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How did the simple faint get so complicated? Syncope in 2014

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Almost 40% of the population expected to faint at least once in their life (Ganzeboom et al., 2006). The management is expensive; an estimated burden of \$2–3 billion per year in direct hospitalization costs in the United States alone (Sun, Emond, & Camargo, Jr., 2005). Why does syncope cost so much? The reasons are many, but can be summed up by stating that “Its Complicated!”

There are several challenges. First, one must determine if the patient really experienced syncope. This challenge is heightened because the episode is usually over before the patient presents for medical attention. The European Society of Cardiology has attempted to address this issue by defining transient loss of consciousness (T-LOC) as the initial clinical entity, instead of syncope (Moya et al., 2009). T-LOC disorders include seizure disorders, transient ischemic attacks, metabolic disorders such as hypoglycemia and psychogenic pseudosyncope and syncope – the only one of these disorders in which the transient loss of consciousness is due to global cerebral hypoperfusion.

Second, syncope does not cleanly fall within any one specialty. Physicians in specialties ranging from general practice, internal medicine, emergency medicine, cardiology, neurology, geriatrics, clinical physiology and medical genetics will all confront patients with syncope. Expert training in “syncope” requires a commitment to a multi-disciplinary approach to training and patient care.

Third, the goals of the physicians assessing a patient with syncope differ, depending on their role. When an emergency medicine physician sees a patient with syncope, their focus is

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appropriately on whether this patient is “high risk” for a life-threatening event in the short-term, especially if that negative prognosis could be altered with a hospital admission or other acute therapy. A Cardiac Electrophysiologist might be most concerned about whether a patient with syncope is at high risk for sudden cardiac death and whether that patient would benefit from an implantable defibrillator or related therapy. This was the focus of the American Heart Association statement on syncope (Strickberger et al., 2006). At the other end of the “worry spectrum”, an integrative physiologist may be most concerned about *why* the patient is fainting (even after it has been established that the fainting is not life-threatening) and *how to minimize future episodes*.

Finally, our current therapies are not very effective at preventing future episodes of syncope.

Despite these challenges, there is room for optimism about the future evaluation and treatment of syncope. There are emerging approaches that are promising. There have been recent efforts to streamline research data collection and definitions to better define the necessary risk stratification when a syncope patient presents to the emergency department (Sun, Thiruganasambandamoorthy, & Cruz, 2012). The goal is to admit those patients that are at high risk of immediate events that are amenable to intervention. These are patients who would benefit from hospitalization. Conversely, patients who are not “high risk” could be diverted to alternative sources of medical care, possibly including specialized, multi-disciplinary Syncope Clinics. Currently, there are important technological improvements that could favorably impact the care of syncope patients. These include the miniaturization of implantable loop recorders for cardiac monitoring that are now injectable, ubiquitous smartphone apps that can record cardiac rhythm to establish symptom-rhythm correlations, and smartphone video that can be used by friends and family to record T-LOC spells to show their physicians. Another emerging tool is SYNCOpedia (http://syncopedia.org/wiki/Main_Page). This is a web-based tool created by syncope experts based in Amsterdam, The Netherlands to leverage the web to train more syncope experts around the world.

In this Special Issue, we have brought together experts from many parts of the world (including the United States of America, Canada, United Kingdom, The Netherlands, Italy and Australia) to share their state of the art thoughts and expertise on syncope. The topics range from the classification schema and evaluations approaches for syncope, to discussions of pathophysiology, a discussion of emerging science on channelopathies and on the genetics of vasovagal syncope, and treatments approaches. We have added some “special topics”, including risk stratification in the Emergency Room, how to handle issues of returning to driving or working after a syncopal spell, and the diagnosis and management of psychogenic pseudosyncope. We also offer a compiled list of ongoing syncope clinical trials that we hope will advance our therapeutic approach over the next decade.

We trust that physicians and other providers will find this Special Issue on Syncope to be useful in the care of their patients.

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