Data Analytics Update

Health IT Policy Committee Meeting
January 14, 2014

Putting the **I** in Health**IT**

www.HealthIT.gov

Hospital and Professional Progress to Meaningful Use

Hospital progress to Meaningful Use, November 2013

Hospitals (n=5011): Attested MU 83%, AIU only 7%, Registered EHR Incentive Program 3%, Enrolled REC 2%, Not participating 5%

Beds (n=790k): Attested MU 89%, AIU only 6%

Medicare discharges (n=11m): Attested MU 92%, AIU only 5%

Legend: ■ Attested MU ■ AIU only ■ Registered EHR Incentive Program ■ Enrolled REC ■ Not partcipating
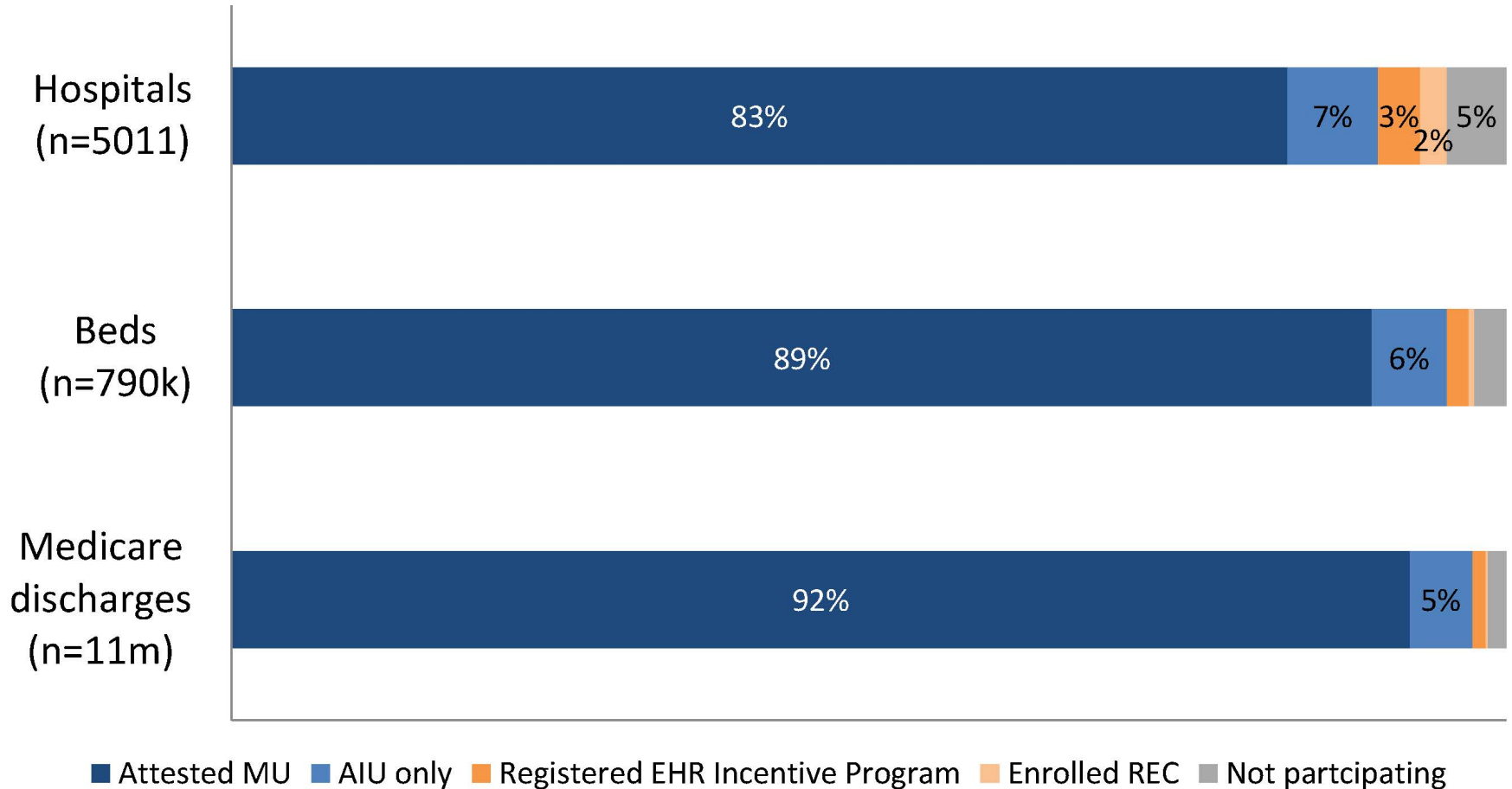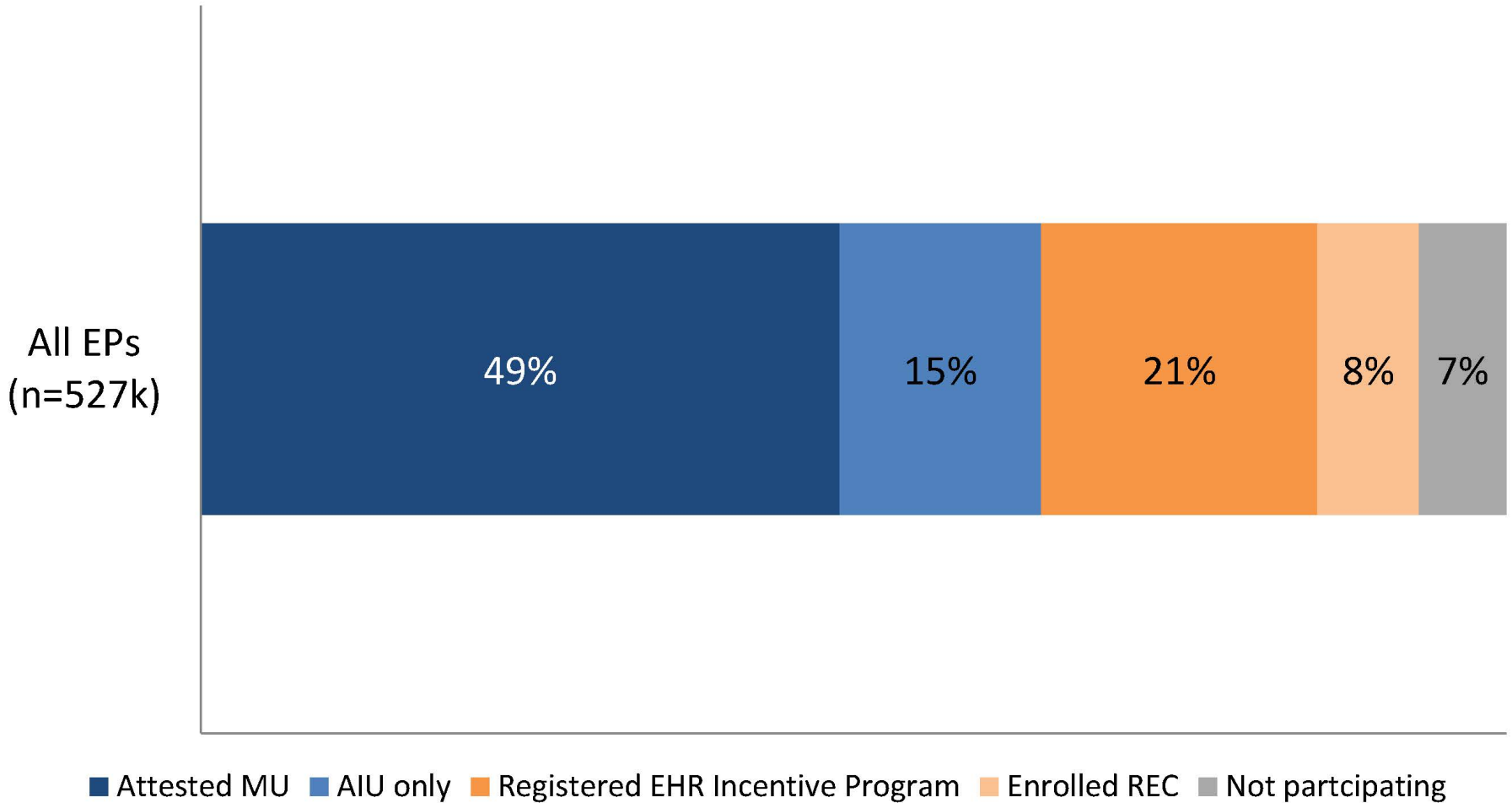
Note: Categories are hierarchical and mutually exclusive. For example, a hospital that has attested and received AIU payment and is enrolled with an REC is counted only in the Attested MU category. See Data Sources and Definitions slides for more details.

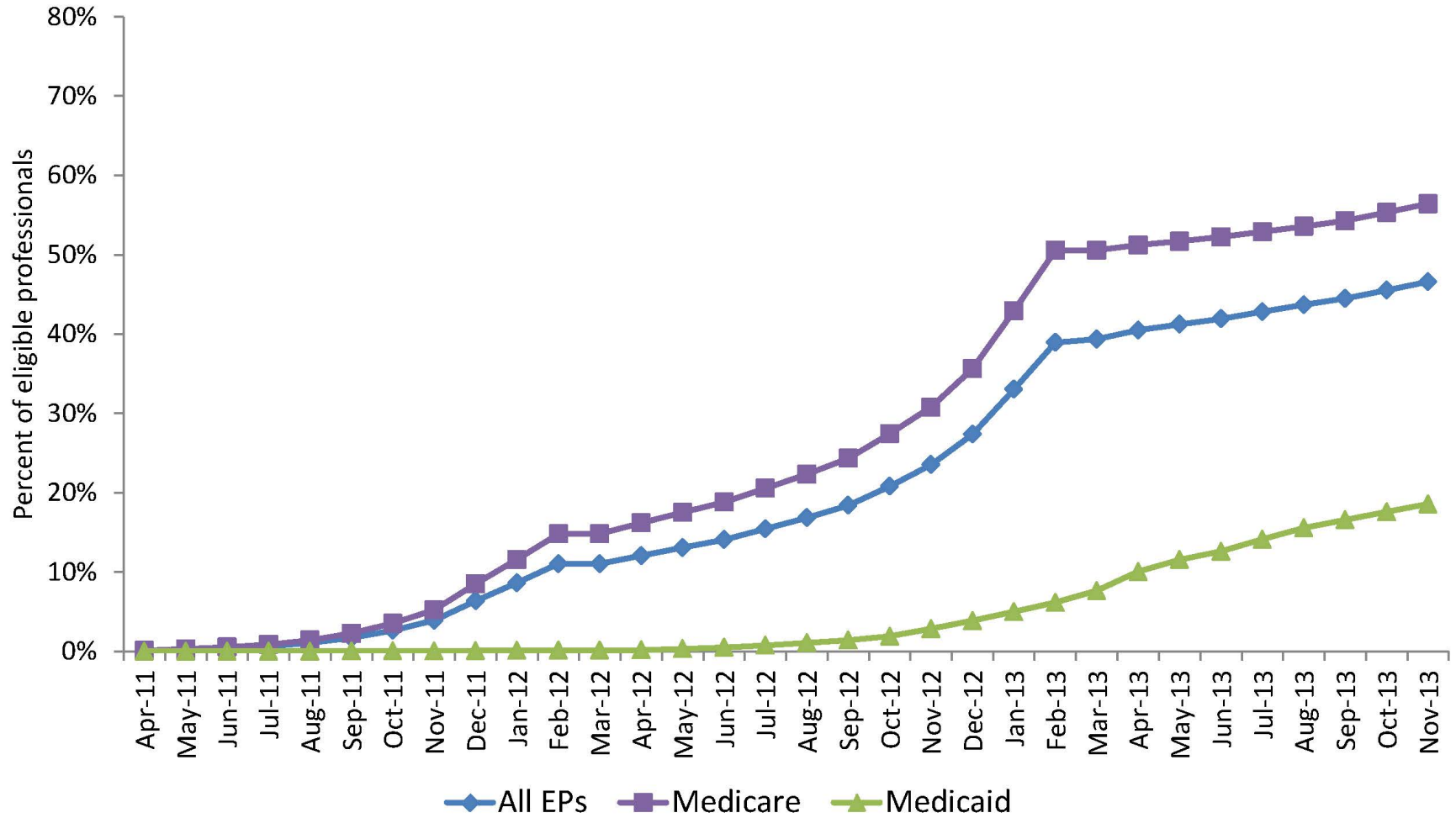# Hospitals attesting to Meaningful Use, through November 2013
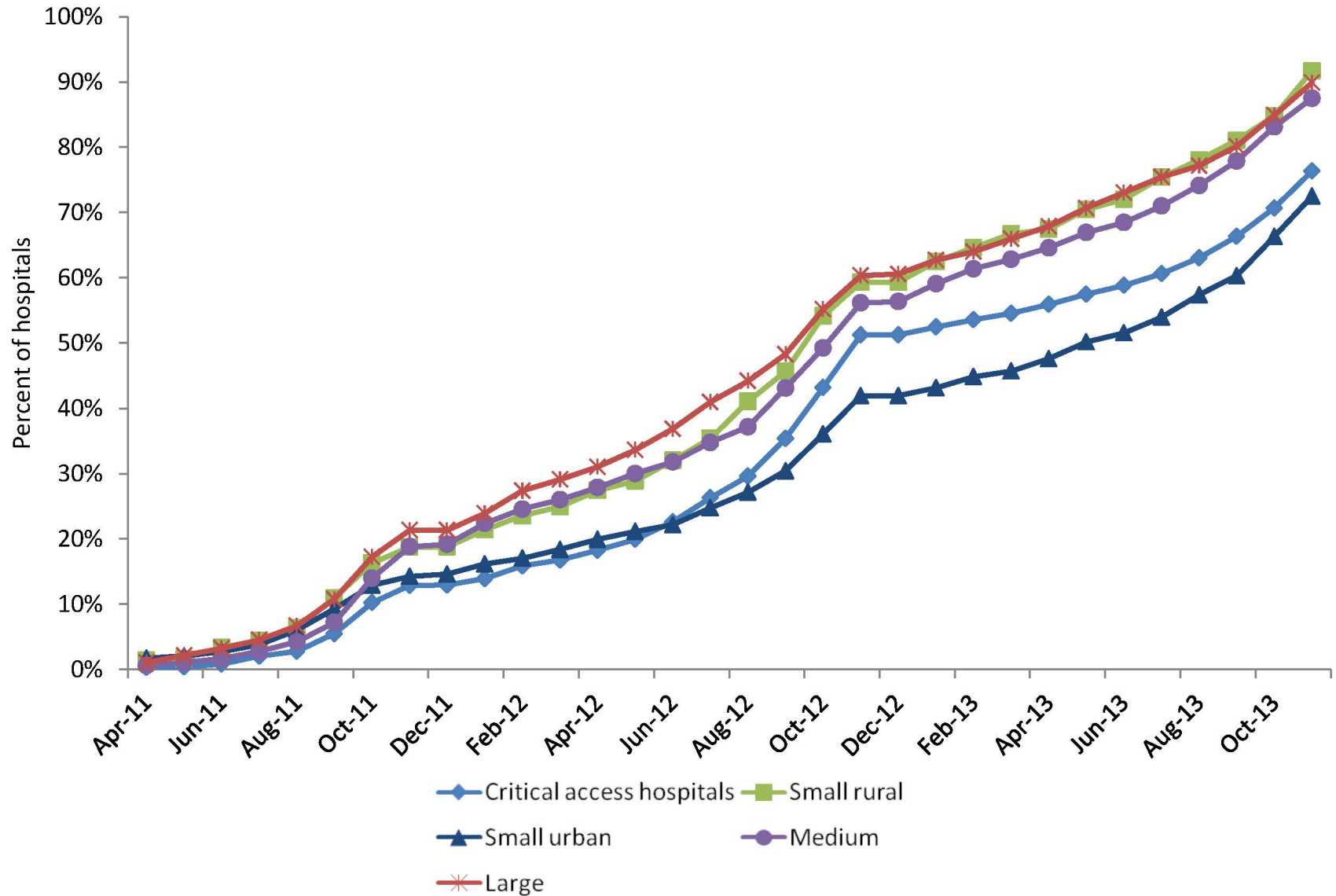
Note: Large = 400+ staffed beds; Medium = 100-399 staffed beds; Small = <100 staffed beds. Rural = non-metropolitan; Urban = metropolitan.
See Data Sources and Definitions slides for more details.

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Eligible professional progress to Meaningful Use, November 2013

Note: Categories are hierarchical and mutually exclusive. For example, a professional that has attested and received AIU payment and is enrolled with an REC is counted only in the Attested MU category. See Data Sources and Definitions slides for more details.

Professionals attesting to Meaningful Use, through November 2013

Line chart titled "Professionals attesting to Meaningful Use, through November 2013." The vertical axis is labeled "Percent of eligible professionals" ranging from 0% to 80% in 10% increments. The horizontal axis spans Apr-11 through Nov-13. Three series are plotted: All EPs (blue), Medicare (purple), and Medicaid (green). By Nov-13, Medicare reaches about 56%, All EPs about 47%, and Medicaid about 18%.

2014 Certification update

Hospitals attested to stage 1 MU by 2014 edition certification status of primary vendor

Note: Primary EHR vendors are the vendors whose products are certified to the most 2011 Edition certification criteria in the provider's EHR system (in cases where a provider used certified products from multiple vendors to attest).
Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).

Hospitals attested to stage 1 MU by 2014 edition certification status of primary vendor
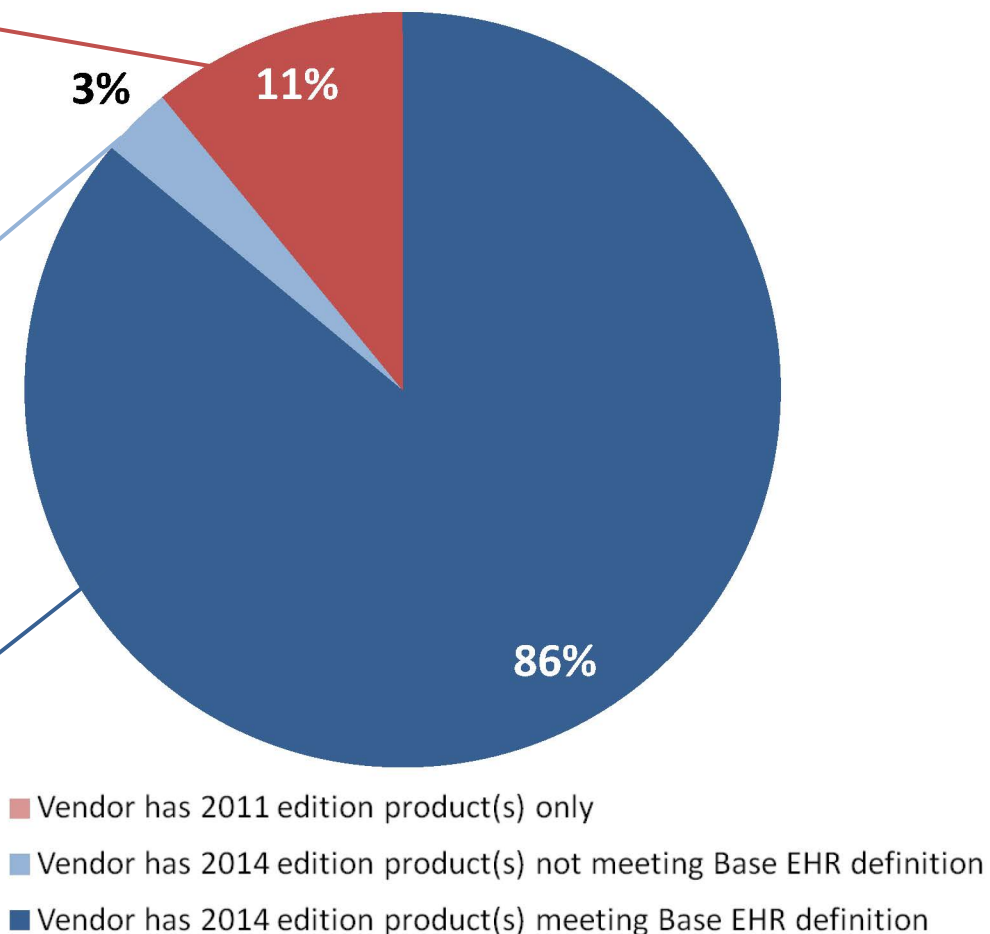
Vendor has 2011 edition product only:

Healthland, Inc.	5%
Indian Health Service	1%
Prognosis Health Information Systems	1%
QuadraMed Corporation	1%
Other (43 vendors, <1% each)	4%

Vendor has 2014 edition product not meeting Base EHR definition:

MEDHOST	1%
Health Care Systems, Inc.	1%
Other (5 vendors, <1% each)	1%

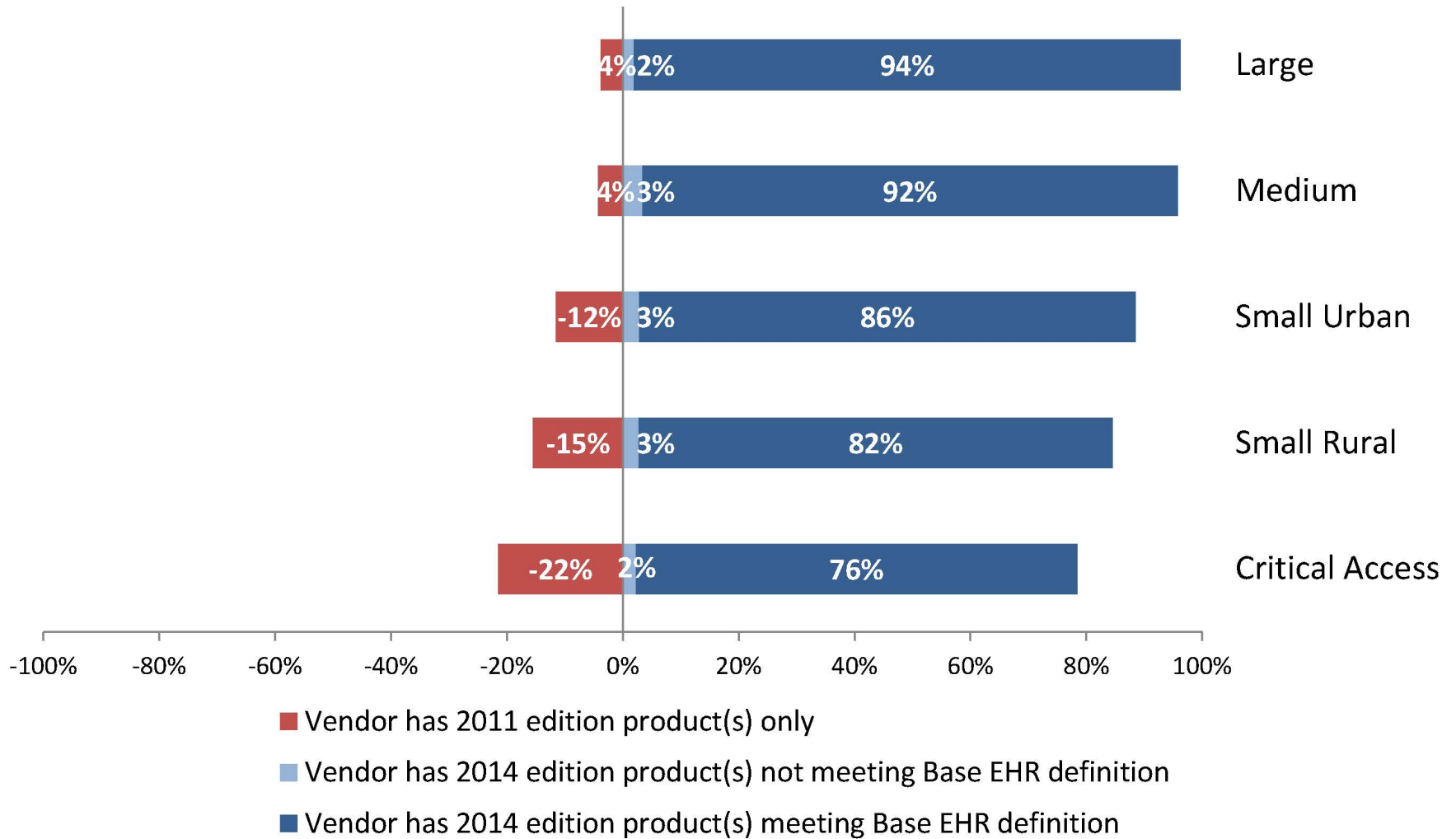**Vendor has 2014 edition product meeting Base EHR definition:**

MEDITECH	21%
Cerner Corporation	14%
Epic Systems Corporation	14%
CPSI (Computer Programs and Systems), Inc.	11%
McKesson	10%
Healthcare Management Systems, Inc.	6%
Allscripts	4%
Siemens Medical Solutions USA Inc	5%
NextGen Healthcare	1%
GE Healthcare	<1%

3% **11%**

86%

■ Vendor has 2011 edition product(s) only
■ Vendor has 2014 edition product(s) not meeting Base EHR definition
■ Vendor has 2014 edition product(s) meeting Base EHR definition

Note: Primary EHR vendors are the vendors whose products are certified to the most 2011 Edition certification criteria in the provider's EHR system (in cases where a provider used certified products from multiple vendors to attest).
Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).

Hospitals attested to stage 1 MU by size/type/location and 2014 edition certification status of primary vendor

Large: 4% 2% 94%
Medium: 4% 3% 92%
Small Urban: -12% 3% 86%
Small Rural: -15% 3% 82%
Critical Access: -22% 2% 76%

■ Vendor has 2011 edition product(s) only

■ Vendor has 2014 edition product(s) not meeting Base EHR definition

■ Vendor has 2014 edition product(s) meeting Base EHR definition

Note: Primary EHR vendors are the vendors whose products are certified to the most 2011 Edition certification criteria in the provider's EHR system (in cases where a provider used certified products from multiple vendors to attest).
Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).
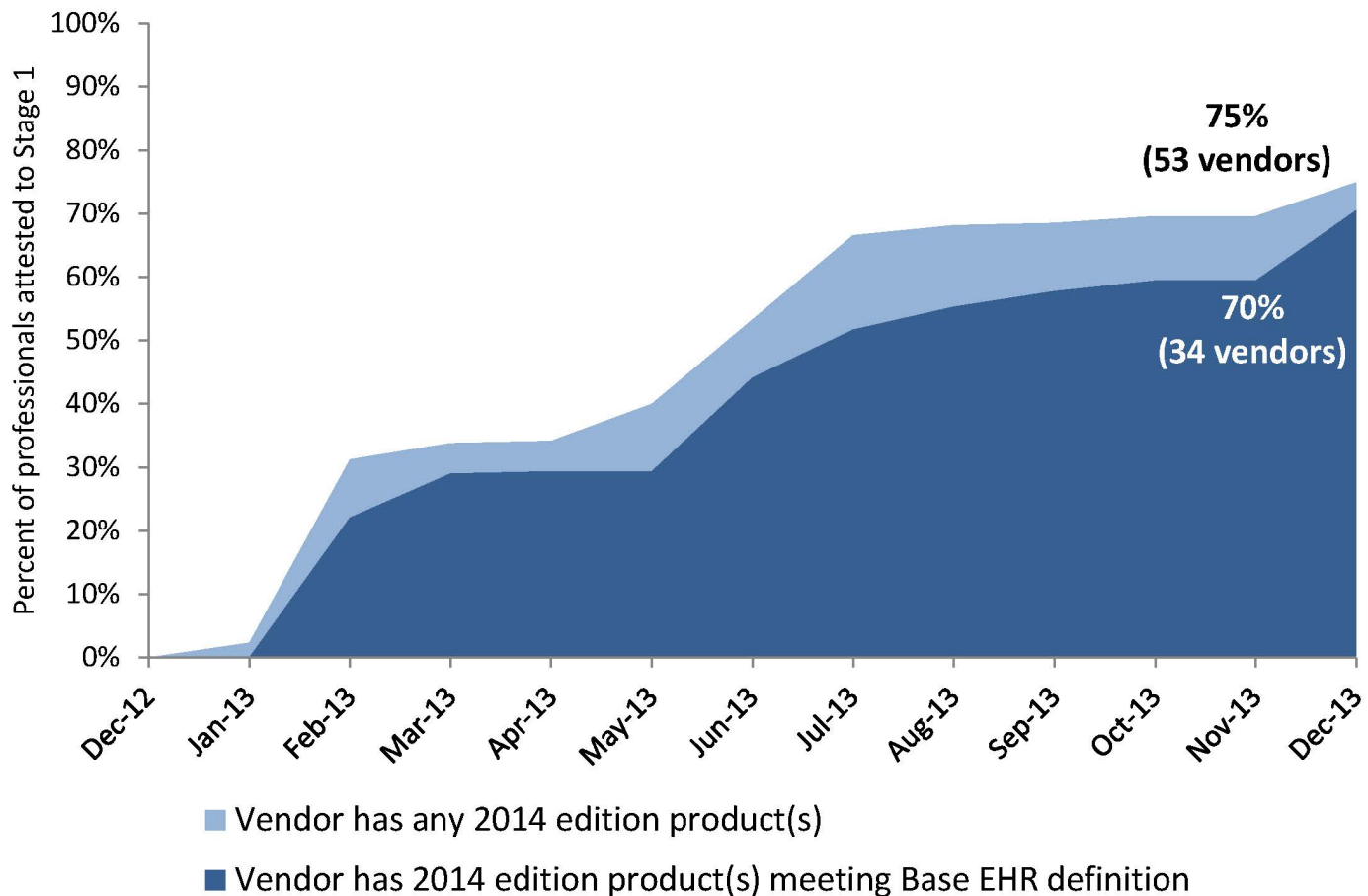
Professionals attested to stage 1 MU by 2014 edition certification status of primary vendor

Percent of professionals attested to Stage 1

75%
(53 vendors)

70%
(34 vendors)

75% of EPs that have attested to Stage 1 used a primary vendor that had any 2014 Edition product as of 12/31/13

■ Vendor has any 2014 edition product(s)

■ Vendor has 2014 edition product(s) meeting Base EHR definition

Note: Primary EHR vendors are the vendors whose products are certified to the most 2011 Edition certification criteria in the provider's EHR system (in cases where a provider used certified products from multiple vendors to attest).
Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).

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Professionals attested to stage 1 MU by
2014 edition certification status of primary vendor

Vendor has 2011 edition product only:

Practice Fusion	3%
Community Computer Service, Inc.	1%
Compulink	1%
AmazingCharts.com, Inc.	1%
BioMedix Vascular Solutions	1%
MedPlus, A Quest Diagnostics Company	1%
Integrated Practice Solutions, Inc.	1%
Other (420 vendors, <1% each)	17%

Vendor has 2014 edition product not meeting Base EHR definition:

Eyefinity/OfficeMate	2%
Partners Healthcare System	1%
Other (17 vendors, <1% each)	2%

25%

4%

70%

■ Vendor has 2011 edition product(s) only
■ Vendor has 2014 edition product(s) not meeting Base EHR definition
■ Vendor has 2014 edition product(s) meeting Base EHR definition

Note: Primary EHR vendors are the vendors whose products are certified to the most 2011 Edition certification criteria in the provider's EHR system (in cases where a provider used certified products from multiple vendors to attest).
Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).
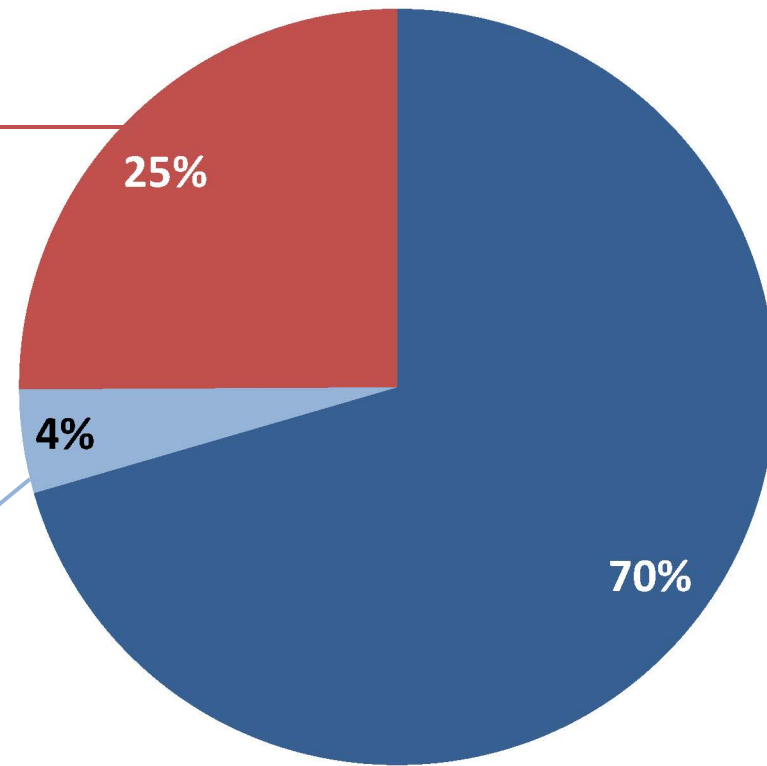
Professionals attested to stage 1 MU by 2014 edition certification status of primary vendor, cont.

Vendor has 2014 edition product meeting Base EHR definition:

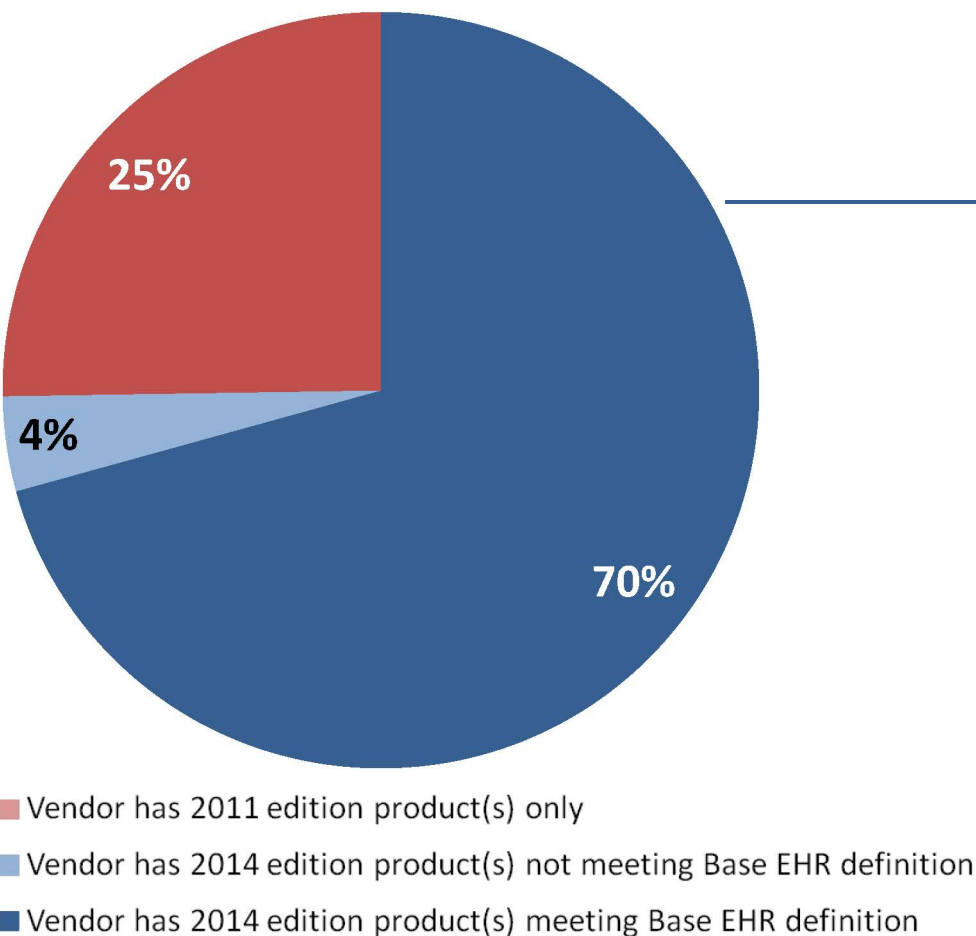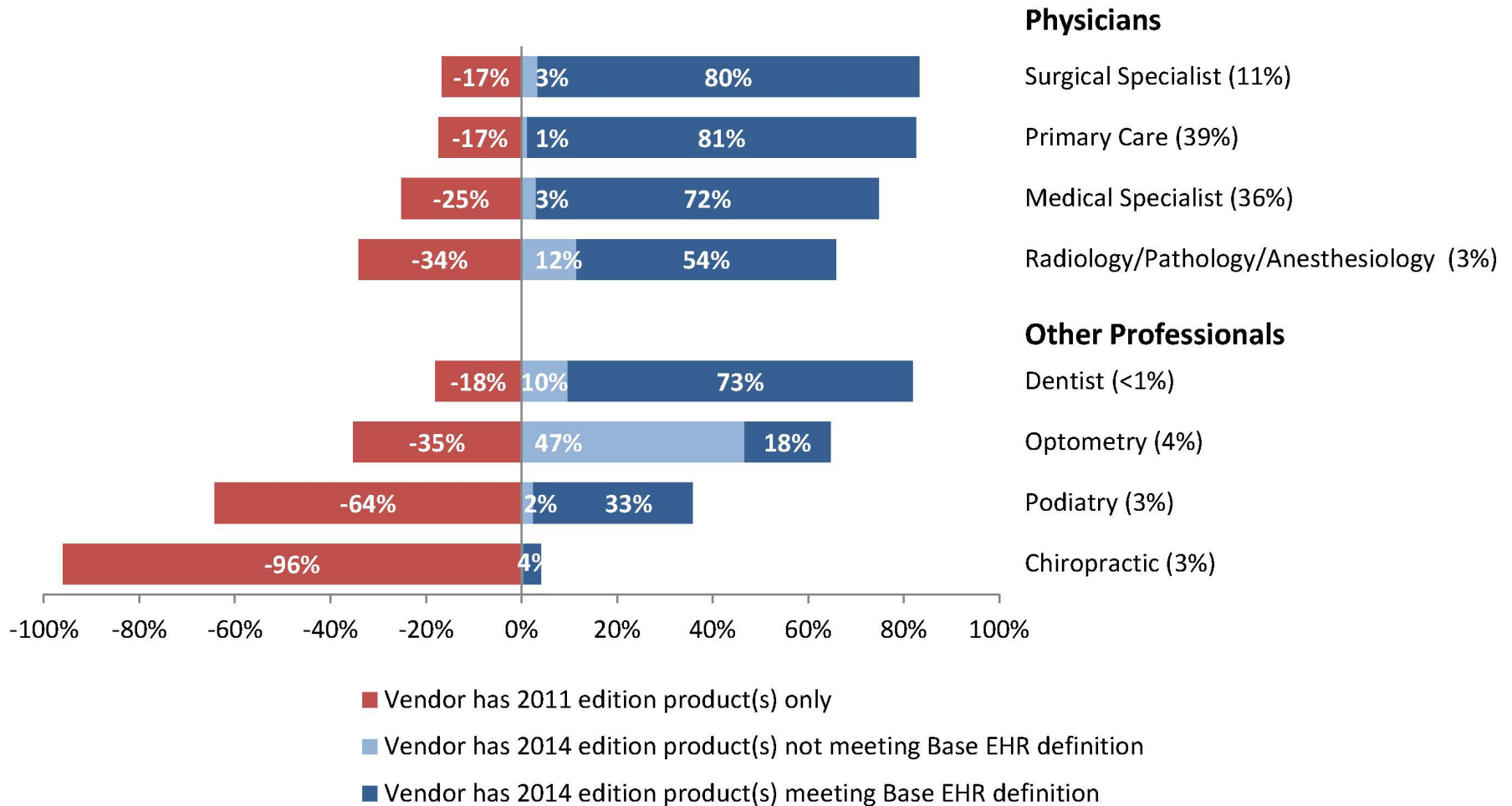| Vendor	%
Epic Systems Corporation	20%
Allscripts	12%
eClinicalWorks LLC	8%
NextGen Healthcare	7%
GE Healthcare	6%
Cerner Corporation	3%
McKesson	2%
Greenway Medical Technologies, Inc.	2%
Vitera Healthcare Solutions, LLC	2%
athenahealth, Inc	2%
e-MDs, Inc.	1%
SRSsoft	1%
Aprima Medical Software, Inc	1%
MedInformatix, Inc	1%
Medflow	1%
Other (19 vendors, <1% each)	2%

Pie chart:
- 25% — Vendor has 2011 edition product(s) only
- 4% — Vendor has 2014 edition product(s) not meeting Base EHR definition
- 70% — Vendor has 2014 edition product(s) meeting Base EHR definition

Note: Primary EHR vendors are the vendors whose products are certified to the most 2011 Edition certification criteria in the provider's EHR system (in cases where a provider used certified products from multiple vendors to attest).
Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).

Professionals attested to stage 1 MU by specialty and 2014 edition certification status of primary vendor

Physicians

Surgical Specialist (11%)

Primary Care (39%)

Medical Specialist (36%)

Radiology/Pathology/Anesthesiology (3%)

Other Professionals

Dentist (<1%)

Optometry (4%)

Podiatry (3%)

Chiropractic (3%)

■ Vendor has 2011 edition product(s) only

■ Vendor has 2014 edition product(s) not meeting Base EHR definition

■ Vendor has 2014 edition product(s) meeting Base EHR definition

Note: Primary EHR vendors are the vendors whose products are certified to the most 2011 Edition certification criteria in the provider's EHR system (in cases where a provider used certified products from multiple vendors to attest).
Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).

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Professionals attested to stage 1 MU by specialty and 2014 edition certification status of primary vendor

■ Vendor has 2011 edition product(s) only
■ Vendor has 2014 edition product(s) not meeting Base EHR definition
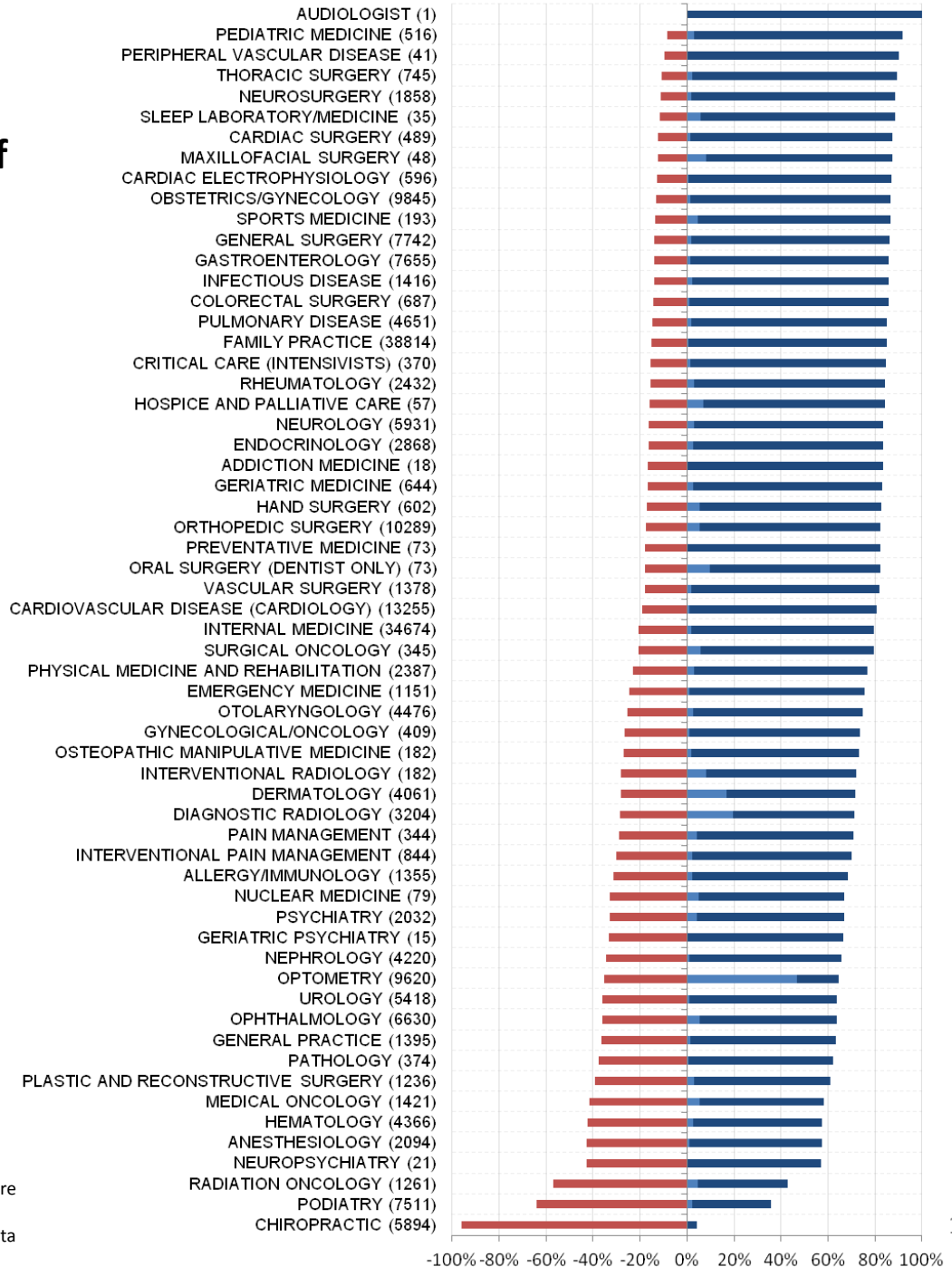■ Vendor has 2014 edition product(s) meeting Base EHR definition

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Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).

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New evidence on impacts of MU

New systematic review of health IT studies

Review of 493 studies published from July 2007 to August 2013 found:

➢Meaningful use functionalities have predominantly positive effects on quality, safety, and efficiency outcomes.

➢Health IT effects varied by type of outcome but were mostly positive overall.

➢The Health IT literature is expanding rapidly.

➢Future health IT evaluation studies need more details on how context and implementation affect value.

"Health Information Technology:
An Updated Systematic Review with a Focus on Meaningful Use".
Jones SS, Rudin RS, Perry T, Shekelle PG. *Annals of Internal Med* 2014;160:48-54

http://www.healthit.gov/buzz-blog/electronic-health-and-medical-records/meaningful-use-healthit-improves-quality-safety-efficiency-outcomes/

MU functionalities have predominantly positive effects on health care outcomes

Updated Systematic Review of Effects of Meaningful Use Functionalities on Quality, Safety and Efficiency: % of Reviewed Studies By Study Outcome
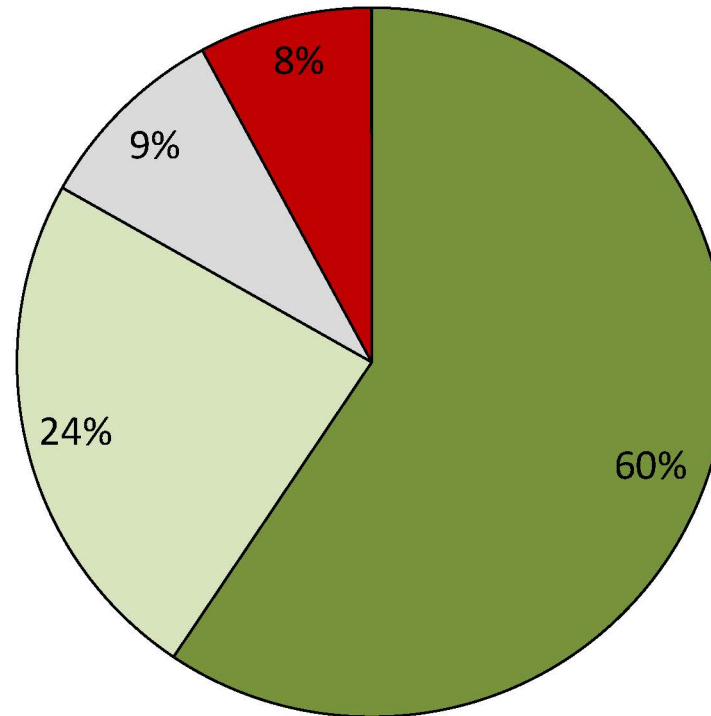
Legend: ■ Positive □ Mixed-Positive □ Neutral ■ Negative

Pie chart values: Positive 60%, Mixed-Positive 24%, Neutral 9%, Negative 8%

Health IT evaluation studies, 2007-2013 (n=493). Positive defined as health IT improved key aspects of care but none worse off; Mixed-positive defined as positive effects of health IT outweighed the negative effects; Neutral defined as health IT not associated with change in outcome; Negative defined as negative effects of health IT on outcome.

MU functionalities have predominantly positive effects on health care outcomes

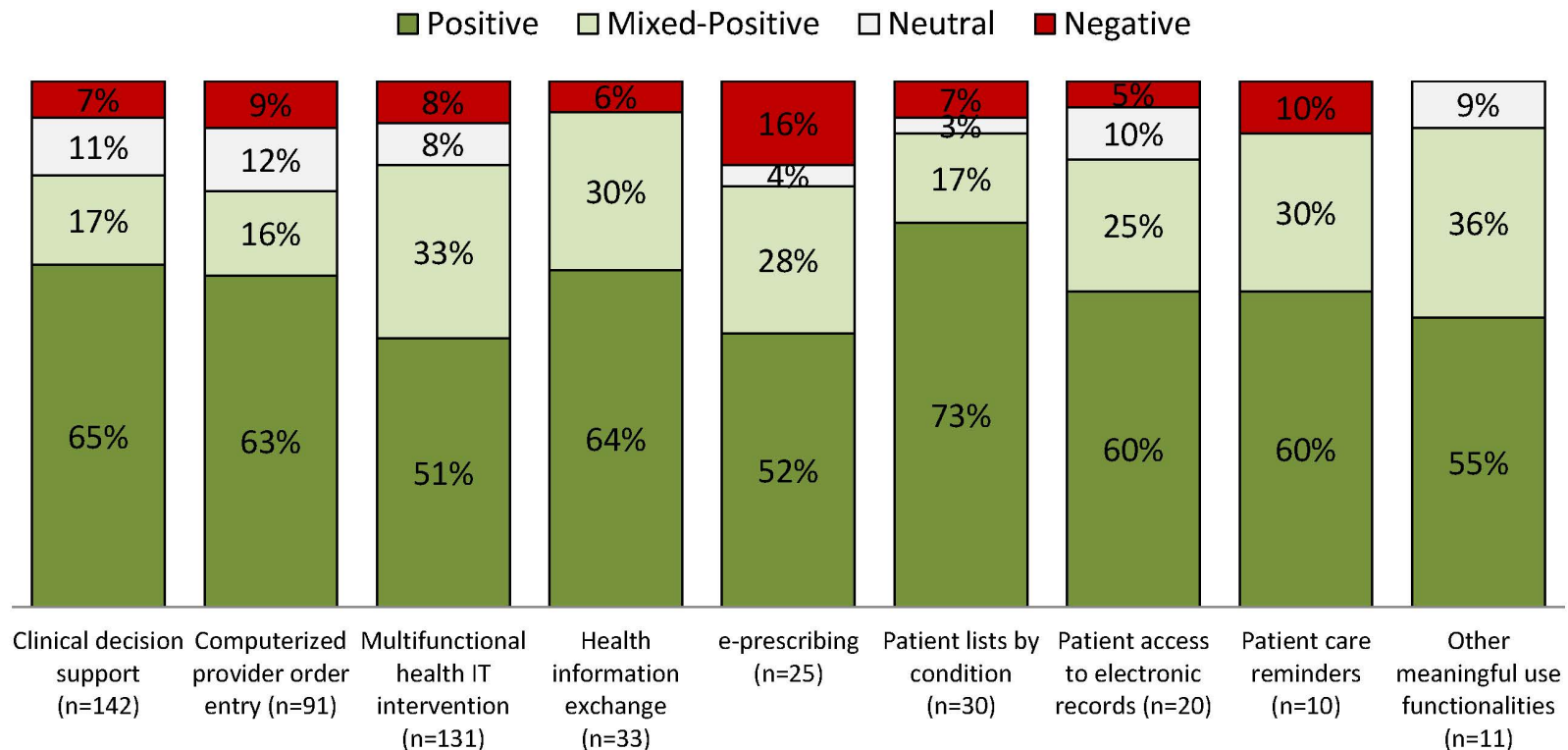**Updated Systematic Review of Effects of Meaningful Use Functionalities on Quality, Safety and Efficiency: % of Reviewed Studies By Intervention and Study Outcome**

Legend: ■ Positive ☐ Mixed-Positive ☐ Neutral ■ Negative

Intervention	Positive	Mixed-Positive	Neutral	Negative
Clinical decision support (n=142)	65%	17%	11%	7%
Computerized provider order entry (n=91)	63%	16%	12%	9%
Multifunctional health IT intervention (n=131)	51%	33%	8%	8%
Health information exchange (n=33)	64%	30%		6%
e-prescribing (n=25)	52%	28%	4%	16%
Patient lists by condition (n=30)	73%	17%	3%	7%
Patient access to electronic records (n=20)	60%	25%	10%	5%
Patient care reminders (n=10)	60%	30%		10%
Other meaningful use functionalities (n=11)	55%	36%	9%	

Health IT evaluation studies, 2007-2013 (n=493). Positive defined as health IT improved key aspects of care but none worse off; Mixed-positive defined as positive effects of health IT outweighed the negative effects; Neutral defined as health IT not associated with change in outcome; Negative defined as negative effects of health IT on outcome.

Health IT evidence base is rapidly expanding

➤ 1000+ health IT studies published in peer-review since 1995

➤ Some MU functionalities like CDS, CPOE studied extensively

➤ Other functionalities related to health information exchange and patient access not as well-studied

➤ Reporting on context and implementation was poor

➤ Need more research on *how* health IT can be used to realize value

"Health Information Technology:
An Updated Systematic Review with a Focus on Meaningful Use".
Jones SS, Rudin RS, Perry T, Shekelle PG. *Annals of Internal Med* 2014;160:48-54

http://www.healthit.gov/buzz-blog/electronic-health-and-medical-records/meaningful-use-healthit-improves-quality-safety-efficiency-outcomes/

National physician survey finds key benefits from EHR use

Analysis of nationally representative survey of office based physicians

➢Majority of physicians report EHR led to clinical, efficiency, and financial benefits

➢Some types of benefits are experienced at lower rates

➢Physicians using MU EHRs are more likely to report benefits, especially those with longer EHR experience

"Clinical Benefits of Electronic Health Record Use: National Findings"
King J, Patel V, Jamoom E, Furukawa MF. *Health Services Research* online 21 Dec 2013.

"Physician experience with electronic health record systems that meet meaningful use criteria: NAMCS Physician Workflow Survey, 2011."
Jamoom E, Patel V, King J, Furukawa MF. NCHS data brief, no 129.
http://www.cdc.gov/nchs/data/databriefs/db129.htm

Percent of physicians with EHRs agreeing their EHR has the following impacts

2011

Produces clinical benefits for my practice — 79, 88, 92

My practice functions more efficiently — 75, 79, 85

Produces financial benefits for my practice — 55, 67, 72

☐ EHR does not meet MU criteria or unknown

☐ EHR meets MU criteria

☐ EHR meets MU criteria with 2+ years EHR experience
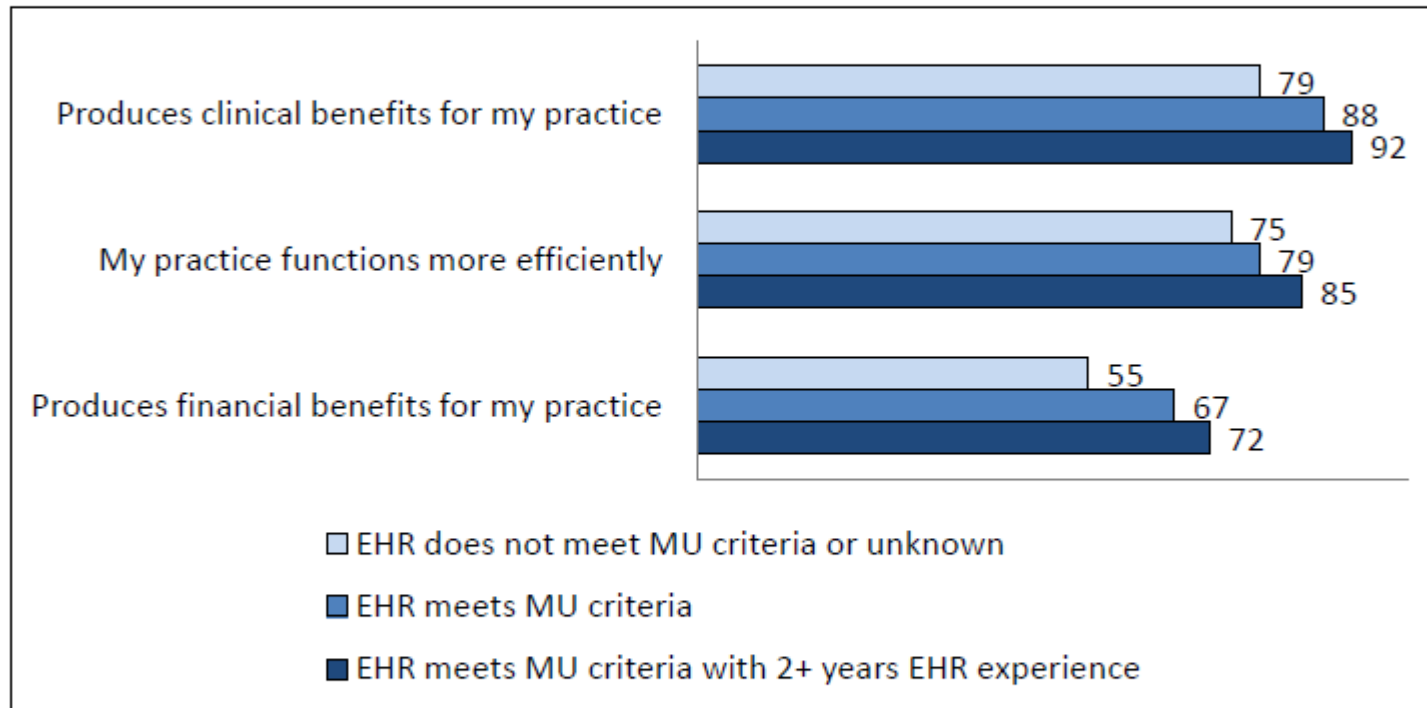
Summary:

The majority of office-based physicians with EHRs reported their EHRs had clinical, efficiency, and financial benefits for their practice. Physicians with EHRs meeting MU criteria were more likely to report some benefits than physicians with other EHRs. Among physicians with MU EHRs, those with 2 or more years EHR experience were more likely to report benefits than those with less experience.

http://dashboard.healthit.gov/quickstats/

Physicians using MU EHRs more likely to report benefits from EHR use

Percent of physicians with EHRs reporting that EHR use led to benefit

Benefit	EHR does not meet MU criteria or unknown	EHR meets MU criteria
Overall, enhanced patient care	69	79
Helped you access patient chart remotely	77	82
Alerted you to a potential medication error	62	65
Alerted you to critical lab values	55	64
Helped you order more on-formulary drugs	37	49
Reminded you to provide preventive care	38	49
Reminded you of clinical guidelines for chronic conditions	29	49
Helped you order fewer tests	26	41
Helped you identify needed lab tests	22	36
Facilitated direct communication with a patient	21	32

■ EHR does not meet MU criteria or unknown   ■ EHR meets MU criteria

Physicians using MU EHRs with longer EHR experience more likely to report EHR benefits

Percent of physicians with MU EHRs reporting that EHR use led to benefit

Benefit	1 year or less EHR experience	2 years or more EHR experience
Overall, enhanced patient care	57	85
Helped you access patient chart remotely	65	87
Alerted you to a potential medication error	48	70
Alerted you to critical lab values	43	70
Helped you order more on-formulary drugs	37	52
Reminded you to provide preventive care	29	55
Reminded you of clinical guidelines for chronic conditions	34	54
Helped you order fewer tests	25	45
Helped you identify needed lab tests	20	41
Facilitated direct communication with a patient	17	37

■ 1 year or less EHR experience   ■ 2 years or more EHR experience

Thank you