Basic Communications Skills

Emergency Communications Are Different
a) daily ham activities usually do not impact the safety and security of lives and property
b) life and death communications are not a part of our daily experience
c) an emergency message can have huge and unintended consequences
d) a message that is unclear, modified, delayed, mis-delivered, or undelivered can have disastrous results.

Techniques for Emergency Communications
a) Listening is at least 50% of communicating
   i) if your attention drifts, you could miss a critical word or message
   ii) listening means avoiding unnecessary transmissions
   iii) listening is complicated by local distractions
   iv) listening is degraded by radio noise, fading, and interference
   v) listening can be aided by digital signal processing (DSP), filters, noise blankers, headphones, and proper equipment adjustments

b) Microphone Techniques
   i) hold the microphone close to your cheek, just to the side of your mouth
   ii) talk across, rather than into the microphone - this reduces popping and breath noises
   iii) speak in a normal, clear, calm voice - raising your voice, or shouting, can result in over-modulation or distortion
   iv) microphone gain should be set for full modulation when speaking within 2 inches of the mic - higher mic gain can pick up extraneous background noise
   v) headset boom microphones can be used - choose one with cardioid or noise cancelling elements

c) Voice Operated Transmission (VOX)
   i) is not recommended for emergency communication
   ii) incorrect vox adjustments can clip words and phrases
   iii) background noise can trigger transmissions
   iv) unintended transmissions can disrupt a net
   v) unintended comments can be accidentally transmitted resulting in embarrassment

d) Proper Techniques for Repeaters
   i) Leave extra time between pressing the push-to-talk button and speaking
   ii) A variety of delays can occur within a system, causing the loss of speech fragments
   iii) Multi-hop, linked, repeater systems need time to activate all transmitters
iv) Some repeaters have “kerchunk” timers to prevent brief keying or noise
v) these techniques will ensure that the entire message is transmitted
vi) a short pause between transmissions can allow other emergency traffic to “break” in

e) **Brevity and Clarity**
i) each communication should be concise - short and to the point
ii) transmit only the information necessary
iii) if additional words do not contribute to understanding, leave them out
iv) avoid contractions like “don’t, can’t, isn’t” - these can be easily confused
v) Do NOT editorialize or engage in chit chat - avoid non-essential conversation,
vi) Do NOT ramble commentaries or think aloud on the air - “Ahhh, let me see . . .
    Hmmm, Well you know . . .”
    vii) make your transmissions sound crisp and professional

f) **The Use of Plain Language**
i) Hams use a lot of jargon or technical slang in amateur radio conversations such as 10-codes, Q signals, technical terms, and abbreviations
ii) In emergency situations, we may be communicating with non-amateur operators or communicators from other agencies who are not familiar with our terminology
iii) For this reason, all emergency messages and communication should be in plain English.
iv) Avoid strong language, emotions, or exaggerations

h) **Phonetics**
i) When speaking over communication circuits, some words may not be clearly understood such as unusual names, places, or words.
ii) It is easy to confuse letters of the alphabet, such as C, D, Z, T, P
iii) The use of the international (ITU) phonetic alphabet uses standard words to represent letters to reduce confusion
iv) do not substitute “cute” phonetics that may be mis-understood
v) numbers should be spoken slowly, one digit at a time - as an example 2,371 should be spoken “ tooo, thuh-ree, sev-vin, wun”

h) **Procedural (Pro) Words**
i) CLEAR -indicates the end of contact
ii) OVER - the end of transmission, a specific station should respond
iii) GO AHEAD - end of transmission –any station can respond
iv) OUT - indicates the end of contact and leaving the air, will not be listening
v) STAND BY - end of a transmission and a temporary interruption of the contact
vi) ROGER - indicates the transmission has been received completely and correctly
i) **Tactical Call Signs**
   i) tactical call signs identify the station’s location or purpose
   ii) a tactical call sign aids contact with a station without knowing the FCC callsign of the operator
   iii) tactical call signs should be used for all emergency nets and public service events with more than a few operators
   iv) use tactical call signs that indicate a specific location or function, such as Roosevelt EOC, or EOC

j) **Station Identification**
   i) To satisfy FCC requirements, each station is required to identify at ten minute intervals.
   ii) When calling a tactical call sign during a directed net, no FCC call signs are necessary.
   iii) After completing a message, identify your station by saying the tactical call sign, followed by your FCC call sign, for example “Roosevelt EOC, KC5ID”.
   iv) The tactical identification followed by your FCC call sign also indicates to net control that you have completed the message.
   v) For this method to work, the net control station must allow each station the opportunity to exchange additional messages, and for each station to indicate the end of the contact.

k) **A QUICK REVIEW**
   1) Plan your messages in advance
   2) Save valuable net time for emergency traffic - do NOT talk while “standing by” or talk just to pass the time
   4) Talk slowly and clearly using plain language - do not use Q signals, 10 codes, or other jargon
   5) Use the ITU phonetic alphabet – do not use “cute” phonetics
   6) Shouting into the microphone may cause distortion and intermodulation
   7) During a message exchange, it is un-necessary to ID every time you unkey the mic
   8) Save comments for the post-emergency review – do NOT engage in on-air arguments or criticism