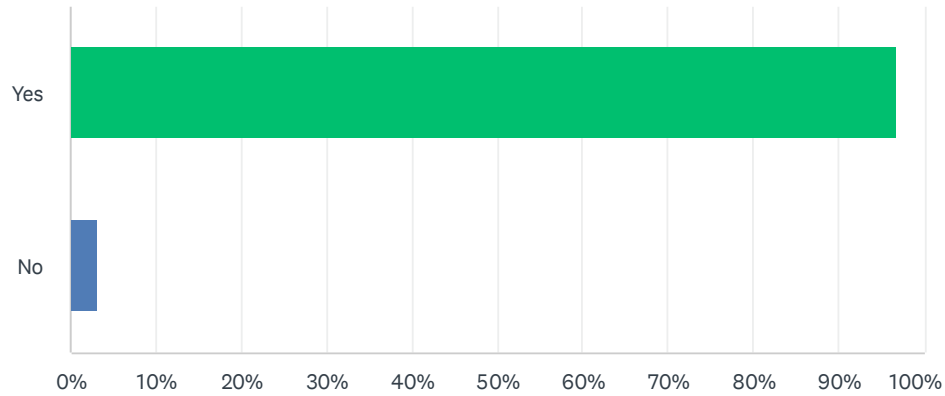


Q1 Do you have any role in managing patients with implanted CIEDs (pacemakers/ICDs)?

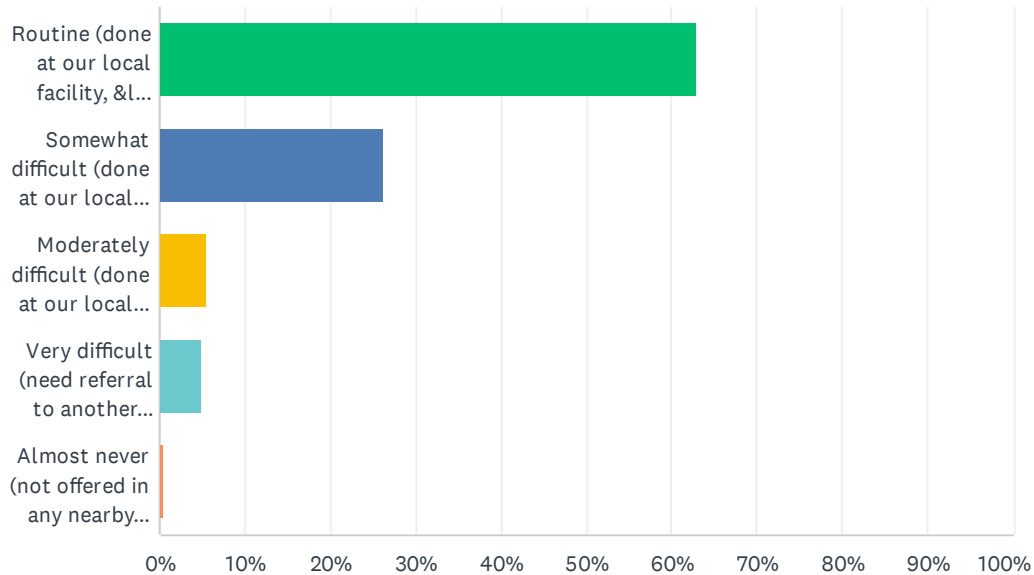
Answered: 494 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	96.76%	478
No	3.24%	16
TOTAL		494

Q2 How accessible is MRI scanning for your patients with MRI-conditional CIED systems?

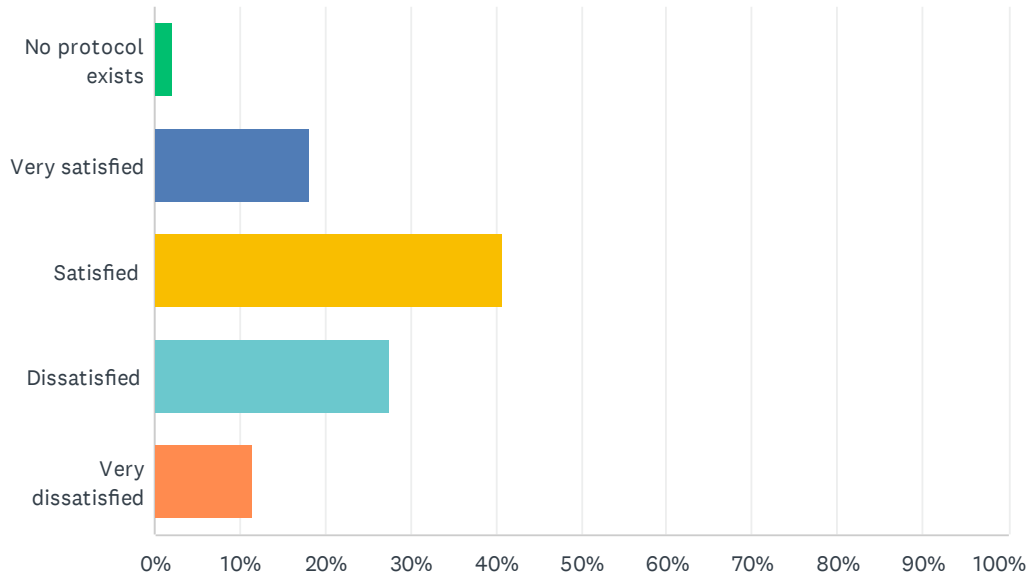
Answered: 478 Skipped: 16



ANSWER CHOICES	RESPONSES	
Routine (done at our local facility, <1 month wait time)	62.97%	301
Somewhat difficult (done at our local facility, but 1-3 month wait time)	26.15%	125
Moderately difficult (done at our local facility, but >3 month wait time)	5.65%	27
Very difficult (need referral to another facility in our area)	4.81%	23
Almost never (not offered in any nearby facilities)	0.42%	2
TOTAL		478

Q3 How satisfied are you with your clinic's protocol for MRI coordination (for conditional and non-conditional systems)?

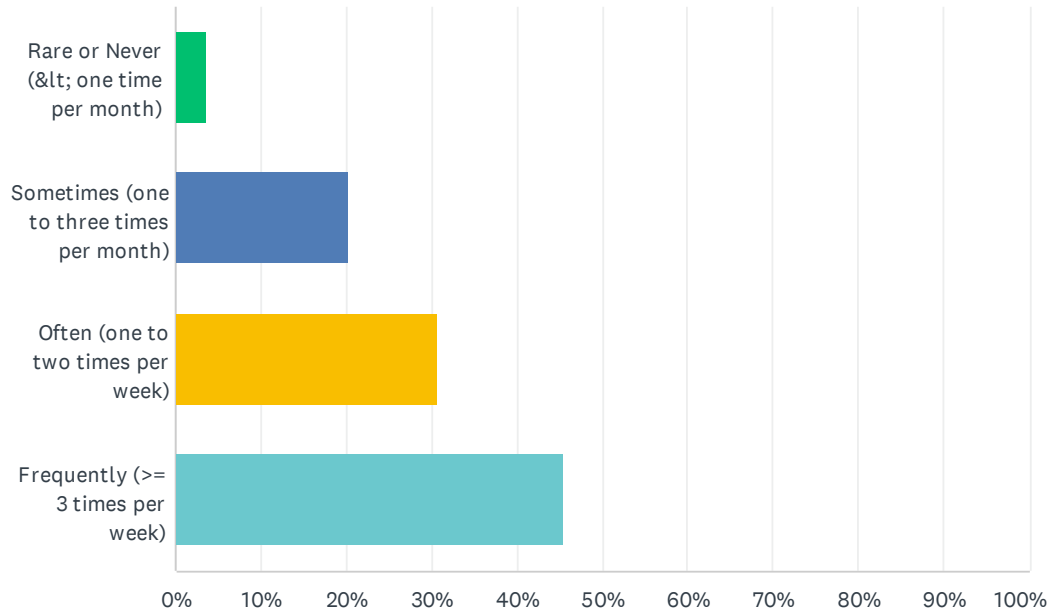
Answered: 478 Skipped: 16



ANSWER CHOICES	RESPONSES	
No protocol exists	2.09%	10
Very satisfied	18.20%	87
Satisfied	40.79%	195
Dissatisfied	27.41%	131
Very dissatisfied	11.51%	55
TOTAL		478

Q4 How frequently are you asked to determine whether an individual with CIEDs may undergo an MRI?

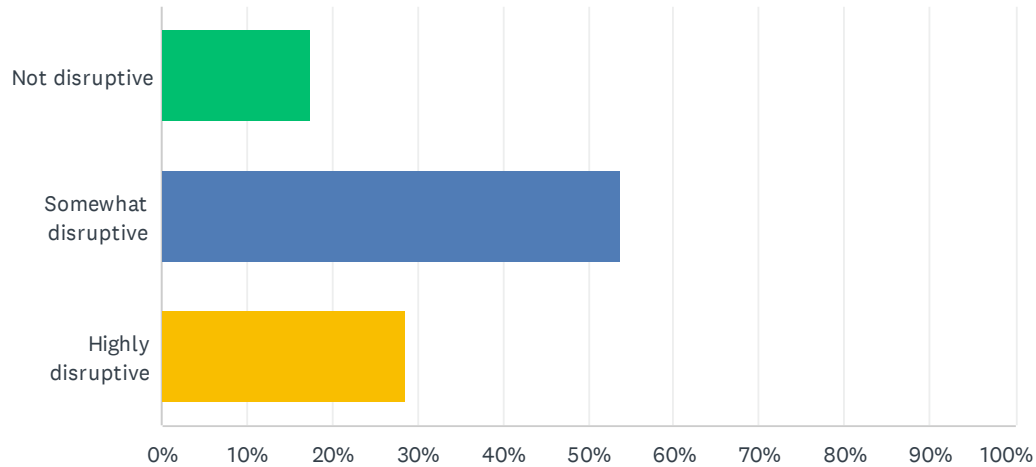
Answered: 478 Skipped: 16



ANSWER CHOICES	RESPONSES	
Rare or Never (< one time per month)	3.56%	17
Sometimes (one to three times per month)	20.29%	97
Often (one to two times per week)	30.75%	147
Frequently (>= 3 times per week)	45.40%	217
TOTAL		478

Q5 How disruptive are the requests to adjudicate MRI approvals in your workflow?

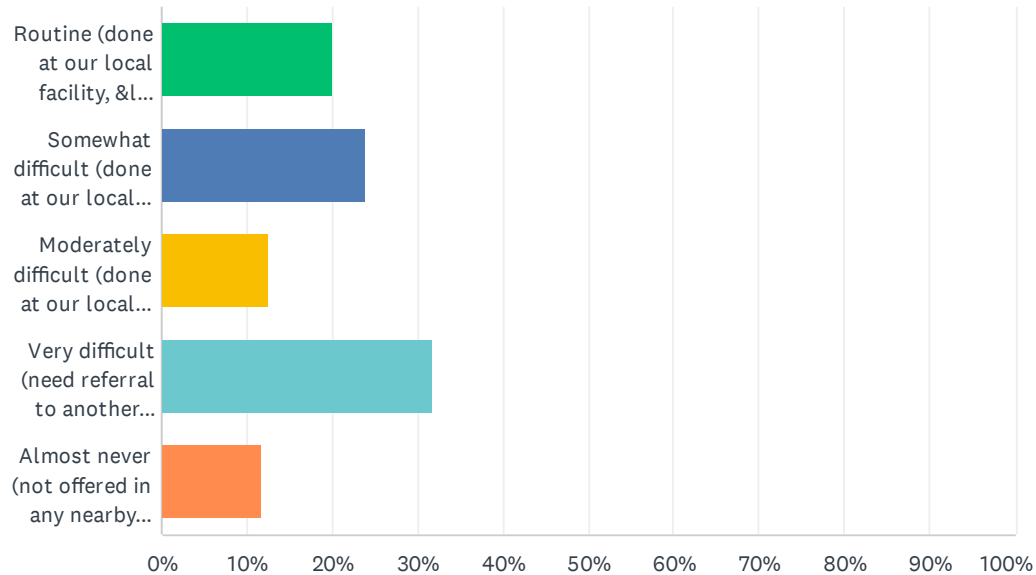
Answered: 478 Skipped: 16



ANSWER CHOICES	RESPONSES	
Not disruptive	17.57%	84
Somewhat disruptive	53.77%	257
Highly disruptive	28.66%	137
TOTAL		478

Q6 How accessible is MRI scanning for your patients with a non-MRI-conditional CIED system?

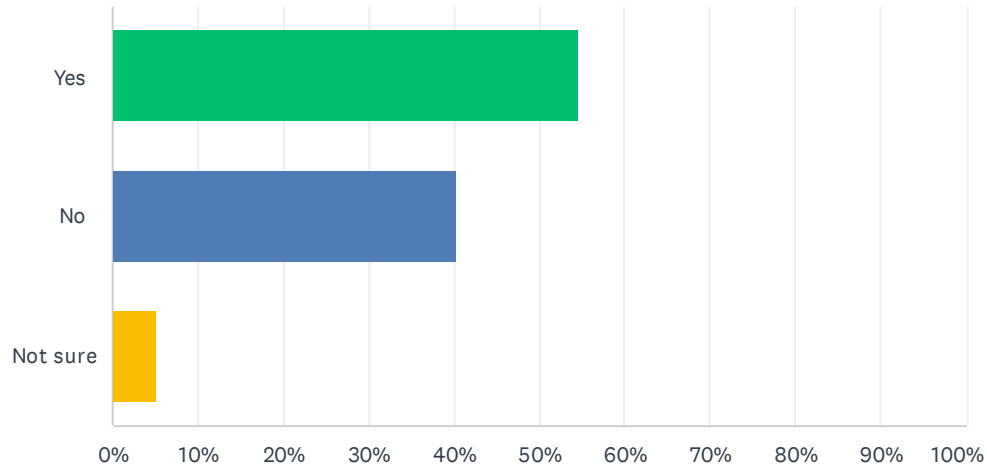
Answered: 478 Skipped: 16



ANSWER CHOICES	RESPONSES	
Routine (done at our local facility, <1 month wait time)	20.08%	96
Somewhat difficult (done at our local facility, but 1-3 month wait time)	23.85%	114
Moderately difficult (done at our local facility, but >3 month wait time)	12.55%	60
Very difficult (need referral to another facility)	31.80%	152
Almost never (not offered in any nearby facilities)	11.72%	56
TOTAL		478

Q7 Does your institution have a formal protocol for scanning off label/non-conditional devices?

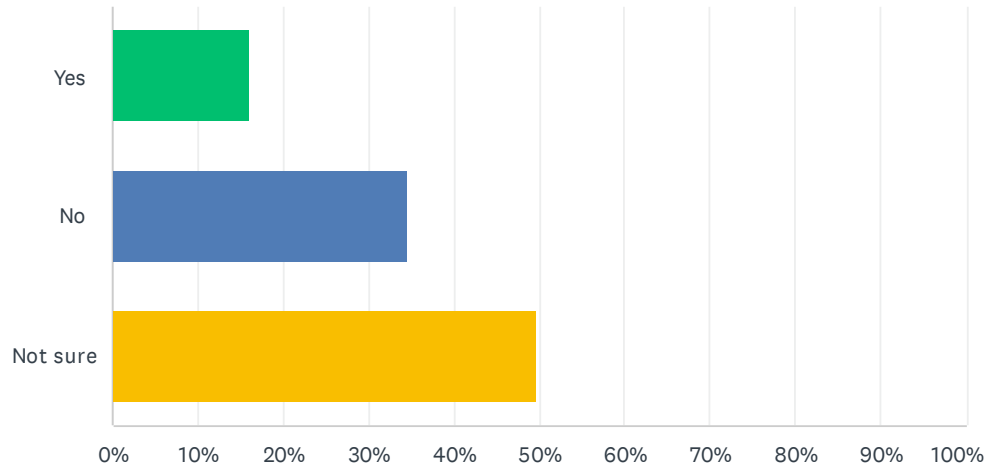
Answered: 478 Skipped: 16



ANSWER CHOICES		RESPONSES	
Yes		54.60%	261
No		40.38%	193
Not sure		5.02%	24
TOTAL			478

Q8 Have you ever encountered denial of pre-authorization for scanning an off- label/non-conditional device or denial of payment after a scan?

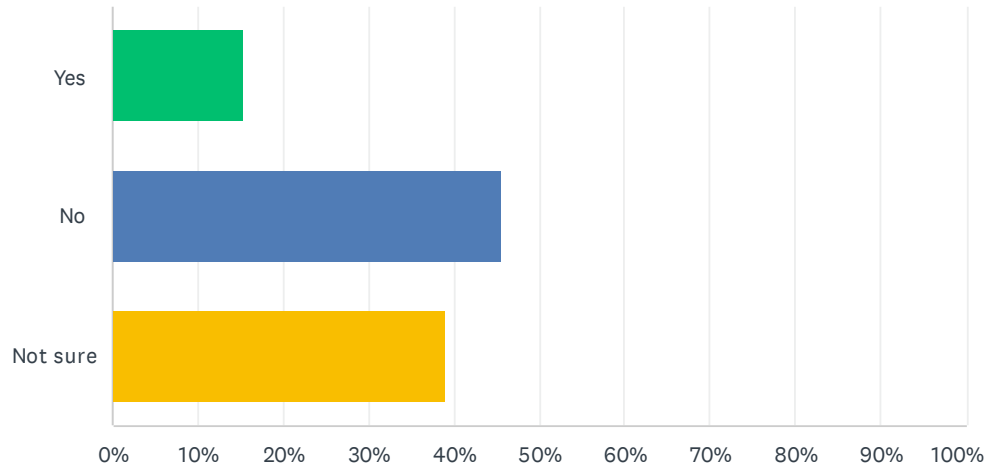
Answered: 478 Skipped: 16



ANSWER CHOICES		RESPONSES	
Yes		15.90%	76
No		34.52%	165
Not sure		49.58%	237
TOTAL			478

Q9 Do you prefer to do off-label MRI for non-conditional systems while patients are in the hospital (under inpatient DRG)?

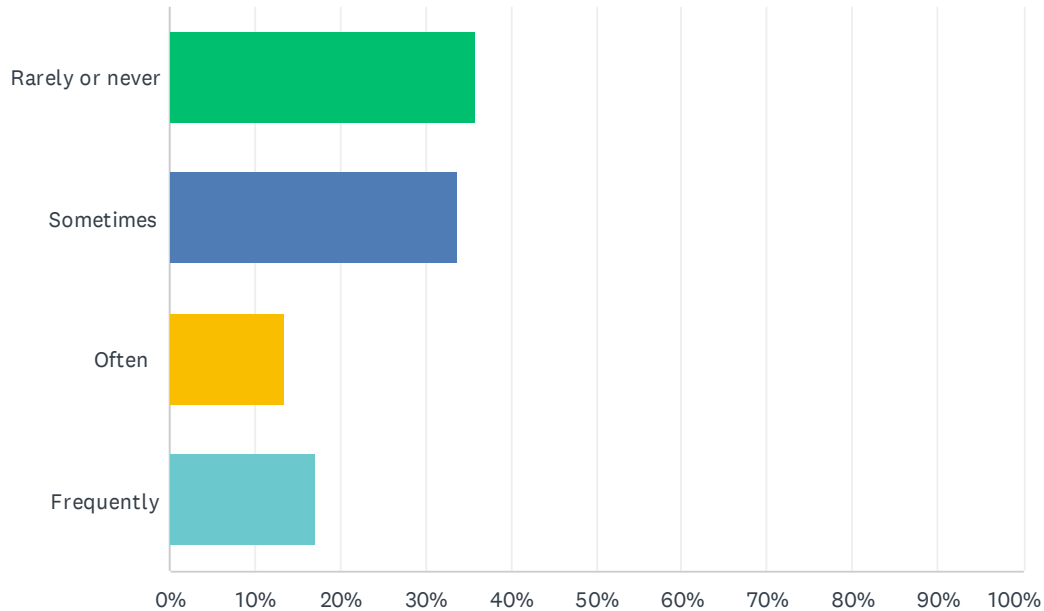
Answered: 478 Skipped: 16



ANSWER CHOICES	RESPONSES	
Yes	15.27%	73
No	45.61%	218
Not sure	39.12%	187
TOTAL		478

Q10 How often have you not been able to obtain an MRI on a non-conditional device that you felt was low risk?

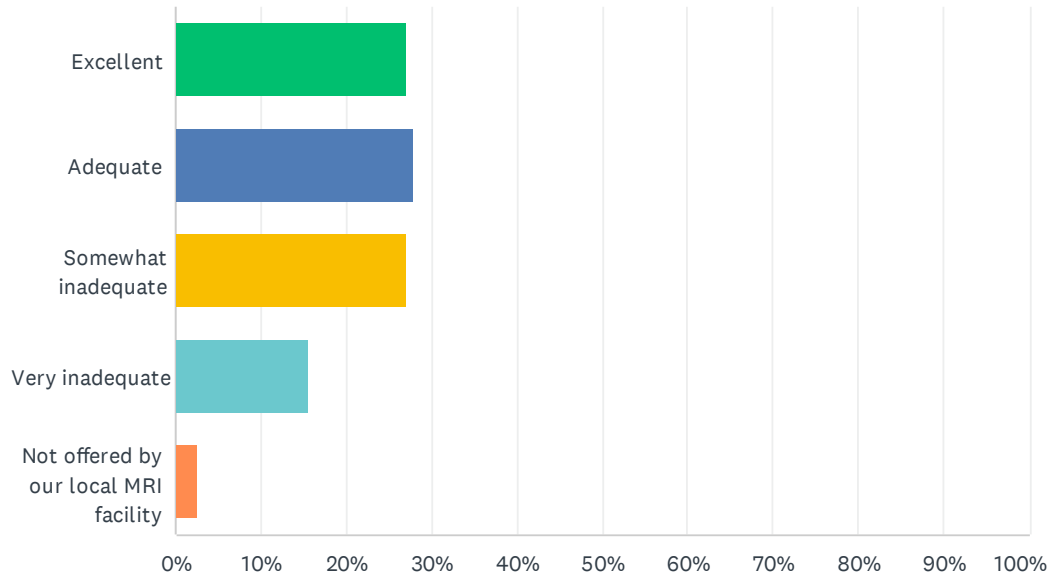
Answered: 478 Skipped: 16



ANSWER CHOICES	RESPONSES	
Rarely or never	35.77%	171
Sometimes	33.68%	161
Often	13.39%	64
Frequently	17.15%	82
TOTAL		478

Q11 What is your perception of your local MRI facility's efforts to accommodate CIED patients for MRI?

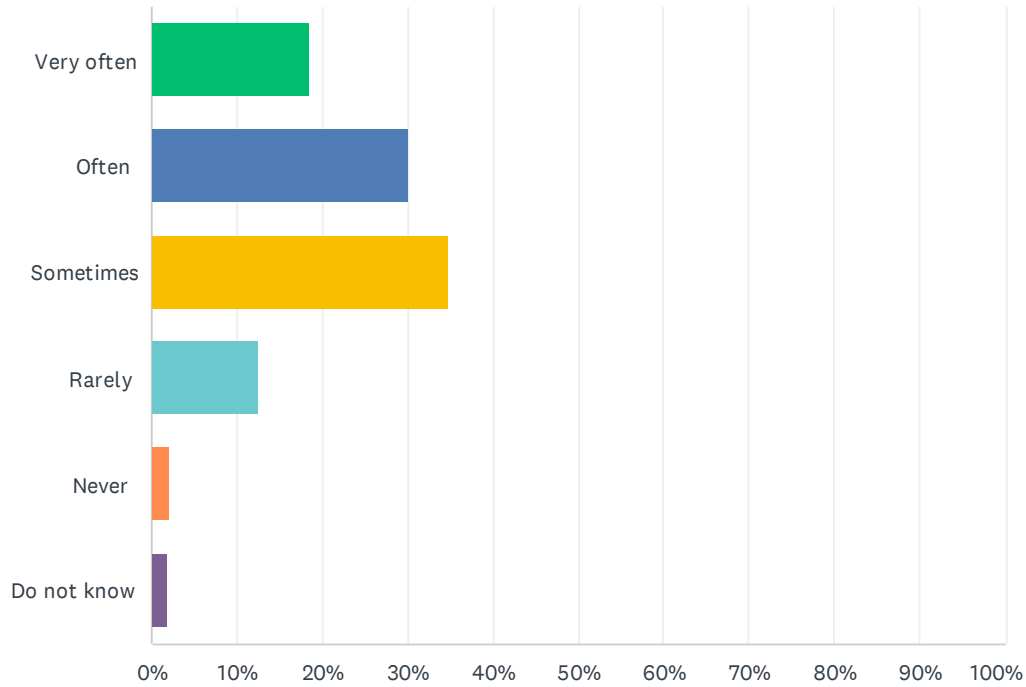
Answered: 478 Skipped: 16



ANSWER CHOICES	RESPONSES	
Excellent	26.99%	129
Adequate	28.03%	134
Somewhat inadequate	26.99%	129
Very inadequate	15.48%	74
Not offered by our local MRI facility	2.51%	12
TOTAL		478

Q12 Do you think patient care is adversely affected by inability to obtain indicated MRI scans in patients with non-conditional devices?

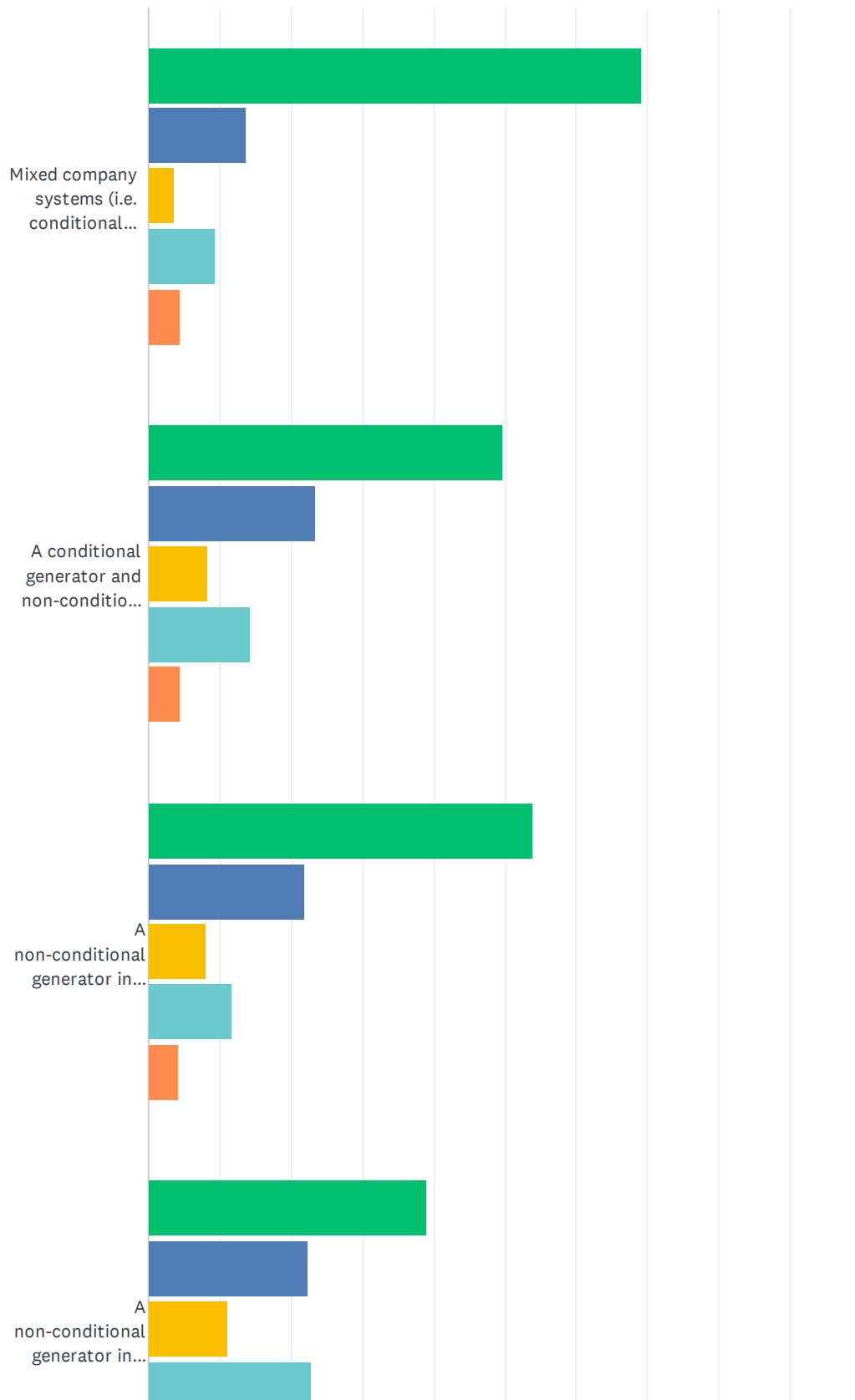
Answered: 478 Skipped: 16



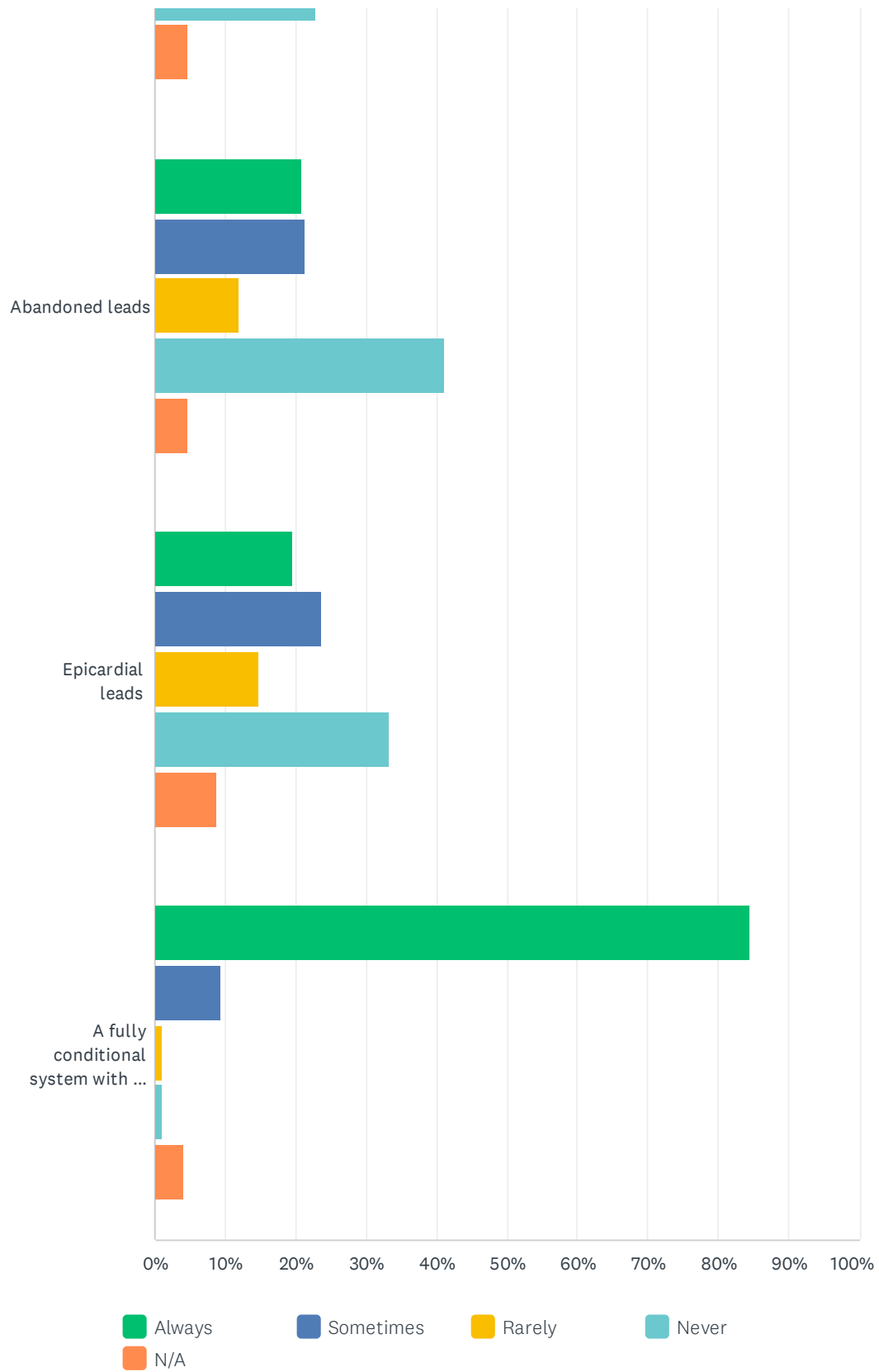
ANSWER CHOICES	RESPONSES	
Very often	18.62%	89
Often	30.13%	144
Sometimes	34.73%	166
Rarely	12.55%	60
Never	2.09%	10
Do not know	1.88%	9
TOTAL		478

Q13 Would you approve an MRI scan in a CIED patient with:

Answered: 478 Skipped: 16



Challenges with MRIs for Patients with CIEDs

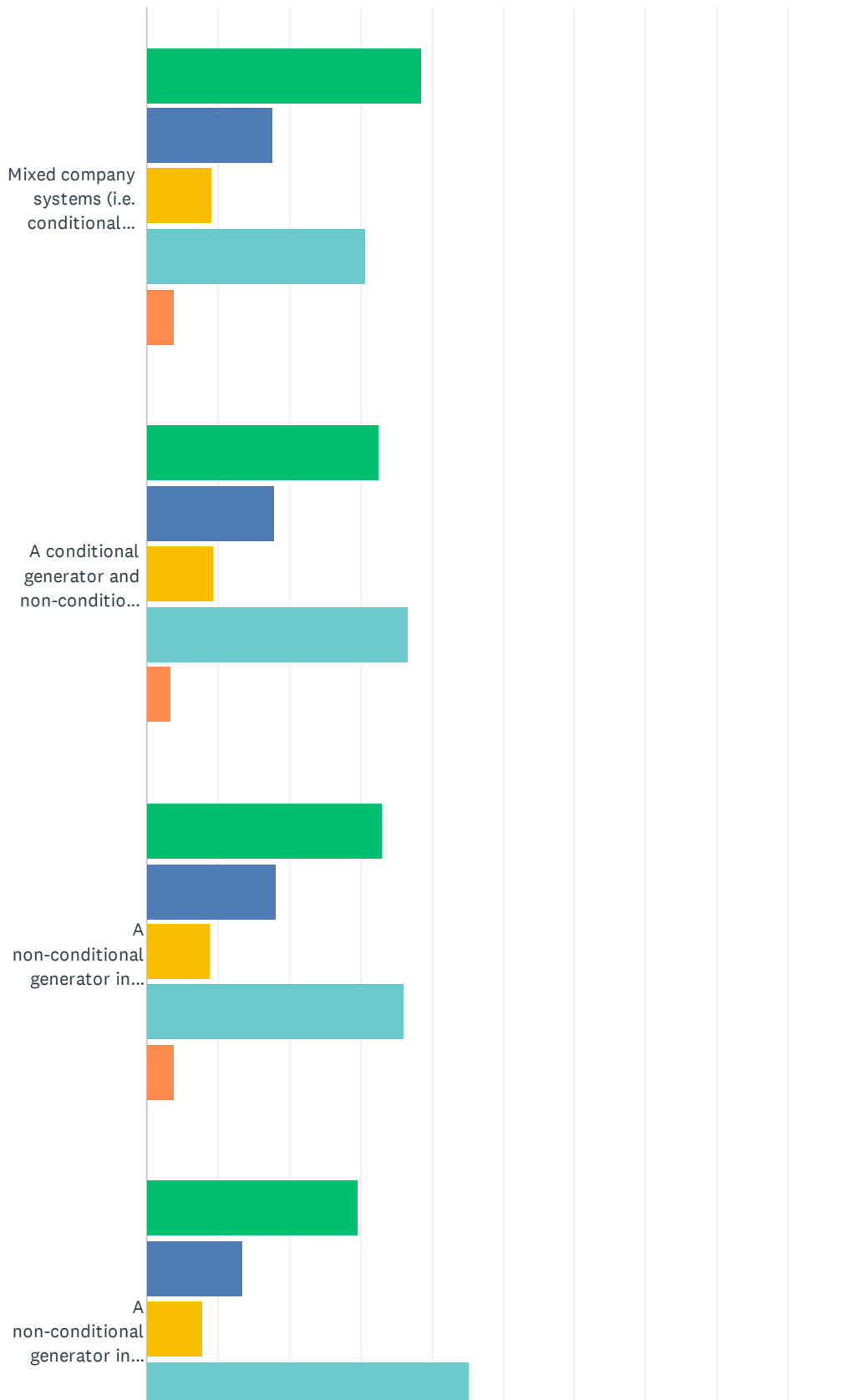


Challenges with MRIs for Patients with CIEDs

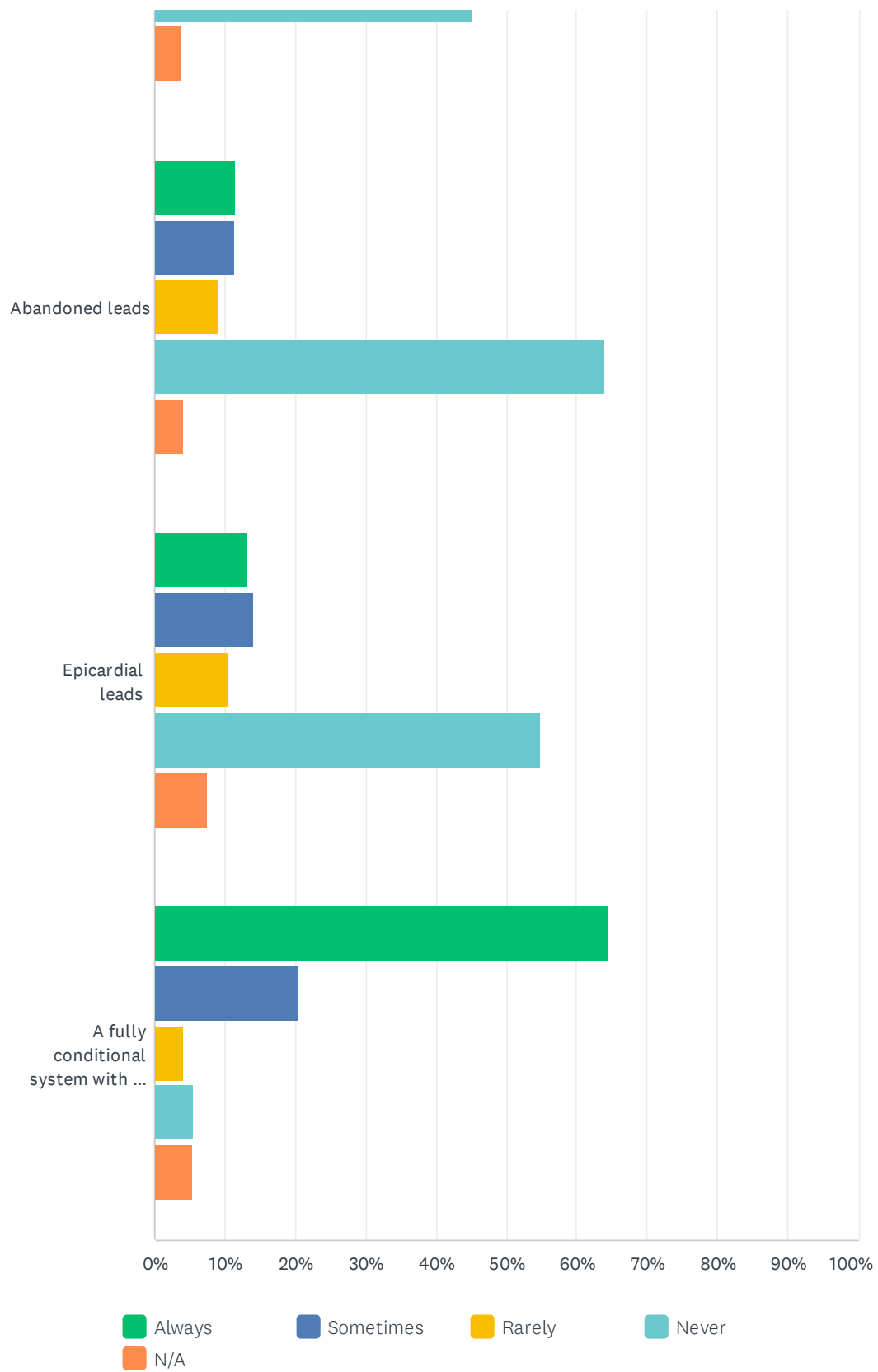
	ALWAYS	SOMETIMES	RARELY	NEVER	N/A	TOTAL	WEIGHTED AVERAGE
Mixed company systems (i.e. conditional generator and another company's conditional leads)?	69.04% 330	13.60% 65	3.56% 17	9.41% 45	4.39% 21	478	1.51
A conditional generator and non-conditional leads	49.58% 237	23.43% 112	8.37% 40	14.23% 68	4.39% 21	478	1.87
A non-conditional generator in non-pacing-dependent patient	53.97% 258	21.97% 105	8.16% 39	11.72% 56	4.18% 20	478	1.77
A non-conditional generator in pacing-dependent patient	39.12% 187	22.38% 107	11.09% 53	22.80% 109	4.60% 22	478	2.18
Abandoned leads	20.92% 100	21.34% 102	11.92% 57	41.21% 197	4.60% 22	478	2.77
Epicardial leads	19.67% 94	23.64% 113	14.64% 70	33.26% 159	8.79% 42	478	2.67
A fully conditional system with an additional MRI-conditional implanted device (such as an implanted loop recorder, coronary stent, CardioMEMS, ASD occlusion device, LAA occlusion device, Mitra clip, etc).	84.52% 404	9.41% 45	1.05% 5	1.05% 5	3.97% 19	478	1.15

Q14 Does your facility ever allow MRI scan in a CIED patient with:

Answered: 478 Skipped: 16



Challenges with MRIs for Patients with CIEDs

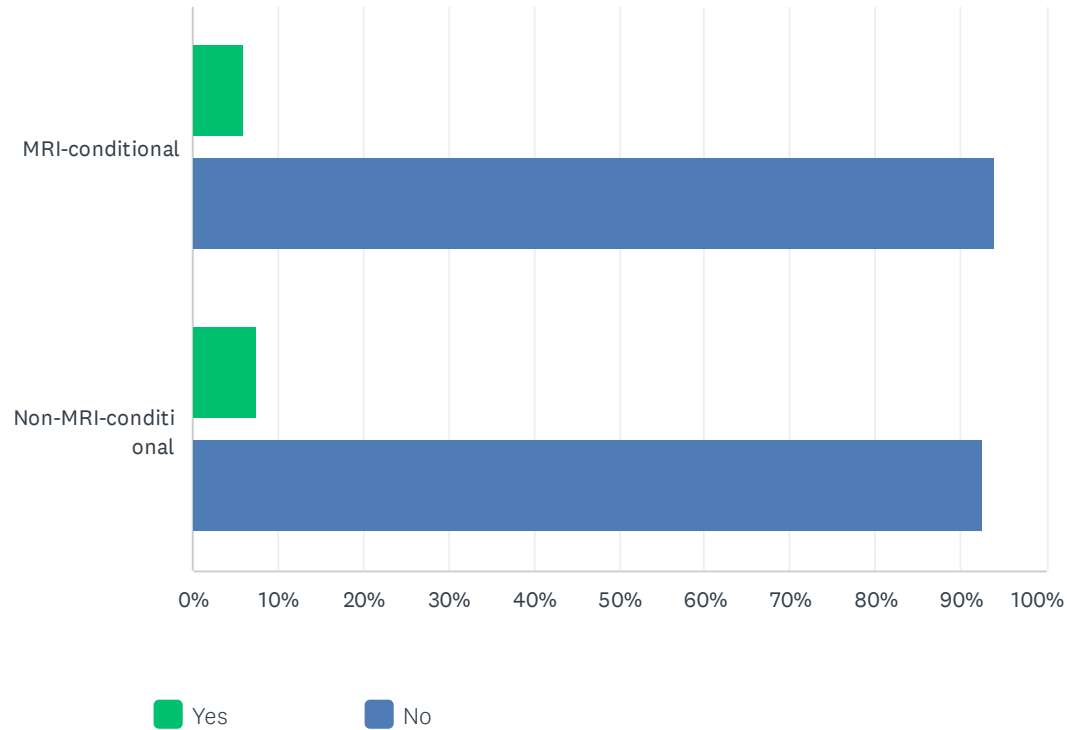


Challenges with MRIs for Patients with CIEDs

	ALWAYS	SOMETIMES	RARELY	NEVER	N/A	TOTAL	WEIGHTED AVERAGE
Mixed company systems (i.e. conditional generator and another company's conditional leads)?	38.49% 184	17.78% 85	9.21% 44	30.75% 147	3.77% 18	478	2.33
A conditional generator and non-conditional leads	32.64% 156	17.99% 86	9.41% 45	36.61% 175	3.35% 16	478	2.52
A non-conditional generator in non-pacing-dependent patient	33.05% 158	18.20% 87	9.00% 43	35.98% 172	3.77% 18	478	2.50
A non-conditional generator in pacing-dependent patient	29.71% 142	13.39% 64	7.95% 38	45.19% 216	3.77% 18	478	2.71
Abandoned leads	11.51% 55	11.30% 54	9.21% 44	64.02% 306	3.97% 19	478	3.31
Epicardial leads	13.18% 63	14.02% 67	10.46% 50	54.81% 262	7.53% 36	478	3.16
A fully conditional system with an additional MRI-conditional implanted device (such as an implanted loop recorder, coronary stent, CardioMEMS, ASD occlusion device, LAA occlusion device, Mitra clip, etc).	64.64% 309	20.50% 98	3.97% 19	5.65% 27	5.23% 25	478	1.48

Q15 Have you ever encountered a clinically significant adverse event related to MRI scanning with a CIED system that is:

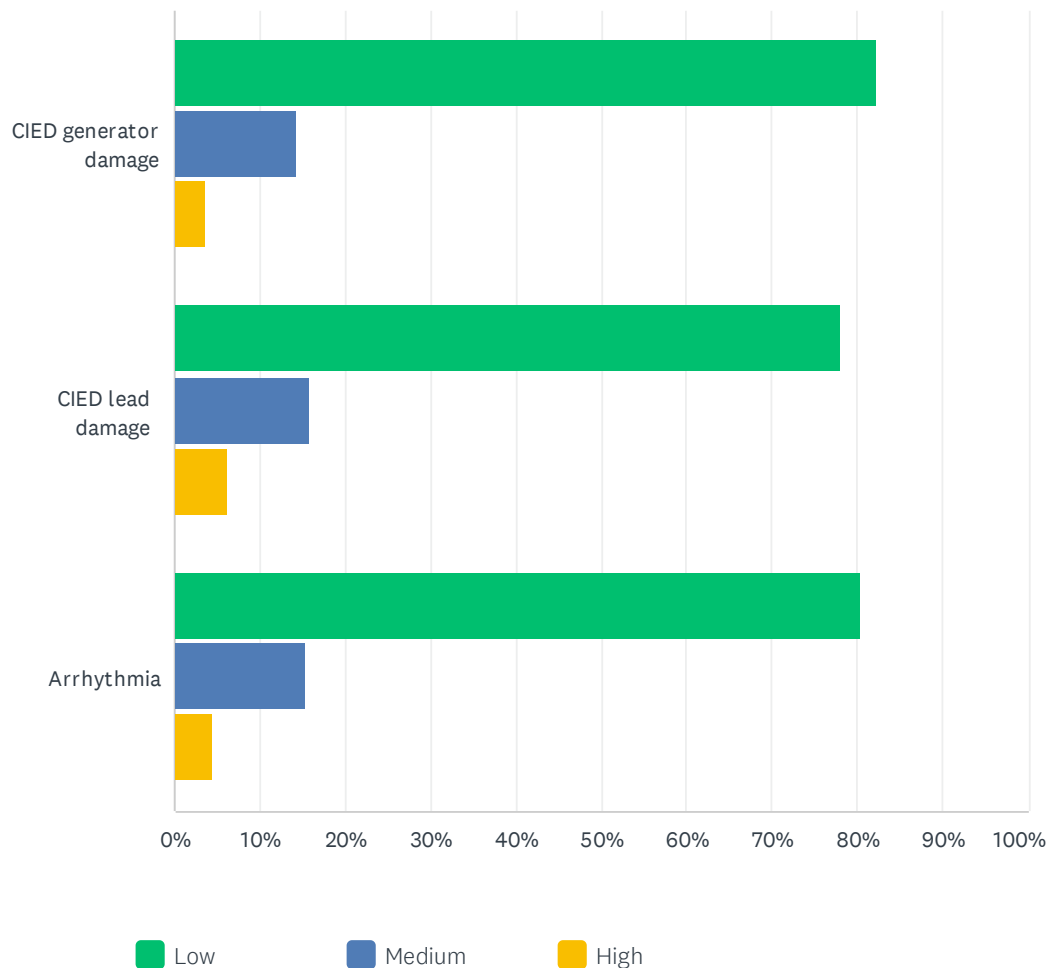
Answered: 478 Skipped: 16



	YES	NO	TOTAL	WEIGHTED AVERAGE
MRI-conditional	5.87% 28	94.13% 449	477	1.94
Non-MRI-conditional	7.46% 35	92.54% 434	469	1.93

Q16 What is your level of concern for these possible adverse events when scanning a non-conditional CIED system:

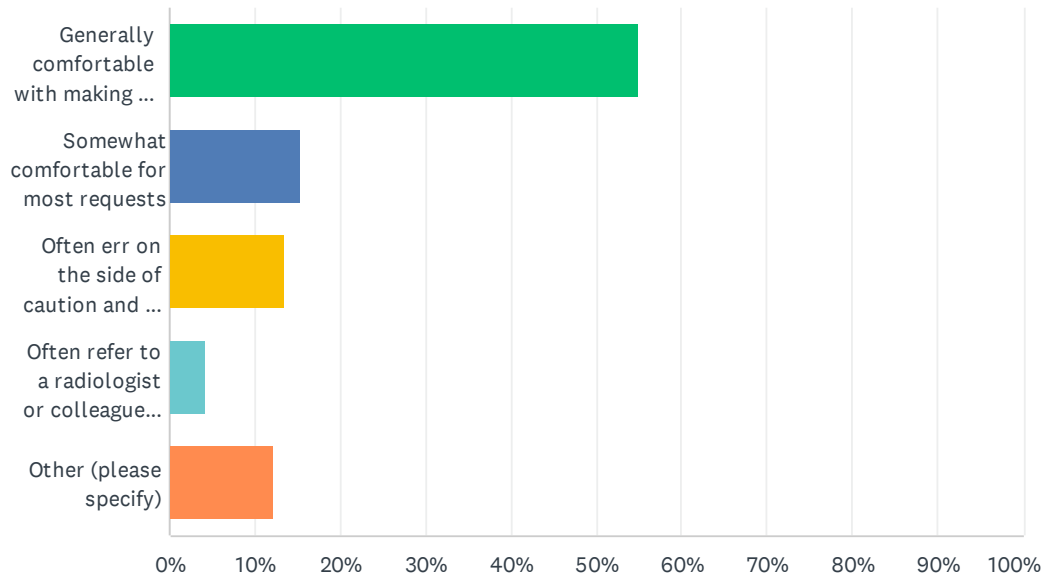
Answered: 478 Skipped: 16



	LOW	MEDIUM	HIGH	TOTAL	WEIGHTED AVERAGE
CIED generator damage	82.22% 393	14.23% 68	3.56% 17	478	1.21
CIED lead damage	78.03% 373	15.69% 75	6.28% 30	478	1.28
Arrhythmia	80.33% 384	15.27% 73	4.39% 21	478	1.24

Q17 When you receive requests to approve MRI for patients with non-conditional CIEDs, how certain do you feel about your ability to manage the request to ensure the safety of the patient?

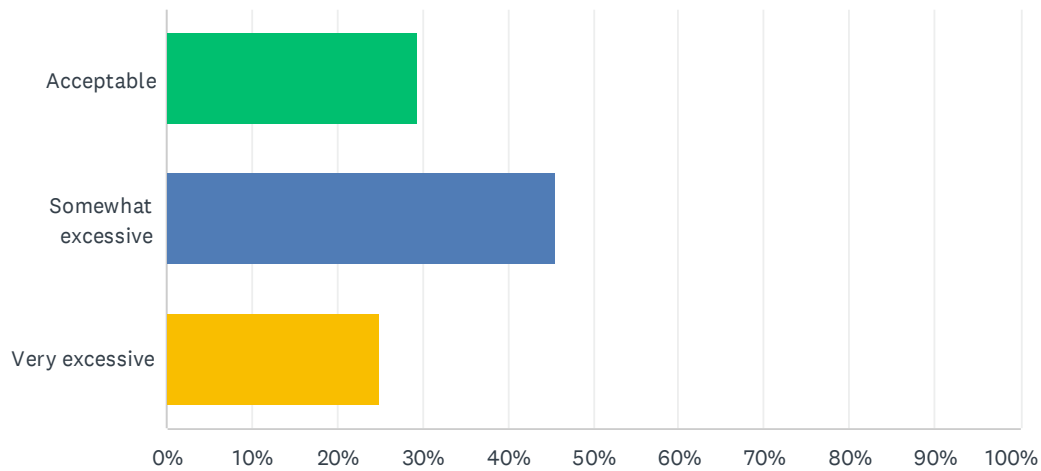
Answered: 478 Skipped: 16



ANSWER CHOICES	RESPONSES	
Generally comfortable with making the decision	55.02%	263
Somewhat comfortable for most requests	15.27%	73
Often err on the side of caution and do not approve	13.39%	64
Often refer to a radiologist or colleague to make the decision	4.18%	20
Other (please specify)	12.13%	58
TOTAL		478

Q18 How would you characterize the amount of your device team's work involved for the average patient with non-conditional CIED to undergo MRI?

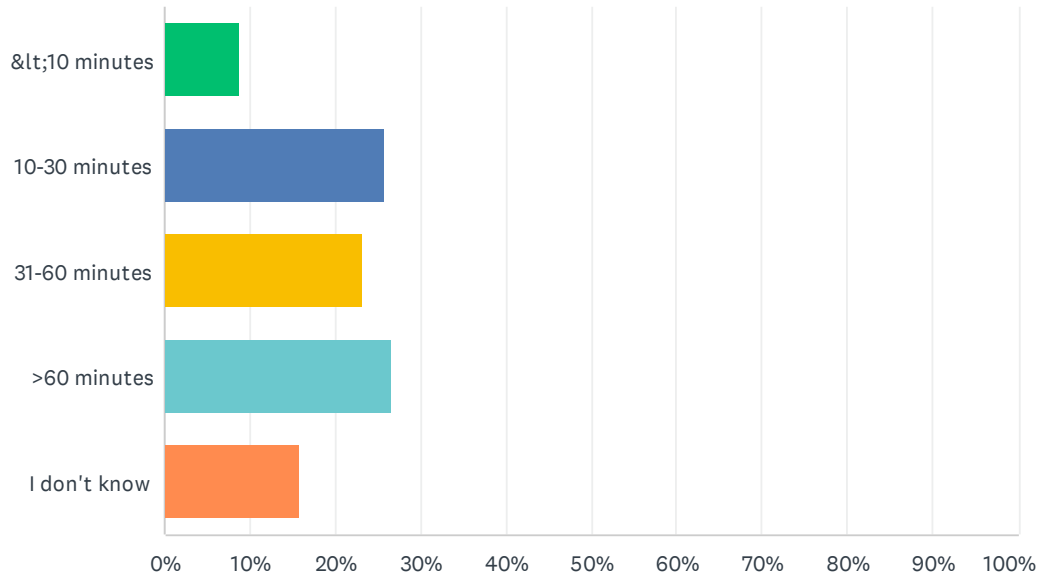
Answered: 478 Skipped: 16



ANSWER CHOICES	RESPONSES	
Acceptable	29.50%	141
Somewhat excessive	45.61%	218
Very excessive	24.90%	119
TOTAL		478

Q19 What is the estimated total time dedicated by you and your device team to the care of a typical non-conditional CIED patient's MRI scan?

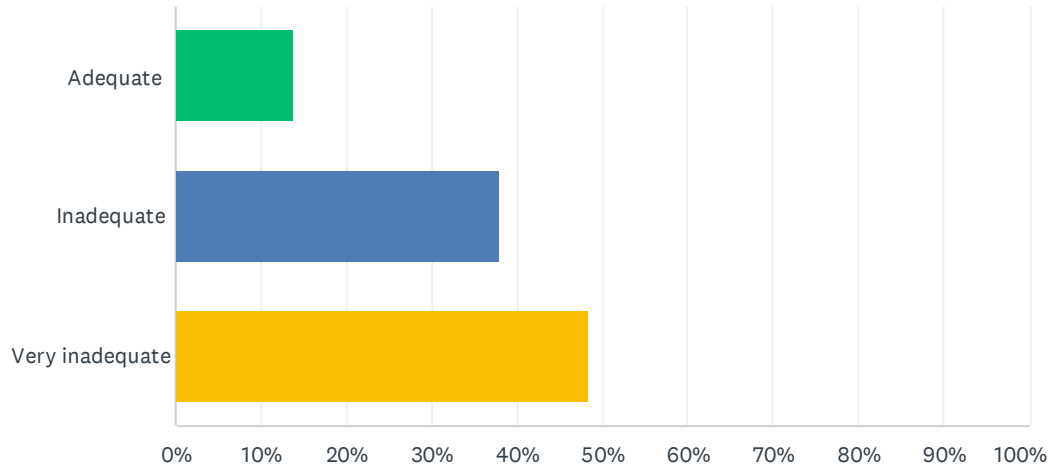
Answered: 478 Skipped: 16



ANSWER CHOICES	RESPONSES	
<10 minutes	8.79%	42
10-30 minutes	25.73%	123
31-60 minutes	23.22%	111
>60 minutes	26.57%	127
I don't know	15.69%	75
TOTAL		478

Q20 Payment for EP services provided to support MRI scans in CIED patients is:

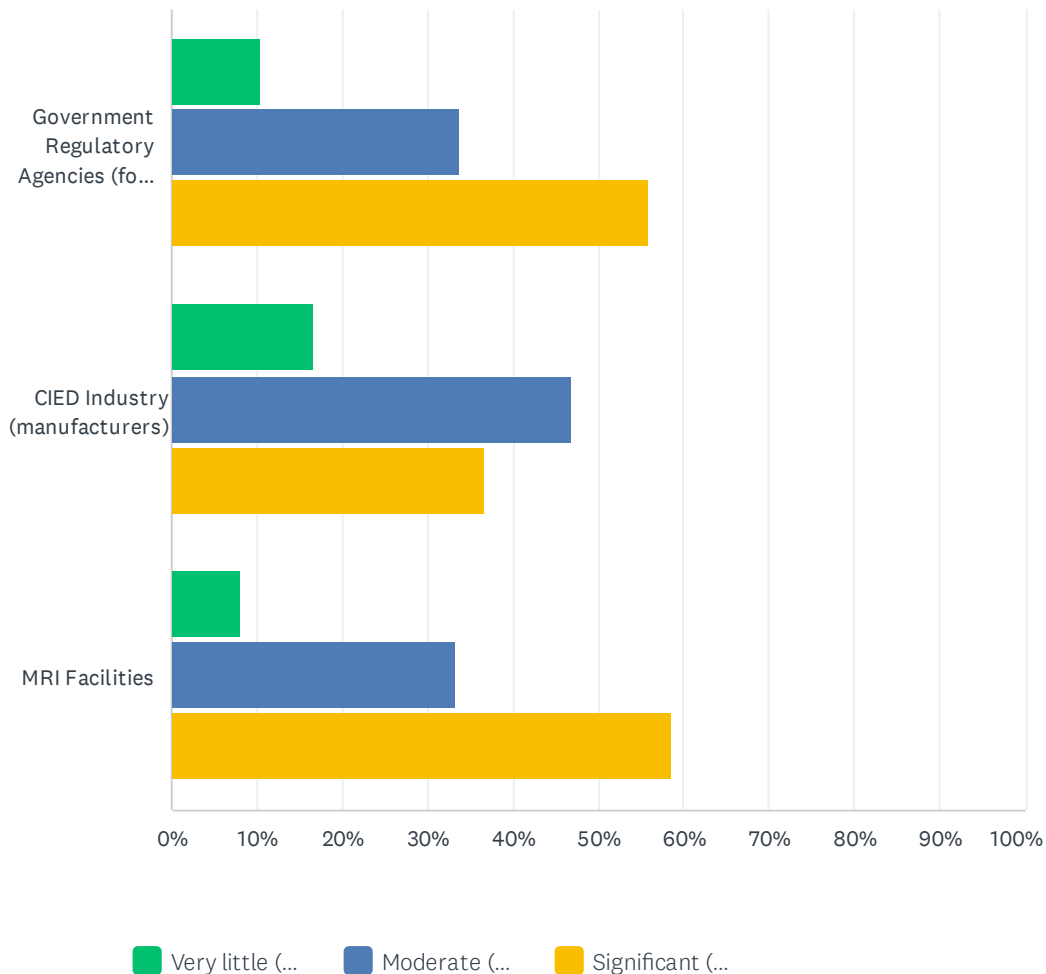
Answered: 478 Skipped: 16



ANSWER CHOICES	RESPONSES	
Adequate	13.81%	66
Inadequate	37.87%	181
Very inadequate	48.33%	231
TOTAL		478

Q21 How much increased effort do you believe each of the following entities need to dedicate to improve MRI scanning for patients with CIEDs (including systems currently considered non-conditional)?

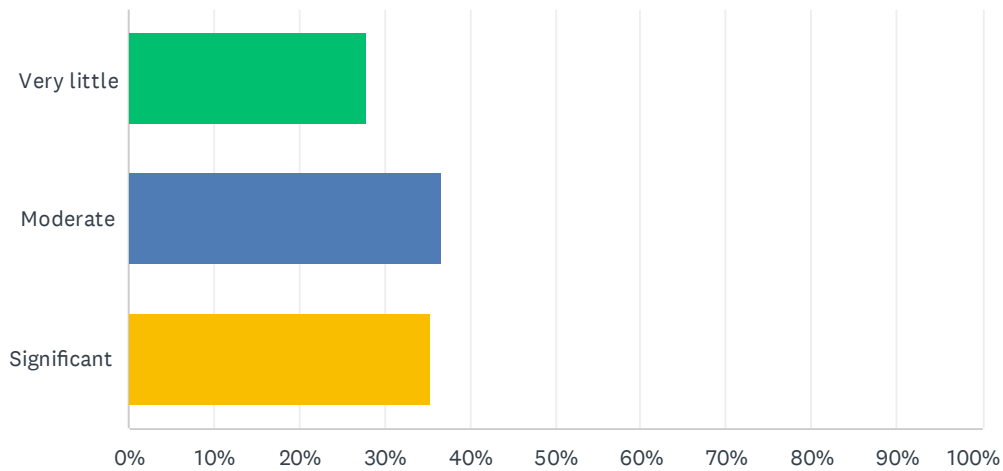
Answered: 478 Skipped: 16



	VERY LITTLE (CURRENT EFFORTS ARE GENERALLY ADEQUATE)	MODERATE (CURRENT EFFORTS ARE SOMEWHAT INADEQUATE)	SIGNIFICANT (CURRENT EFFORTS ARE VERY INADEQUATE)	TOTAL	WEIGHTED AVERAGE
Government Regulatory Agencies (for U.S.: FDA and CMS)	10.46% 50	33.68% 161	55.86% 267	478	2.45
CIED Industry (manufacturers)	16.53% 79	46.86% 224	36.61% 175	478	2.20
MRI Facilities	8.16% 39	33.26% 159	58.58% 280	478	2.50

Q22 If a CIED manufacturer was able to obtain MRI-conditional labeling for its generator to be used with a mix of other manufacturers' leads, how much competitive advantage would you give this brand in your practice?

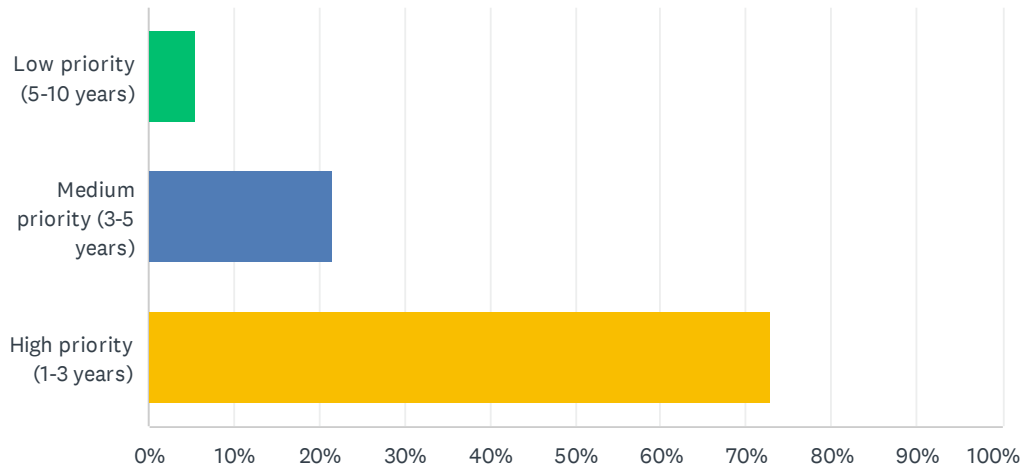
Answered: 478 Skipped: 16



ANSWER CHOICES	RESPONSES	
Very little	28.03%	134
Moderate	36.61%	175
Significant	35.36%	169
TOTAL		478

Q23 What priority do you believe industry and regulatory agencies (FDA and others) should place to update MRI-conditional labeling to include mixed-brand systems?

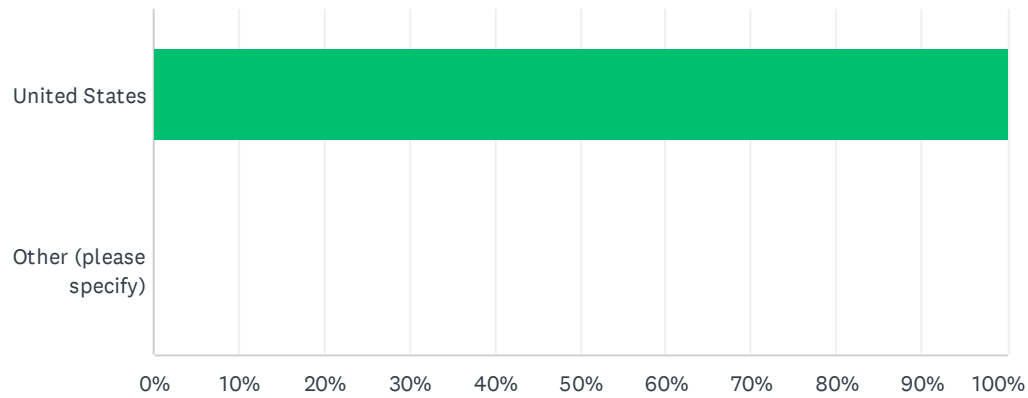
Answered: 478 Skipped: 16



ANSWER CHOICES	RESPONSES	
Low priority (5-10 years)	5.44%	26
Medium priority (3-5 years)	21.55%	103
High priority (1-3 years)	73.01%	349
TOTAL		478

Q24 In what country do you currently practice?

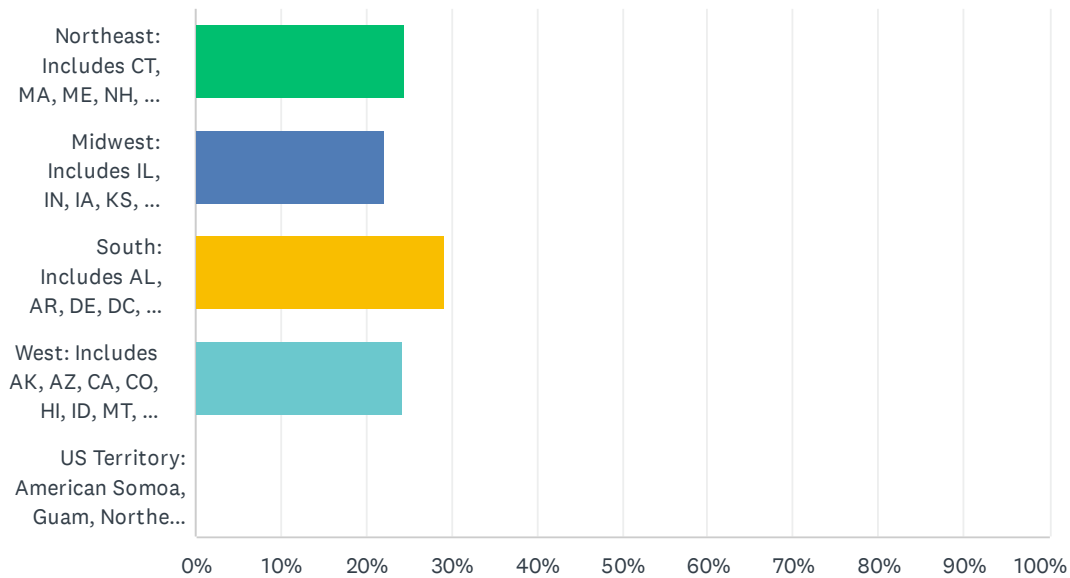
Answered: 494 Skipped: 0



ANSWER CHOICES	RESPONSES	
United States	100.00%	494
Other (please specify)	0.00%	0
TOTAL		494

Q25 In what region or territory of the U.S. do you primarily practice?

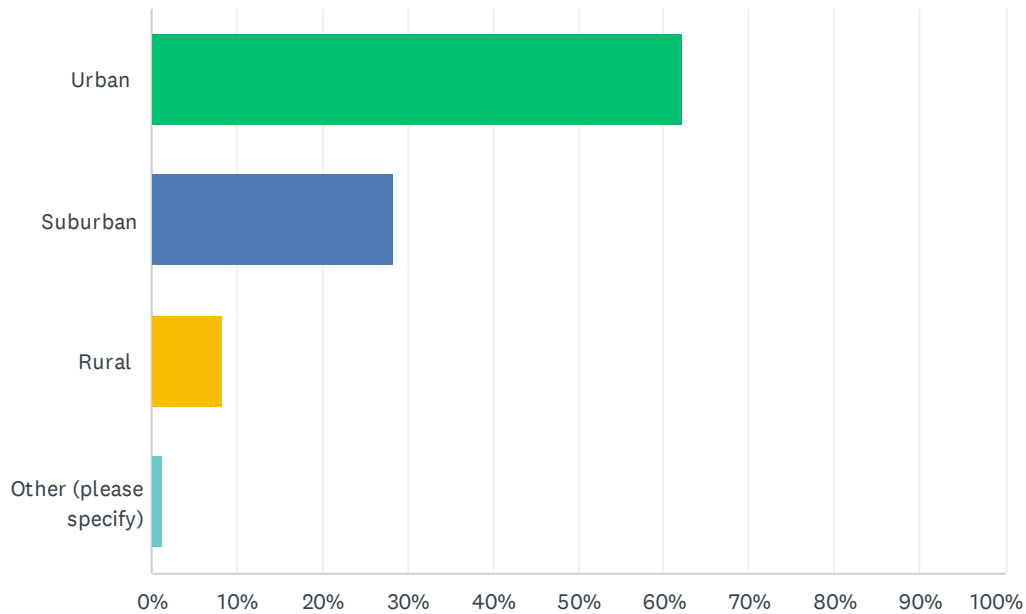
Answered: 487 Skipped: 7



ANSWER CHOICES	RESPONSES	
Northeast: Includes CT, MA, ME, NH, NJ, NY, PA, RI, VT	24.44%	119
Midwest: Includes IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WI	22.18%	108
South: Includes AL, AR, DE, DC, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV	29.16%	142
West: Includes AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY	24.23%	118
US Territory: American Somoa, Guam, Northern Mariana Islands, Puerto Rico, U.S. Virgin Islands	0.00%	0
TOTAL		487

Q26 What is the setting of your primary hospital?

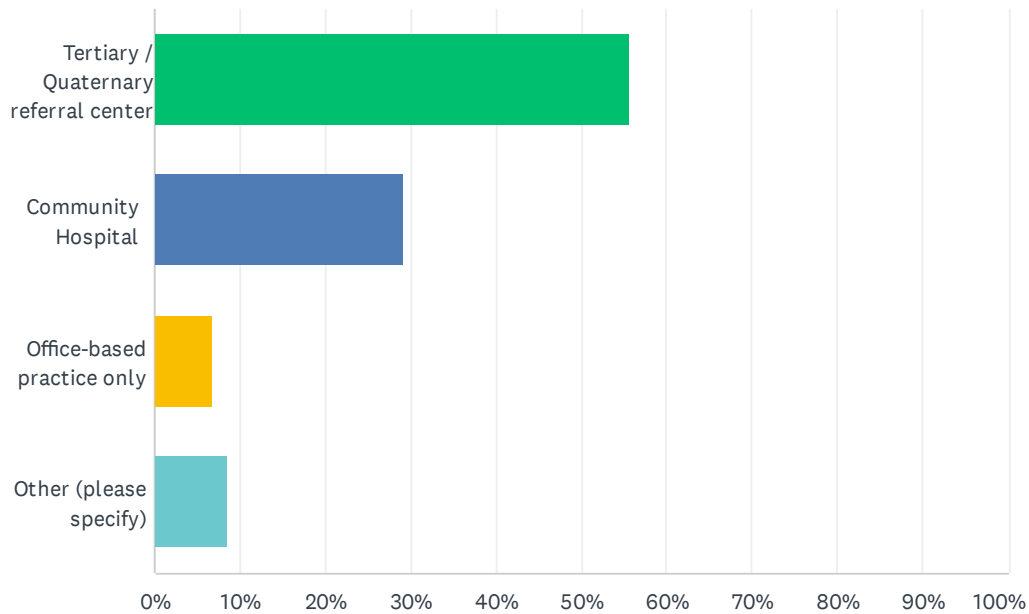
Answered: 474 Skipped: 20



ANSWER CHOICES	RESPONSES	
Urban	62.24%	295
Suburban	28.27%	134
Rural	8.23%	39
Other (please specify)	1.27%	6
TOTAL		474

Q27 Which of the following best describes your primary practice setting?

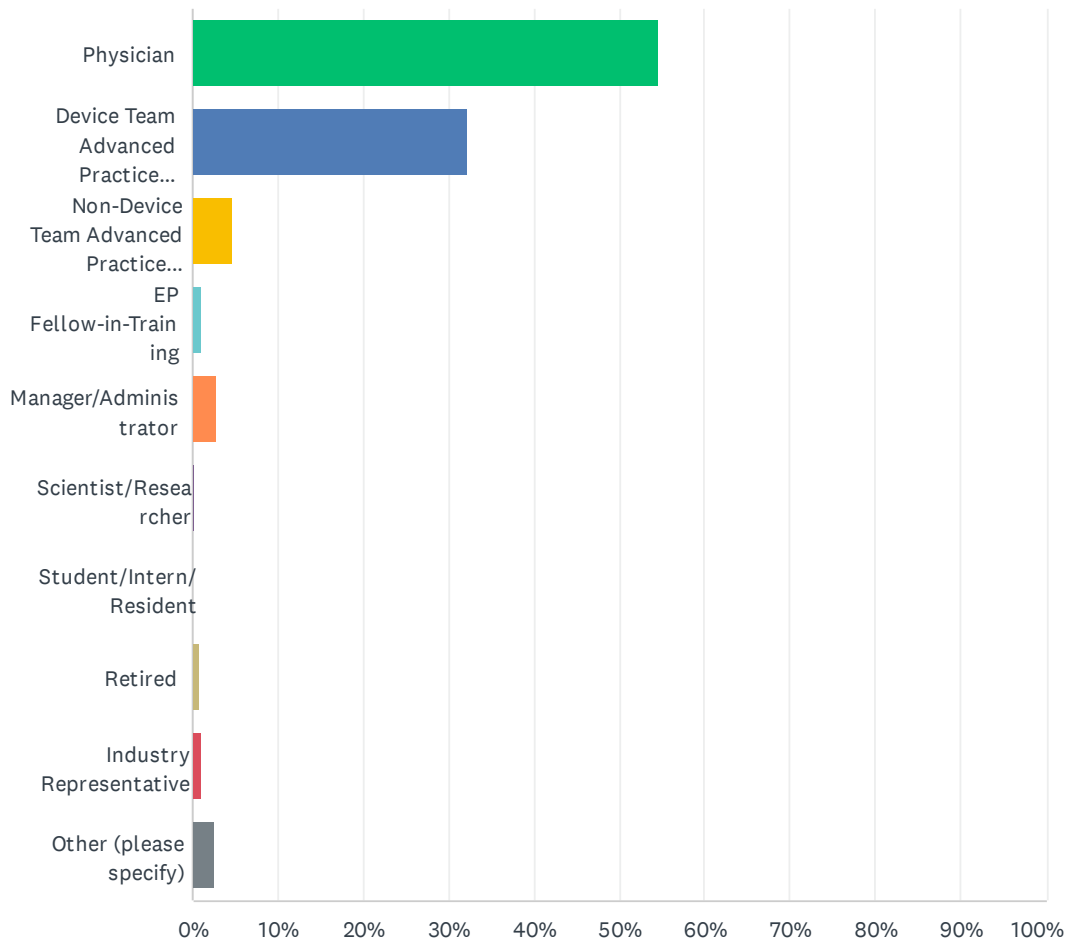
Answered: 474 Skipped: 20



ANSWER CHOICES	RESPONSES	
Tertiary / Quaternary referral center	55.70%	264
Community Hospital	29.11%	138
Office-based practice only	6.75%	32
Other (please specify)	8.44%	40
TOTAL		474

Q28 Which of the following best describes your role? (Select only one):

Answered: 474 Skipped: 20

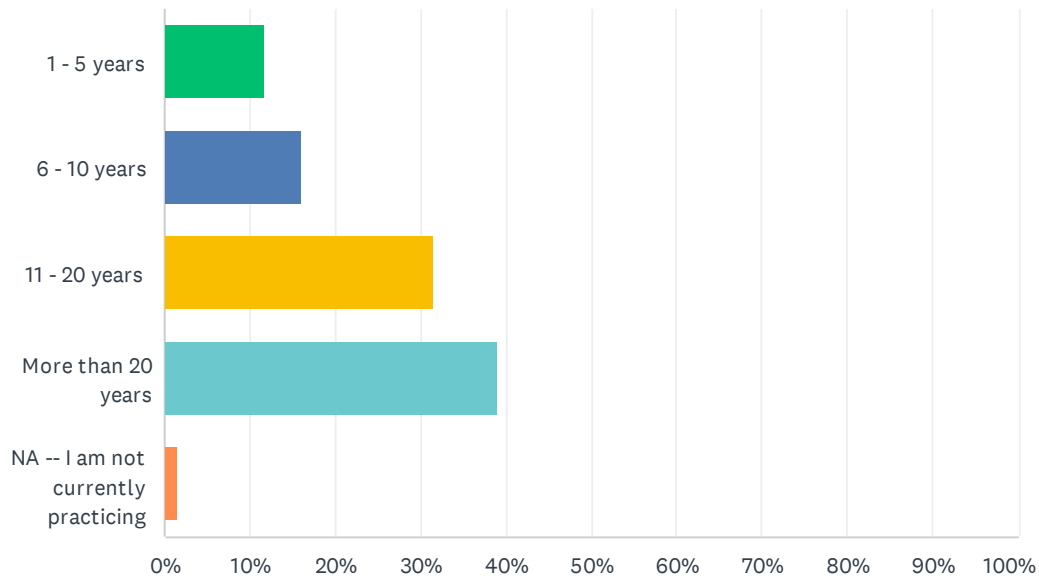


Challenges with MRIs for Patients with CIEDs

ANSWER CHOICES	RESPONSES	
Physician	54.64%	259
Device Team Advanced Practice Provider (NP, PA), Nurse, or Technician	32.28%	153
Non-Device Team Advanced Practice Provider (NP, PA), Nurse, or Technician	4.64%	22
EP Fellow-in-Training	1.05%	5
Manager/Administrator	2.74%	13
Scientist/Researcher	0.21%	1
Student/Intern/Resident	0.00%	0
Retired	0.84%	4
Industry Representative	1.05%	5
Other (please specify)	2.53%	12
TOTAL		474

Q29 How many years have you been in practice?

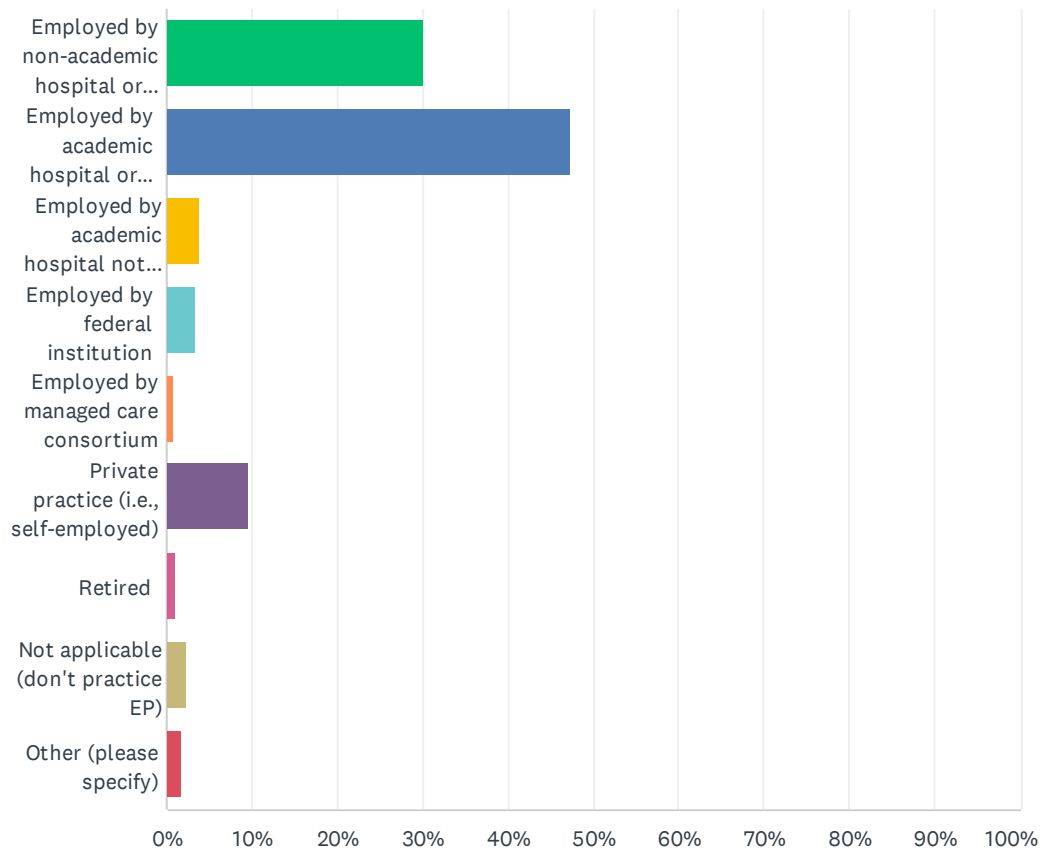
Answered: 474 Skipped: 20



ANSWER CHOICES	RESPONSES	
1 - 5 years	11.81%	56
6 - 10 years	16.03%	76
11 - 20 years	31.65%	150
More than 20 years	39.03%	185
NA -- I am not currently practicing	1.48%	7
TOTAL		474

Q30 What is the primary setting in which you practice electrophysiology?

Answered: 474 Skipped: 20



ANSWER CHOICES	RESPONSES	
Employed by non-academic hospital or health system	30.17%	143
Employed by academic hospital or health system	47.26%	224
Employed by academic hospital not affiliated with a university	3.80%	18
Employed by federal institution	3.38%	16
Employed by managed care consortium	0.84%	4
Private practice (i.e., self-employed)	9.49%	45
Retired	1.05%	5
Not applicable (don't practice EP)	2.32%	11
Other (please specify)	1.69%	8
TOTAL		474

Q31 Please share your comments and suggestions for HRS on on the need for additional evidence or workflow improvement for CIEDs and MRI scanning.

Answered: 167 Skipped: 327

Q32 Please provide your contact information if you are willing to share your CIED MRI protocol and/or participate in future CIED-MRI registry studies.

Answered: 220 Skipped: 274

ANSWER CHOICES	RESPONSES	
Name	99.55%	219
Institution	94.09%	207
Address	0.00%	0
Address 2	0.00%	0
City/Town	0.00%	0
State/Province	99.09%	218
ZIP/Postal Code	0.00%	0
Country	97.73%	215
Email Address	98.64%	217
Phone Number	87.27%	192