



Command & Control of MVA's

Motor Vehicle Accident

Facts and Stats

Why are we here today....

It's ALL about TIME.....

SAVING TIME.....

Time Standards have been Defined Internationally

W.R.O. = World Rescue Organization

T.E.R.C. = Transportation Emergency Rescue Committee

Referencing PATIENT EXTRICATION

RAPID = **10** minutes

STANDARD = **20** MINUTES

Who we are....

TEACH – LEARN - TRAIN

Puyallup Extrication Team

Group of Firefighters from all rank and file that have a passion for Teaching, Learning, Training & instructing thousands of Firefighters all over the globe since 2000.



Instruction used Internationally



Our common goal is.....

PXT Mission Statement

To build on our skills and knowledge in vehicle & heavy rescue extrication so that we may share information with all rescuers to meet our common goal—

"Saving Lives" ...

PXT 501 COMMAND & CONTROL



"The First 5 Minutes can create success or failure.."

COMMAND & CONTROL

- An effective approach used internationally.
- Objective based criteria to **SAFE scene control**.
- What is our Goal within the Rescue Community pertaining to auto extrication?
 - To have complete Situational Awareness.
 - Provide the **safest** working environment.
 - Provide the best patient care we can.
 - Be as efficient as we can by developing and executing plans managed by the **Extrication Leader**.

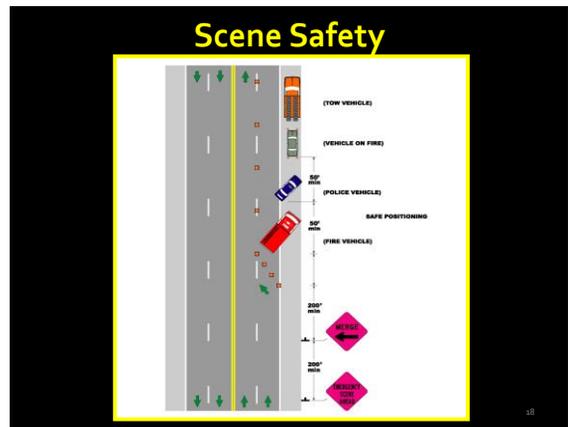
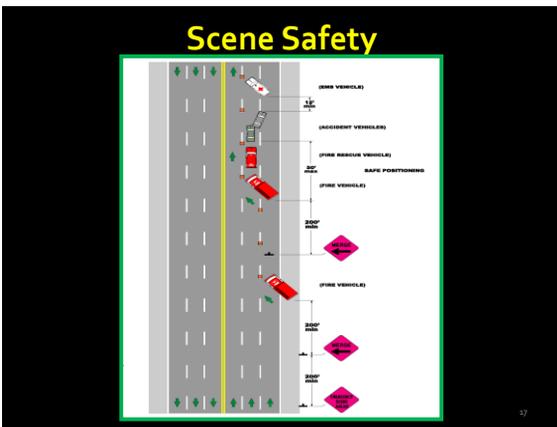
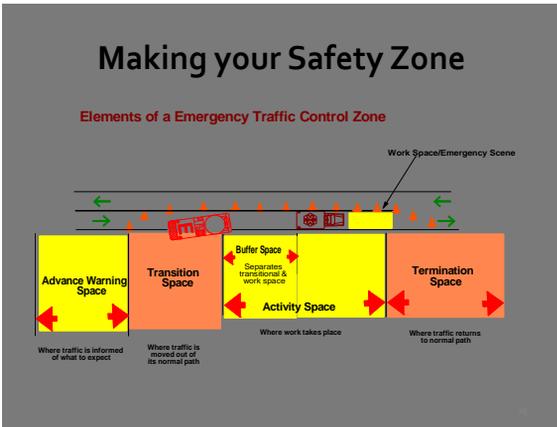
Situational awareness

- It is driven by **SAFETY** and involves everyone.
- It's a behavior and attitude that must be possessed.
- To create a conditioned response of situational awareness one can affect their own behavior and attitude through-
 - Training & Experience
 - **Repetition** - "you don't use it you lose it"
 - Knowledge- "you don't know what you don't know"
 - New technology - "just when you thought you knew it all"
- **Communications**
 - Open, Clear & Common terminology with responders.
- Starts on dispatch and runs throughout the incident.

Size-up & En-route to Incident

- Number and size of vehicles or machinery involved?
- Number of known or potential victims & entrapment?
- Hazards such as disrupted or exposed utilities, standing or flowing water, mechanical hazards, hazardous materials, electrical hazards, and explosives
- Environmental factors & Exposure to traffic
- Available versus necessary resources
- Approach & access to the incident scene
- Resource positioning for Safe zone and equipment deployment.

En-route Hazards



Protect your people!



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Protect your people!



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Size-up & En-route to Call

- 1st in Medic Unit
 - Trauma Hospital and status.
 - Heads up call to Base Step, MPI/MCI.
 - 1st in Last out.
 - Approach not to get "Boxed In".
 - Positioning in a direction for rapid transport.



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Pre-Arrival and arrival at scene

Morning assignments - Crew review

- Crew assignments before arrival on scene i.e.-
 - Size-up/outer circle – Officer
 - Stabilization/inner circle – Firefighter
 - Pull hose line/ lights/ stage tools – Driver
- First arriving company creates the foundation.
 - Size up- What do you see.
 - Paint the picture
 - "Standby" and "Update to follow" is OK- Just follow up

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The "2 Minute Out" Rule

- Next arriving Unit
- Assignment (s)
- Safety Considerations/ Rig Positioning
 - No answer try again at 1 Minute out.
- No answer/ Contact= Make decisions based on size up and what you can see.

"Bring something to the party"

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S H A D E Acronym

- **S**ize up and **S**urvey
 - Outer & inner circles
 - Number of patients, Triage/Med-Ops needed?
 - Extrication Plans & Stabilization & fire control
- **H**azard location, **H**ose Line, **H**ybrid
- **A**ccess Patients, immediate **A**id & **A**irway
- **D**isconnect batteries/**D**isentanglement
- **E**xtricate & remove from vehicle

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FIRST ON BOARD

FIRST ON MVA

- Apparatus Positioning – Determine
- Provide Safe Scene
- Confirm Location of Accident
- Number of Vehicles / Condition
- Hazmat / Chemical
- Short (optional): Size Up – Print the Picture
"Stand by for Additional"
- Outer 360 Circle (360 / Flashlight)
Short (optional) Complete
- Inner 360 Circle (360 / Flashlight / A&L or weight)
Short (optional) Complete
- Block Wheels
- Mechanical Extrication required?
- Hose Lines
- Consider additional resources – (best route for incoming units)

1. Fire Apparatus
 2. Medical
 3. Utilities
 4. Heavy Wrecker

- Update Size Up
- Assign or assume Extrication Leader

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FIRST ON BOARD

- Apparatus Positioning
- Provide Safe Scene
- Confirm Location
- # of Vehicles/ Condition
- **Establish Command**
- In Cab Size Up
- Outer 360
- Inner 360
- Mechanical Extrication?
- Hose Lines
- Additional Resources
- Update Size up
- Assign or Assume **Extrication Leader** – Flip Board Over

Incident Command Board

MVA INCIDENT COMMAND

Incident Name: _____ Time: _____

- Confirm Work Location
- Hazmat / Gas / Chemical
- Dispatch / 10 Minute Timer

Scene Safety: Back / Stabilization Traffic Lighting

Vehicles: Number Involved _____ Towed _____

Hazmat: Airborne _____ Solid _____ Liquid _____

Traffic: Blocking Primary Unit _____ Secondary Unit _____

Resources: ALS/BLS Air Unit Heavy Wrecker P.A.
 Open Box PFD Utility HAZ
 B.G.I. Helmet

UNIT	ASSIGNMENT	TIME	ASSIGNMENT	TIME	UNIT

Incident Command Board

- Confirm Location
- Resource Management
- **Establish Command**
- 10 Minute timer
- Scene Safety
- Fire Suppression
- Accountability
- Support Extrication Leader



Break

A Quick

5

Minute Break!




Now lets practice






On – Scene Size UP Paint the picture



DO you want to be the "HERO" or are you going to be the ZERO

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On – Scene Size UP Paint the picture



DO you want to be the "HERO" or are you going to be the ZERO

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On – Scene Size UP Moth to FLAME?



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Hazards – POWER ?



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Energized or NOT



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Hazards from the Surroundings

- From our surroundings
 - Distracted drivers
 - Damaged power poles
 - Live wires down
 - Trip hazards
 - Water (ditch)



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Hazards we may encounter

- Haz-Mat
- Re-enforced vehicles
- Fire Arms
- Live Ordinance
- Sensitive Cargo



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Hazards we may encounter

- Blood
- Fuel leaks
- Battery acid
- High Voltage
- Live airbags
- Compressed bumpers
- Mobile Drug Labs



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Witnesses of your scene!



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Scene Stabilization - Things Should Only Get Better

- Fire protection
- Dry Chem., CO₂, or H₂O extinguisher with Inner.
- Once 360's completed place extinguisher at engine compartment.
- Hose line- ? Per your Dept. SOP's- SOG'S- defined by type of



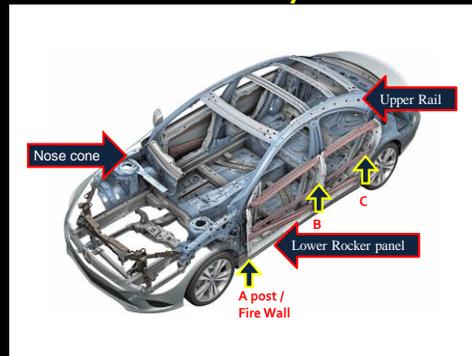
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Outer & Inner 360's



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Basic Anatomy review



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Make a Rapid Scene Survey

1st arriving company to conduct a **360** scene survey:
 - Same direction as Inner Circle-

- **Outer Circle** - (Up, Down, and All around)
 - Hazards to you and Inner, Other vehicles involved.
 - Flashlight, Radio and T.I.C. (Thermal Imaging Camera)
 - Ahead of Inner to ID Immediate hazards to Inner.
 - Ejections or Walking wounded pt's, witnesses.
 - Condition / Damage to Vehicle for Plan development.
 - Occupants Orientation for Plan development.
- Communicate with Inner**

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Make a Rapid Scene Survey

1st arriving company to conduct a **360** scene survey:
 - Same direction as Outer-

- **Inner circle** - (Hot Zone) **NO TOUCHING**
 - Fire Suppression Agent & Wheel Chock material
 - Fluids, Hazards Identification and mitigation
 - Condition / Damage to Vehicle for Plan development
 - Number of Occupants
 - Occupants Orientation for Plan development
 - Injuries and Severity of, Is there Time or NO Time
 - Entrapment and Extent of
 - Placement of Wheel Chock & Extinguisher
- Communicate with Outer**

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You've sized up now what's your PLANS

- Once Outer and Inner **360** benchmarks are completed you need to formulate a Plan/s.
 Patient + Vehicle = Plan/s
- The Patients position and condition within will dictate how they want to come out.
 EYE's, NOSE, BELLY BUTTON, TOE's
- What options does the vehicle give you
- Insurance Company ?.....
- Who's watching, (YouTube) listening (On-star)

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Declare your Extrication Plans

- **RAPID is #1** Take Home #1
 - **Plan A** Don't confuse your Plans with Stabilization
 - "Maxi Door Drivers Side"
 - **Plan B** Take Home #2
 - **Plan C** Your Plan/s will direct your Stabilization
 - "Rear Window Tent"
 - Still evaluating
- If your assigning Stabilization you must communicate the PLAN's

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WHAT IS AN EXTRICATION LEADER

- Color of **Helmet VS** Experience
- Broad Shoulders
- Know your People (Daily Staffing & assignments)
- Plan development- orchestrate
- Assignments
 - Tools
 - Interior
 - Manpower

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EXTRICATION LEADER BOARD

MVA EXTRICATION LEADER

Establish Extrication Plans: Vehicle #1 Vehicle #2

1. Rapid _____

2. Plan A _____

3. Plan B _____

Assign Interior Stabilizer (Multi-Profession)

Basic Stabilization

Advanced Stabilization

Interior Stabilization

Patient Update

Unemployed EMS Y N

DO IS VET (Once determined not needed)

Include "Water" Site

Continuous "Re-Checking" of Stabilization

Clean / Organized Work area

Progress Plan A

Progress Plan B

Signature _____

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EXTRICATION LEADER BOARD

- Extrication Plans
 - Rapid, A, B
- Interior Stabilizer in
- Basic Stabilization
- Advanced Stabilization
- Interior Stabilized
- SRS
- Patient Update
- 12 VOLT
- Debris Pile
- Stabilization
 - Check & Recheck
- Work Area
- Progress of Plan A
- Progress of Plan B
- Diagram Incident

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Break

A Quick

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Minute Break!



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Initial Patient Contact/Access

- Make verbal contact
- Reassure
- Give instructions
- C-spine from exterior of vehicle only **AFTER 360** is completed.



- Need to get rescuer in with patient as soon as 360 is complete and stabilized.

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Interior Board

INTERIOR STABILIZATION
(Preferably a Medic)

Outside Vehicle Functions

- Patient contact from outside
- Number of patients
- Determine patient status & entrapment
- Determine seat status for vehicle
- Stage patient protection and EMS

Inside Vehicle Functions
As noted

- On-deployed SRS - Y or N
- Patient Condition: Stable
- Degree of PE entrapment
- Turn on Hazards
- Fuel Evaluation: Y or N
- Will Plan "A" Work?
- Use 19 Volt to your Advantage
- Make PE Access / Ignition
- Safety Vehicle
- Interior "Extrication" Considerations

Patient 01 Name _____ Patient Location _____ Injury (Distribution): Y or N _____ Status: Green Yellow Red Black _____ Head (Distribution): Y or N _____ Neck (Distribution): Y or N _____ Chest (Distribution): Y or N _____ Abdomen: See M or F _____ Transport: Y or N _____	Patient 02 Name _____ Patient Location _____ Injury (Distribution): Y or N _____ Status: Green Yellow Red Black _____ Head (Distribution): Y or N _____ Neck (Distribution): Y or N _____ Chest (Distribution): Y or N _____ Abdomen: See M or F _____ Transport: Y or N _____
Patient 03 Name _____ Patient Location _____ Injury (Distribution): Y or N _____ Status: Green Yellow Red Black _____ Head (Distribution): Y or N _____ Neck (Distribution): Y or N _____ Chest (Distribution): Y or N _____ Abdomen: See M or F _____ Transport: Y or N _____	Patient 04 Name _____ Patient Location _____ Injury (Distribution): Y or N _____ Status: Green Yellow Red Black _____ Head (Distribution): Y or N _____ Neck (Distribution): Y or N _____ Chest (Distribution): Y or N _____ Abdomen: See M or F _____ Transport: Y or N _____

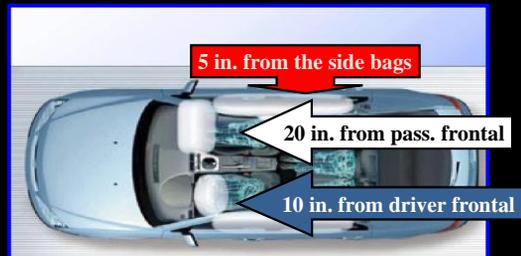
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Interior Stabilization

- Talk to the Patient- "You touch it you own it"
- Airbags and/or SRS systems (5-10-20 Rules)
- Gut the vehicle out- **Make room** to work
- Extent of entrapment, Internal **Ramming?**
- Trans. Park, Brake set, Ign. Off, Tilt, Keys out,
- Manual or auto** – electric powered
 - Seats, Locks, Windows
- Hazards- Direct to **12 Volt** - Everyone knows
- Communicate** out to the Extrication Leader – Will your plans work?

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Stay Clear of Inflation Zones



Disconnect the electrical system...

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Stay Clear of Inflation Zones



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Interior Stabilizer

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Rapid Extrication



- TERC /WRO = 0 - 10 min extrication why?
- **Criteria:** Decreased LOC, s/s of shock, no radial pulse, cardiac or resp. arrest.
- Can do **rapid** removal with **KED**: use chest straps and leg straps, maintain manual C-spine.

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Normal Extrication

- TERC/WRO = 0 - 20 min extrication why?
- **Stable** patient: Complaining of neck/back pain, mechanism of injury.
- Initial assessment, apply C-collar, **KED**, move to long backboard.
- Slow, controlled removal keeping the spine in-line.

EYES – NOSE – BELLY BUTTON - TOES

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Slumper vs. True Patient

- **From the Cab**
 - Horn Blast
- **Lights & Sound**
- **Approach**
 - Safe angle
 - Using wheel chocks
- **Hybrid, Weapon, Needles**



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Our goal: Controlled Release

- Systematic moving or removal of vehicle side, roof, and/or dash
 - To free patient from compression
 - To create adequate pathway for removal
- Goal is not to cause further injuries to the patient.



Special Considerations

- Crush/ Compartment Syndrome (your Protocol)
 - No blood flow to extremity.
 - Time & Pressure
 - EKG, Bicarb, etc to treat acidosis
- Hypothermia
 - Warm fluids, blanket, O₂



Special Considerations

- Extended entrapment times
 - May need to perform ALS intervention within the hot zone
 - Advanced Airway
 - IV or IO establishment
 - Pharmacology
 - Impalement
 - Amputation



Special Considerations

- Impalements:
 - Foreign object from outside vehicle or interior component may be impaled in patient
 - May call for disassembly or severing using low impact tools




Special Considerations



Special Considerations



Special Considerations





Patients are coming out plan

- Pt's coming out where are they going
 - To the deck
 - Medic Unit
- 100% Pt accountability
- Transport if needed and where



Always check the Trunk!

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Termination

- Safety Check ALL personnel
- Head on a swivel if in Hazard area
- Secure all Vehicles
- Training opportunity to educate
- Reclaim all tools in a systematic order in an organized manor
- Hot Wash
 - "Do it right otherwise it's a waste of time"

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After Action Review (HOT Wash)

- **Joseph Maguire**
Deputy Commander, Naval Special Warfare (retired)
 - Nothing will change nor will you move forward unless you are going to have an honest assessment of your actions
 - Here is what we learned
 - Here is where we made mistakes
 - Here is what we want to make sure we never do again

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SUM IT UP

- Preparation-
 - Planning- Training- Practice
- Call early- Resource Management
- Protect your Crews
- Size up- Evaluate and Re-evaluate
 - Plan- Manage & Lead
 - Monitor progress, Terminate & Critique.

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Thank you for participating



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