

Statewide Efforts to Enhance HIT in Critical Access Hospitals

AHRQ Patient Safety and HIT Conference

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AHRQ Grant HIT Value in Iowa Rural Hospitals

- Key personnel are:
 - Marcia Ward is PI.
 - James Bahensky, John Ely, Art Hartz, Mirou Jaana, Paul James, Tanya Uden-Holman, Tom Vaughn, Bonnie Wakefield, and Doug Wakefield are faculty co-investigators.
 - Pengxiang Li, Qian Qiu, Lance Roberts, and Smruti Vartak are doctoral student investigators.
- Primary collaborating organizations are:
 - Iowa Hospital Association
 - Iowa Medicare Rural Hospital Flexibility Program (FLEX)

2002 HIT Survey of Iowa Hospitals - Methods

- In Fall 2002 we surveyed Iowa's hospitals to assess their clinical information systems (funded by Iowa Dept of Public Health/CDC)
- Survey was designed and analyzed by:
 - Guy Paré and Claude Sicotte published the original survey that formed the basis for our work
 - Mirou Jaana led our survey project for her dissertation
 - Doug Wakefield, Robert Ohsfeldt, and Marcia Ward supervised and completed the 2002 survey project

2002 HIT Survey of Iowa Hospitals - Findings

- The survey of clinical information systems showed similar reliability and validity in Iowa and Canada hospitals (Jaana et al., 2005).
- Iowa hospitals had more computerized systems but used IT technologies to a lesser extent than Canada hospitals (Jaana et al., 2005).
- The level of clinical information system use was related to IT staff levels more than to hospital size or functional capacity (Jaana et al., submitted).
- Iowa rural hospitals had low levels of clinical information systems (Ward et al., in press).

Goals of AHRQ HIT Value Grant

- Based partly on our previous findings, AHRQ funded our research proposal on “HIT Value in Rural Hospitals” (HS015009).
- AHRQ HIT Value Grant is designed to:
 - Assess current HIT capability in Iowa rural hospitals
 - Assess patient safety issues in Iowa rural hospitals
 - Build a toolkit to help rural hospitals make informed HIT investments, especially to address patient safety issues

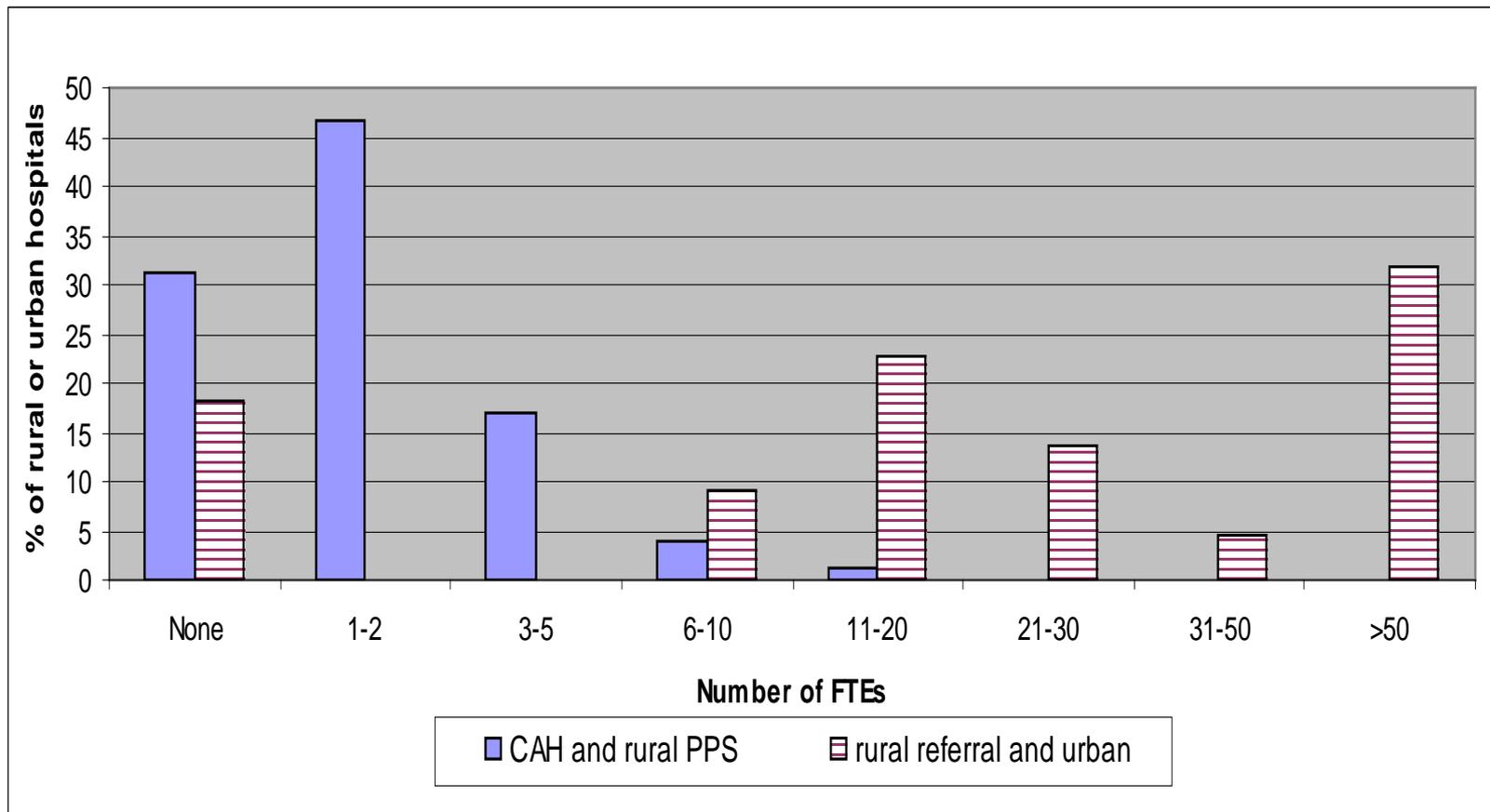
2005 HIT Survey of Iowa Hospitals - Approach

- As part of the AHRQ grant, in Fall 2005 we developed a new survey of Iowa hospital clinical information systems. This survey consisted of:
 - general information on hospital IT services, network influence, connectivity
 - approaches to IT staffing, outside services
 - an inventory of clinical information systems to determine the level of systems in each hospital

Sample for 2005 Survey

	number of hospitals that responded	total number of hospitals in category	response rate
Critical Access Hospitals	70	81	86%
Rural PPS	7	8	88%
Rural Referral	6	7	86%
Urban	16	20	80%

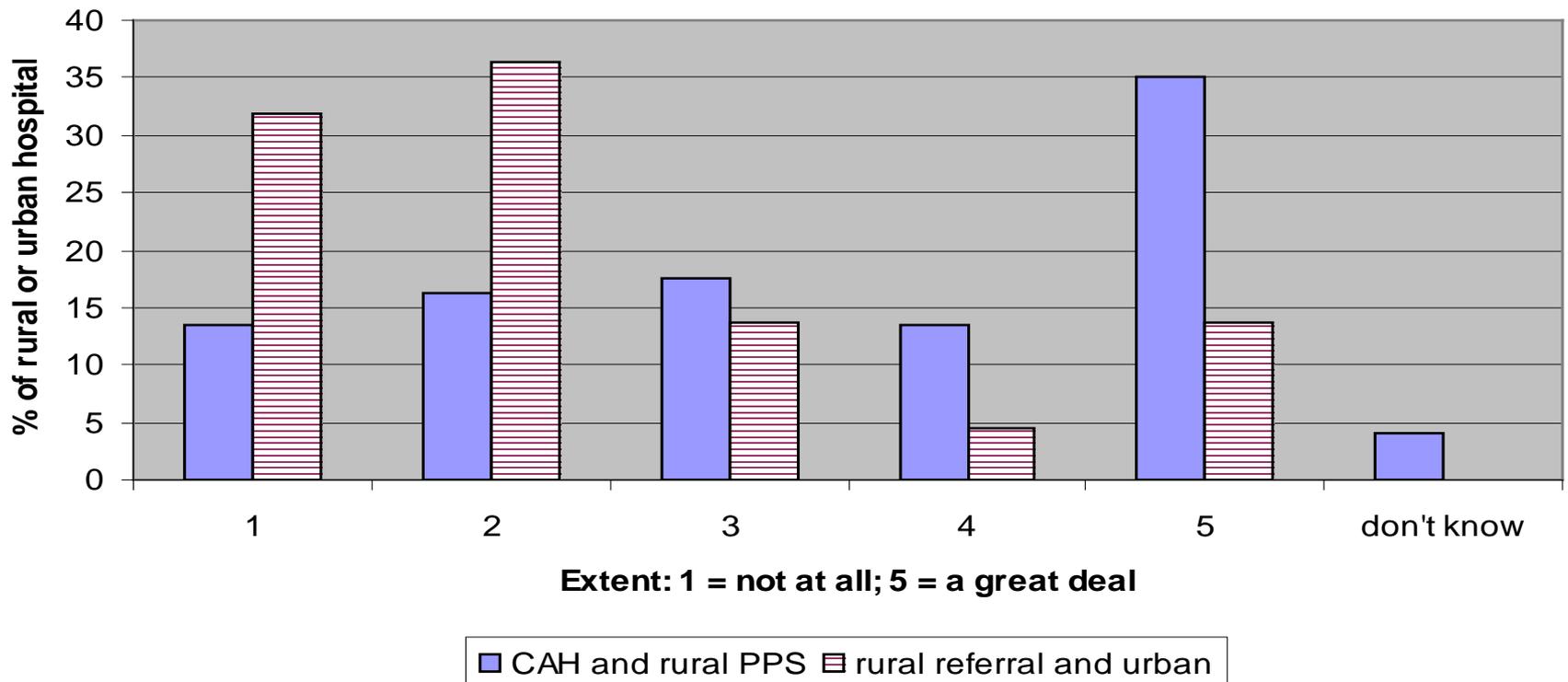
Number of Information Technology (IT) Personnel (FTEs) Employed by Hospitals



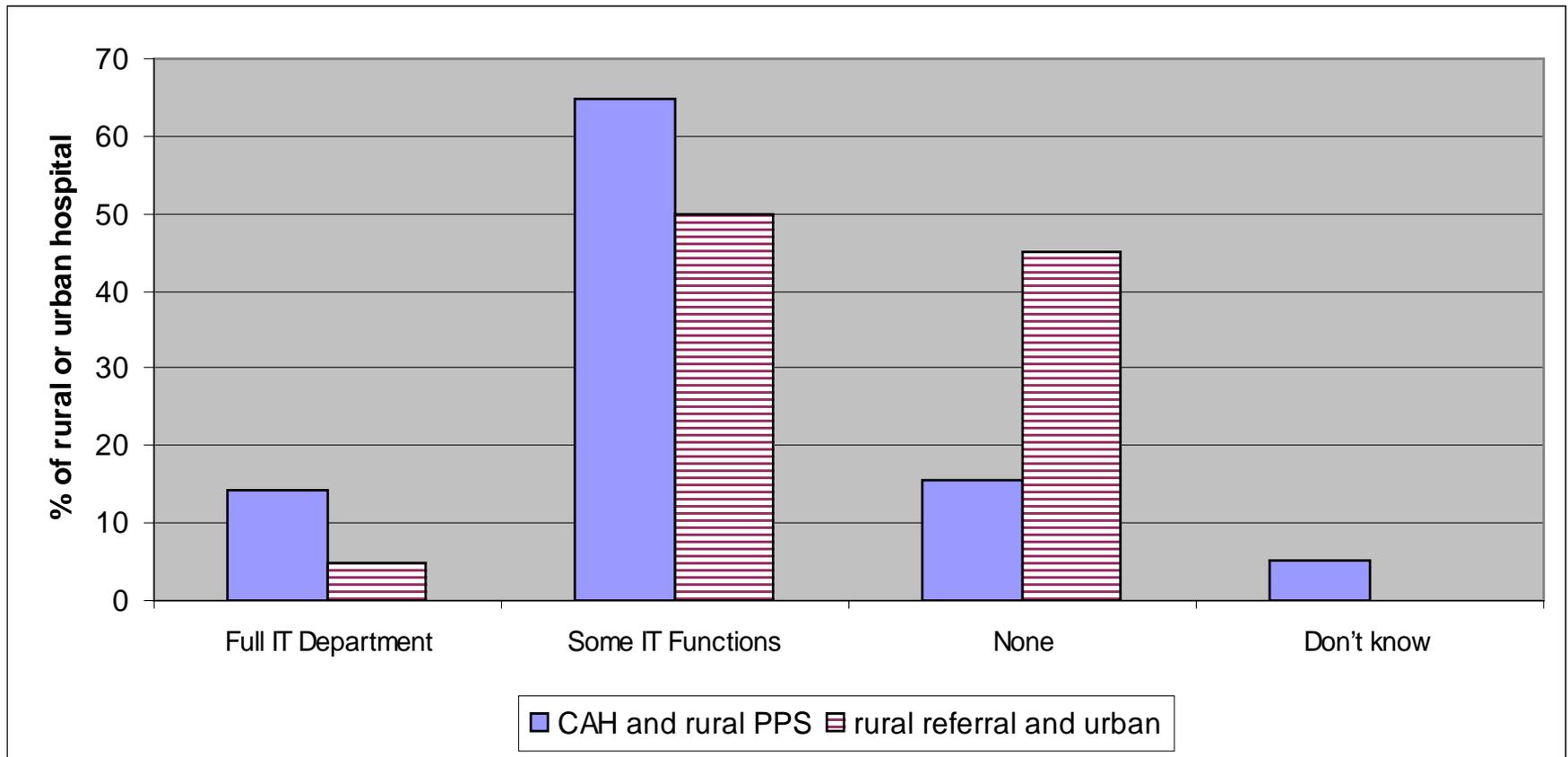
Approaches Used by Hospitals without IT Staff

- 65% of rural hospitals and 50% of urban hospitals without IT staff use external consultants to a great extent.
- 13% of rural hospitals rely a great deal on ASP (remote hosting) to meet their IT needs. 25% of urban hospitals use ASP to a limited extent.
- Both rural and urban hospitals without IT staff outsource specific business and clinical IT functions.

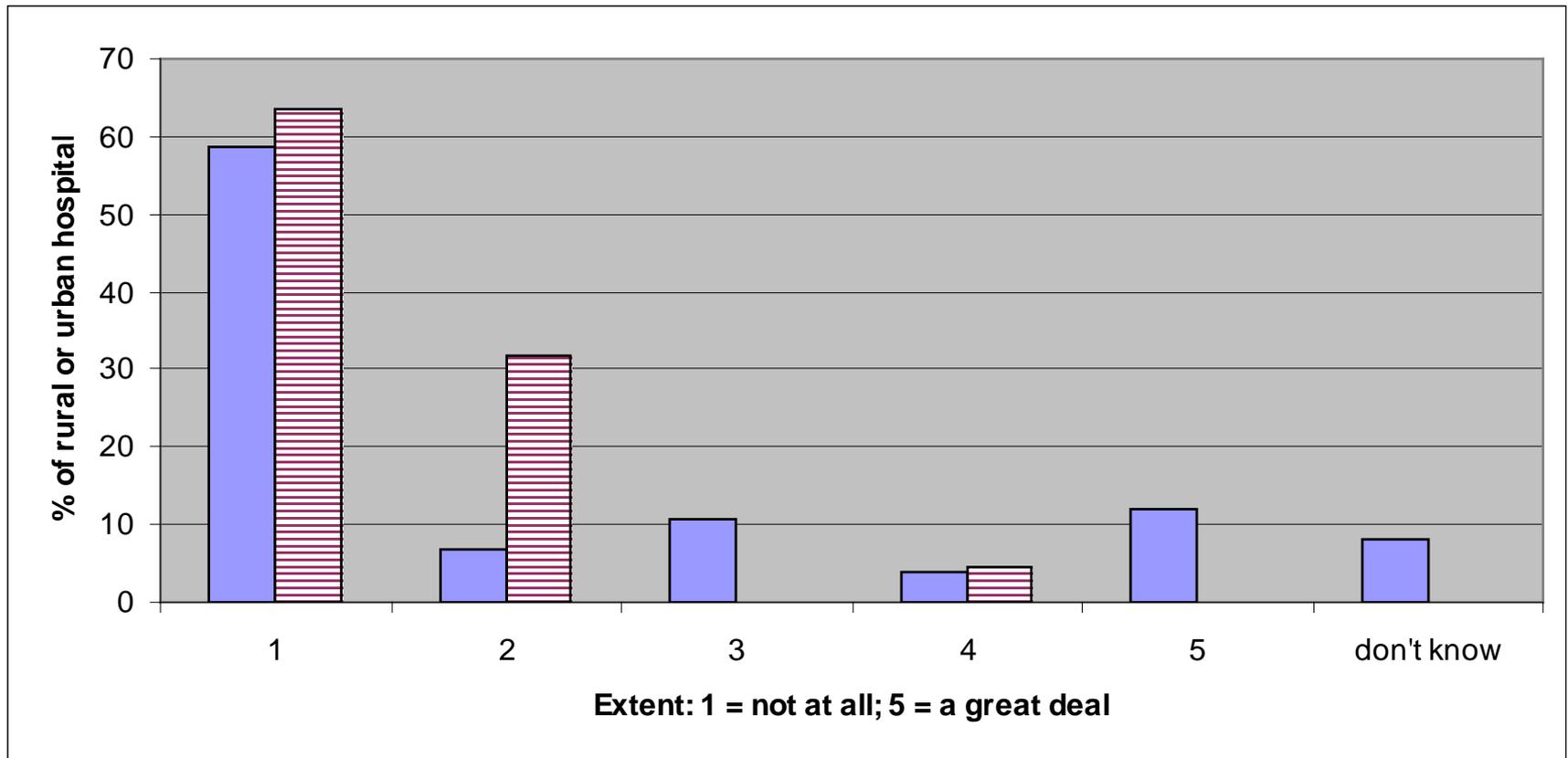
“The extent hospitals rely on external consultants or sub-contractors to support use of IT applications for clinical systems”



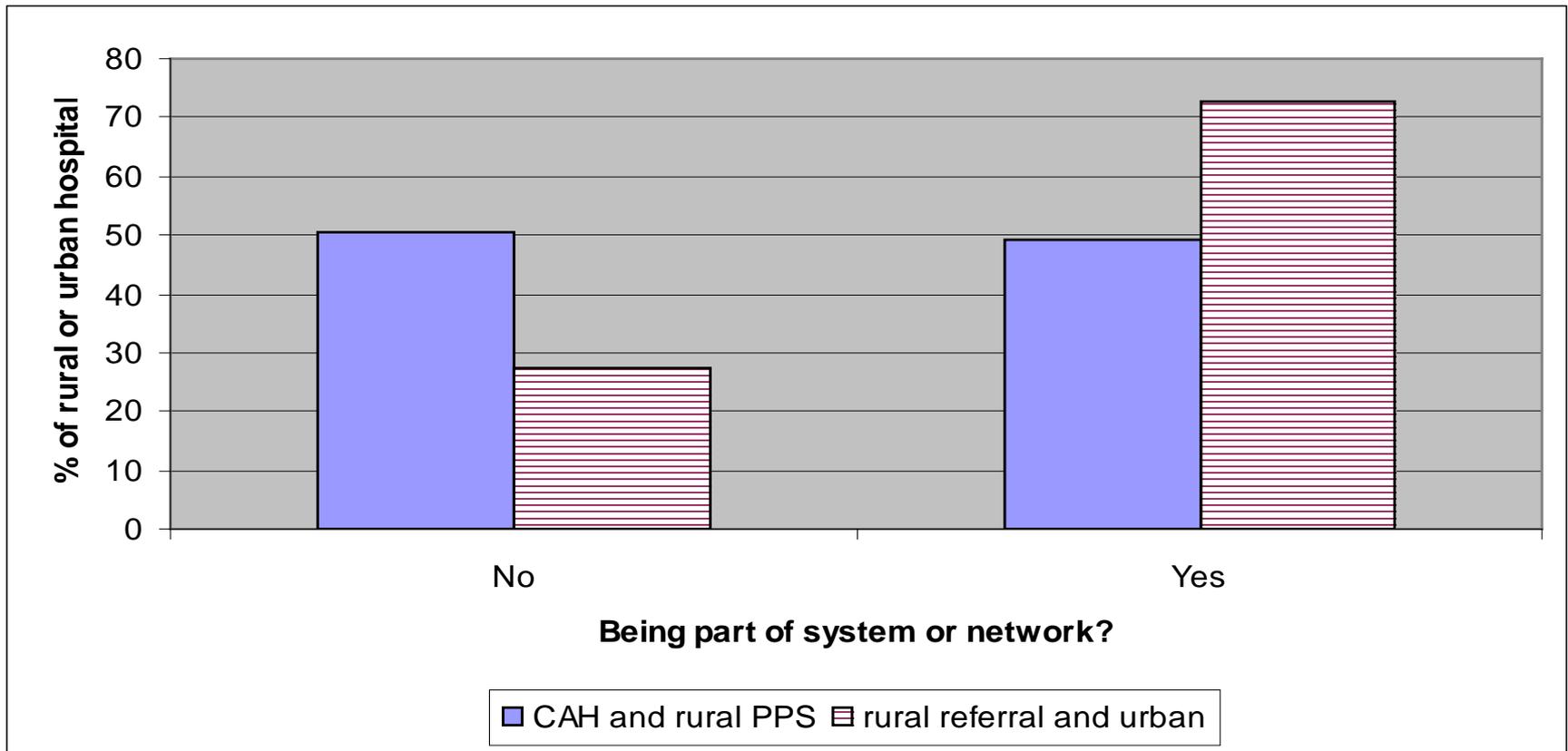
The Extent Hospitals Rely on Outsourcing for IT Applications



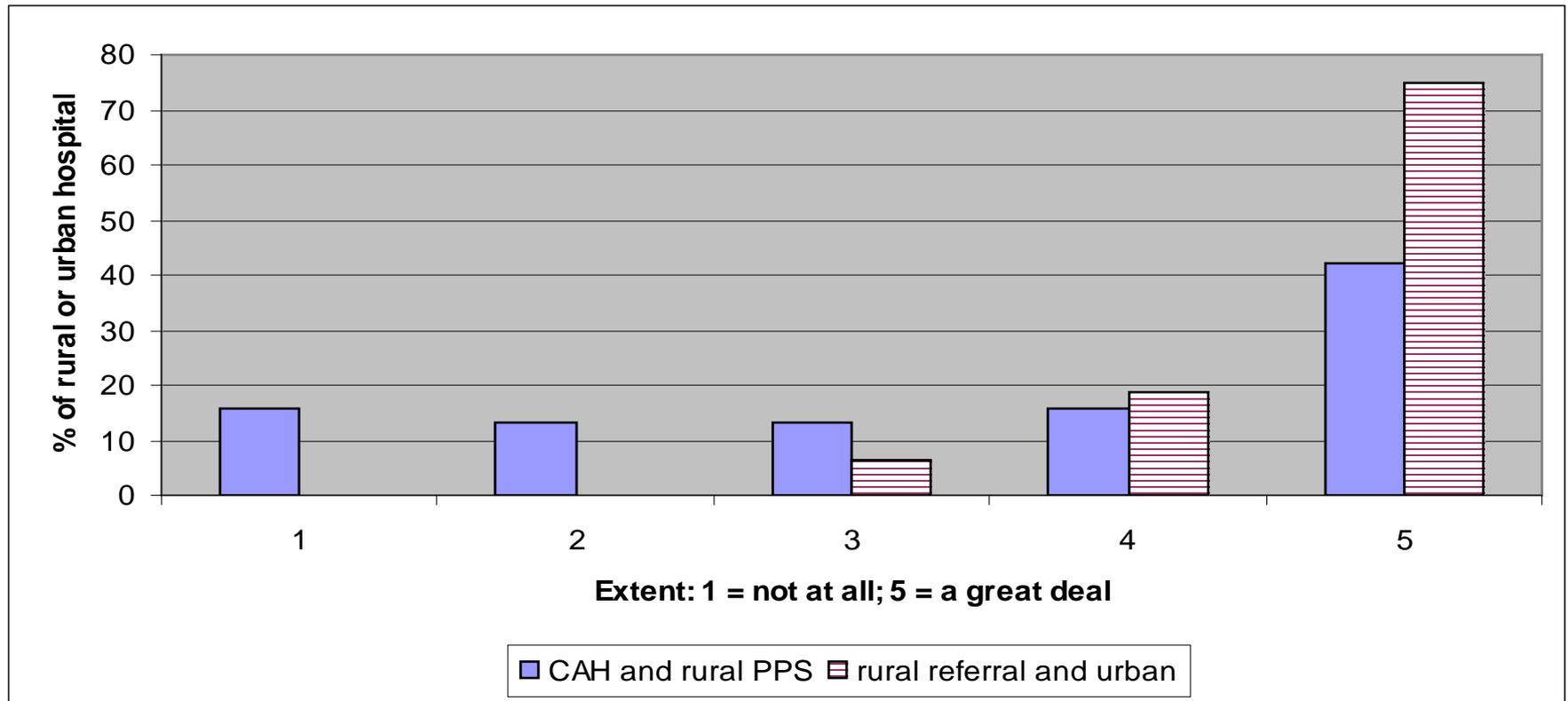
The Extent Hospitals Rely on ASPs for Clinical System Applications



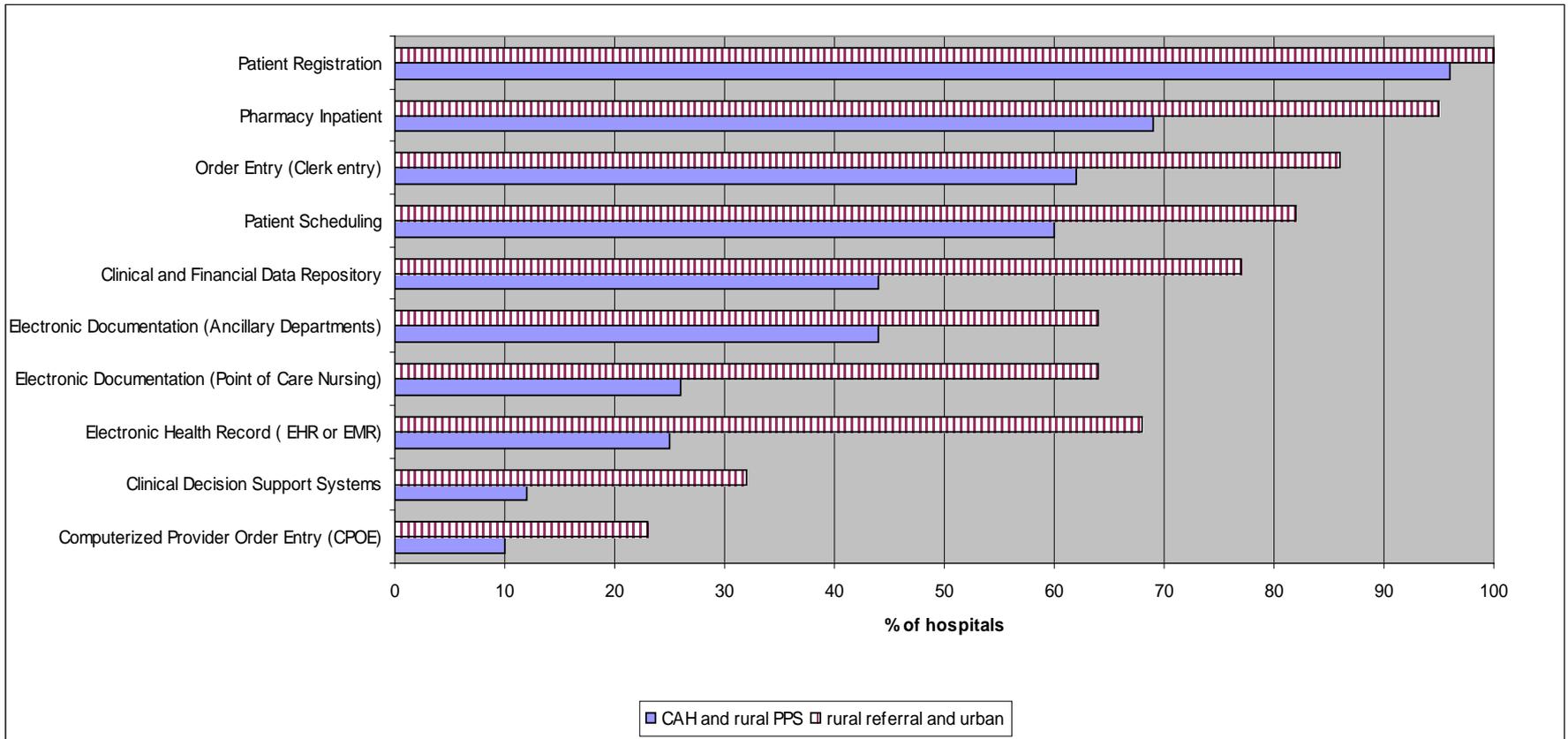
Percent of Hospitals that Are Part of a System or Network



“The extent that the system or network influences hospitals’ clinical IT system applications purchasing decisions”



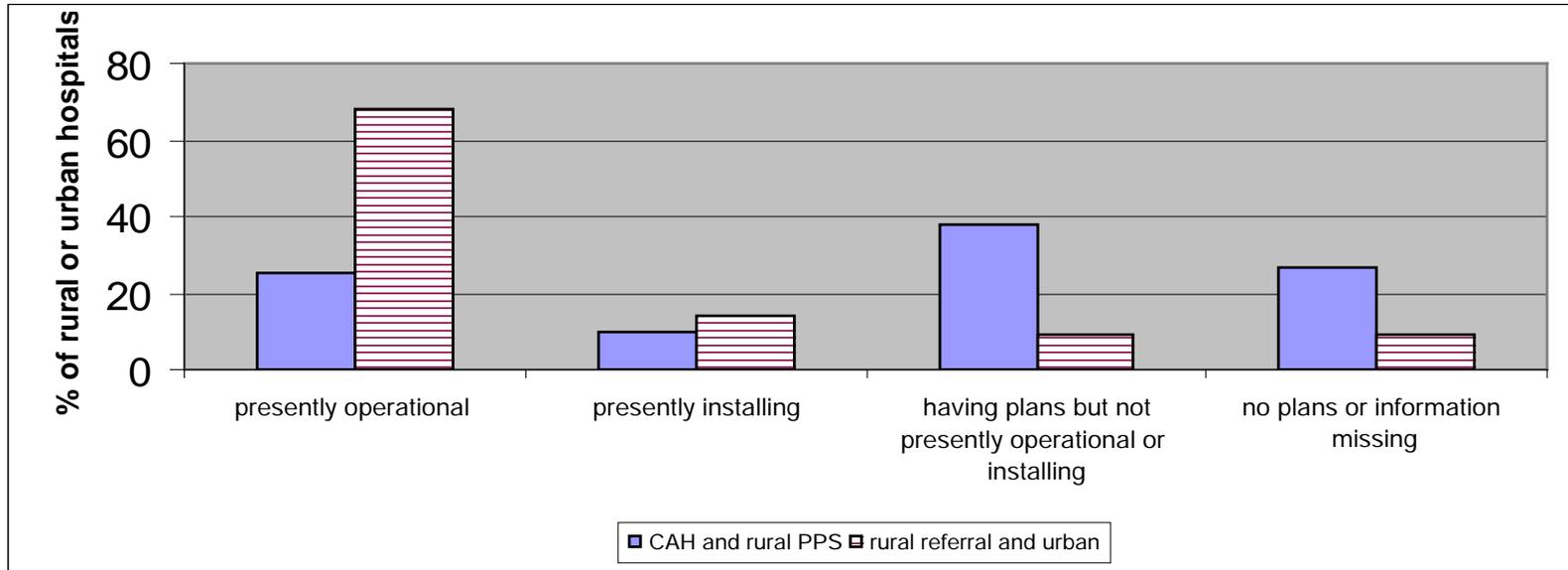
Sample of Presently Operational Systems in Rural and Urban Hospitals



Current HIT Capabilities in Rural Hospitals - Summary

- Rural hospitals report few HIT personnel (31% had none, 47% had 1-2 IT personnel).
 - Many rely on external consultants/subcontractors or outsourcing to support HIT applications.
 - Surprisingly, few use ASPs to meet their needs.
- While almost all rural hospitals have standard business and financial systems in place, few have clinical information systems.

Electronic Health Record (EHR or EMR)



Vendor Names	Rural	Urban
CPSI	12	2
Meditech	7	3
Dairyland	9	0
Cerner	1	5

EHR/EMR Follow-up Site Visits

- We conducted follow-up on-site interviews with the CEO, CIO/HIT Manager, Chief of Nursing, and Quality Director at each rural hospital that had EHR/EMR systems operational or are installing.
 - Purchases of EHR/EMR systems were largely made because of legacy systems, network influence, or wanting to stay current with other hospitals.
 - Hospitals had made little effort to track benefits and thus had little knowledge of benefits.

Formation of Iowa CAH HIT Interest Group

- We partnered with the Iowa Medicare Rural Hospital Flexibility Program (FLEX) to launch an Iowa CAH HIT Interest Group.
- The group is meeting bimonthly, identifying goals, and using the meetings as a forum for networking, education, and mutual growth.
- One of their goals is to assist us to develop a toolkit to help Iowa Critical Access Hospitals (CAH) develop HIT.

Development of HIT Toolkit

- The web-based toolkit is hosted on *Sharepoint* and includes:
 - information on emerging standards, readiness tools, national developments, vendors
 - a continuously updated inventory of clinical information systems in Iowa's CAHs, to help CAHs as they consider future HIT investments.
- The **Iowa CAH HIT Interest Group** provides information on their needs and feedback on each toolkit component as it is developed.

Future Directions

- The Iowa CAH HIT Interest Group feedback will be used to drive further toolkit enhancements.
- The toolkit is available only to members of the Iowa CAH HIT Interest Group currently but will eventually be widely available.
- FLEX, Iowa Hospital Association, Iowa Healthcare Collaborative, Iowa Foundation for Medical Care, and Iowa HIMSS are collaborators and work together to help Iowa hospitals develop HIT, such as:
 - FLEX offers Small Hospital Improvement Program grants
 - IFMC taskforce assists rural hospitals assess HIT needs