

## “Paradigm Shift at the Intersection of Technology, Inclusion, Health Services, Safety, and Risk Analysis: An Encampment Case Study”

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### **Abstract:**

With the numbers of American youths and adults with chronic health issues increasing and the usage of monitoring and alerting technologies relying on continuous connectivity increasing, the lack of including such considerations in planning, analyses, mitigation, and preparedness could result in increased risk and potentially, passive discrimination of members. CAP members and as an organization, we are encouraged to consider including the availability of wireless connectivity as part of activity risk analysis; the procurement of backup equipment capable of performing monitoring and alerting as part of mitigation; and the training of personnel on the situation assessment and usage of those equipment. Together, this can create the inclusive culture and environment espoused by CAP doctrine that not only promotes safety and health, but actively addresses reasonable accommodations.

### **Keywords:**

Safety, risk, mitigation, preparedness, health services, nondiscrimination, reasonable accommodations, connectivity

### **Introduction and Background:**

From the Centers for Disease Control National Diabetes Statistics Report published 2022, there are approximately 37.3 million (11.3%) Americans with diabetes. Traditional blood glucose monitoring involves the need of performing a “finger stick” with a lancet and

testing of the blood with a glucometer. The process can be painful and for insulin-dependent individuals, managing one’s blood glucose level repeatedly to meet with changes in schedules and activities can become stressful. Continuous glucose monitoring (CGM) technology reduces the amount of time and pain for individuals and provides more efficient monitoring and responsive management. For CAP members, this means they can participate in activities with their teammates while minimizing time away to manage their diabetes.

The technology has since developed alarms to warn of hypoglycemia (low blood sugar), a condition that can lead to unresponsiveness, coma, and death, and synchronization capabilities to wearable insulin pumps to automatically adjust insulin levels in response to hyperglycemia (high blood sugar). Additionally, the information can be shared between devices thus allowing parents and clinicians to monitor the blood glucose levels of their children and patients remotely. The advances in this technology allow for better individual management, less physical and emotional stress, more opportunities to participate in group activities, and increased levels of individual safety.

With the advancement of technology, however, comes the reliance on other technologies. CGM requires consistent, reliable access to cellular and / or wireless networks and devices (such as

mobile phones) to function and interruptions (i.e., loss of cellular / wireless network, proximity to devices, battery depletion of devices, etc.) along with the lack of back-up methods (i.e., traditional finger stick devices), training, and organizational support and protection can lead to not only increase in risks to the safety and health of the member but potentially, passive discrimination, a reason for members and parents of cadets to not attend activities resulting in delayed or halted program progression.

This article is intended to serve as a shared experience and lessons learned with fellow CAP members and for consideration in future planning and not intended as advocacy for policy and regulatory change.

#### **Case Details:**

The situation began with the parent of the cadet with CGM reaching out to the encampment health services officer, who was off duty and not on site, asking about the loss of connectivity. The health services officer called the safety officer who then notified the on-duty health services officer. Shortly after the discussion, the on-site health services officer received a request to respond. The exchange described took place within several minutes as the safety officer and health services officer were collocated. The situation was resolved on site and the cadet remained at the activity.

#### **From an Activity Planning / Management Perspective:**

It is not uncommon for cadet activities, ranging from simple weekend overnights to full-blown encampments and special activities, to be held on military installations. Oftentimes such facilities have very limited, or unreliable, cellular network connectivity with the buildings themselves, adding to that connectivity degradation.

When planning for such activities, it would be prudent to consider involving IT officers in conducting a network availability survey of the training area and indoor facilities being used. If hot spots or other types of portable networking capabilities are to be used, those specific pieces of equipment should be tested

and verified to assess under actual operating conditions (e.g., time and duration, number of users, etc.). If the activity involves long periods of poor, or no, internet connectivity, especially in the buildings where cadets will be sleeping, this information must be considered in both the risk assessment and information sent to parents.

Activity directors and planners already take various inclusion issues into consideration, such as dietary restrictions. Adding this type of consideration to the planning will not be difficult but will yield information valuable to some parents in deciding if a specific activity is right for their cadet. Reliable internet and/or cellular connectivity is no longer a manner of administrative convenience, but a potential showstopper for some that want to participate but are reliant on such health-management devices.

#### **From a Safety / Risk Analysis Perspective:**

The addition of interruptions to or absence of wireless connectivity to the list of hazards is straightforward for the activity planning team and designated safety officers. However, familiarity with how much weight should be given to this "hazard" as it relates to the mission / purpose of the activity, the number of participants affected at this activity, and the overarching cost, effort, and return on investment (amount of risk reduction) may require extensive socialization and practice before it will be broadly accepted by the entirety of activities planner and safety officers.

This hazard should be included in the existing collaboration between safety, health services, and activity leadership / planning cadre in the planning and execution of CAP activities and may be driven by an accompanying shift in planning and leadership paradigms to wireless connectivity as "essential" to safety and health from being a distractor.

#### **From a Diversity, Equity, and Inclusion Perspective:**

CAP espouses diversity, equity, and inclusion. While the concept can be easily understood, the actions and metrics to achieve and measure DEI are not always as clear. In this instance, accommodations were made for cadets with CGM and insulin pumps to keep their mobile phones during encampment. With the

proliferation of smart technologies aimed at improved health management with safety features dependent on connectivity, CAP activity planners may have to consider not only ensuring access to mobile devices and connectivity but communicate that to members as part of public information as part of reasonable accommodation.

As more Americans and CAP members integrate with technology designed to support health conditions and disabilities and form a new group at whom discrimination may be laid against, disregarding this topic under traditional training / activities paradigms may become anti-DEI.

### **Conclusion:**

Given the increasing numbers of Americans with health issues and use of technology to manage those health issues; the presumptive corresponding representation in CAP membership; the combined impacts on diversity, equity and inclusion, health, safety; and the relative light “lift” of including continuous wireless connectivity with activity planning and risk analysis, it would seem appropriate to consider socialization (if not already) of ideas described and proactively adapt CAP practices with both the ever changing technology and integration and with not just health, but life-management in support of our members.

The authors fully acknowledge the broader policy-level impacts the concepts described in this article have risks and liabilities CAP, as a national organization, would result. The purpose of this article is to share a collective experience and realization and intended to spur thinking and discussion.

### **About the Authors:**

#### ***Lieutenant Colonel Uei Lei CAP Bio***

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LtCol Uei Lei joined CAP in 1988 as a cadet and achieved the Mitchell award. After a 12-year break, he returned as a senior in 2004 and has served in various capacities to include safety, emergency services, health services, and character development at the unit, group, and wing levels. Professionally, he has worked as a paramedic and instructor; healthcare and public health preparedness and response; epidemiologist and data analyst; and presently

as a health analyst for the Department of Homeland Security. He is currently the MAR-DC-060 Challenger 1 Cadet Squadron’s Character Development Instructor, a member of the National Safety Analytics Team, and the safety officer for the encampment described.

#### ***Major Nathan Rolfe CAP Bio***

Maj Nathan Rolfe joined Civil Air Patrol in 2018 when his son entered the Cadet Program. He brought with him over 22 years of experience in the military, along with over 20 years supporting another military-oriented youth leadership program. At the squadron level, he has served in a variety of roles, including Emergency Services Training Officer, Historian, Deputy Commander for Cadets, and is currently the commander of Mt. Airy Composite Squadron (MD-091). Beyond the squadron, Capt Rolfe is a Group Emergency Services Officer and commanded the first Tri-Wing (MD-DE-DC) Type B encampment in over 30 years.