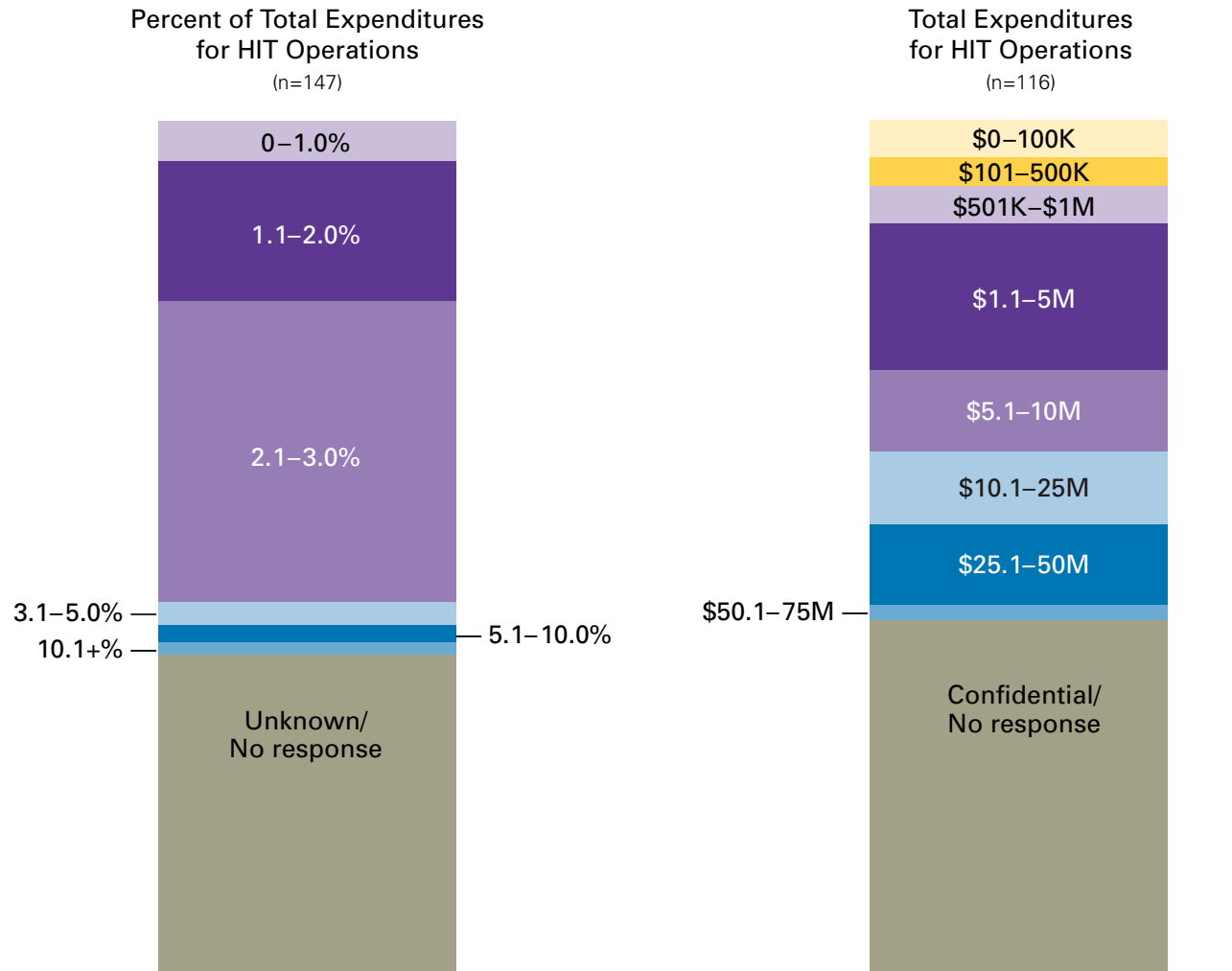
Total Expected HIT Expenditures in the Next 3 Years  
(n=118)



Most hospitals expect to spend up to 20 percent of their total capital investment on HIT in the next three years. Most hospitals expect to spend \$10.1 to \$25 million on HIT during that period.

Source: American Hospital Association and California Hospital Association. Health Information Technology Surveys. 2006/2007.

# Hospital Investment in HIT Operations, California, 2007

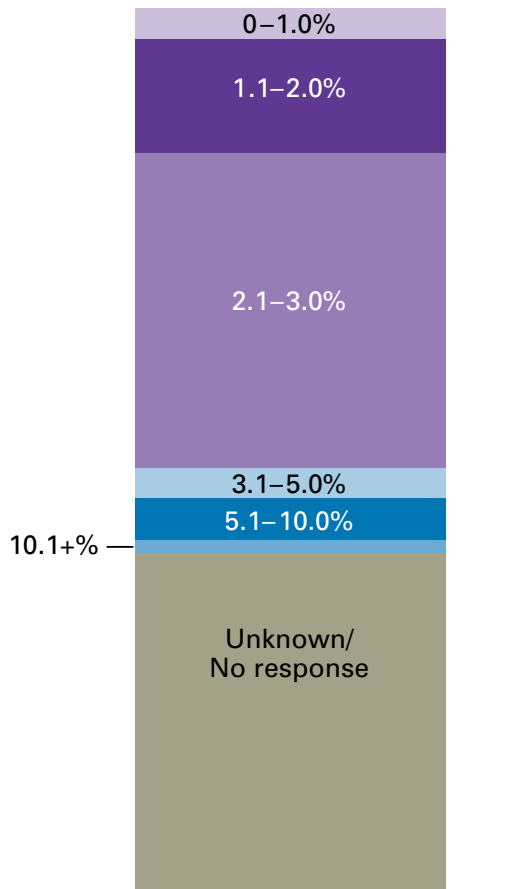


Most hospitals reported that they spent 2.1 to 3.0 percent of their total expenditures on HIT operations (noncapital costs) in the last fiscal or calendar year. Most hospitals spent \$1.1 to \$5 million on operational HIT costs in the last year.

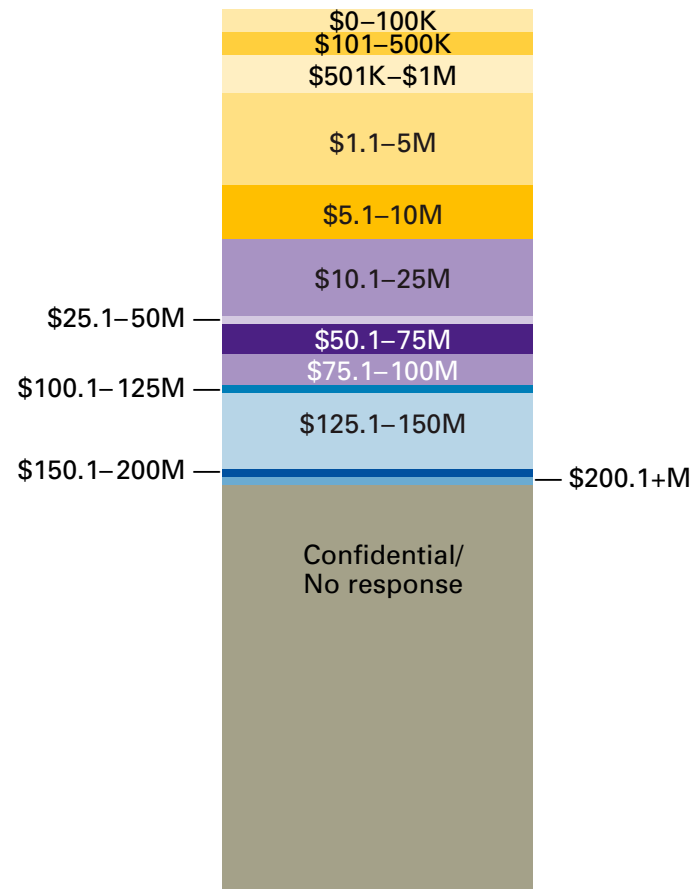
Source: American Hospital Association and California Hospital Association. Health Information Technology Surveys. 2006/2007.

# Projected Spending on HIT Operations in Hospitals, California, 2007

Percent of Total Expected Expenditures  
for HIT Operations in the Next 3 Years  
(n=146)



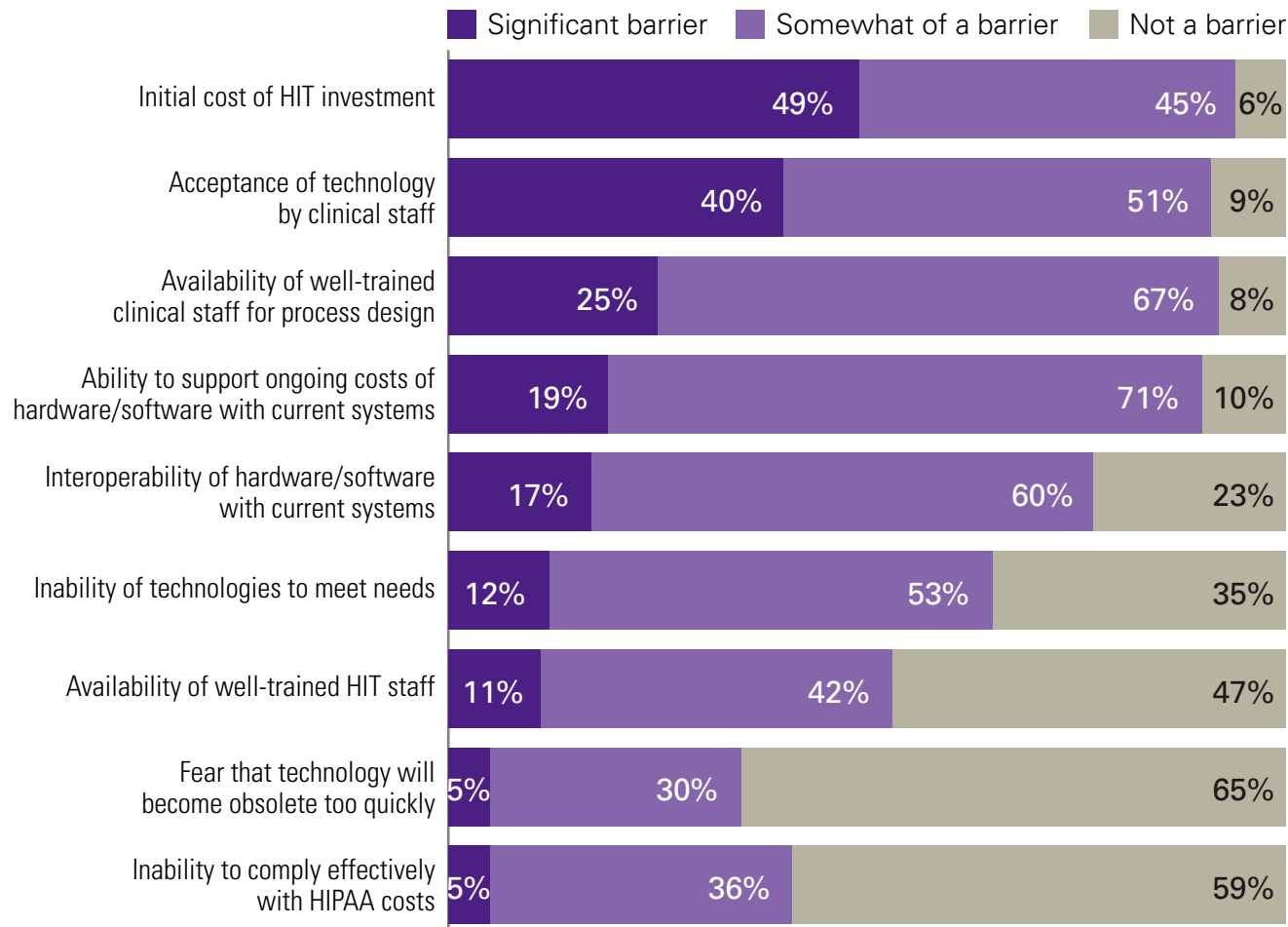
Total Expected Expenditures  
for HIT Operations in the Next 3 Years  
(n=115)



Most hospitals expect to spend 2.1 to 3.0 percent of total expenditures on HIT operations in the next three years. Most hospitals expect to spend \$1.1 to \$5 million on HIT operations in that period.

Source: American Hospital Association and California Hospital Association. Health Information Technology Surveys. 2006/2007.

# Barriers to HIT Adoption in Hospitals, California, 2007

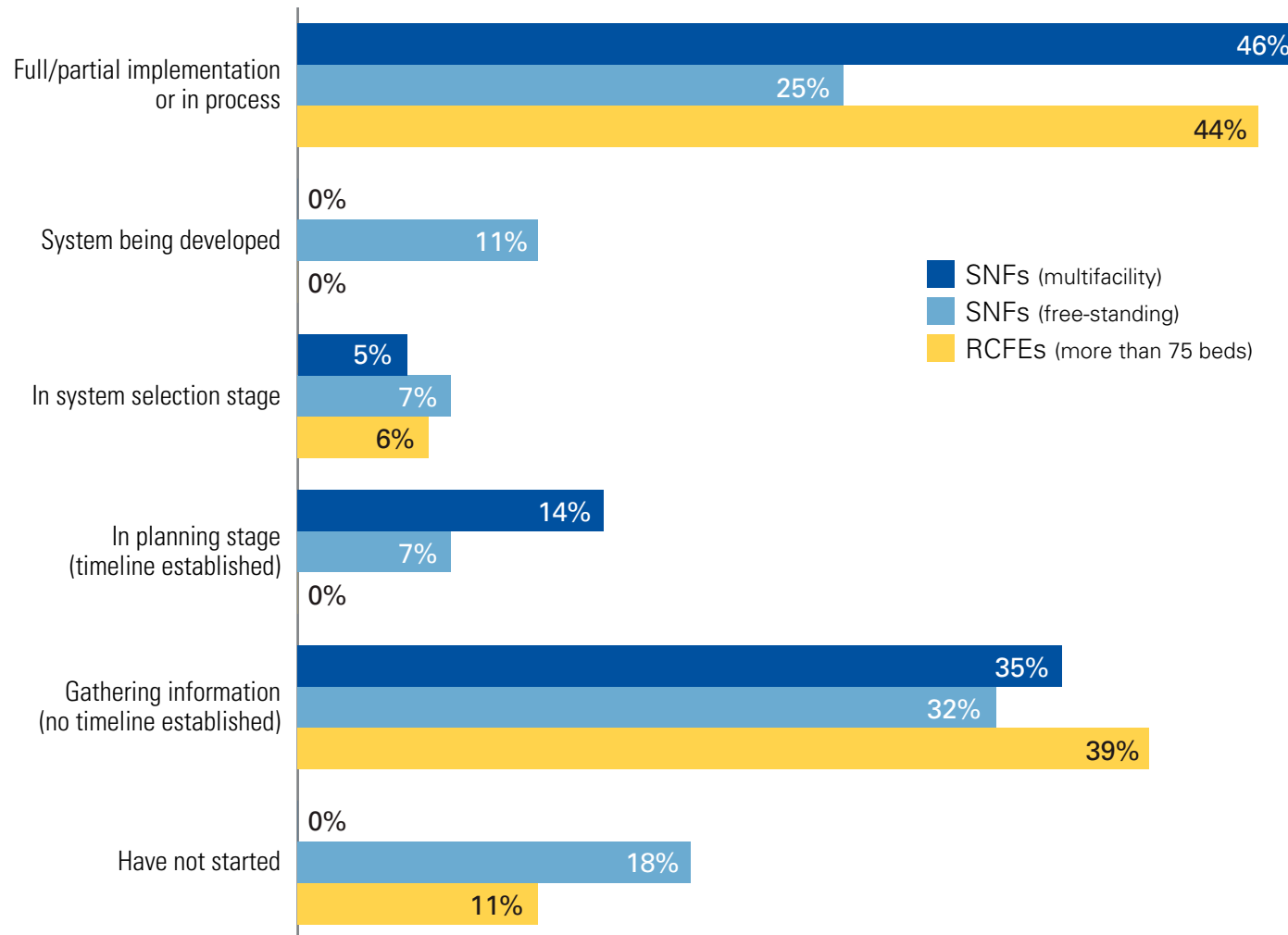


## Health Information Technology Financing in Hospitals

The largest number of hospitals reported that the initial cost of HIT investment was a significant barrier to adoption, followed by clinical staff's acceptance of the technology.

Source: American Hospital Association and California Hospital Association. Health Information Technology Surveys. 2006/2007.

# Implementation of HIT\* in Long Term Care Facilities, California, 2007



## Health Information Technology in Long Term Care Facilities

Nearly half of skilled nursing facilities (SNFs) with more than one facility reported they have implemented or are implementing some form of HIT. Far fewer free-standing SNFs reported such progress.

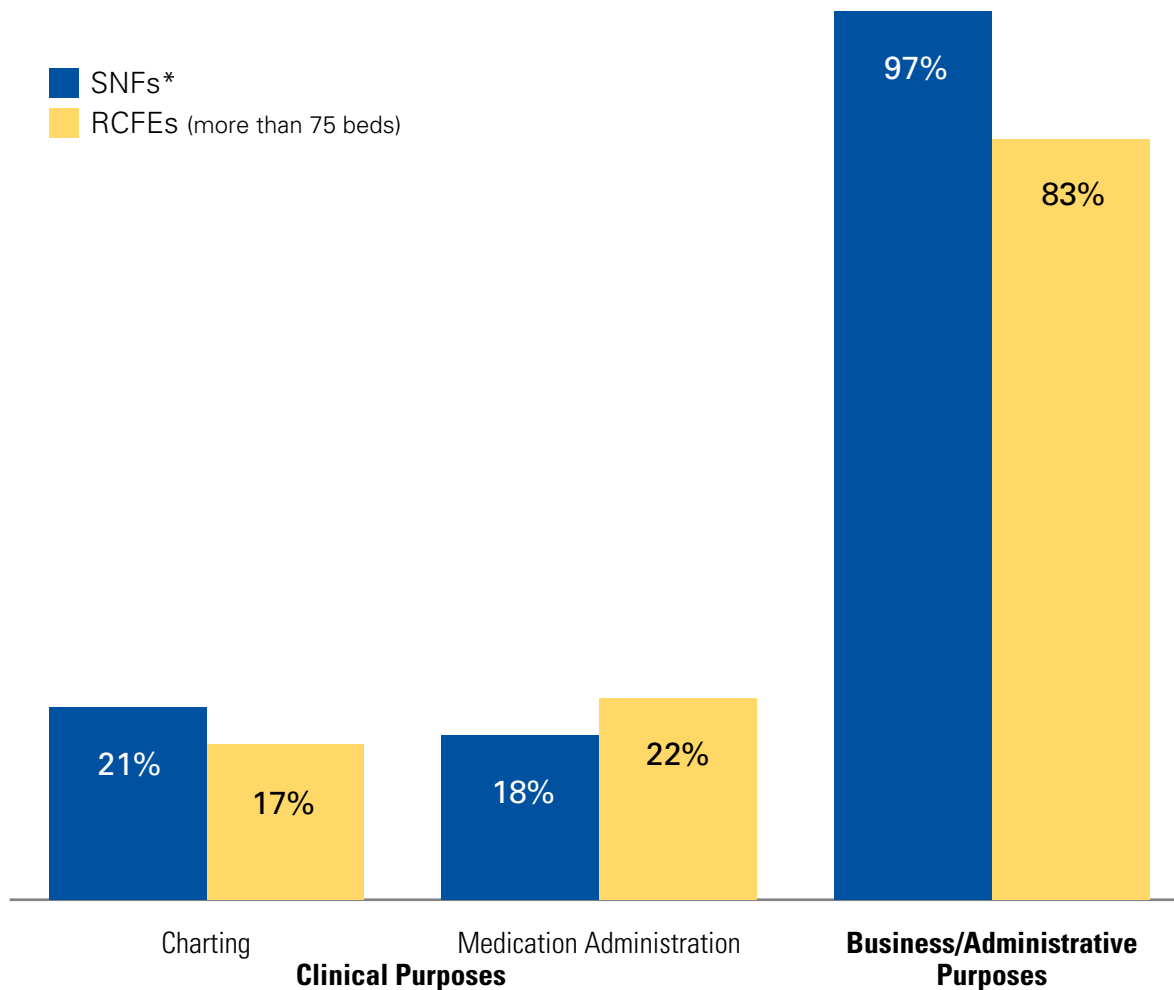
\*Health information technology (HIT) is defined as technology used to collect, store, retrieve, and transfer clinical, administrative, and financial health information electronically.

Notes: SNF is a skilled nursing facility; RCFE is a residential care facility for the elderly.

Source: *Health Information Technology: Are Long Term Care Providers Ready?* California HealthCare Foundation. April 2007.



# Use of HIT in Long Term Care Facilities, California, 2007



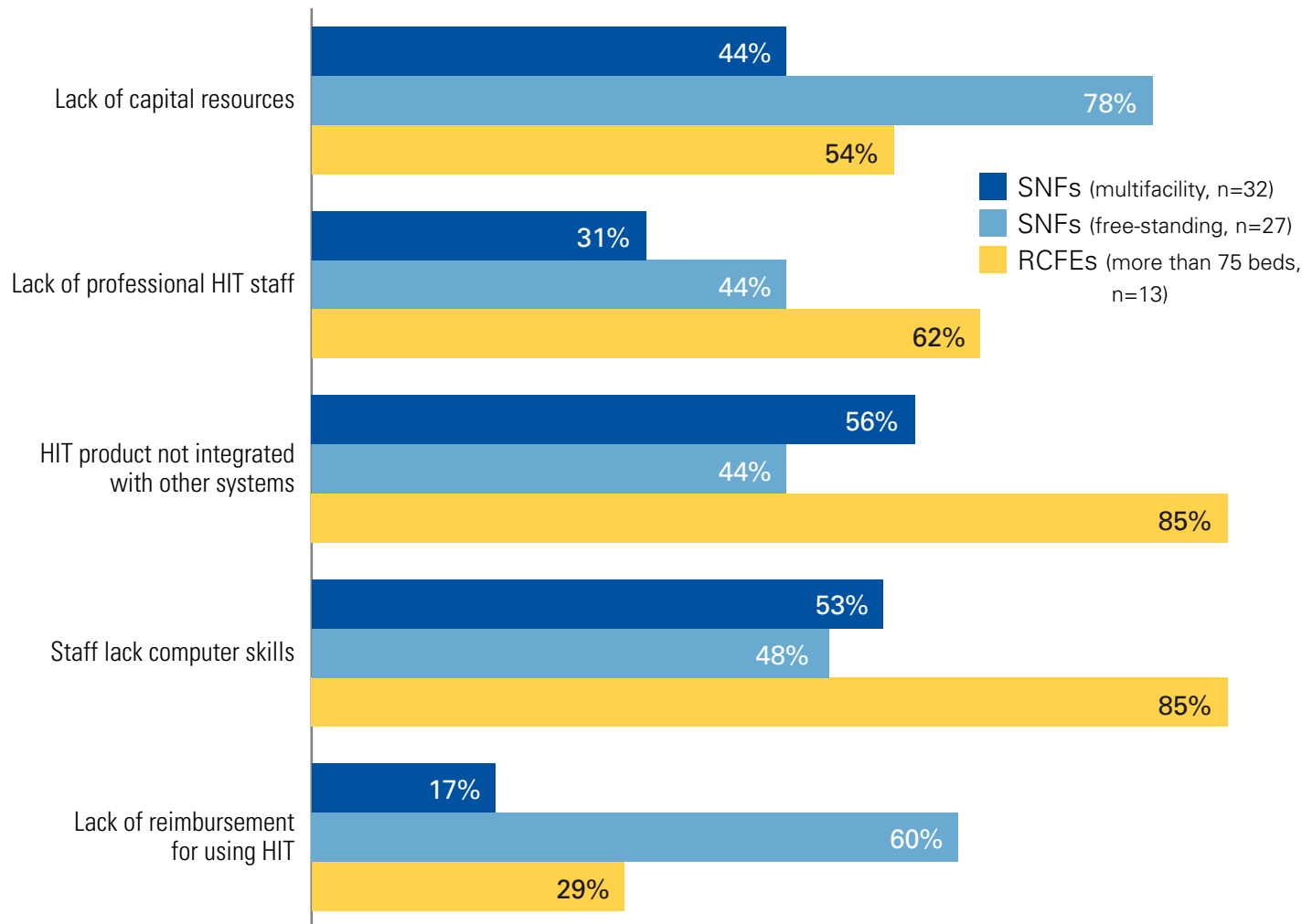
\*Includes hospital-affiliated, multifacility, and free-standing skilled nursing facilities.  
 Notes: SNF is a skilled nursing facility; RCFE is a residential care facility for the elderly.

Source: *Health Information Technology: Are Long Term Care Providers Ready?* California HealthCare Foundation. April 2007.

## Health Information Technology in Long Term Care Facilities

About one-fifth of all long term care facilities reported that they use some form of HIT for clinical purposes. Nearly all nursing homes and 83 percent of residential care facilities for the elderly (RCFEs) indicated they use such technology for business or administrative purposes.

# Barriers to HIT Adoption in Long Term Care Facilities, California, 2007



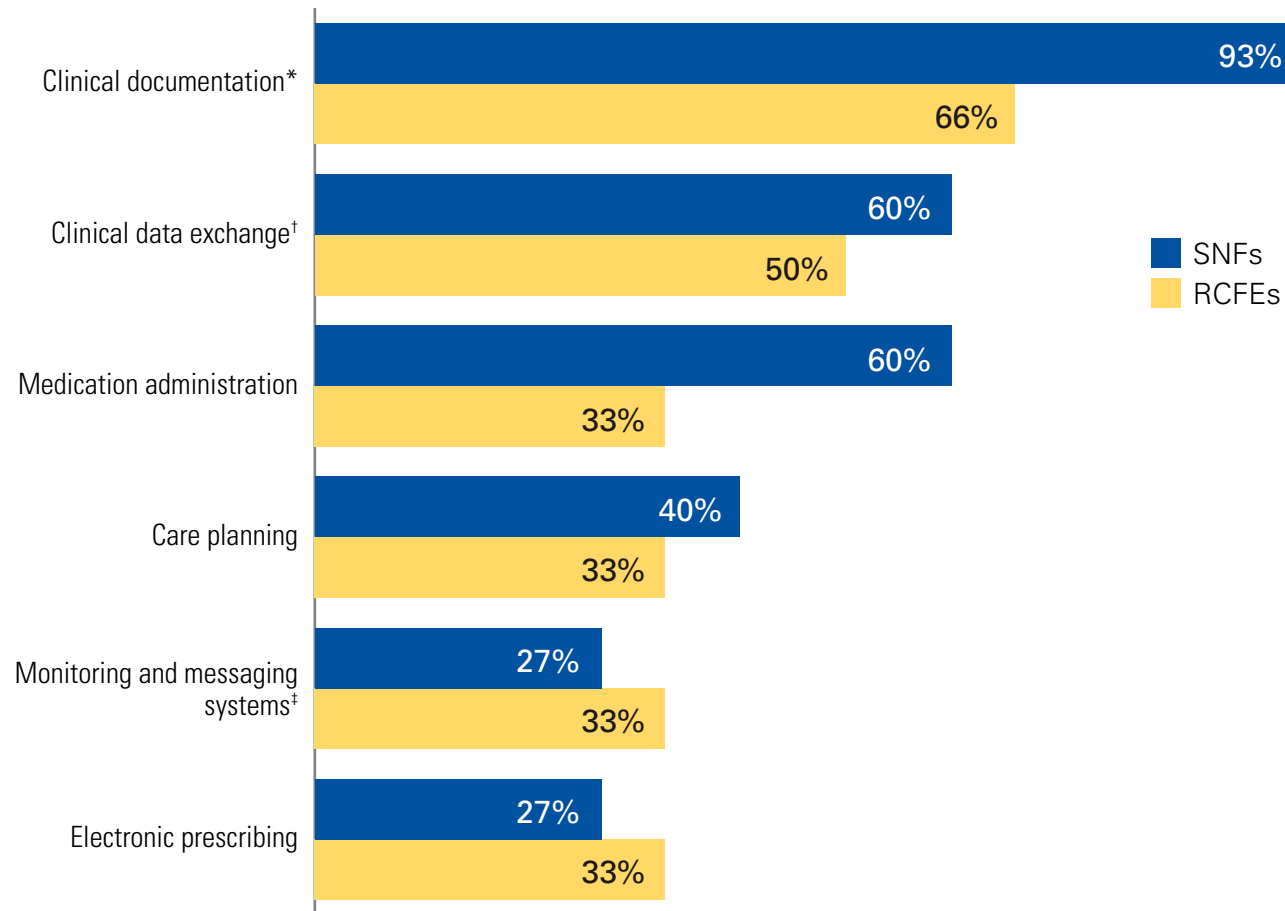
## Health Information Technology in Long Term Care Facilities

Fifty-six percent of skilled nursing facilities with more than one facility, and 85 percent of residential care facilities for the elderly cited lack of integration with other systems as a significant barrier to HIT adoption.

Notes: SNF is a skilled nursing facility; RCFE is a residential care facility for the elderly.

Source: *Health Information Technology: Are Long Term Care Providers Ready?* California HealthCare Foundation, April 2007.

# Top Clinical IT Priorities in Long Term Care Facilities, California, 2007



\*Activities of daily living, daily notes, physician orders, and results.

†Electronic communications of resident information with physicians, hospitals, and providers in the community, and insurance eligibility information available on one system for Medicare, Medi-Cal, and HMOs.

‡Blood pressure, blood glucose, weight scales, and electronic thermometers.

Notes: SNF is a skilled nursing facility; RCFE is a residential care facility for the elderly.

Source: *Health Information Technology: Are Long Term Care Providers Ready?* California HealthCare Foundation. April 2007.

## Health Information Technology in Long Term Care Facilities

After administrative and financial functions, clinical documentation is the top HIT priority for long term care facilities.

## Sources and Methodologies

The **American Hospital Association** surveyed about 4,000 hospitals in the fall of 2006. More than 1,500—about 31 percent of all community hospitals in the United States—responded. The AHA sent its survey form via email and fax to chief executive officers, who could complete it on paper or on a secure Web site. Seventy-one California hospitals participated, a state-level response rate of about 20 percent. To supplement these data, between July and September of 2007, the **California Hospital Association** contacted 414 hospitals in the state that did not respond to the AHA survey. CHA received 76 additional responses, increasing the total response rate among California hospitals that participated in both the AHA and CHA surveys to 30 percent.

In 2006, the **California HealthCare Foundation** supported research to better understand the health information technology (HIT) readiness of skilled nursing facilities (SNFs), residential care facilities for the elderly (RCFEs), and other providers in the state. This research included a literature review, nonrandom surveys, and focus groups. The survey of long term care providers was conducted in collaboration with the California Association of Health Facilities and Aging Services of California, which distributed the survey form to a select list of HIT decision-makers at facilities with an interest in HIT. Forms went to 150 SNFs of any size and to 50 RCFEs with more than 75 beds. The SNF and RCFE response rates were 47 percent and 24 percent, respectively. Participants completed 82 of 103 forms electronically; the other 21 were completed on paper at the end of five focus groups. The focus groups, which included administrators, nursing directors, and care managers, were convened in Los Angeles, Sacramento, and Fremont in October 2006.

## Health Information Technology

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