Non-Communicable Diseases: An Academic Responsibility?

The Challenge: The harsh facts about non communicable diseases as reported by WHO (2013) are well known: 36 mil deaths each year are caused by NCD. 9 million of these deaths (25%) occur before the age of 60; 80 % of them (29 million) occur in middle to low income regions. These diseases can be prevented, early death postponed, and the quality of life improved through a change in lifestyle. The first step toward such a lifestyle change is to understand the causes of non-communicable diseases and how to respond to them, and that is the particular role of education. The last great opportunity to bring about such a life change occurs in the university, where students transition from youth to adulthood and prepare for a responsible and useful life for themselves and their families. Therefore the university campus is uniquely responsible for addressing the hard facts about non-communicable diseases, both by setting an example and by becoming a change agent in society at large.

What do we know about university student health? At first glance, university students appear to have a health advantage over most other young adults (ACHA/NCHA, Spring, 2013, 2-4). On the whole, they are better vaccinated, suffer from less than half the suicide rate in their age group, and a tiny fraction of the homicide rate compared to others. They generally live in a more protected environment than most. They are generally young, have access to health services, and many benefit from being better informed about health than their non-student contemporaries. Many have a routine health check-up and most wear seat belts when they drive! All told, 91% of university students describe their health as good, very good or excellent.

And yet many University students suffer challenges to their generally good health. Specifically, the American College Health Association (ACHA), an advocacy organization for health in higher education conducts research through the National College Health Assessment (NCHA) annually. Here are some selected findings in the 2013 report. (Fig 1) The most common ailments for which college students sought treatment are allergies (19%), back pain (12%) and sinus infection (15%) —all fairly harmless. But some other things are more serious. For example, 8 % reported

suffering from ADHD (attention deficiency/hyper activity). 11 % of college males have been in a fight, and 15 % of female students have suffered a verbal threat. Some students reported a perceived relationship between academic performance and a number of other more subtle challenges to good health admitting that these impacted their studies negatively: Anxiety (20%), cold (15%), depression (12%), gaming (12%), sleep disorder (19%) and stress (29%).

Additionally, many students away from home for the first time engage in risky behavior that often lead to serious short term and long term health challenges. (Fig 2) Among these, 65% of students used alcohol the past month. As a result of drinking, 35% did things they later regretted, 30% forgot where they were and 20% had unprotected sex during intoxication. The public press recently estimated that one in five American college women suffered sexual violence while on university campuses (*Time Magazine* 4/24/2014).

Finally, students report emotional challenges to their health such as stress, depression and hopelessness. (Fig 3) 45% of students have felt hopeless in the past year, 56 % have felt lonely and 80 % have been exhausted (but not from physical exercise). 31 % have experienced deep depression, 37 % have felt overpowering anger, and 7 % have considered suicide (all within the last 12 months). Conclusion: Even a relatively protected population group of young adults experience significant health challenges and some of them have potentially long-term negative impacts, i.e. students may well carry them along after graduation. What protective measures can be put in place in a university to reduce these health risks?

<u>Student health in a Christian university versus general US student population</u>. Students attending Christian universities with strong personal, social and lifestyle values fare better than the general student population, especially when dealing with health challenges caused by at-risk behavior. While we do not have comparable statistics on student mental and emotional health in Christian institutions, we do have some information regarding at-risk behavior that often leads to health problems. The numbers below compare students in a Christian university to the

general student population in the United States. They are presented here for illustrative purposes only. (Fig 4).

Alcohol (within the past year):	42% (Christian institution);	79% (comparison group)
Tobacco:	18%	31%
Marijuana	16%	38%
Sexual intercourse (18-19 year olds)	41%	71%

Conclusion: This reduction in at-risk behavior, while going a long way to protect student health, still leaves students with significant exposure to health challenges caused by at-risk behavior.

Factors contributing to lower at-risk behavior. Recent investigations by the IPA (Institute for Prevention of Addictions), Andrews have identified a series of factors that discourage young adults from engaging in at-risk behavior, with the corresponding benefit to good health. Among these factors are (Fig 5, 6)

1. A religious commitment (to Christ/church).
2. Awareness of factors that contribute to good health
3. Attendance at church services and Bible study.
4. Family bonding and open communication with parents.
5. Parents' involvement in the life and interests of their children.
6. Family time, including regular family dinners.
7. Adult mentoring at a personal level by individuals other than parents, e.g. teachers.
8. A community service orientation.
9. Communication of religious and personal values through education.

10. Personal values and self-esteem. (For example 62 % of students who had experienced sexual abuse or assault reported voluntary sexual activity, compared to 38% of those who had not been abused).

Conclusion: Most of these protective measures are associated with home and church activities, but 7, 9 relate to educational activities. Research found that the ability of students to discuss personal values, especially with multiple mentors or faculty members (three or more), significantly lowered risky student behavior.

Other health risk factors: Things students neglect!

Students (and faculty) sit far too much in offices, lecture rooms or libraries, or stand bent over lab benches or look at computer screens, or struggle with sleep deprivation, preceded or followed by long periods of intense study, cramming for exams, while eating "junk food," and drinking coffee or coke for quick stimulation. Good food and adequate sleep, often overlooked on campuses, are essential to student health. A recent study has found that just over 50% of students exercise moderately (30 minutes) 1-4 days a week, whereas only 30% exercise vigorously (20 minutes) 1-2 days a week. All told, 49 % of university students met recommended guidelines for exercise in the USA. Food, sleep and exercise represent the remaining gaps in good student health.

Conclusion: Narrowing the gap

In assessing the academic responsibility toward good student health, and reducing the devastating impacts of NCD in the future, several matters should be considered.

First the good news (Fig 7): The lifestyle factors in the Christian university have dramatically reduced at- risk behavior by about half. That gives a huge health advantage to students in the Christian university. Research has shown that this protection from ill health due to reduced at-risk behavior is associated with faith commitments and relationships with parents and friends at home and in places of worship. Education also helps achieve that goal, particularly through

programs of health education and relationships with multiple mentors and teachers. The university should continue its advocacy of these factors through campus initiatives and collaboration between university and home. Student life directors and academic advisors and instructors must make common cause in making university education holistic and developmental. It can lower the risks of NCD by huge margins in the university population and make higher education a change agent in society. That represents the first step in the academic response to NCD. It will take us half way to our goal of making universities centers of health.

Second – The second response by the Christian university to the health threat by NCD must find new approaches so as to close the remaining gap between where we are and the ideal of total health as defined by WHO, namely: "a state of complete physical mental and social well-being, and not merely the absence of diseases or infirmity."

(Fig 8) In order to close that final gap, incremental improvements in student health may be inadequate. Rather it requires a "conversion" as it were—a reorientation of the university's educational goal, a new university culture for the whole institution, a reaffirmation of the Adventist educational mission. Only that will take us to the next level of health and wellness in higher education.

That brings us to the philosophical foundations of Adventist higher education as follows: Adventist education is developmental and aspirational. True education. . . "has to do with the whole person and with the whole period of existence possible to human beings. It is the harmonious development of the physical, the mental and the spiritual powers." (*Education*, p. 13). While not intended to address life threatening NCD's it does call for an education that promotes life to its full extent, and to the full human capacity. This understanding of education therefore challenges any illness that prevents a full life. Like health, education is aspirational and never static—it never reaches a plateau to stop there. If there is a gap between actual and desired outcome in student health, Adventist education will want to bridge it.

Andrews University has embarked upon such a health and wellness initiative under the following four rubrics. (Fig 9)

a. Intentionality. At Andrews University that includes the appointment of a health and wellness champion who brings both advanced education (a doctorate) and extensive experiences in the health professions or services to the task. This represents a new appointment and a new budget, someone who will report to senior administration. The champion will provide advocacy for health and develop programs for students, faculty, staff and community, with the help of existing staff in student life and human resources, thereby making the health initiative multi-dimensional.

To push its intentionality further, Andrews University is planning a state of the art, comprehensive wellness center, located centrally and prominently on campus. It will house cardio and fitness machines, and spaces for aerobics, racquetball, basketball, badminton, intramural activities, an indoor walking track and a climbing wall. The department of public health & wellness will occupy one wing, which will include public lecture rooms and a demonstration kitchen offering a range of health and wellness services to students and the community. Access will be gained through a single entrance, a large lobby that tells the story of Adventist health. Together with the wellness champion, this center will assure the intentionality of the institution to raise the profile of health and wellness in the university. (Fig 10) Picture of wellness center

b. Accessibility (Fig 11). We know that NCDs are selective (80% of those impacted live in low economies). Therefore a big challenge to health and wellness is accessibility for all. At Andrews that means the whole campus must share in this initiative. Hence the entire campus plan developed by the School of Architecture, Art and Design, is named "A

campus for health and wellness." (Fig 12) That includes both the central campus, housing the academic and residential facilities, but also the surrounding campus with miles of walking and biking trails. The green spaces, the arboretum, well-designed and functional building with adequate light and fresh air all contribute to making health accessible for all. The rhythm of work and rest during the week and on the Sabbath adds a spiritual dimension to the health experience. The agriculture department with its organic produce initiative on campus and in the local community will extend accessibility to the neighborhood.

c. Integration (Fig 13). All aspects of health and wellbeing are included. That is accomplished partly with curriculum design that brings cohesiveness to health courses of study, and introduces wellness into the discussion of other courses of study, research, and co-curricular activities. New degrees in public health and combined degrees in ministry and public health will add to the integration of health and education in the university.

The counseling department, student recreational programs and campus ministries further extend the care for student wellness into related aspects of student life—the emotional, social and spiritual. Dining Services will provide nutritional information regarding the food served to students, employees and community, and will be followed up with public lectures and demonstrations of food and nutrition on community nights. Many students come to Andrews from other regions of the world with different cultures, food habits and very different outdoor temperatures. Andrews will help them stay warm, well and healthy throughout the year.

d. Motivation (Fig 14). The university will use peers, technology, and incentives to motivate faculty, staff and students to turn what we learn about health into action. Already employees are motivated to maintain good health with annual check-ups in return for reduced health insurance premiums. Support groups, weigh management groups, and walking partners along with technology that tracks activities and measurements (bio stats) will measure progress and encourage persistence.

   The new health and wellness center will offer tests, health surveys, and other ongoing measurements enabling us to check progress toward making Andrews not only a health conscious campus, but a "healthy campus" so identified by a series of objective measurements. Instruments such as those prepared by the American College Health Association's National College Health Assessment will be used, results will be quantified and progress measured and reported both for individuals and for the campus. Additionally the IPA will continue to measure the levels of at-risk behavior on campus, and identify preventative steps the university can take to lower this type of behavior. This will be supplemented by individual and personal counseling. Annual outcomes assessment will be made of all initiatives and a better understanding of the impact of health on student academic performance will be sought. The health and wellness initiative will become a key part of the branding of Andrews (and Adventist education generally) as a desired destination for a state of the art institution of higher learning in the 21st century.

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