Use of a VA Root Cause Analysis database to reduce suicide among recently returned veterans

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Agenda for this talk

- What is a Root Cause Analysis?
- RCA reports of suicide and suicide attempts in VA.
- Mental Health Environment of Care Checklist.
- RCA reports of suicide among OEF/OIF veterans.

The Challenge

- **11th leading cause of death U.S. (>32,000/year)**
  - **2006: 162,359 hospitalized for self-inflicted injuries**
  - **2005: 372,722 treated in ER for Self harm**
- Primary risk factors are
  - Suicidal thoughts/behaviors and/or history.
  - Psychiatric diagnoses
  - Physical illnesses
  - Availability of lethal means (meds, weapons)
  - Hopelessness, impulsivity, aggression, anxiety.
  - Elderly white males at high risk (especially when alone).
- **Veterans are twice as likely to die from suicide than non-veterans**.

What is a Root Cause Analysis?

- The focus on the systemic and organizational factors that may have contributed to an adverse event .
- Mandated by JC since 1997.
- Conducted at the local level in VA by Patient Safety Managers using Safety Assessment Code (SAC).
- Produces a detailed narrative report of what happened, why it happened and how to prevent it from happening again.

National Center for Patient Safety 400 Root Cause Analysis Reports

Caryl Lee RN, MSN
National Center for Patient Safety

- National Center for Patient Safety 2002
- Utilize Root Cause Analysis Database
- 400 Root Cause Analyses
  - Suicides and Serious Suicide Attempts
- Define victim demographics and risks

National Center for Patient Safety 400 Root Cause Analysis Reports

- Gender: 94% male
- Age: 20-87 (median 51 years)
- Suicide Location:
  - Inpatient: 10
  - Inpatient suicide attempts: 47
  - Outpatient: 293
  - Outpatient suicide attempts: 45

National Center for Patient Safety
400 Root Cause Analysis Reports

- Method (Overall):
  - Gunshot: 35%
  - Drug overdose: 24%
  - Hanging: 12%
- Method (Inpatient suicides N=10):
  - Hanging: 3
  - Drug overdose: 3
  - Gunshot: 2
  - Jumping: 2
- Method (inpatient suicide attempts N=47):
  - Drug overdose: 17
  - Cutting: 11
  - Hanging: 10

National Center for Patient Safety
400 Root Cause Analysis Reports

- Non-marital family relationships/conflicts (31%)
- Multiple medical problems (28%)
- Marital problems (e.g., separation, divorce) (25%)
- Legal issues/court dates (20%)
- Personal finances/money (20%)
- Physical pain - 14% (N = 56) noted pain that was treated but unrelieved.

National Center for Patient Safety 400 Root Cause Analysis Reports

- Most Common Diagnoses: depression, substance use disorder, musculoskeletal disease, circulatory, nervous system disease
- Previous attempt: 34%
- Last Contact:
  - Outpatient Mental Health: 42%
  - Inpatient Mental Health: 25%
  - Outpatient Primary Care: 25%
  - Outpatient Suicides : 78% within 1 month

Root Cause Analysis Actions

- Train staff and improve awareness
- Standardize assessments and provide tools
- Install new monitoring devices
- Architectural and infrastructure changes
- Improve continuity and case management
- Educate veterans and families

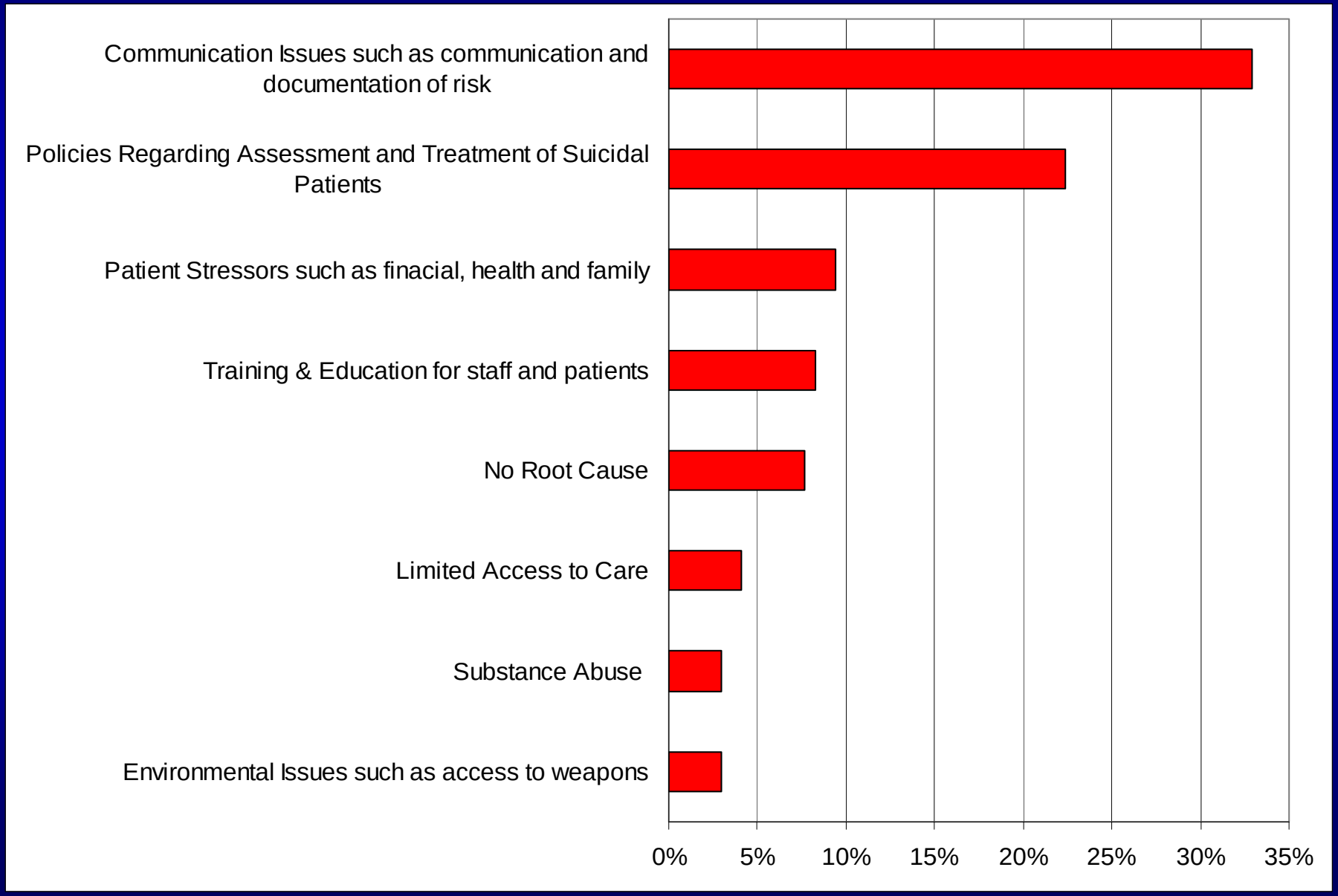
Aggregated RCA Reports Para-Suicide

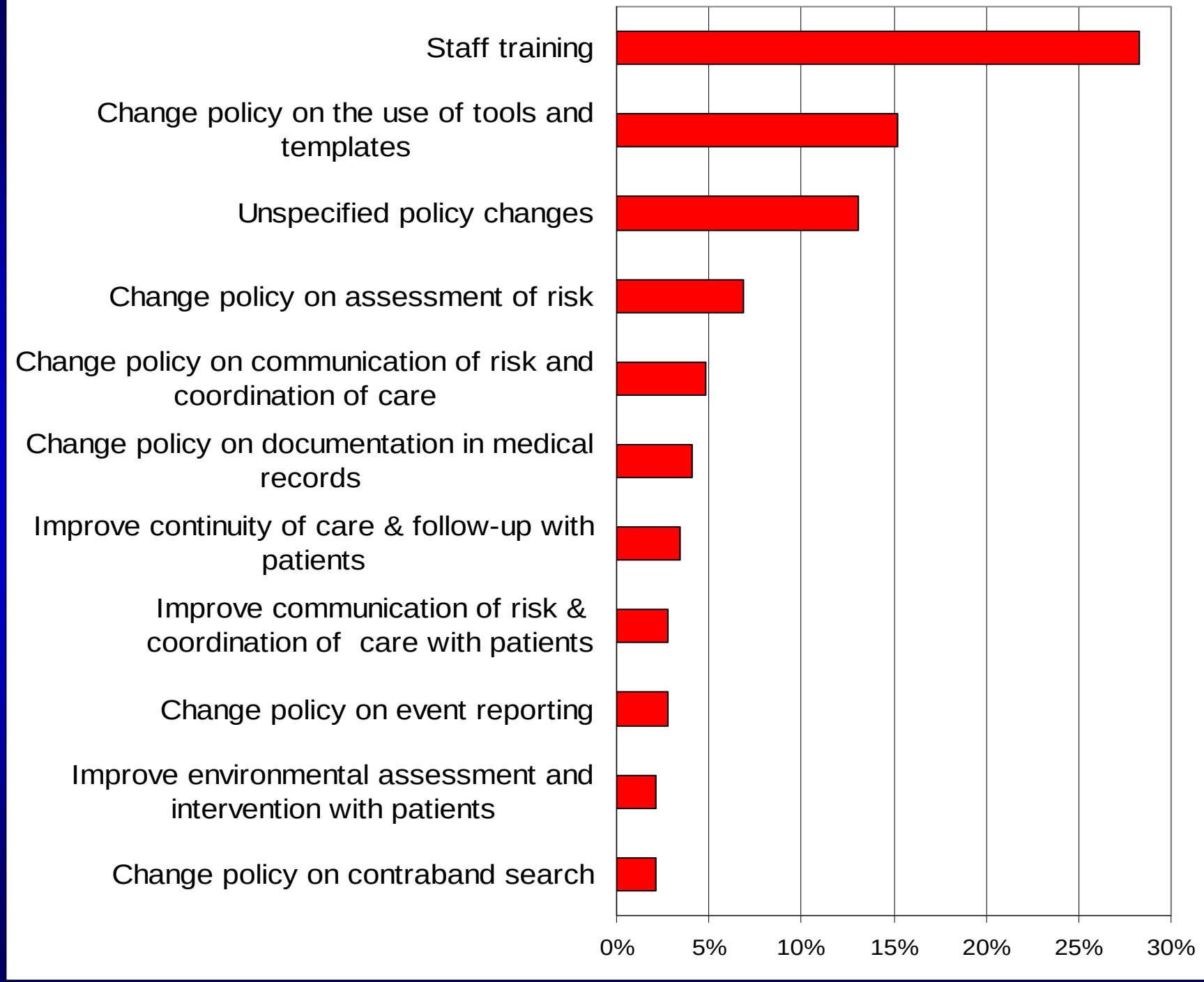
- Examined 94 aggregated root cause analyses submitted from 59 VHA facilities. The aggregated reviews were all those submitted covering the time period of October 1, 2000 through March 31, 2003.
- We conducted a semi-structured telephone interview with each site that submitted either a parasuicidal aggregated review and/or a selected single case RCA.

The Aggregated Reviews

- A total of 775 cases of parasuicidal behavior were reviewed in the 94 aggregate reviews.
- The mean number of cases reviewed per aggregated RCA was 8.5; the median was 5; and the standard deviation was 10.1.
- It took an average of 33.5 person hours (SD = 25.8 hours) to complete an aggregated RCA.

Primary Root Cause/Contributing Factors




Staff training
Change policy on the use of tools and templates
Unspecified policy changes
Change policy on assessment of risk
Change policy on communication of risk and coordination of care
Change policy on documentation in medical records
Improve continuity of care & follow-up with patients
Improve communication of risk & coordination of care with patients
Change policy on event reporting
Improve environmental assessment and intervention with patients
Change policy on contraband search
0%
5%
10%
15%
20%
25%
30%

Characteristics of the Actions

- 88% (214) of the actions address the root cause.
- Of the 214 actions that addressed the root cause:
  - 68.1% (145) were fully implemented
  - 15.5% (33) were partially implemented
  - 9.9% (21) were not implemented
  - 44.7% of the actions has a specific person responsible for implementation
  - Mental Health was responsible for 34.4% of the actions
  - Nursing for 2.8% of the actions
  - More than one service had responsibility for implementing 56.9% of the actions.

Outcome Measures

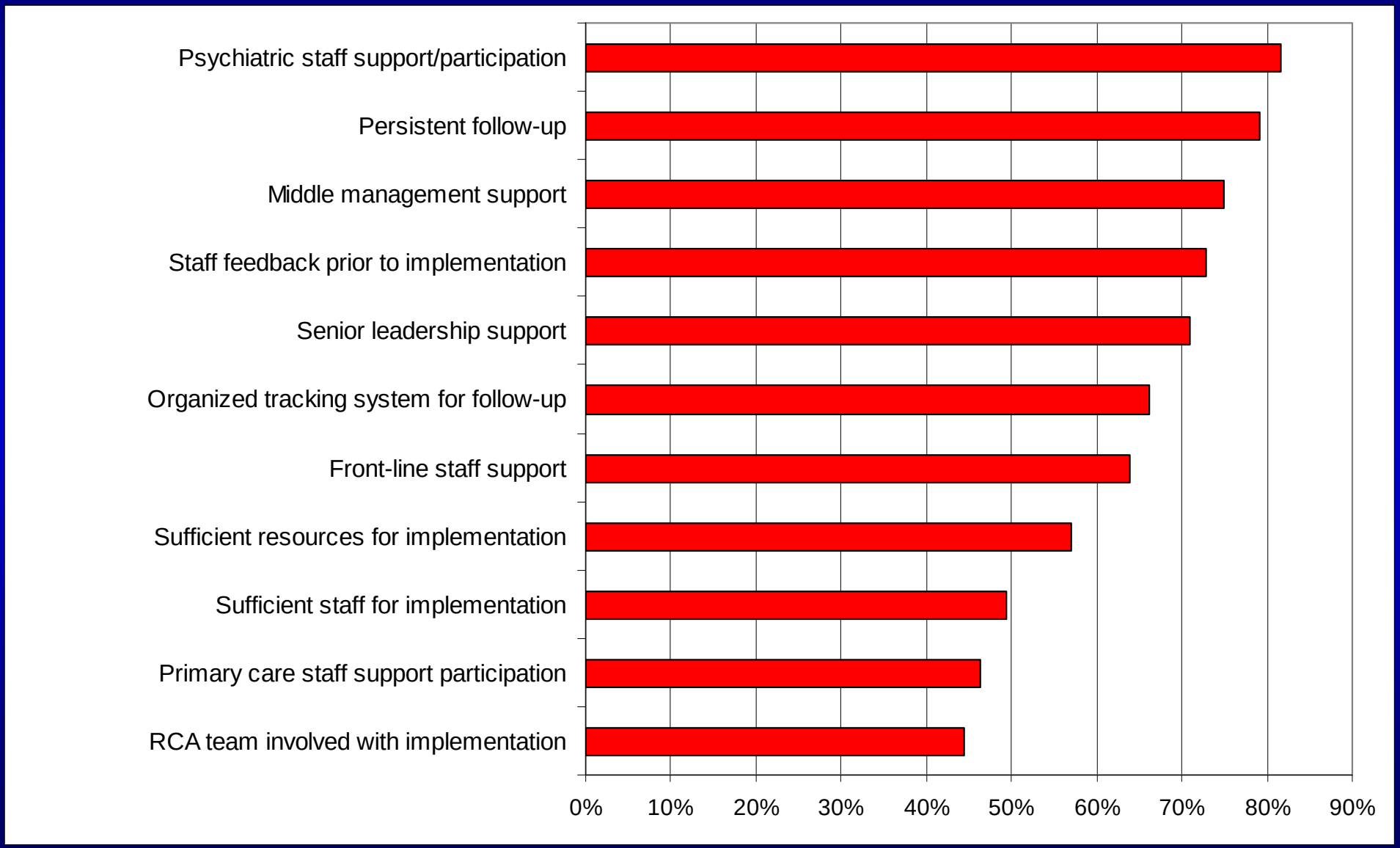
Outcome measure	Not using the measure	Too soon to tell about improvement	Have seen improvement	Have seen no change to date	Have seen an increased number of reports
Reduced reports of parasuicidal events	7%	28.20%	23.90%	32.40%	8.50%
Lengthened time between reported events	44.60%	17.60%	20.30%	17.60%	0%
Reduced reports of suicides	8.50%	18.30%	32.40%	36.60%	4.20%
Fewer reported attempts after discharge from hospital	47.80%	13.40%	22.40%	14.90%	1.50%
Improved discharge planning	29.60%	8.50%	47.90%	14.10%	0%
Fewer suicidal patients lost to follow-up	35.40%	13.80%	35.40%	15.40%	0%

“How are you defining parasuicidal events”?

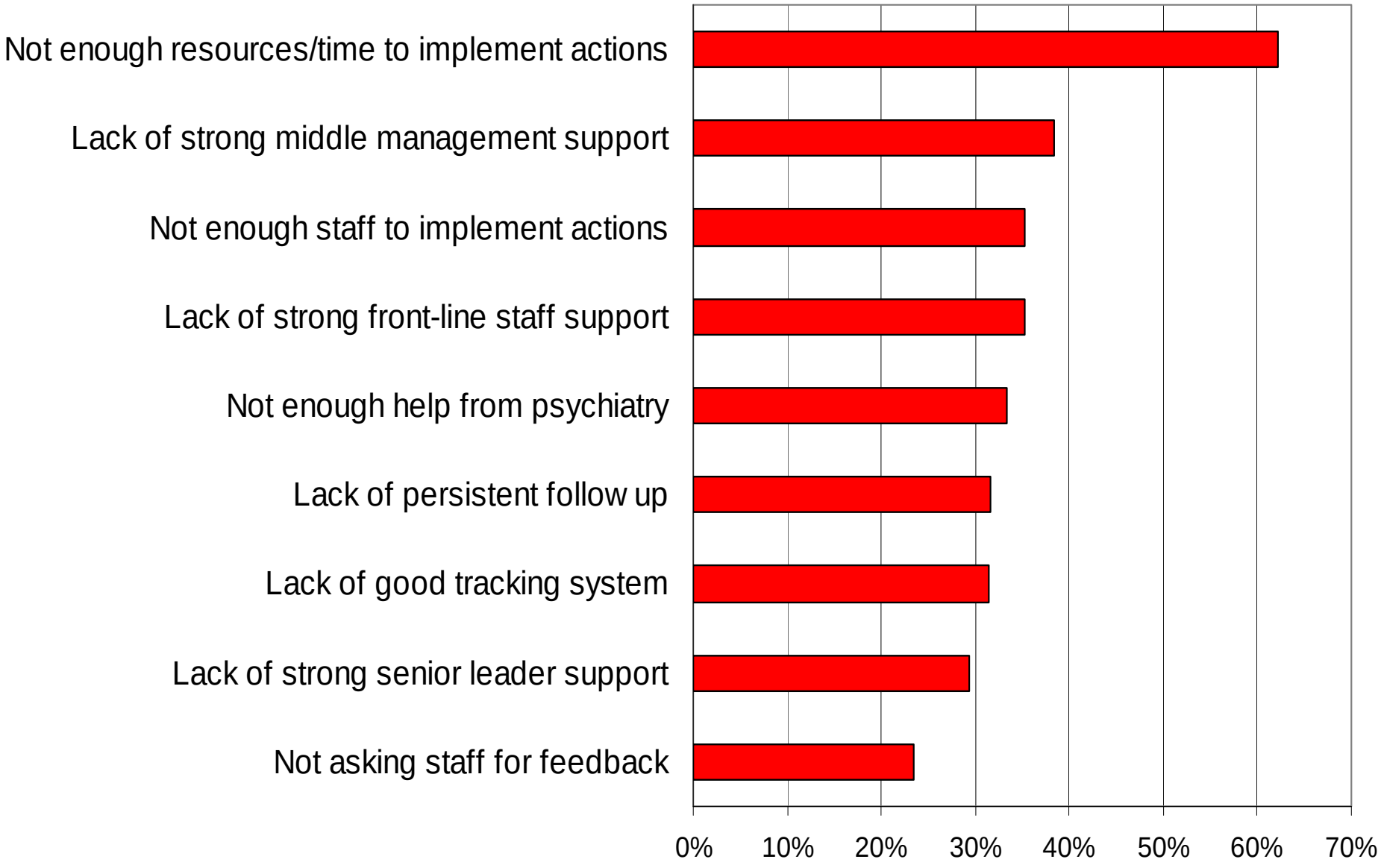
- Parasuicidal definitions were obtained from 67 sites - 73%, fell into one of three categories:
- An attempt or gesture.
- An attempt, gesture, or ideation.
- An attempt, gesture or threat.

Handbook definition: “any suicidal behavior with or without physical injury {i.e. short of death} including the full range of known or reported attempts, gestures and threats”.

Success Factors for Implementation of Actions



Barriers to Implementation



Characteristics Associated with Improved Implementation and/or Clinical Outcome

- “Having a good tracking system for following up on the actions” was significantly correlated with both implementation rate and reports of improved clinical outcomes
- Improved clinical outcome was correlated with strong senior leader support, strong front-line staff support, and enough resources to implement action plans.
- Also, higher implementation rates were associated with strong middle management support and having enough staff to implement action plans.

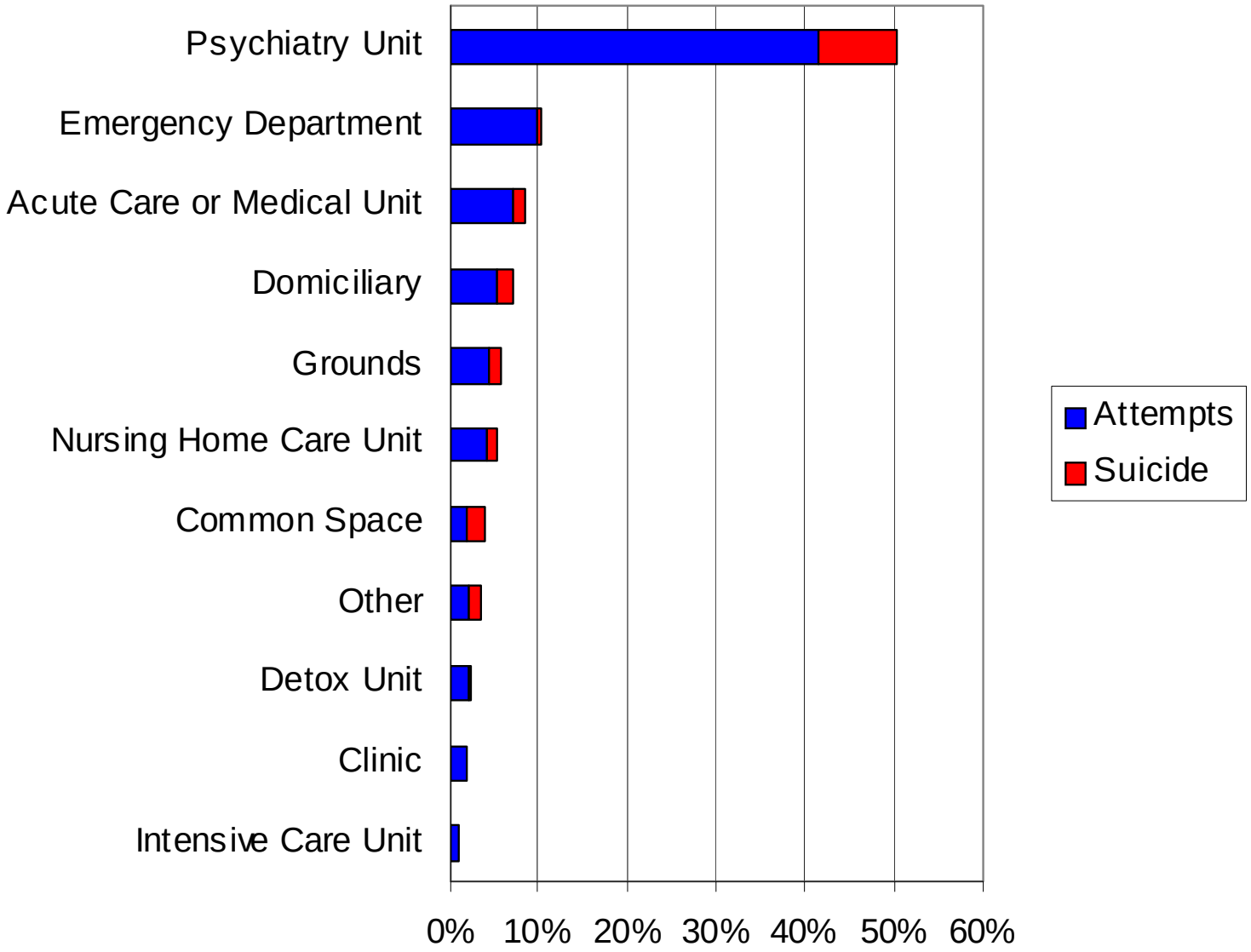
Take Home Points

- Better tools and approaches to aid in the assessment and communication of risk for suicidal behavior.
- Increased reports of parasuicidal events may make it easier to identify trends and root causes. Encourage reports by making it easy and less time-consuming for providers to report events.
- Dealing with “no root cause”
- Use a well-organized tracking system for actions.
- Senior leadership needs to demonstrate that reducing suicidal behavior is a priority by devoting resources and staff to implement actions.

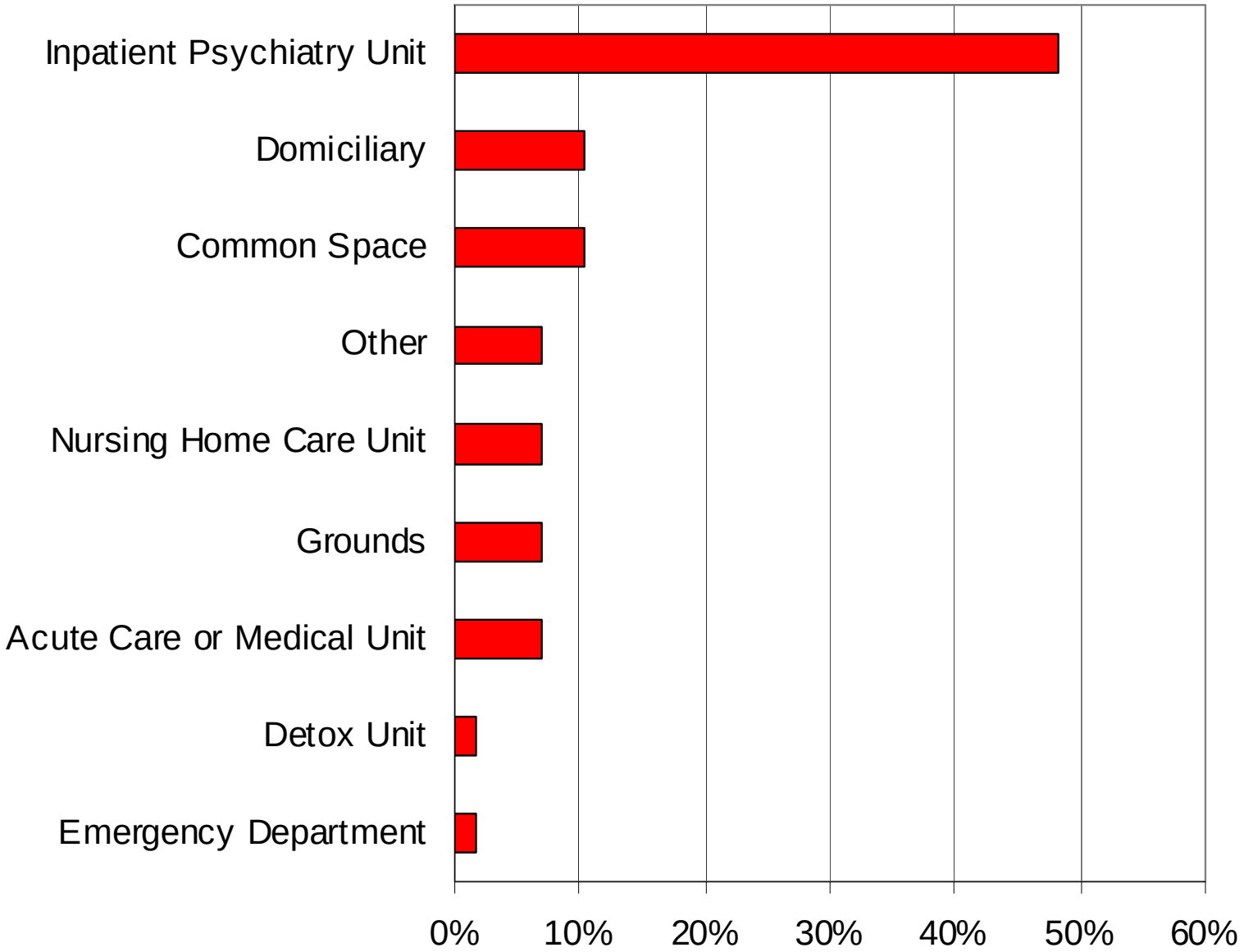
Inpatient Suicide in VA

- Reviewed all RCA reports of suicide, suicide attempts or “para-suicide” on any inpatient unit from December 1999 to December 2008
- Coded the reports for location, method, hanging anchor points and type of lanyard used
- Found 258 RCA reports of inpatient suicide attempts and 58 reports of completed inpatient suicide.

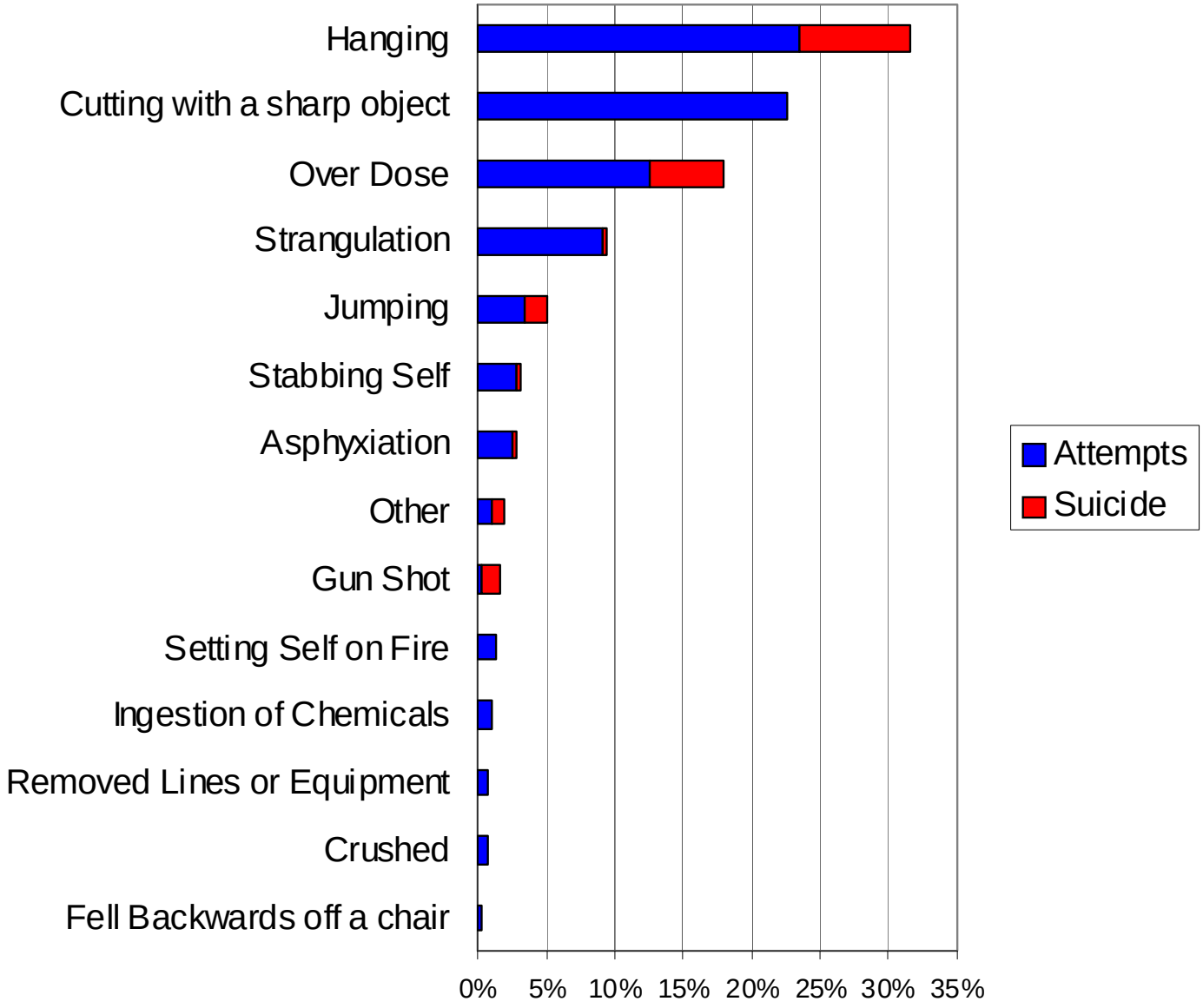
Location of Inpatient Suicide and Suicide Attempts in VA (N = 316)



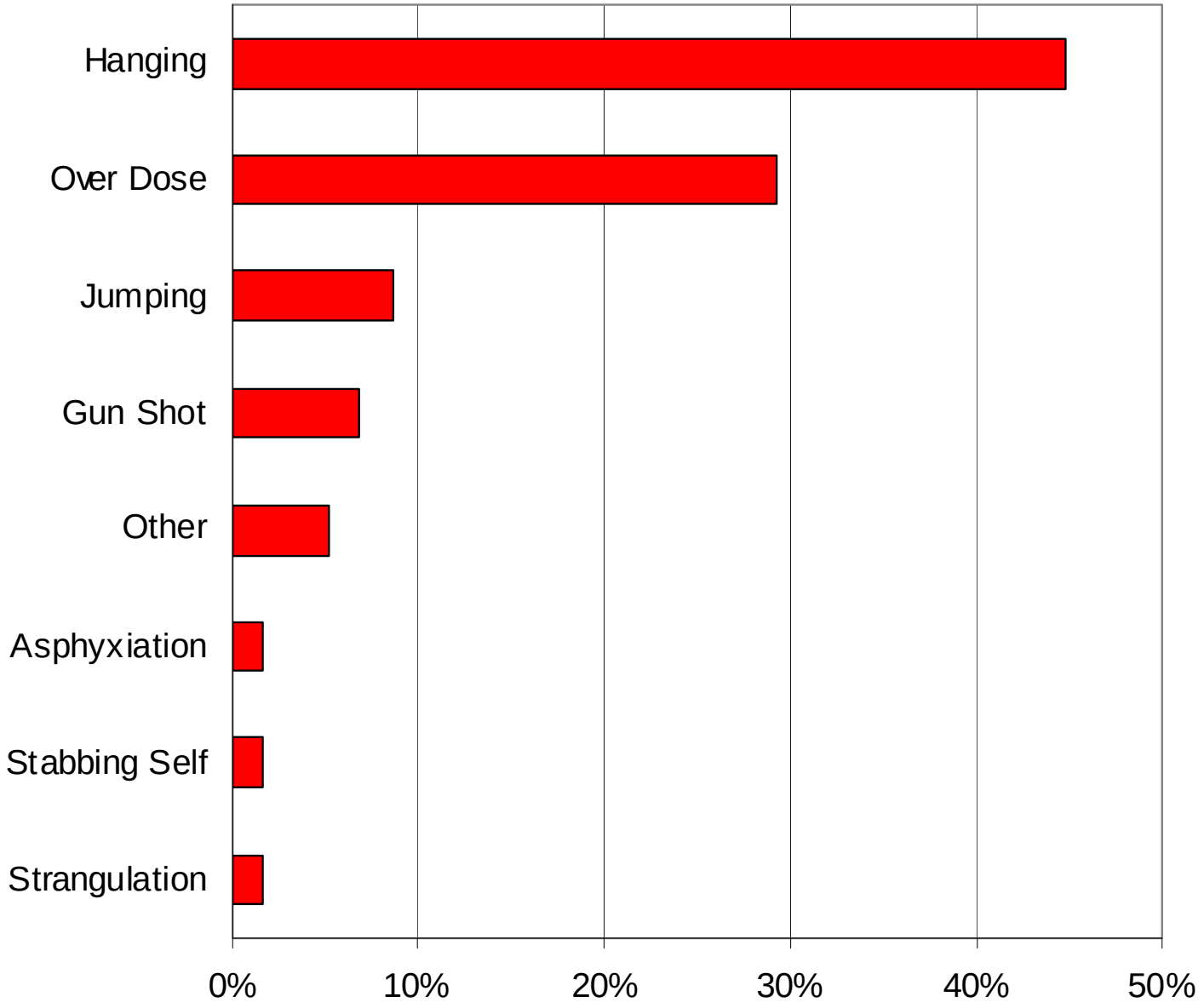
Location for Completed Inpatient Suicides (N=58)



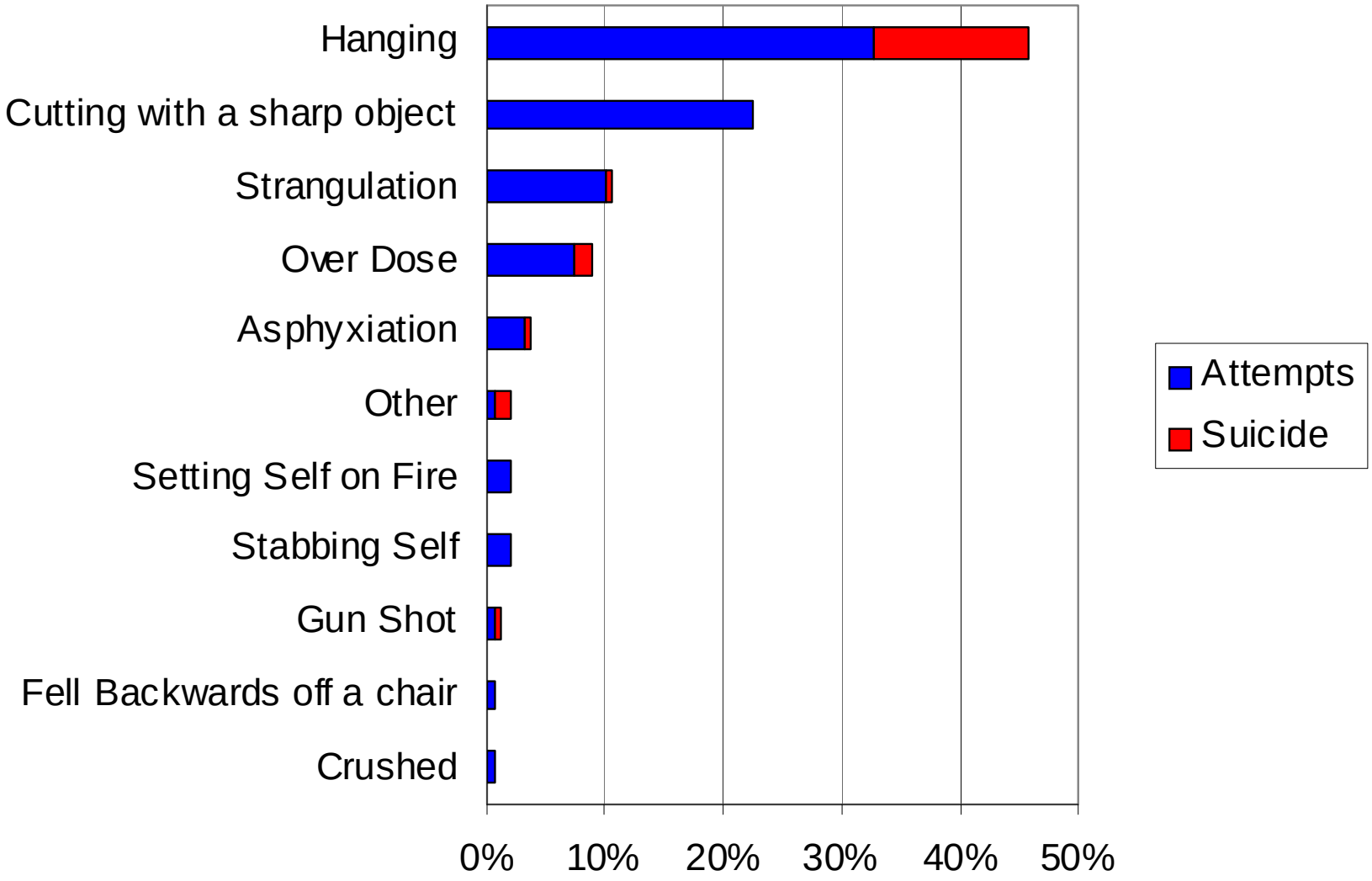
Methods for Inpatient Suicide and Suicide Attempts in VA (N=316)



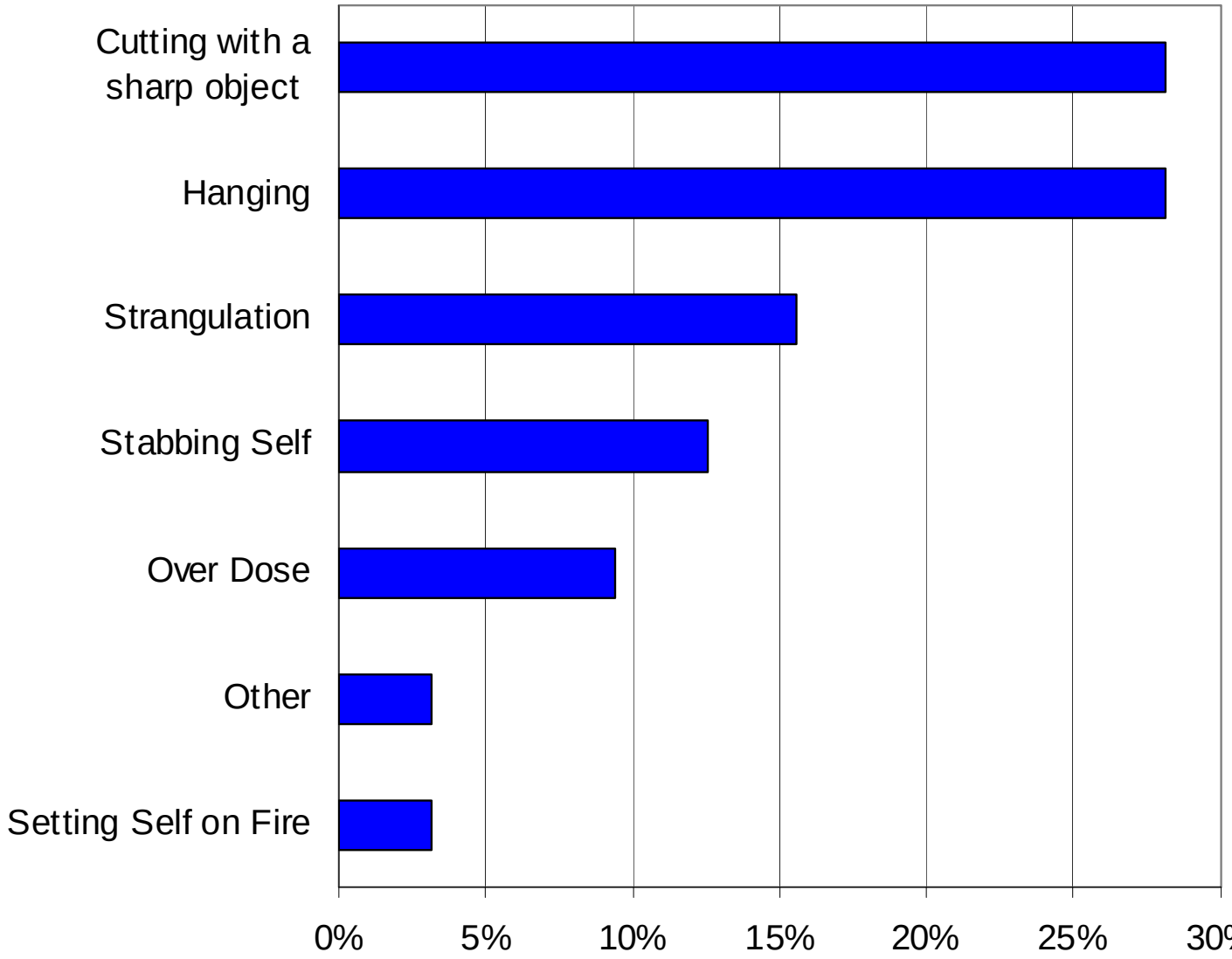
Method for Completed Inpatient Suicide (N=58)



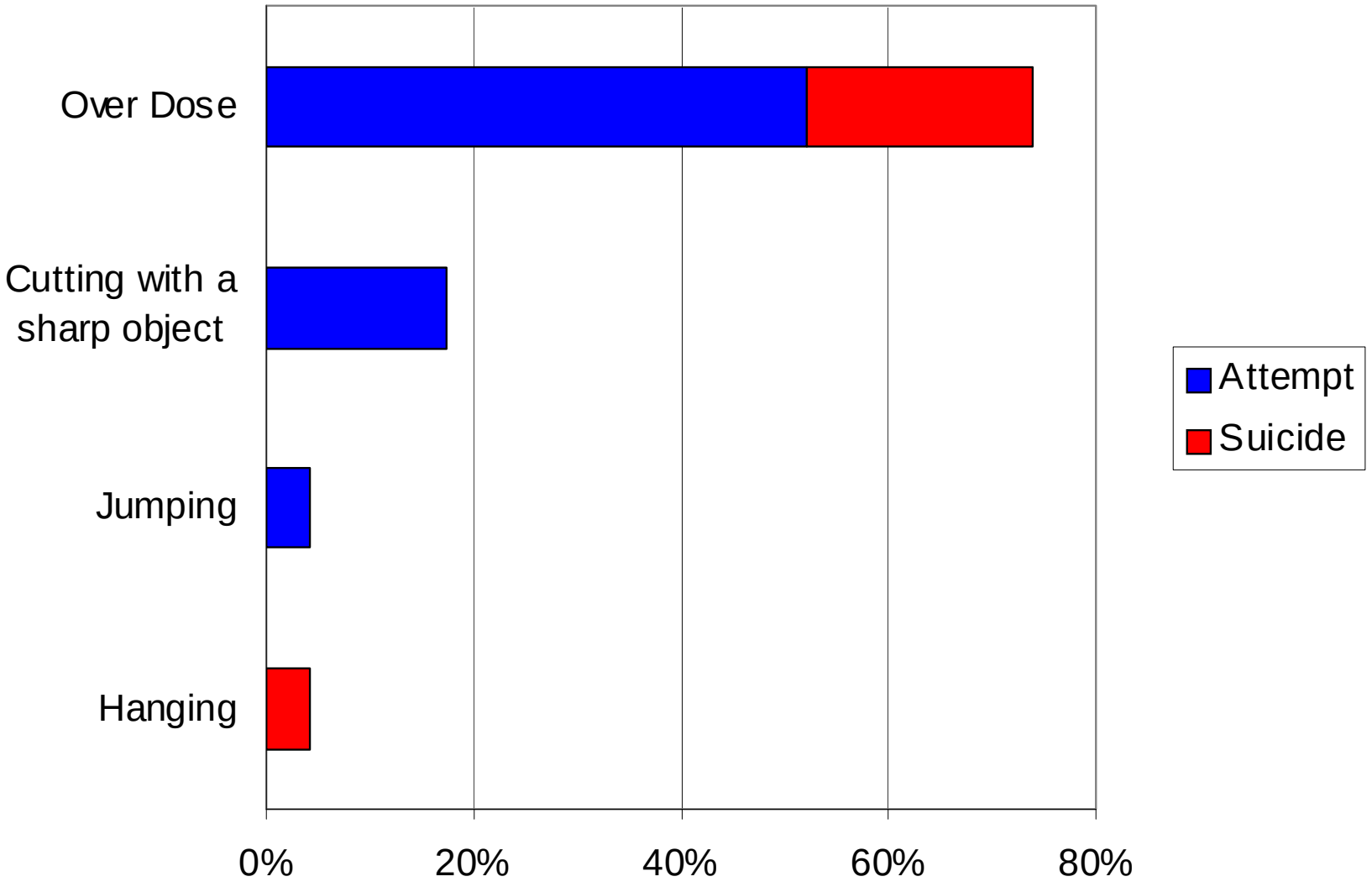
Methods for Inpatient Suicide and Suicide Attempts on Psychiatry units Only (N = 159)



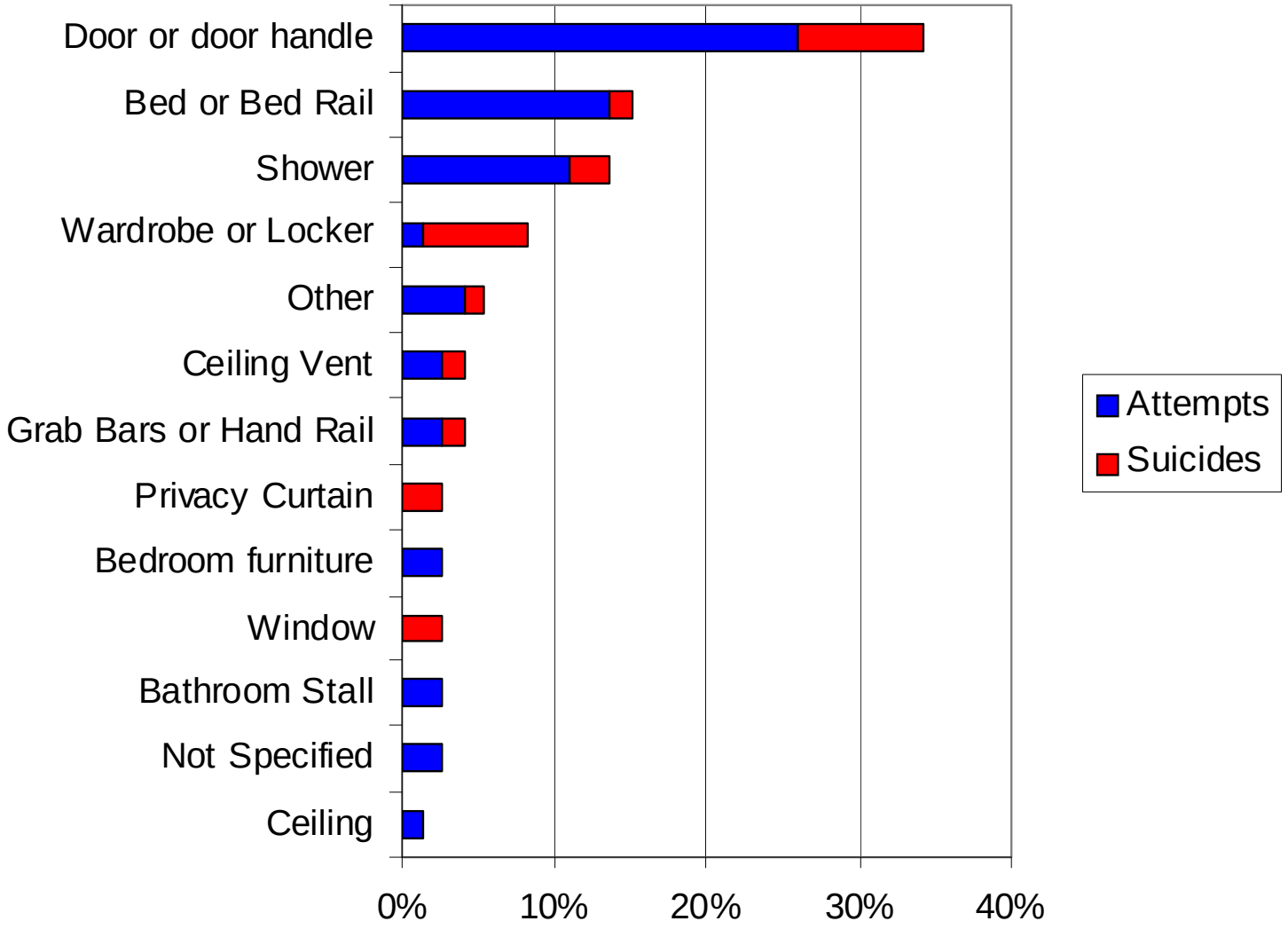
Method of Inpatient Suicide Attempts in ED (N=32)
There were no completed suicides



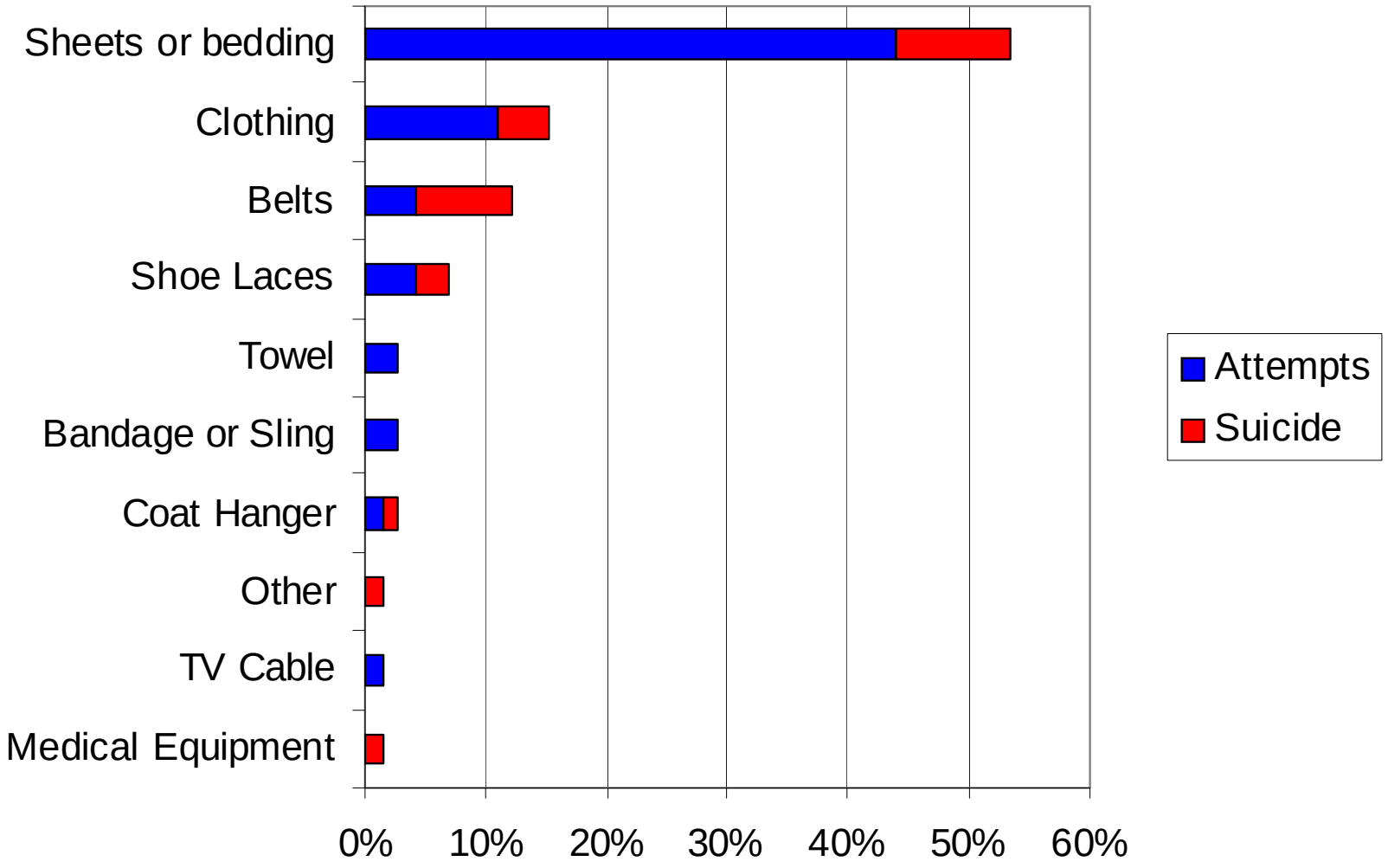
Method of Inpatient Suicide and Suicide Attempts in Domiciliaries (N=23)



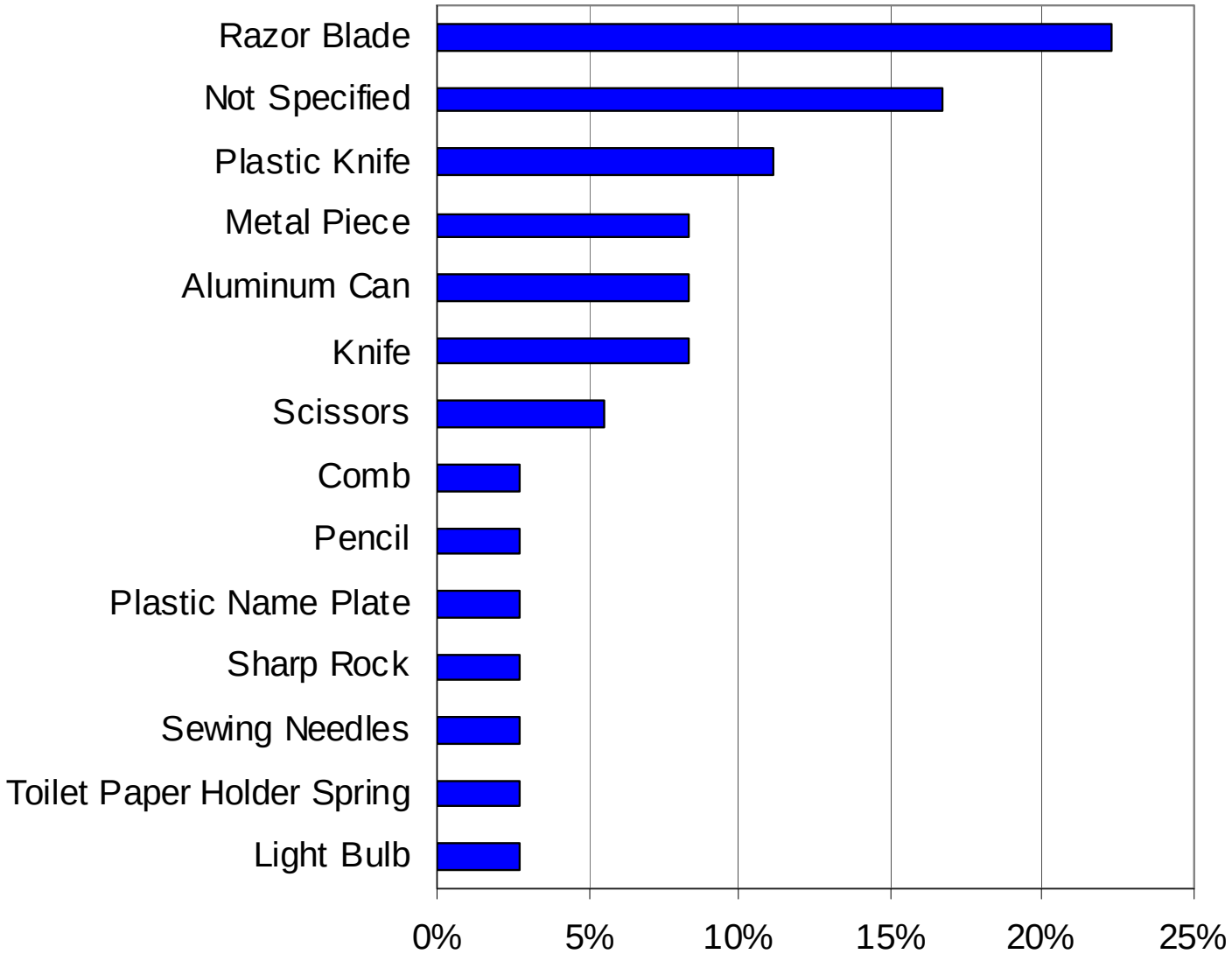
Anchor Points for 73 RCA Reports of Inpatient Suicide and Attempted Suicide by Hanging on Psychiatry Units Only



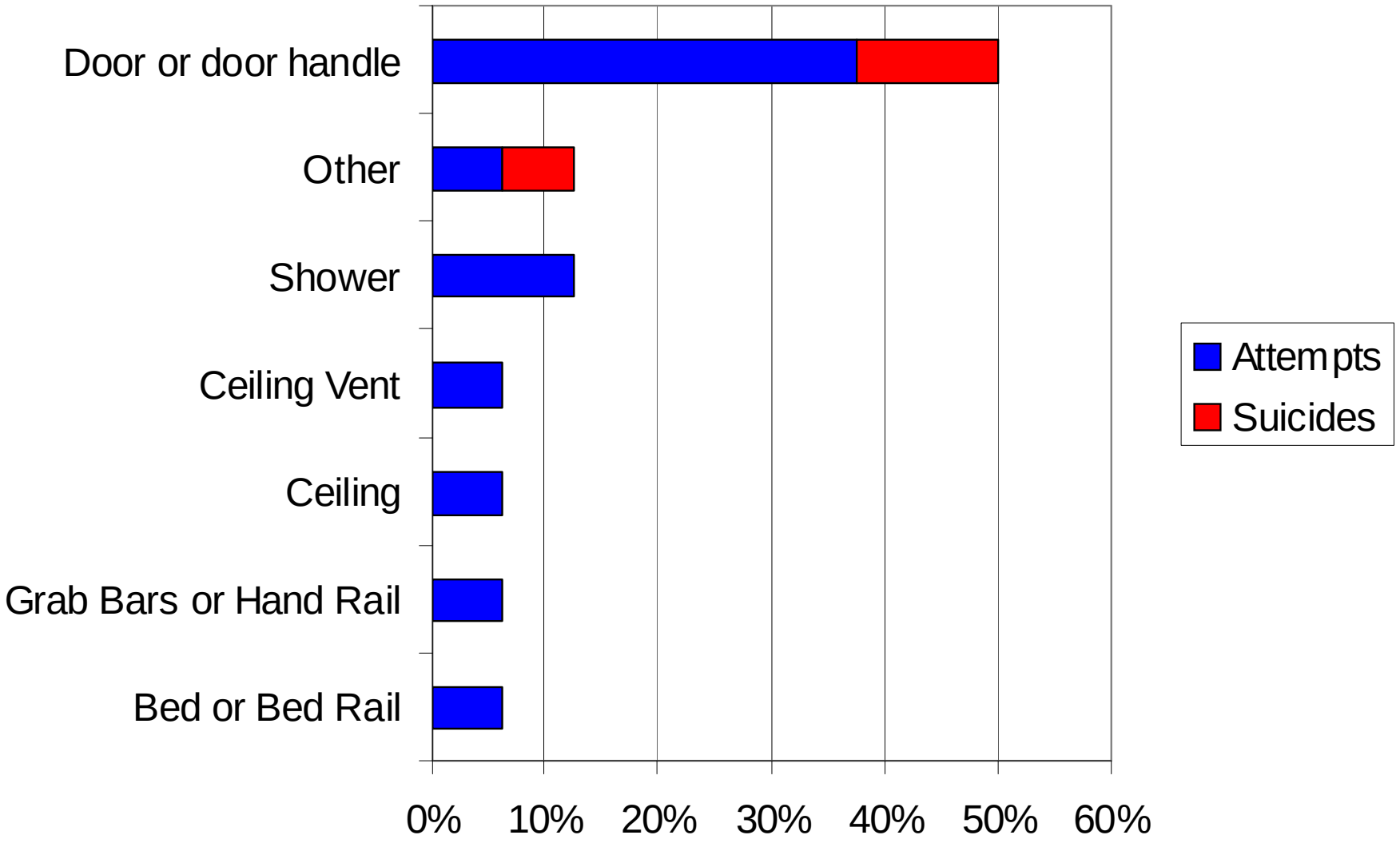
Types of lanylards for the 73 RCA Reports of Inpatient Suicide and Attempted Suicide by Hanging on Psychiatry Units Only



Method for Cutting on Psychiatry Units
There were no Completed Suicides (N=36)



Anchor Points for Hanging on Psychiatry Units in FY 2008 (N = 16)



Conclusions

- Inpatient suicide on psychiatry units in VA continues to be extremely rare – approximately 2.3 completed suicides for every 100,000 psychiatric admissions.
- Hanging continues to be the most common method for inpatient suicide and doors, especially interior doors, are the most common anchor points.
- Sheets and bedding continue to be the most common type of lanyard for hanging.

The Mental Health Environment of Care Checklist for Locked Units

- From Patient Safety Workgroup
- Formed multidisciplinary national committee in Fall 2006
  - Patient safety, psychiatry, psychology, nursing, fire protection, architecture, facilities engineering, quality improvement, senior management
- Focused on specific rooms in locked mental health units
  - General room, bath, bed, seclusion, utility, kitchen, Laundry, OT, dinning, staff office, nursing station, entrance to unit, outdoor areas

Protocol for Environmental Rounds

- Form multidisciplinary safety inspection team
  - Include suicide prevention coordinator, patient safety officer, facility safety officer, psych nurse, non-psych nurse, Psychiatrist, reps from engineering and environmental services – **get people who are not normally on the unit**
- Conduct environmental rounds at least quarterly
- Rate identified safety concerns using a standardized scale taking severity and frequency into account.
- Track progress and report to senior leadership
- First tracking sheet was due October 2007

27.a. Are closets free of clothes rods that could be used as an anchor point for hanging? **----------** **27.b. Are closets free of clothes hangers (plastic, wood, and metal)?**	***Spring-loaded hooks designed for mental health areas should be used in lieu of closet rods and hangers.***
28.a. Are shelves in closets secured with tamper resistant fasteners and designed so they cannot be used as an anchor for hanging? **----------** **28.b. Are heavy items on shelves placed low to the floor and secured in place to prevent them from being removed?** **----------** **28.c. Is each shelf layer secured and not removable so that it cannot be pulled apart to be used as a weapon?**	***If there is a television or other electrical or heavy item on the shelf, it should be secured so that it cannot be pulled off onto someone, and the electrical cord must be short and plugged directly into the electrical receptacle. Sets of shelves should be short or low in height (low profile) to prevent the patient from reaching the ceiling.***

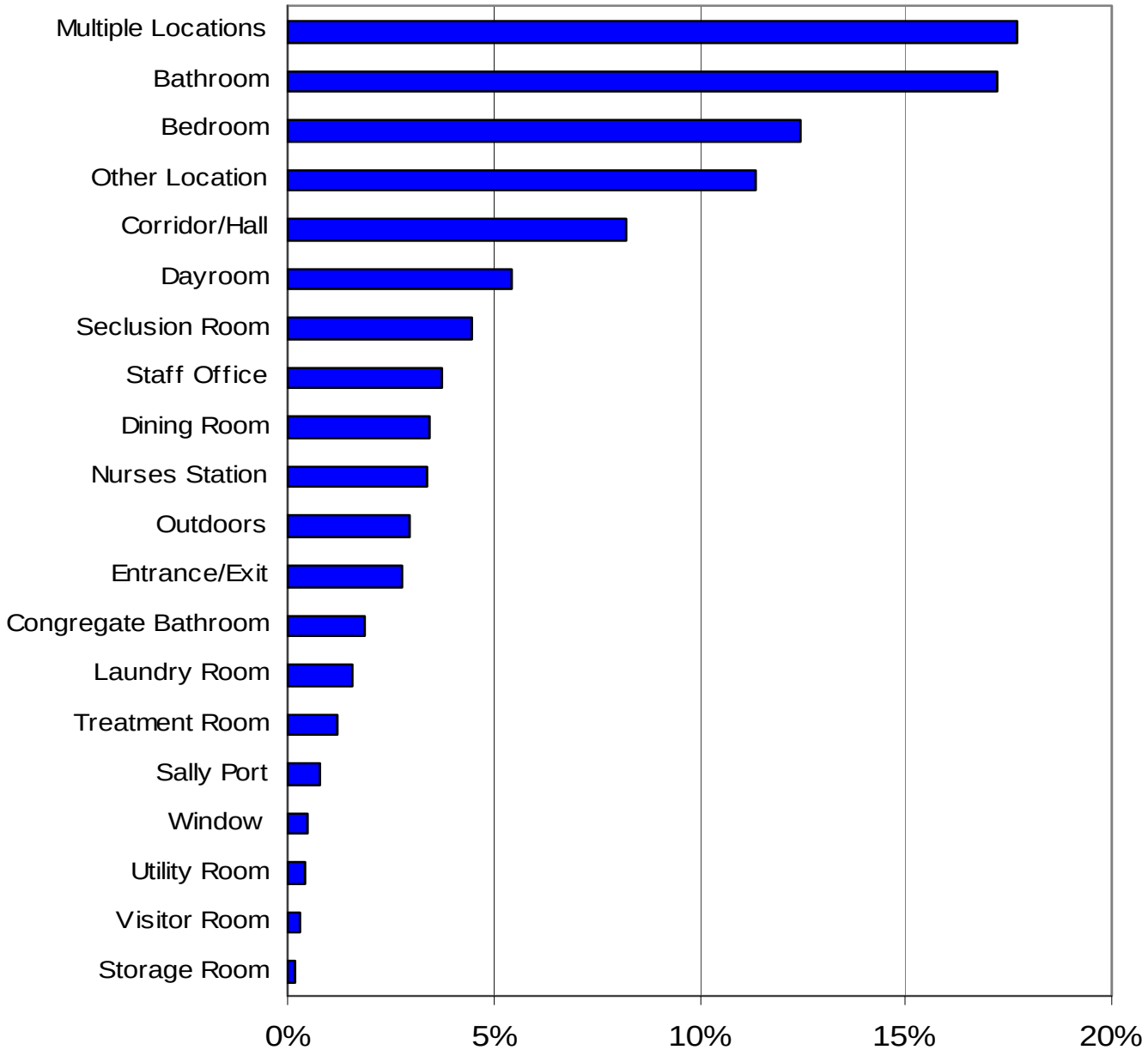
Risk Level Classification Chart

Risk Level Classification Chart				
Mishap Probability	A	B	C	D
Hazard Severity				
I	5	5	4	3
II	5	4	4	3
III	3	2	2	1
IV	2	2	1	1

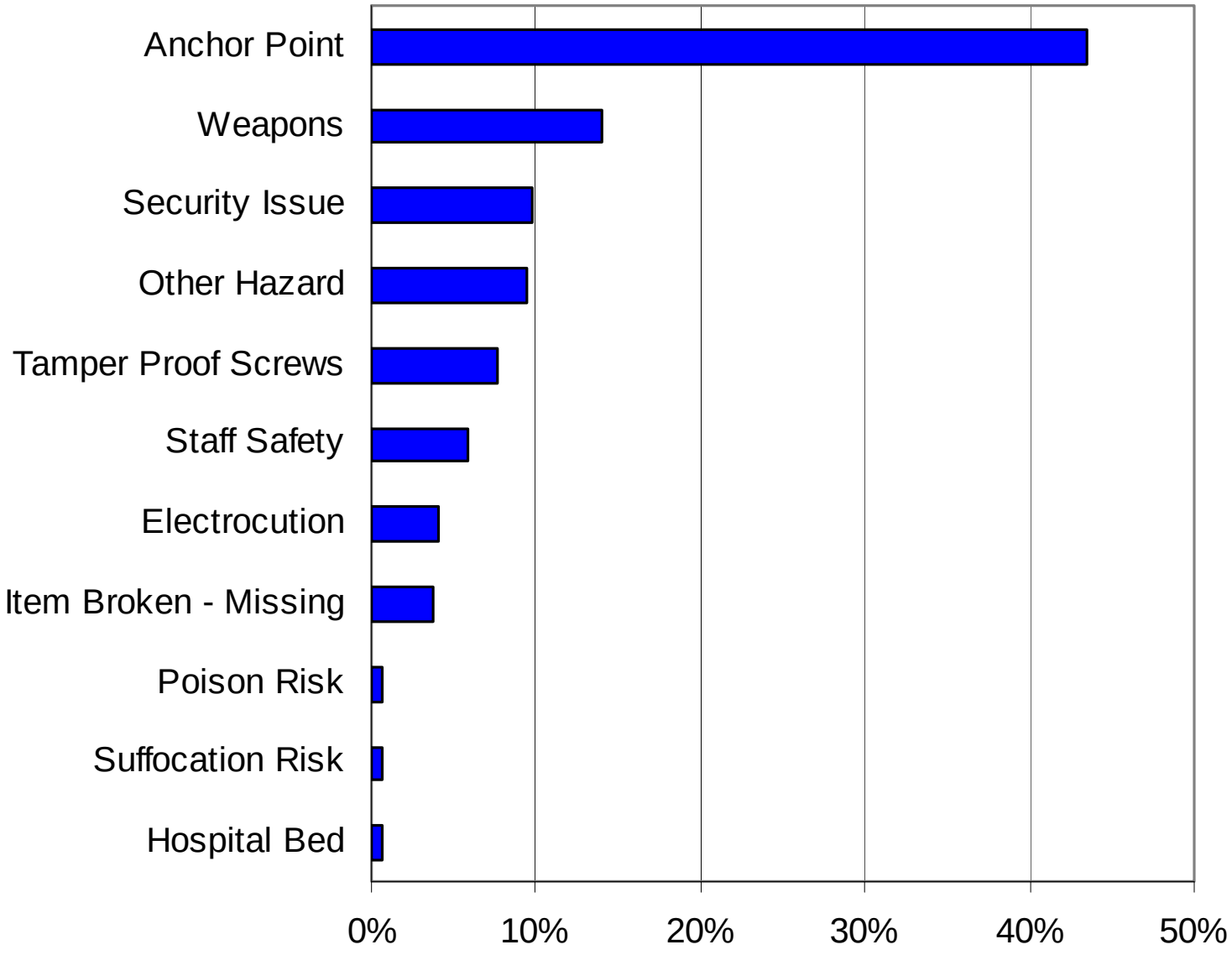
The first 12 months of the MHEOCC

- 113 VA facilities used the checklist to evaluate their mental health units.
- These facilities identified and rated 7642 hazards.
- At the end of the first year of the project, 5834 (76.3%) of these hazards had been abated.
- The next 2 slides show where the hazards were identified and what type of hazards were the most common.

Percent of Total Hazards By Location



Percent of Hazards by Type of Hazard

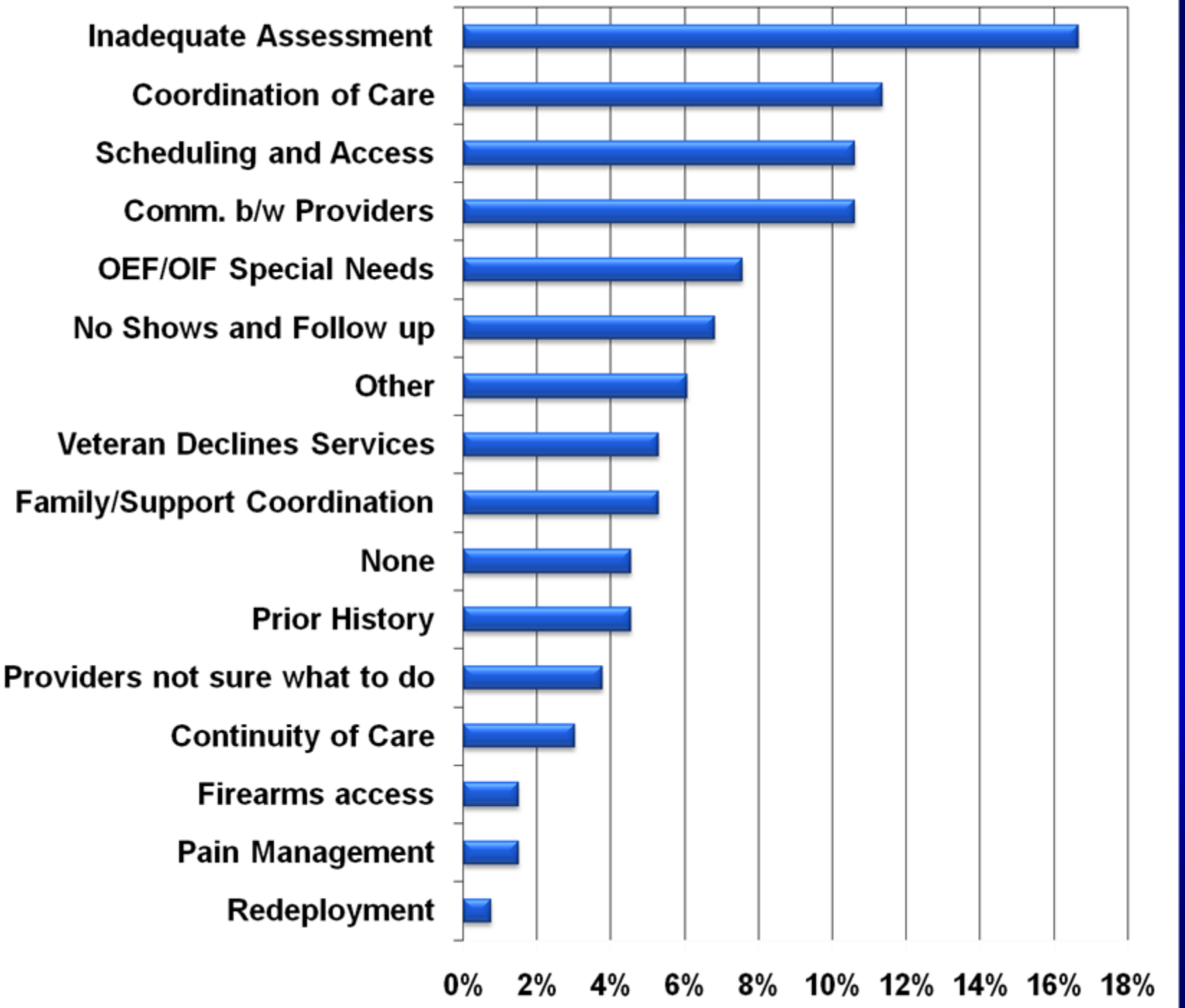


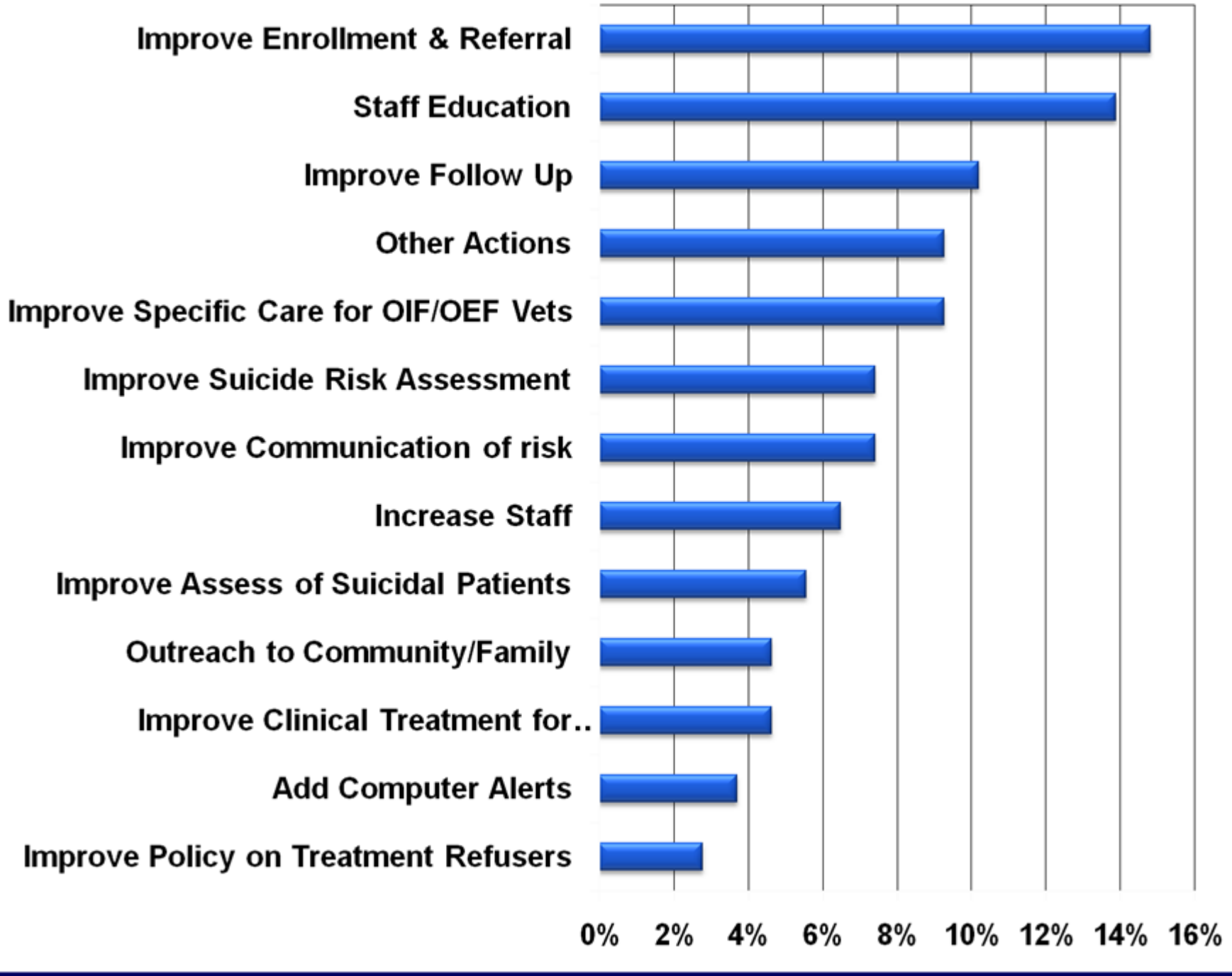
Risk Level of Hazards

- Hazard Type
  - Anchor Points
  - Suffocation Risk
  - Poison Risk
- Room Type
  - Bedrooms had the highest risk level
  - Bathrooms
  - Congregate Bathrooms

Study of Suicide in Recently Returning Veterans

- Fifty-one RCA reports of OIF/OEF suicides were identified between April 2003 (known date of the first RCA done on an OEF/OIF veteran) and July 2008
- 16 common categories among 132 root causes
- 13 categories among 108 recommended actions


Inadequate Assessment
Coordination of Care
Scheduling and Access
Comm. b/w Providers
OEF/OIF Special Needs
No Shows and Follow up
Other
Veteran Declines Services
Family/Support Coordination
None
Prior History
Providers not sure what to do
Continuity of Care
Firearms access
Pain Management
Redeployment
0%
2%
4%
6%
8%
10%
12%
14%
16%
18%


Improve Enrollment & Referral
Staff Education
Improve Follow Up
Other Actions
Improve Specific Care for OIF/OEF Vets
Improve Suicide Risk Assessment
Improve Communication of risk
Increase Staff
Improve Assess of Suicidal Patients
Outreach to Community/Family
Improve Clinical Treatment for..
Add Computer Alerts
Improve Policy on Treatment Refusers
0%
2%
4%
6%
8%
10%
12%
14%
16%

Epidemiological Factors

- 63% reported death by firearms, 20% hanging
- TBI most common medical diagnosis
- PTSD most common but not in isolation
  - Depression, Anxiety and Substance Abuse
- Median time after discharge was 15.5 months (range 2-40 months)

Conclusions:

- Review of multiple RCA reports can identify organizational vulnerabilities detected at the local level that may be applicable system-wide. Attention to improving suicide assessment, coordination of care and timely access may have the largest impact on reducing suicide among OIF/OEF veterans.

Questions?