

EMS System Change: Great Falls Stroke Project



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Current EMS Activities

- Stroke protocol for emergency responders
 - BOME approval
 - Training
- Statewide EMS data system pilot
- EMS survey



Great Falls Fire and Rescue Stroke Project

- Background
 - Task force
 - Partnership
- Environment
 - GFFR staffing
 - Average response time
 - Non-transporting agency



Objectives

- **Stroke screening tool**
 - Implement the stroke screening tool in Great Falls
 - Increase the percentage of Benefis Healthcare stroke or TIA patients who receive a pre-hospital stroke screen by GFFR from 0% to 50% by December 2004.
- **Pre-hospital (mode of arrival)**
 - Increase the percentage of stroke patients arriving to the ED via EMS from 26% to 34% by December 2004.

Five-step planning process

1. Identification

- Delays in treatment, recognition of symptoms, first responder evaluation

2. Selection

- Education audiences, methods, resources

3. Design

- Pre-hospital protocol and training program

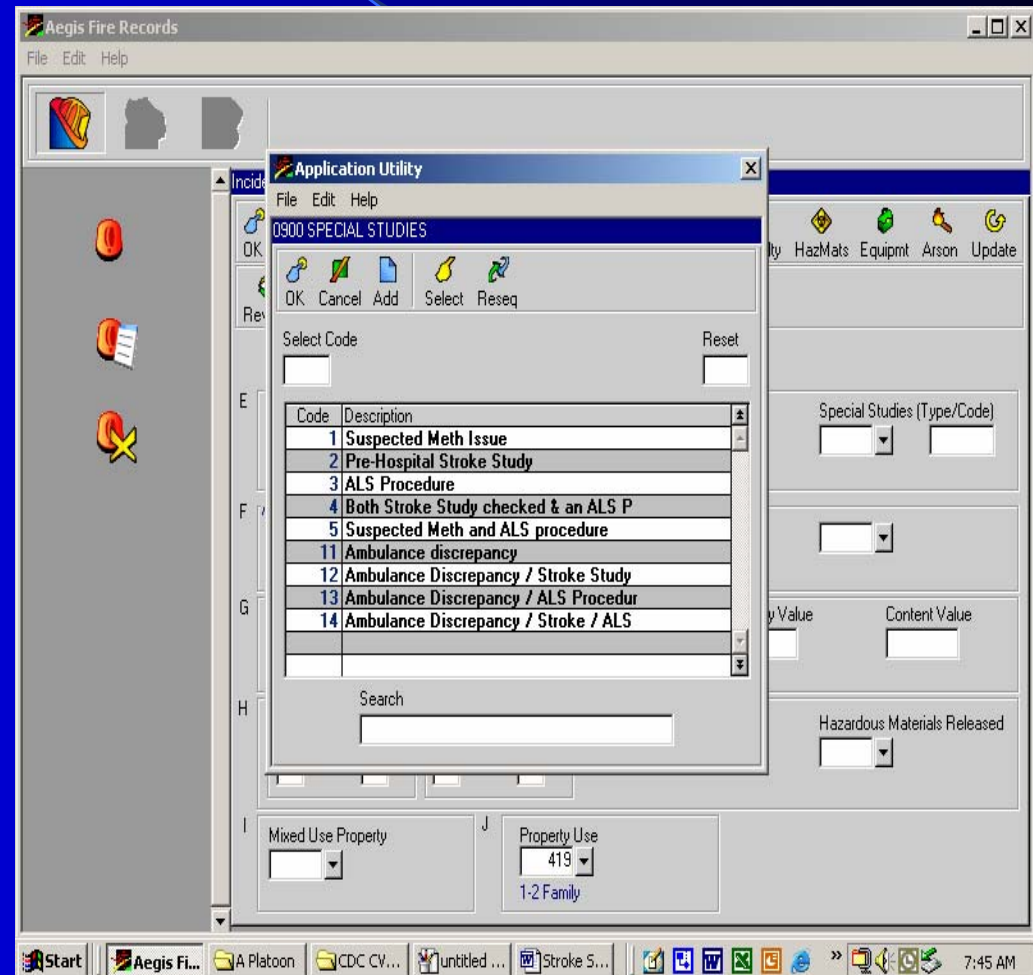
Design

- Modification of EMS Trip Sheet & patient reports

FFR EMS TRIP SHEET									
RUN #								Date / /	
INCIDENT ADDRESS									
NAME/LAST		FIRST		MI		DOB / /			
PHONE ()				Pt ADDRESS				Vitals	
NATURE OF ILLNESS & ONSET (Complaint)									
								BP	
								PULSE	
								RESP	
SECONDARY ASSMT (Neck, Spine, etc.)									
HX									
ALLERGIES									
MEDS					Blood Thinners				
Cincinnati Stroke Scale									
Facial		R	L	Arm		R	L	Abnormal	Y
Onset of symptoms		Droop	<input type="checkbox"/>	<input type="checkbox"/>	Drift	<input type="checkbox"/>	<input type="checkbox"/>	Speech	<input type="checkbox"/>
Name/Phone # of person giving consent									
Enc. Veh. <input type="checkbox"/>		Seat Belt <input type="checkbox"/>		Air Bag <input type="checkbox"/>		Fall <input type="checkbox"/>		Airway <input type="checkbox"/>	
Pass Space Intrusion <input type="checkbox"/>		Assault <input type="checkbox"/>				>15Ft <input type="checkbox"/>		O2 <input type="checkbox"/>	
Ejected from Veh. <input type="checkbox"/>		With Blunt inst. <input type="checkbox"/>		Electric Shock <input type="checkbox"/>		C-Spine / Manual <input type="checkbox"/>			
Extrication Required <input type="checkbox"/>		Stabbing <input type="checkbox"/>		Hazmat Exposure <input type="checkbox"/>		AED y es <input type="checkbox"/> No <input type="checkbox"/>		# c	
Ped / Bike-vs-Veh icle <input type="checkbox"/>		GSW <input type="checkbox"/>		Thermal Burn <input type="checkbox"/>		IV: <input type="checkbox"/>			
Motorcycle/Scooter <input type="checkbox"/>		Trunk <input type="checkbox"/>		Work Related <input type="checkbox"/>		Drug: <input type="checkbox"/>			
vs- Veh <input type="checkbox"/>		S.I. Accidental <input type="checkbox"/>		Unknown <input type="checkbox"/>		Drug: <input type="checkbox"/>			
Helmet <input type="checkbox"/>		S.I. Intentional <input type="checkbox"/>		Other <input type="checkbox"/>		Monitor: <input type="checkbox"/>			
AMB					Officer				

Design

- NFIRS
- Pre-hospital stroke study
- Approval process



Planning process (cont'd)

1. Identification

- Delays in treatment, recognition of symptoms, first responder evaluation

2. Selection

- Education audiences, methods, resources

3. Design

- Pre-hospital protocol and training program

4. **Implementation**

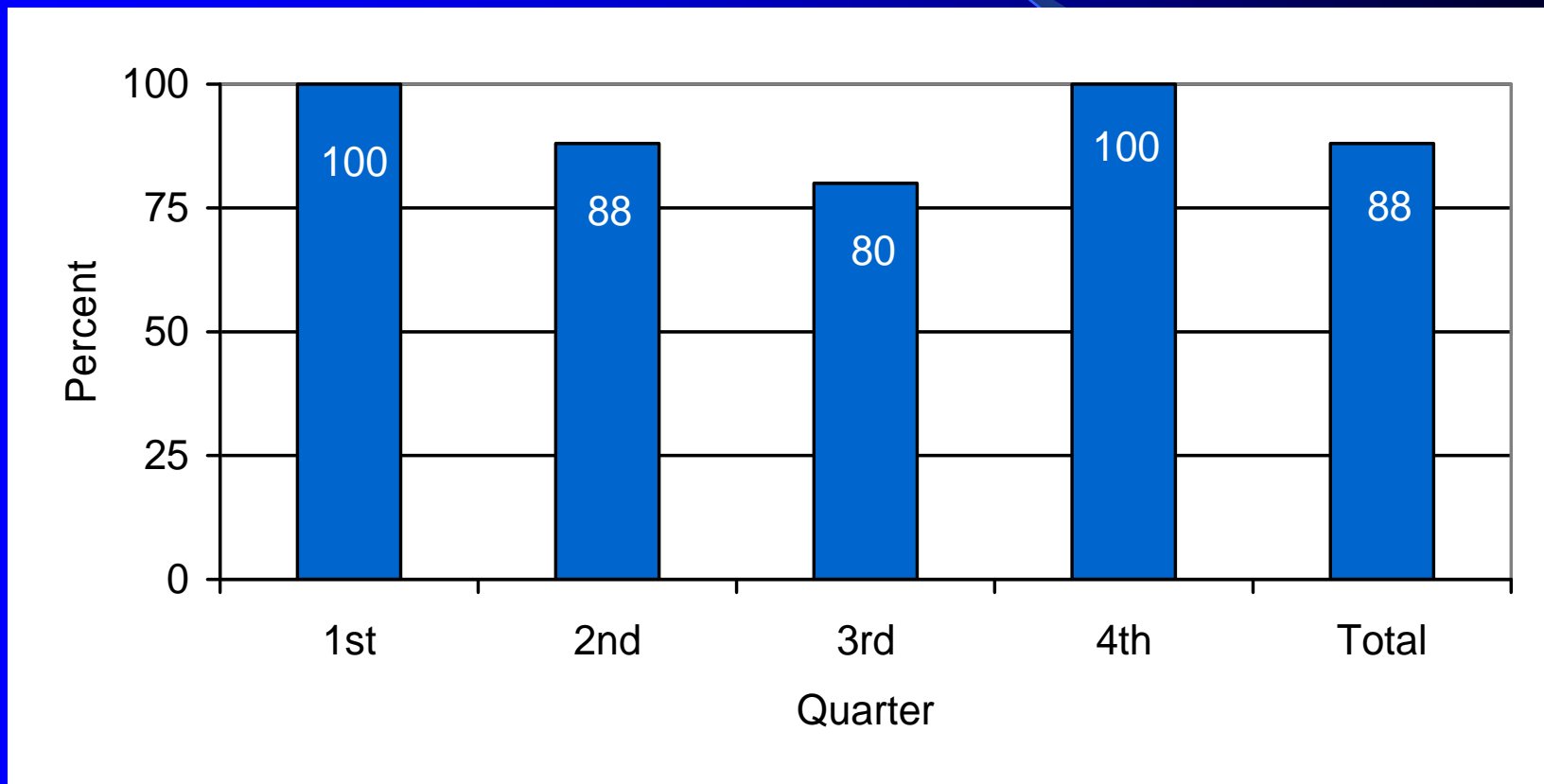
- **Staff training and ongoing monitoring**

5. Evaluation

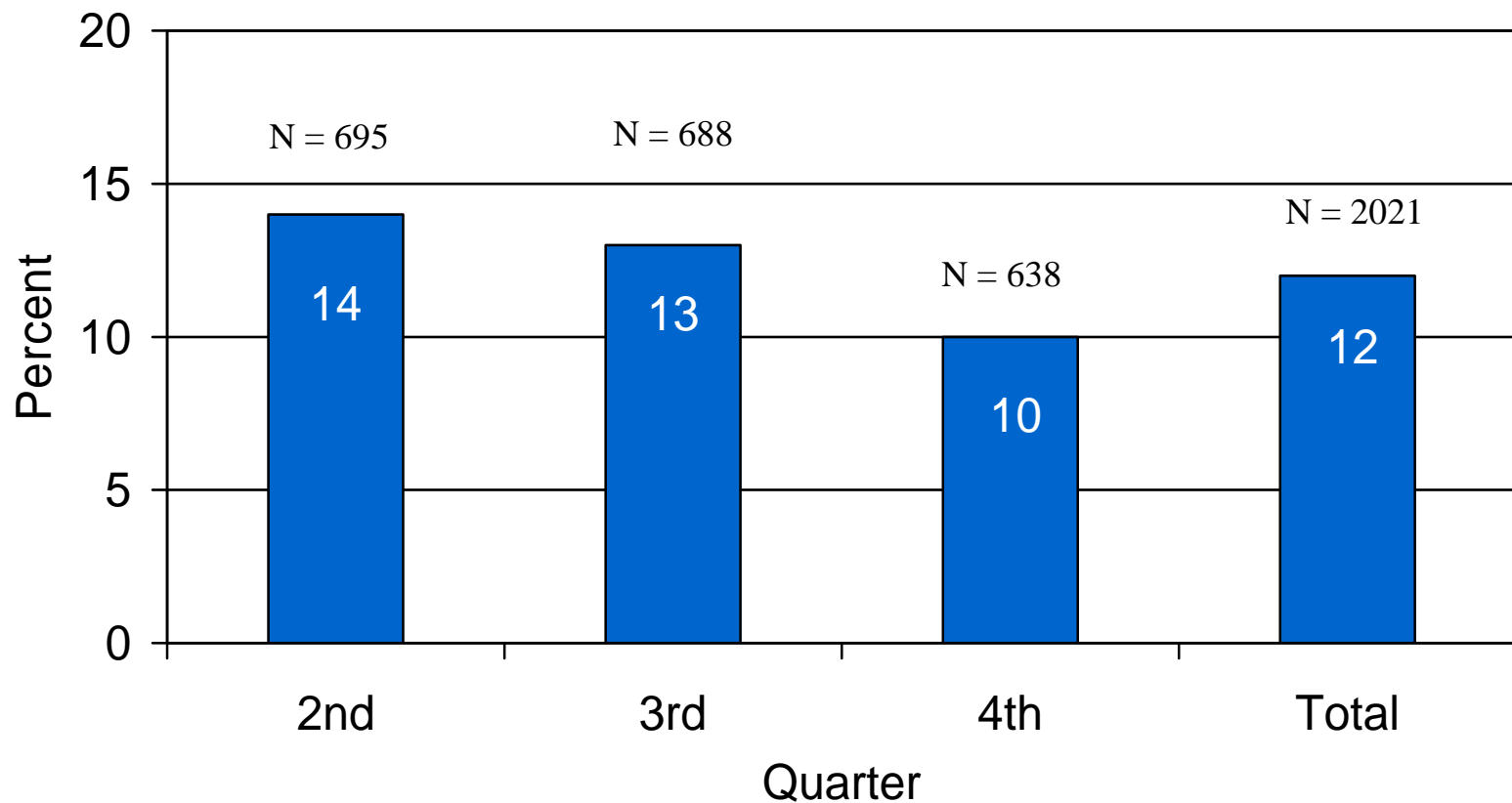
Project Evaluation



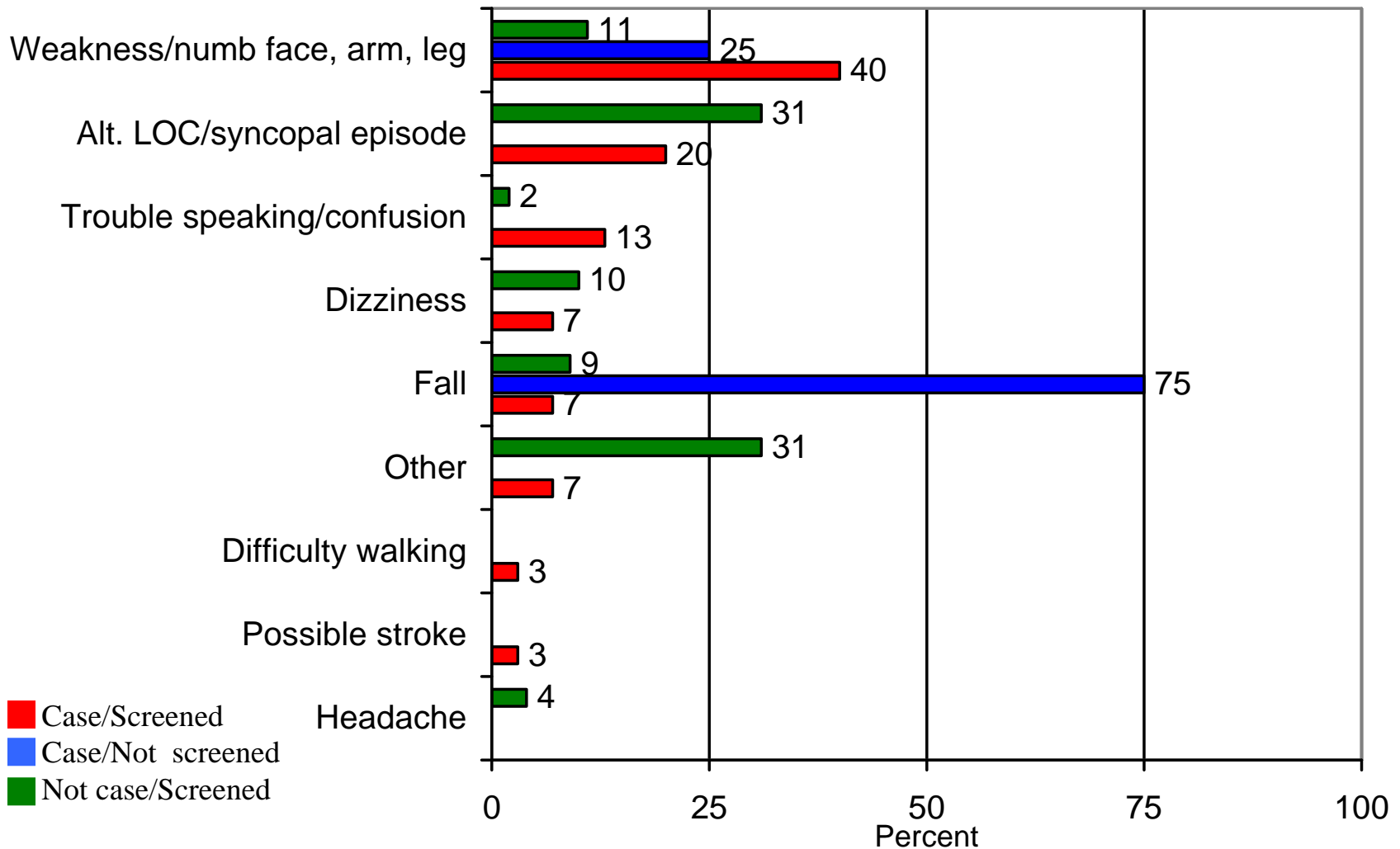
Percent of stroke and TIA cases screened by Great Falls Fire and Rescue, Great Falls, Montana, February – December 2004.



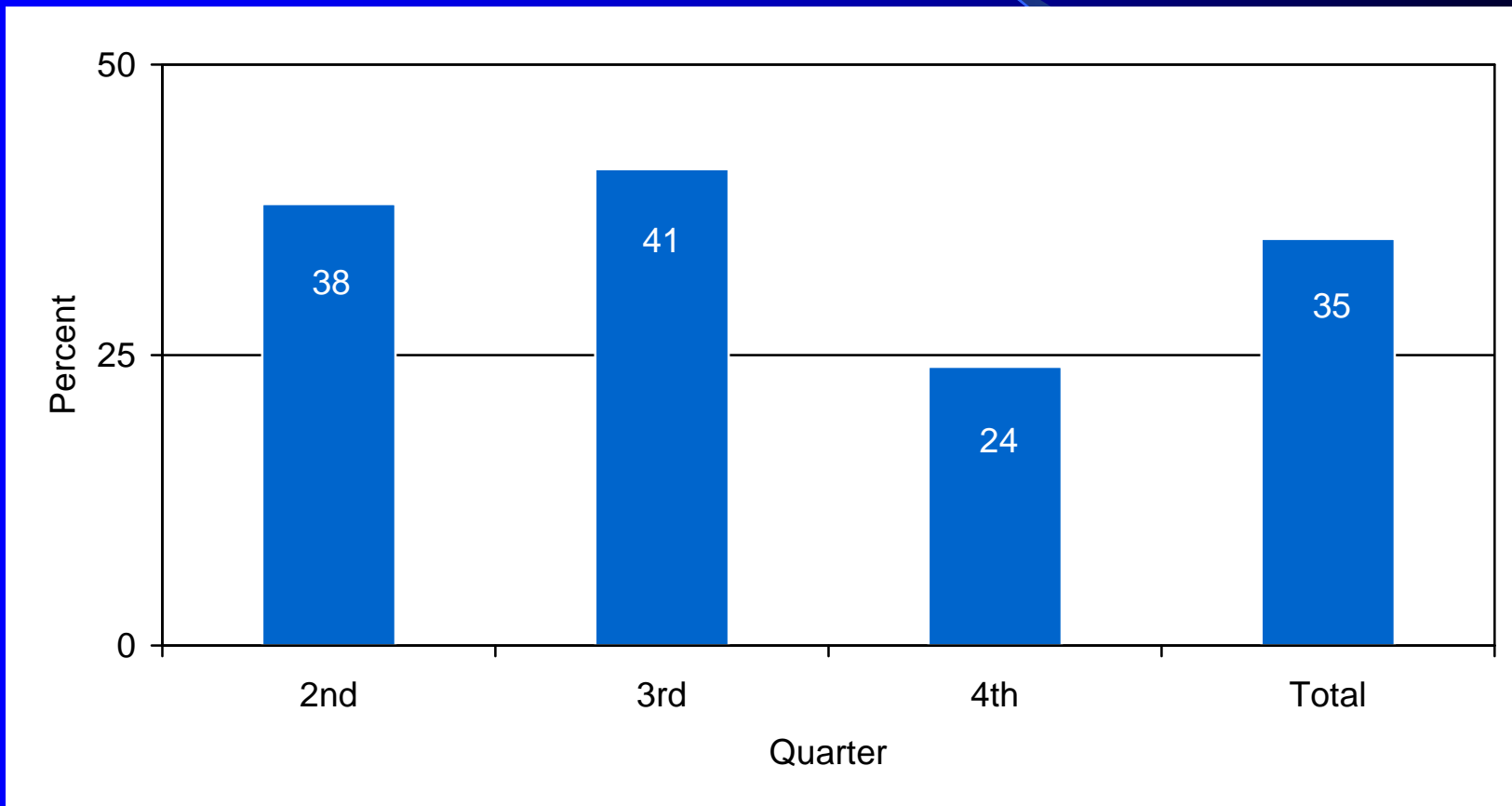
Percent of medical emergencies that were screened for stroke by GFFR, Great Falls, Montana, April – December 2004



Frequency of chief complaints from medical emergencies assessed by GFFR, Great Falls, Montana, February – December 2004.



Percent of Benefis Healthcare stroke and TIA patients arriving to the Emergency Dept. by EMS, by quarter, Great Falls, Montana, April – December 2004.



Lessons Learned

- Private ambulance
 - Difficulty implementing tool
 - High staff turnover
- Communication re: data entry
- Software for data collection



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