



2013 CANCER CENTER BUSINESS SUMMIT

Transforming Oncology
Through Innovation

Actionable Data Analytics in Oncology

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**A Thank You to the following organizations
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“Actionable Data Analytics in Oncology”**

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Objectives and methodology

Objectives

- Define data capabilities of oncology providers
- Understand impact of data analytics on clinical and economic decision making
- Highlight what good looks like

Methodology

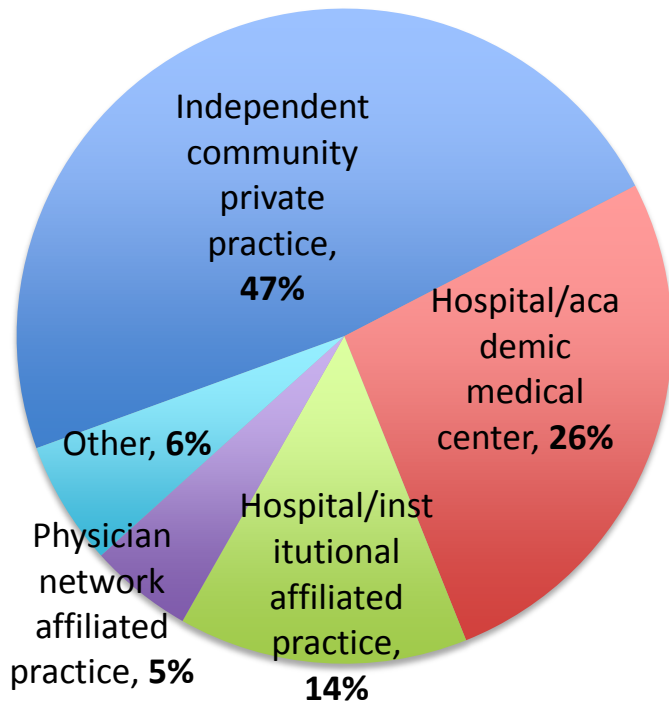
- Online questionnaire summer 2013
- In depth interviews for qualitative detail with:
 - CIOs
 - Senior Advisors
 - Service Line Directors
 - Industry consultants

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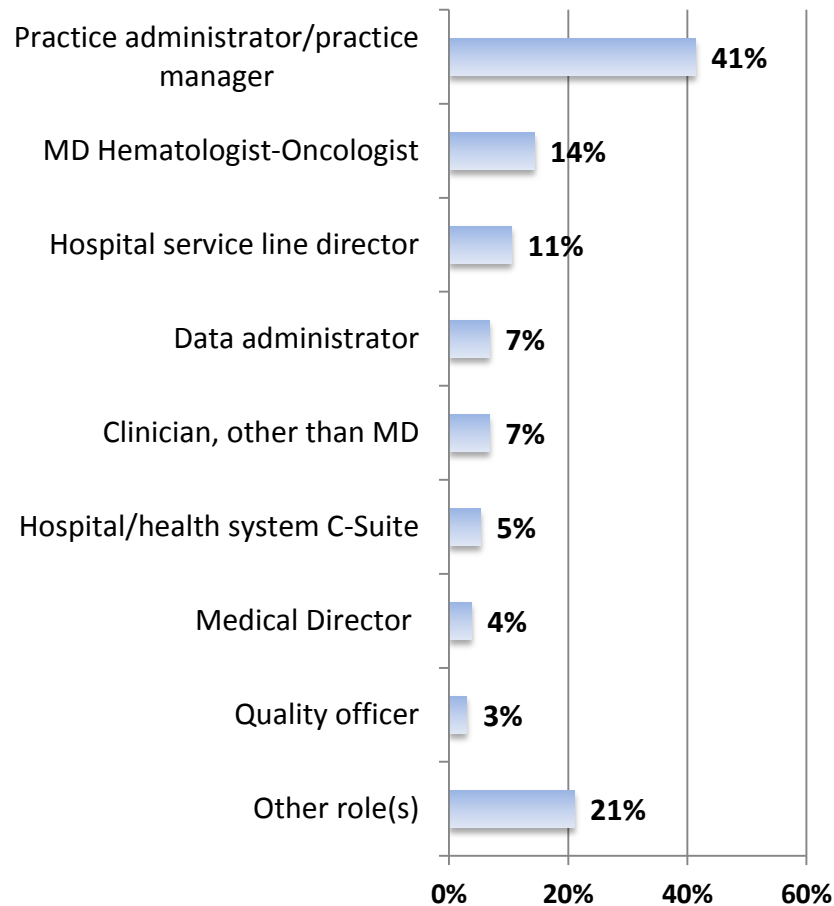
- **General Background**
- State of Data Capabilities
- What Good Looks Like

Respondents Represented Diverse Practice Settings and Responsibilities

Practice Setting



Job Titles and Roles



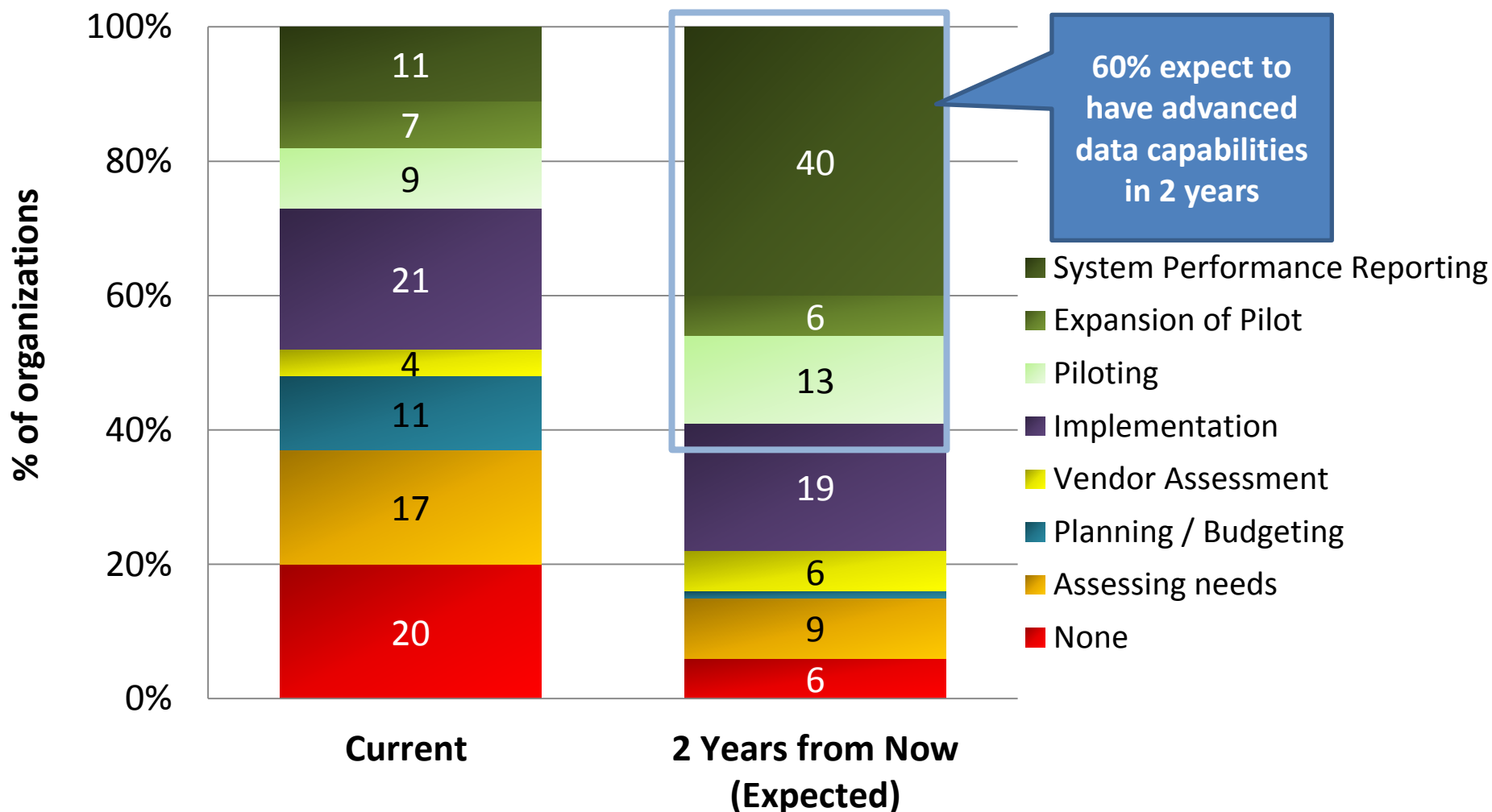
% of respondents

n=133

Q: Which of the following best describes your practice setting/organization?

Q: Please select the title(s)/role(s) that best describe your **current** position within your practice/organization. Please check all that apply.

37% of respondents Oncology Data Capabilities are still in their Infancy



n=133

Q: How advanced are your organization's current oncology data capabilities? Q: At which phase do you expect your oncology data capabilities to be 2 years from now?

Future will bring broader access for payers and providers

“Providers sit on a lot of data, and they need to capture it and analyze it. Once they start to export it – to payers, patients -- that’s hugely valuable.”

– Director of Operations, Oncology Service Line

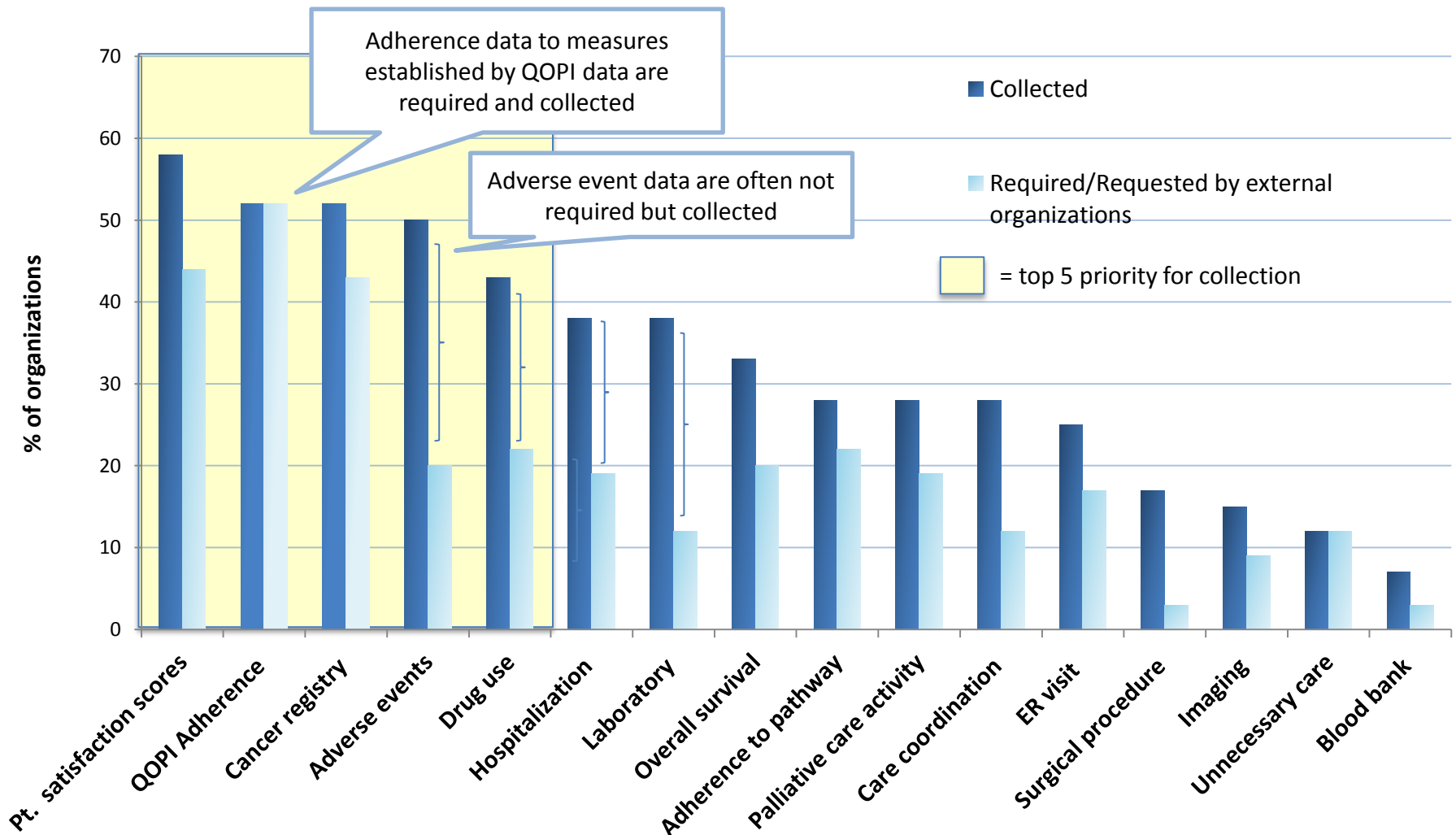
“Providers must move forward with data. Everyone expects it -- payers now, patients soon to follow. Patients are becoming more engaged as owners of their data.”

– CIO

“We are on the cusp of disruption. Data will be widely available to patients and providers, and those providers that are aggressive in embracing this can differentiate and win.”

– Senior advisor to providers and HIT companies

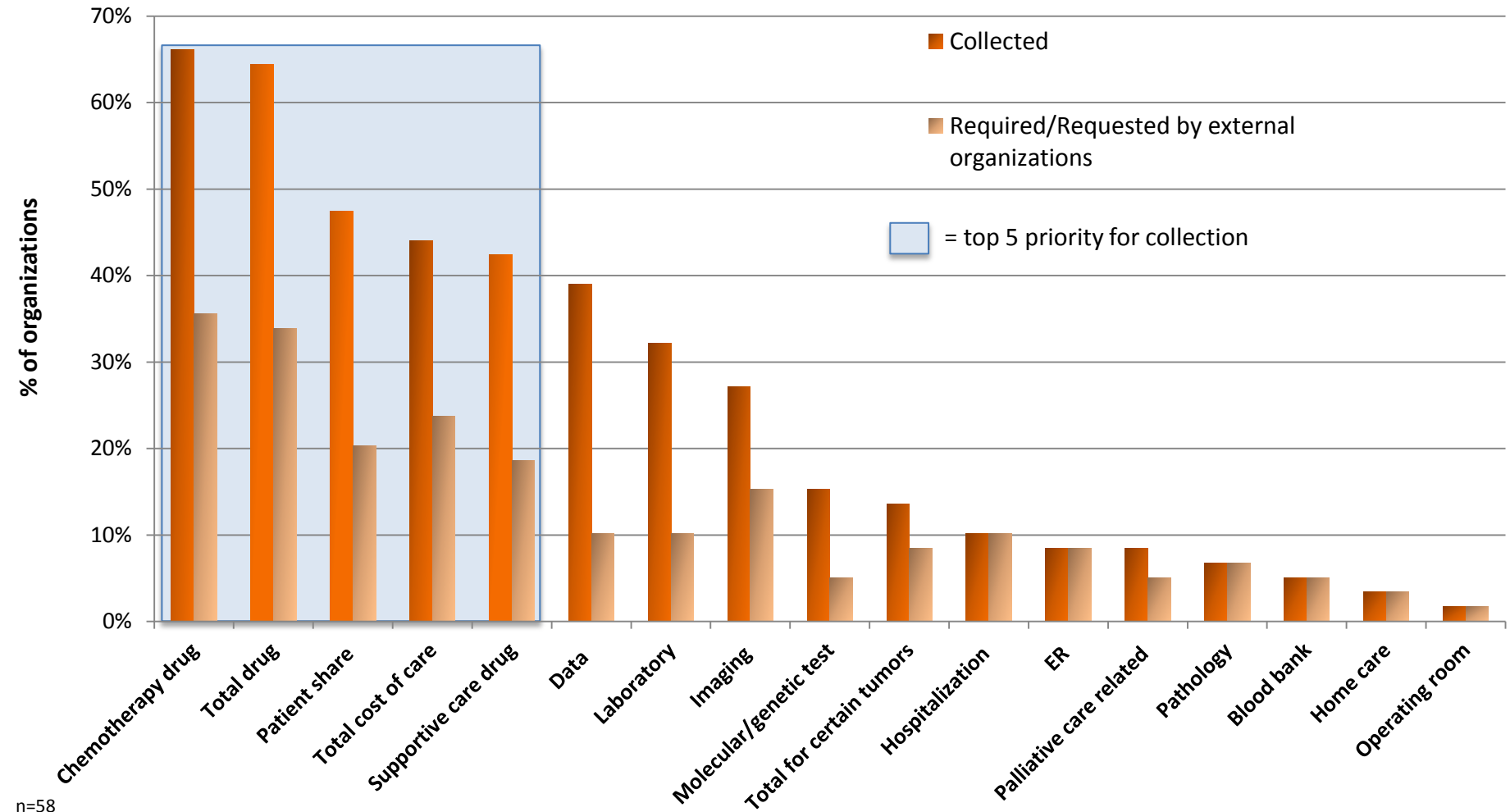
Internal collection can be driven by organizational priorities not external requirements



n=65

Q: What **clinical data** in oncology are you tracking? Please check all that apply. Q: What **clinical data** in oncology are you tracking as **requested/required by external organizations**? Please check all that apply. Q: What are the top 5 **clinical data** in oncology that you've prioritized?

Despite talk regarding ER and hospitalization data, very few are collecting

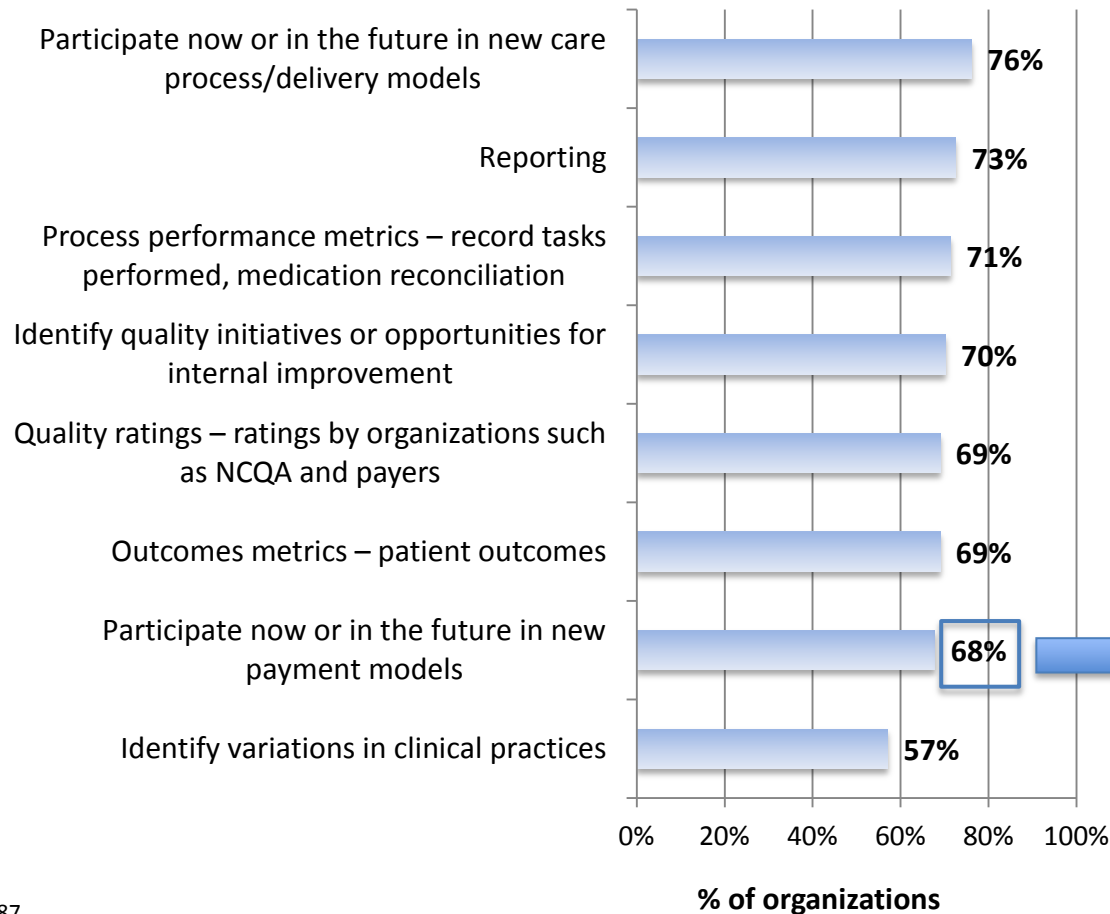


n=58

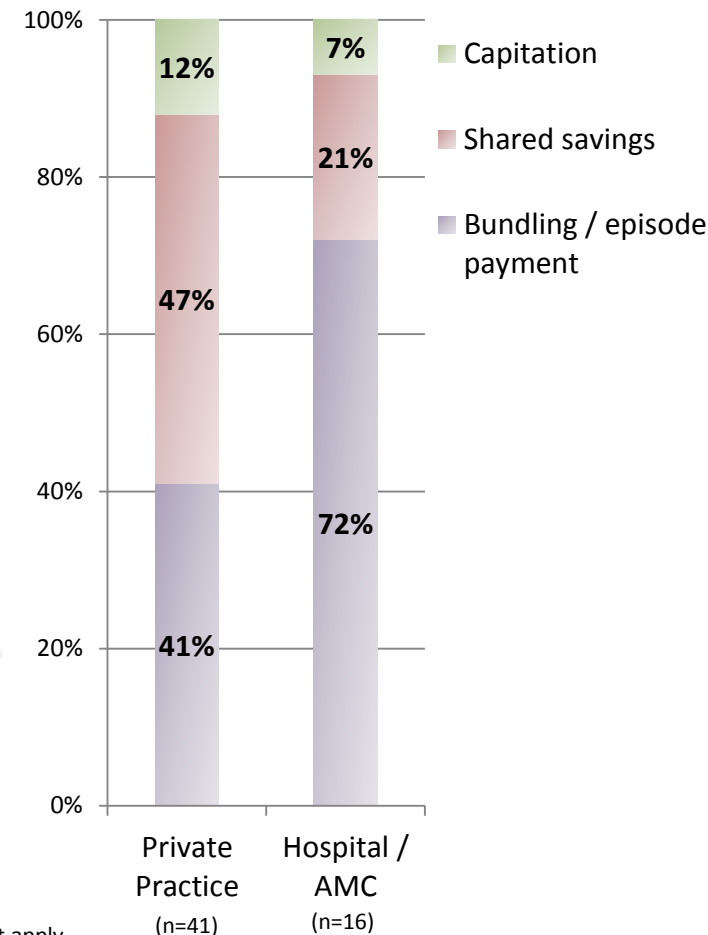
Q: What **economic data** in oncology are you tracking? Please check all that apply. Q: What **economic data** in oncology are you tracking as **required/requested by external organizations**? Please check all that apply. Q: What are the top 5 **economic data** in oncology that you've prioritized?

Desire to Participate in new care process/delivery models are drivers for having oncology data capabilities

Overall Main Drivers



Payment Model Drivers



n=87

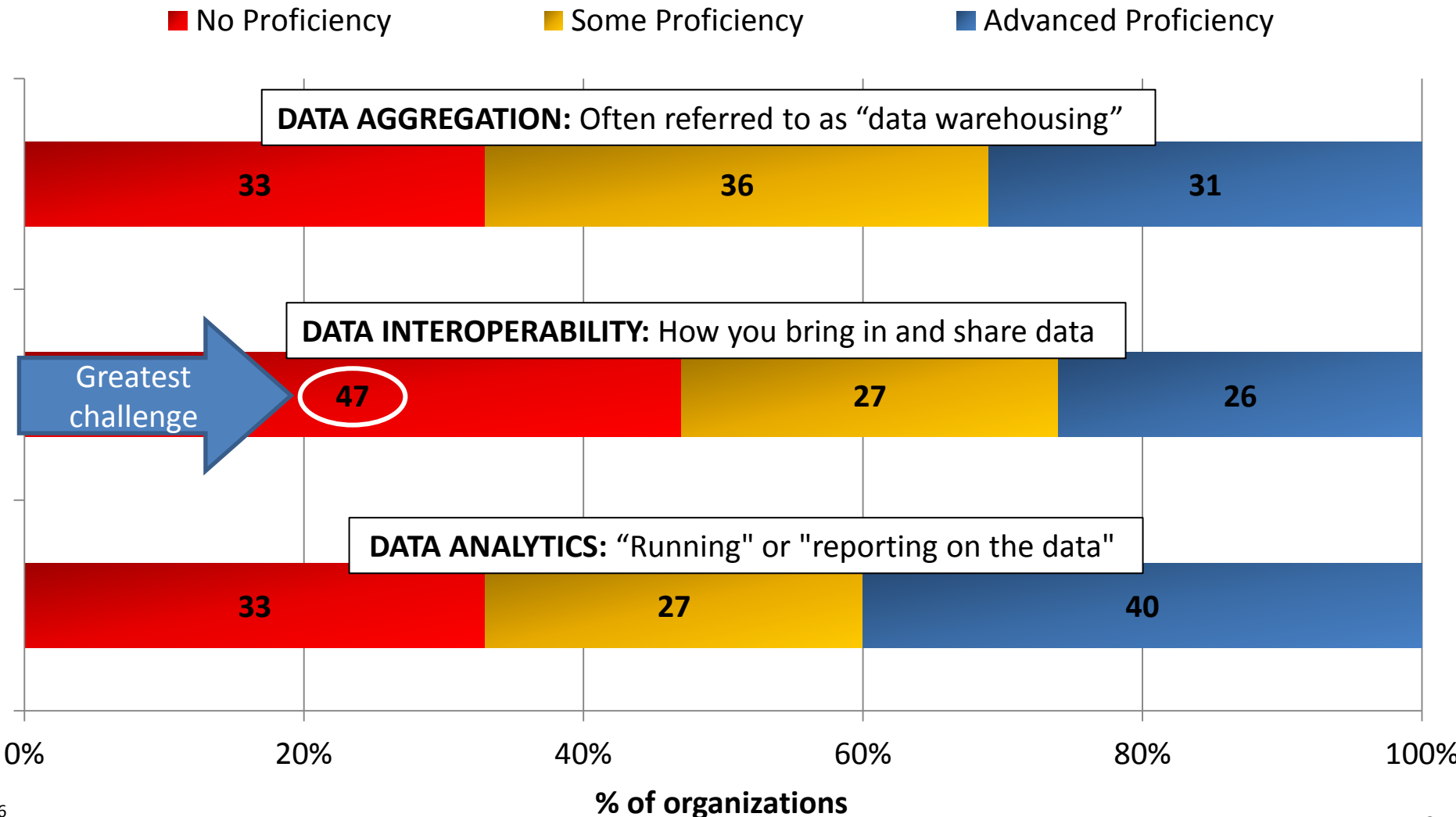
Q: What are the **main reasons/drivers** for having oncology data capabilities within your organization? Please select all that apply.

Q: Which of the following payment redesign methodologies is a top driver?

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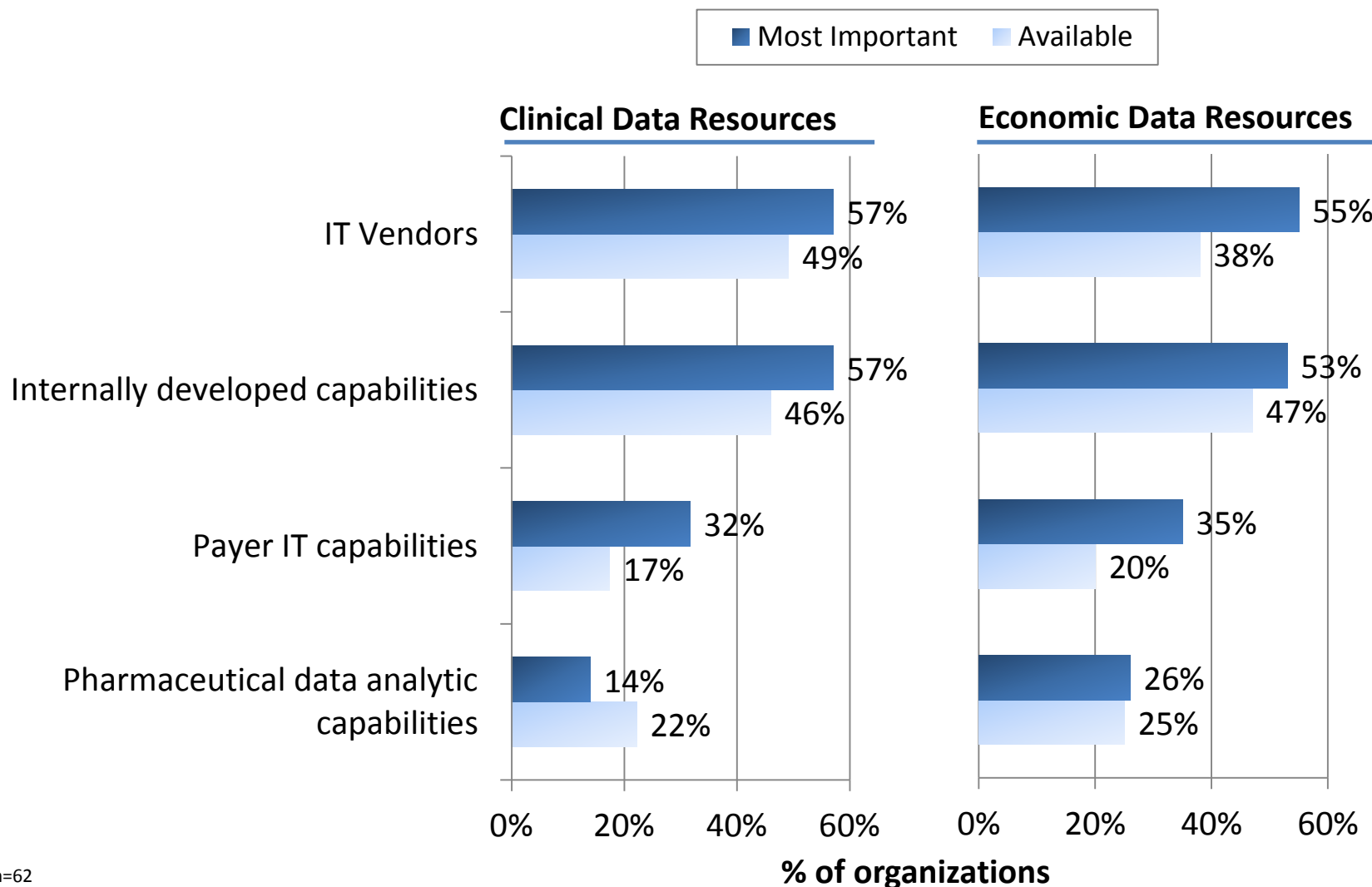
- General Background
- **State of Data Capabilities**
- What Good Looks Like

Current proficiency in data capabilities -- 1/3 to 1/2 have no proficiency in analyzing, interoperating, or aggregating data



Q: How advanced is your organization's data capabilities in oncology along each of these segments? Scale of 1 to 5, where 1 = No proficiency, and 5 = Advanced proficiency.

IT vendors and home grown capabilities most important but gap exists in availability

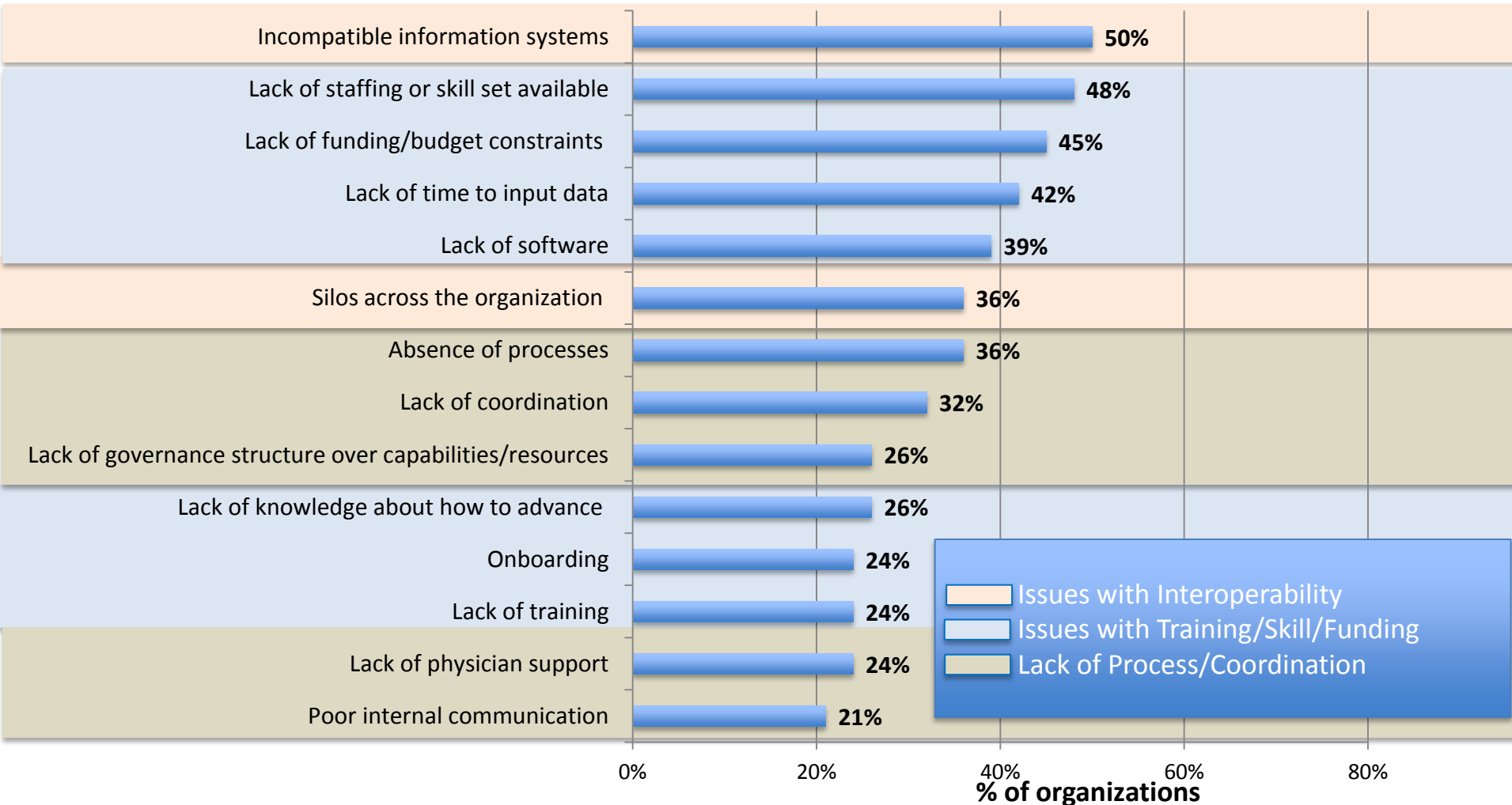


n=62

Q: Which resources are **most important** for the advancement of your **clinical/economic** data capabilities?

Q: Which resources have been made available to you or have you accessed for clinical/economic data capability advancement?

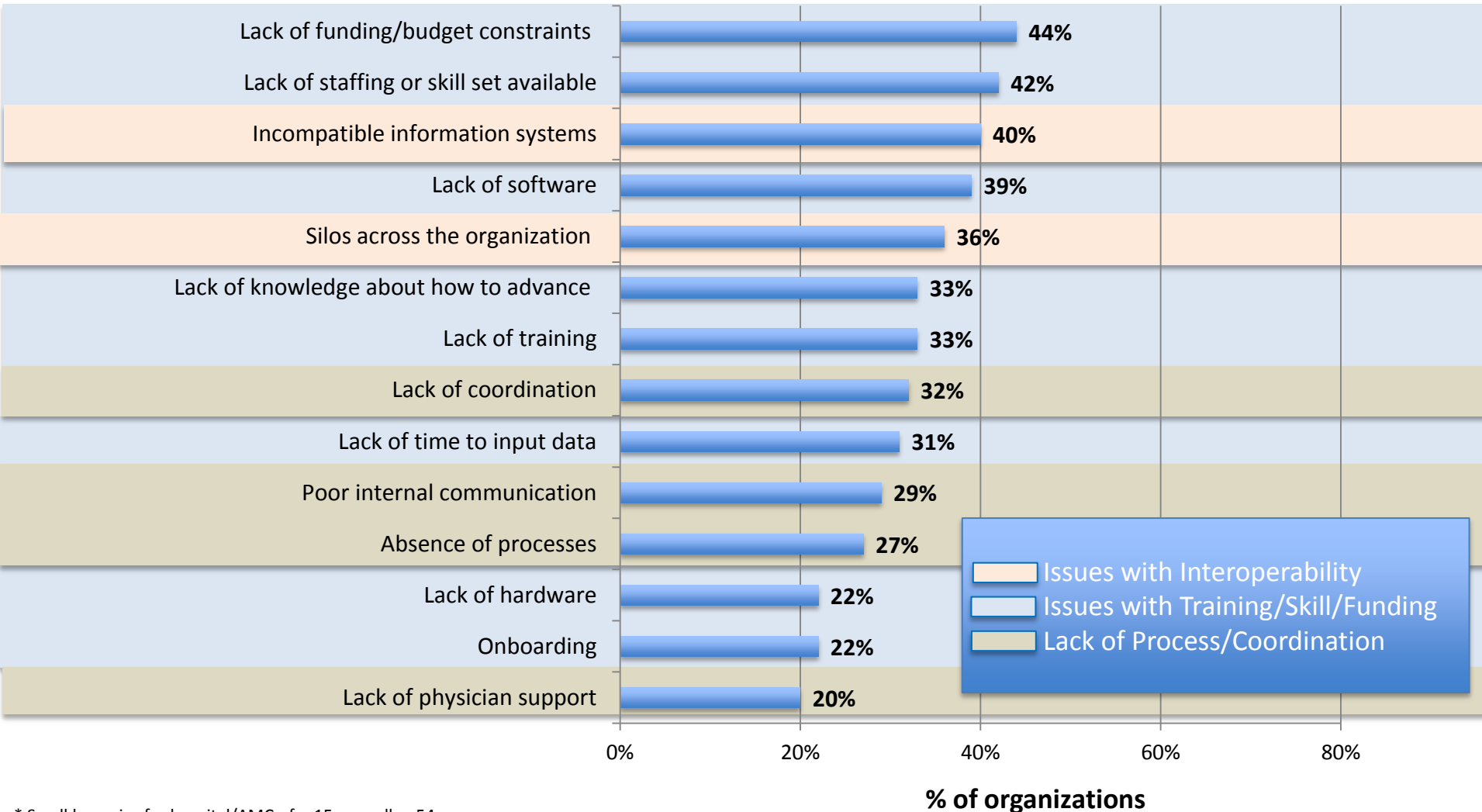
Barriers to advancement of clinical data capabilities – interoperability and lack of internal resources...



n=58

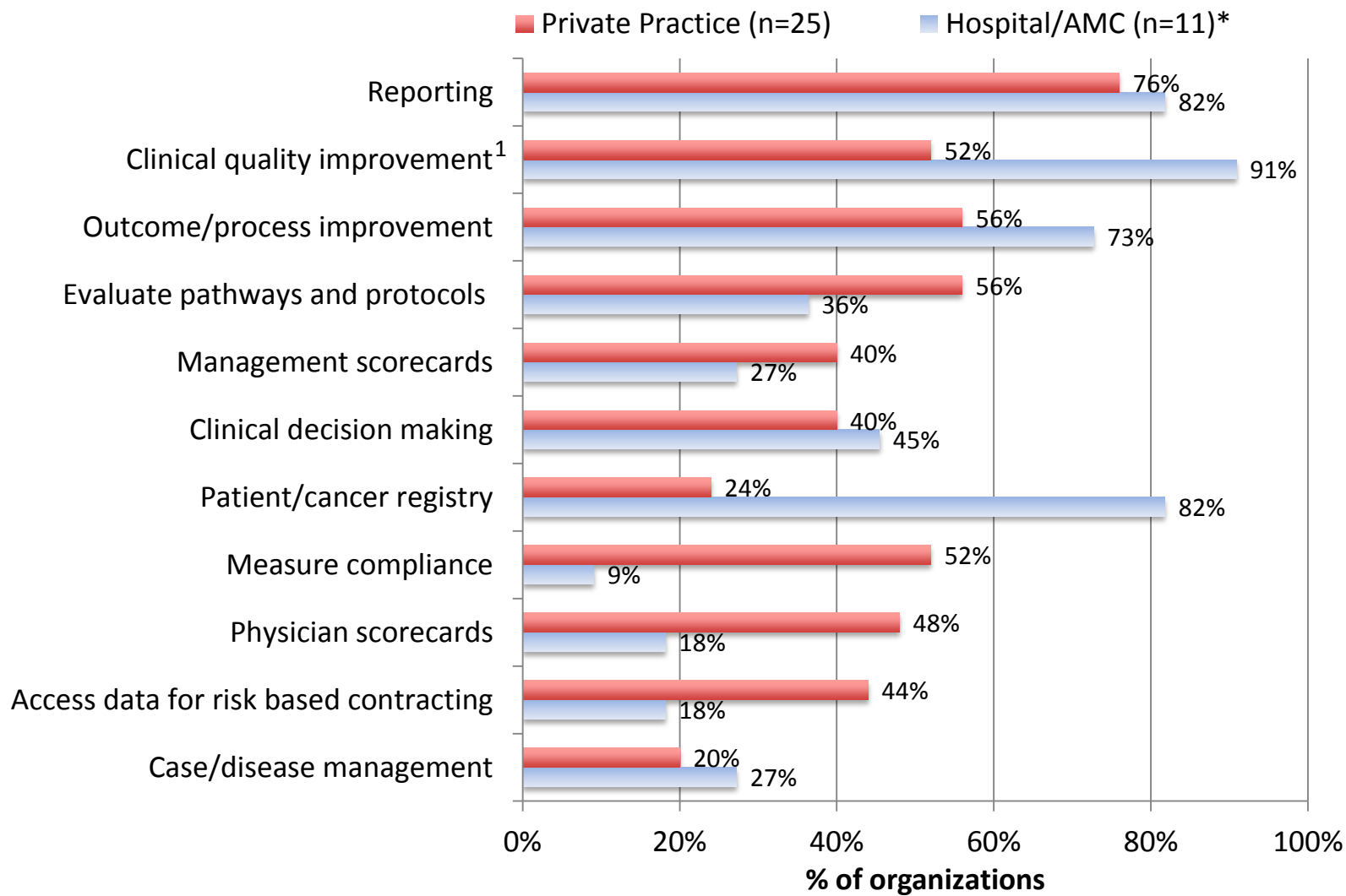
Which of the following are barriers to the advancement of the **clinical** data capabilities within your organization? Please check all that apply

Funding and internal skills top barriers to economic data capabilities



* Small base size for hospital/AMC of n=15, overall n=54
Which of the following are barriers to the advancement of the **economic** data capabilities within your organization? Please check all that apply

Majority Utilize Oncology Data for reporting, quality and outcomes



¹ Most commonly related to market data (e.g., origin of new patient consults, referring MD information, patient sat scores, etc.)

*Small base size of n=11 for Hospital/AMC, n=25 for Private Practice

Q: In which of the following ways is the oncology data utilized? Please check all that apply.

Difficult to develop capabilities to obtain total cost of care and hospital utilization

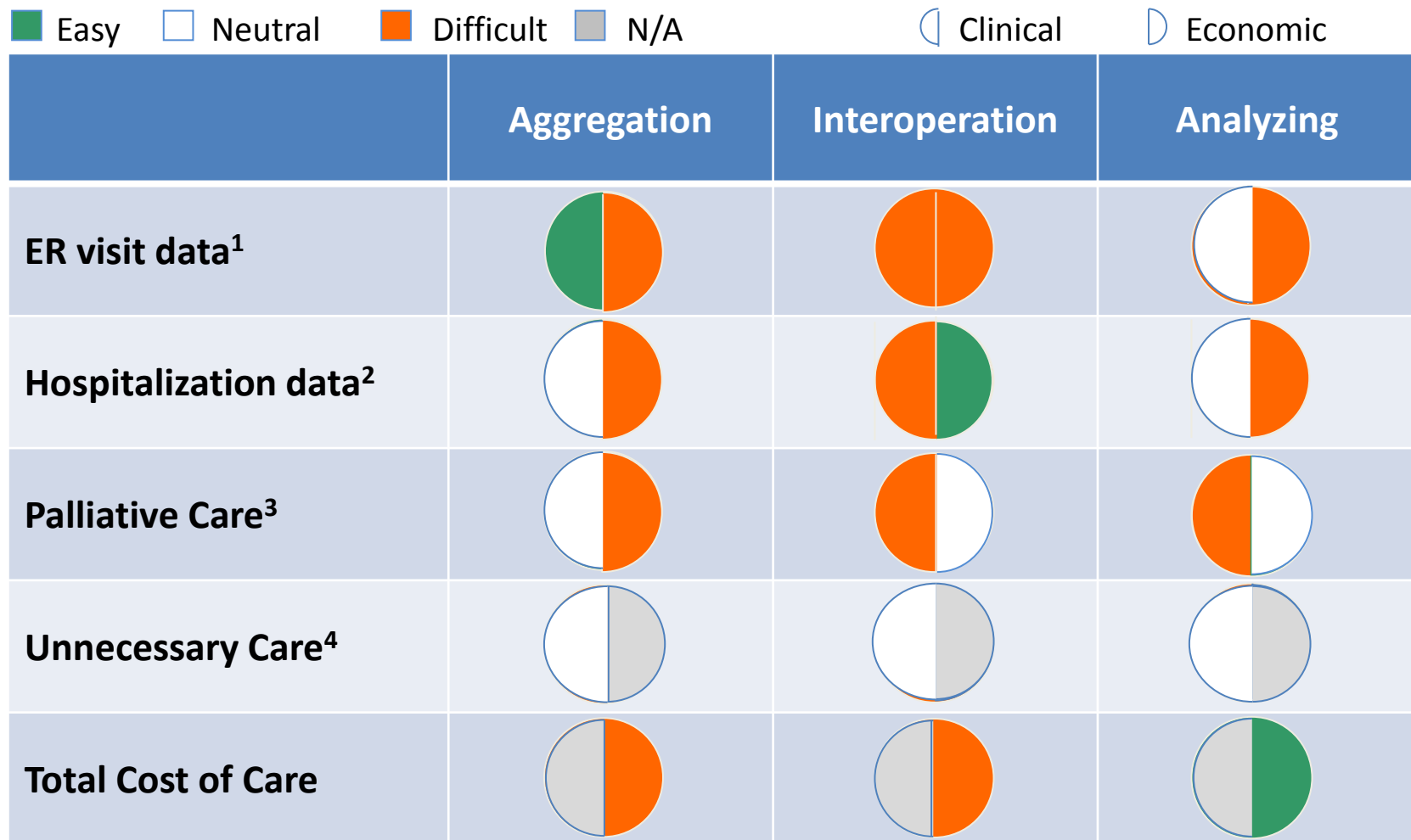
Relatively easy to form data capabilities related to:

- Patient data (satisfaction and costs)
- Overall survival by tumor type
- Drugs (active and supportive agents)
- Surgical procedures / operating room
- Adherence (to measures established by QOPI and pathways)
- Adverse events
- Cancer registry
- Imaging
- Laboratory
- Blood Bank

Difficult to establish data capabilities for:

- Emergency Room
- Hospitalization
- Palliative care
- Unnecessary care
- Total cost of care (entire service line and certain tumor types)

Difficulties in economic data capabilities are in aggregation whereas for clinical data more about interoperability



1 - Examples include Frequency of visits, reasons for visit, percent admitted, timing after chemotherapy administration, etc.; 2 - Examples include LoS by tumor type, admitting diagnoses, etc.; 3 - Examples include initiation of advanced care planning by stage, number of days on hospice, etc.; 4 - Examples include readmission rates, ER visits after office visit, etc.

Challenges in data collection and EHR platforms

- Many organizations face challenges in aggregation or data warehousing
- Aggregation challenges often stem from data entry issues
- Organizations are often unable to capture data in discrete fields

“Getting the providers to input the data can be half the battle”

– Director, Oncology Service Line

- Many platforms are not designed to collect data – tend to be systems that are operational

“EMRs are really operating systems and don’t have DNA in warehousing”

– National KOL in HIT

Data interoperability and data definitions challenge to oncology providers

- Oncology organizations experience the greatest lag in interoperability
- System compatibility and data definitions are main issues

“There is a strong need for a universal data dictionary in oncology”

– Oncology data management specialist

“A lot of data is already there – it’s grabbing and mapping it that’s the headache”

– Oncology Director

“We can’t continue to build applications without first building the platform on which they need to work together”

– IT vendor

Data analytics – Issues less in IT capabilities and more in staffing and processes

- Challenges with analytical capabilities in data in oncology are generally due to a lack of resources -- notably staffing and process training

“We need data people who understand the issues in oncology”

– Oncology management consultant

“If the human processes underneath the technology aren’t right, no amount of technology is going to give you the answers you need”

– CIO, large academic medical center

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- General Background
- State of Data Capabilities
- **What Good Looks Like- Best Practices**

Best Practices in tracking critical data

What they look like

- Integrated delivery network
- ~700 chemo and ~1000 rad onc patients per month
- ~400 new oncology patients per month

What they track

- Both in- and outpatient view
- Operational data (e.g., time in, time out) tied to revenue cycle management
- Oral and IV drug usage by stage
- Adherence to pathways
- Readmissions data
- Referral trends by source, location, and diagnosis

Best Practices -Commitment to a strategic vision

Key success factors

- Investment in internal software development capabilities to customize IT platform
- Investment in talent that understands oncology and what generated data means
- Focus on care processes to improve:
 - Care coordination
 - Patient throughput, especially new patients
 - Metrics

Strong leadership is critical



Best Practices - Continuous Quality Improvement Focus

Ongoing challenges

- Siloing
- Talent recruitment
- Data quality (e.g., capture of most important information)
- Training
- Interoperability with larger, external organizations (e.g., payers)

