Consortium of Eastern Ohio Master of Public Health Environmental Scan

Health trends

- Life expectancy at birth increased for Americans (2.1 years for males and 1.7 years for females) from 2000 to 2010. (Centers for Disease Control and Prevention. Health, United States, 2012 with special feature on emergency care. http://www.cdc.gov/nchs/data/hus/hus12.pdf. Published May 2013. Accessed September 23, 2013.)

- Overall infant mortality decreased 11% from 6.91 to 6.15 deaths per 100 live births. (Centers for Disease Control and Prevention. Health, United States, 2012 with special feature on emergency care. http://www.cdc.gov/nchs/data/hus/hus12.pdf. Published May 2013. Accessed September 23, 2013.)

- Disparities in life expectancy at birth and infant mortality is decreasing between white and black Americans. (Centers for Disease Control and Prevention. Health, United States, 2012 with special feature on emergency care. http://www.cdc.gov/nchs/data/hus/hus12.pdf. Published May 2013. Accessed September 23, 2013.)

- In 2011, of those adults aged 18 and older, 28% did not meet the 2008 physical activity guidelines. (Centers for Disease Control and Prevention. Health, United States, 2012 with special feature on emergency care. http://www.cdc.gov/nchs/data/hus/hus12.pdf. Published May 2013. Accessed September 23, 2013.)

- Heart disease is the leading cause of death in the United States for both men and women, accounting for approximately 307,000 deaths for men and 290,000 deaths for women in 2010. (Centers for Disease Control and Prevention. Health, United States, 2012 with special feature on emergency care. http://www.cdc.gov/nchs/data/hus/hus12.pdf. Published May 2013. Accessed September 23, 2013.)

- In 2010-2011, nearly one half (45%) of men aged 75 and over reported having ever been told by a physician they had health disease, compared with nearly one-third (31%) of women in he same age group. (Centers for Disease Control and Prevention. Health, United States, 2012 with special feature on emergency care. http://www.cdc.gov/nchs/data/hus/hus12.pdf. Published May 2013. Accessed September 23, 2013.)

- Between 2001 and 2011, cigarette smoking among students in grade 12 decreased from 30% to 22% for male students and from 29% to 15% for female students. Also during this period, the percentage of adults who smoked cigarettes declined for men and women aged 18–44 and for women aged 45–64, while remaining stable for men aged 45–64 and for men and women aged 65 and over. (Centers for Disease Control and Prevention. Health, United States, 2012 with special feature on emergency care. http://www.cdc.gov/nchs/data/hus/hus12.pdf. Published May 2013. Accessed September 23, 2013.)

- About 1 in 8 preschoolers is obese in the US. Obesity among low-income preschoolers declined, from 2008 through 2011, in 19 of 43 states and territories studied. About 1 in 5 (19%) black children and 1 in 6 (16%) Hispanic children between the ages of 2 and 5 are obese…Children who are

overweight or obese as preschoolers are 5 times as likely as normal-weight children to be overweight or obese as adults. (Centers for Disease Control and Prevention. CDC Vitalsigns: Progress on childhood obesity. http://www.cdc.gov/vitalsigns/childhoodobesity/ Published August 2013. Accessed September 30, 2013.)

- Ohio showed no change in the rates of childhood obesity. . (Centers for Disease Control and Prevention. CDC Vitalsigns: Progress on childhood obesity. http://www.cdc.gov/vitalsigns/childhoodobesity/ Published August 2013. Accessed September 30, 2013.)

- In 2009-2010, 35.9% of adults over 20 years of age in America were obese. Nearly 70% (69.2%) of Americans over age 20 were either overweight or obese. (Centers for Disease Control and Prevention. Obesity and overweight. Published May, 2013. Accessed September 30, 2013.)

- Between 2001 and 2011, among adults aged 18–64, the percentage who reported not receiving, or delaying, needed medical care due to cost in the past 12 months increased from 10% to 14%. The percentage not receiving needed prescription drugs due to cost increased from 7% to 11%, and the percentage not receiving needed dental care due to cost grew from 10% to 16%. (Centers for Disease Control and Prevention. Health, United States, 2012 with special feature on emergency care. http://www.cdc.gov/nchs/data/hus/hus12.pdf. Published May 2013. Accessed September 23, 2013.)

- In 2011, 35% of adults aged 18–64 who were uninsured did not get, or delayed, needed medical care due to cost in the past 12 months, compared with 7% of adults with private coverage and 13% of adults with Medicaid. (Centers for Disease Control and Prevention. Health, United States, 2012 with special feature on emergency care. http://www.cdc.gov/nchs/data/hus/hus12.pdf. Published May 2013. Accessed September 23, 2013.)

System Trends

- Contrary to claims made by opponents of the health care law, today's report found that the Affordable Care Act did not result in increased health care costs. In fact, the report showed a slight decrease in costs in 2011. (US Department of Health and Human Services. Health Care's New Trend: Spending Dollars More Wisely. http://www.hhs.gov/healthcare/facts/blog/2012/06/health-spending061212.html. Published June 12, 2012. Accessed September 23, 2013.)

- The Affordable Care Act is projected to insure over 30 million additional Americans, resulting in improved access and thus health spending as they gain coverage. Once implemented, the report shows that national health spending growth is projected to be lower than it would have been without the health care law from 2017 through 2019. (US Department of Health and Human Services. Health Care's New Trend: Spending Dollars More Wisely. http://www.hhs.gov/healthcare/facts/blog/2012/06/health-spending061212.html. Published June 12, 2012. Accessed September 23, 2013.)

- Enrollment for the Affordable Care Act (ACA) is set to begin on October 1, 2013. One of the key goals of the ACA is to reduce the number of uninsured through a Medicaid expansion and create

health insurance marketplaces. (The Kaiser Family Foundation. Health Coverage by Race and Ethnicity: The Potential Impact of the Affordable Care Act. http://kaiserfamilyfoundation.files.wordpress.com/2013/04/8423.pdf. Published March, 2013. Accessed September 23, 2013)

- ACA coverage could benefit communities of color and advance efforts to eliminate disparities given they are at a disproportionate risk for being low income and uninsured. (The Kaiser Family Foundation. Health Coverage by Race and Ethnicity: The Potential Impact of the Affordable Care Act. http://kaiserfamilyfoundation.files.wordpress.com/2013/04/8423.pdf. Published March, 2013. Accessed September 23, 2013)

- People of color are projected to make up a majority of the population by 2050. (The Kaiser Family Foundation. Health Coverage by Race and Ethnicity: The Potential Impact of the Affordable Care Act. http://kaiserfamilyfoundation.files.wordpress.com/2013/04/8423.pdf. Published March, 2013. Accessed September 23, 2013)

- It is estimated that 30% of direct medical costs for Blacks, Hispanics, and Asian Americans are excess costs due to disparities. This results in a loss of $309 billion per year to the economy. (The Kaiser Family Foundation. Focus on health care disparities: Key facts. http://kaiserfamilyfoundation.files.wordpress.com/2013/01/8396.pdf. Published December, 2012. Accessed September 25, 2013.)

- The Centers for Medicare & Medicaid Services estimates national healthcare expenditure growth to remain just under 4% for 2013 due to the sluggish economic recovery, but improving economic conditions and coverage by the ACA will increase health care expenditures in the United States to 6.1% by 2014. (Centers for Medicare & Medicaid Services. National Health Expenditure Projections 2012-2022: Forecast Summary. http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/Proj2012.pdf. Accessed September 23, 2013.)

- Medicaid spending was estimated to have been $416.8 billion, and Medicare total spending $580 billion in 2012. It is estimated that Americans spent $930.6 billion in private insurance premiums and $320.2 billion in out of pocket spending in 2012. (Centers for Medicare & Medicaid Services. National Health Expenditure Projections 2012-2022: Forecast Summary. http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/Proj2012.pdf. Accessed September 23, 2013.)
- There were an estimated 1,500,000 uninsured Ohioans in 2011.

- Medicaid is currently Ohio's single largest payer of health care services, covering 2.2 million of Ohio's low income families every month. (Health Policy Institute of Ohio. Ohio Medicaid Basics 2013. http://a5e8c023c8899218225edfa4b02e4d9734e01a28.gripelements.com/pdf/publications/medicaidbasics2013_final.pdf. Published March 2013. Accessed September 23, 2013.)

- The total expenditure for Ohio's Medicaid program in 2012 was $17 billion ($6.1 billion of which was paid by state funds.) (Health Policy Institute of Ohio. Ohio Medicaid Basics 2013.

http://a5e8c023c8899218225edfa4b02e4d9734e01a28.gripelements.com/pdf/publications/medicaidbasics2013_final.pdf. Published March 2013. Accessed September 23, 2013.)

- In SFY 2012, a total of 2.64 million Ohioans were enrolled in Medicaid at some point during the year. However, because people enter and exit the program throughout the year, Medicaid's SFY 2012 average monthly enrollment was 2.21 million Ohioans. (Health Policy Institute of Ohio. Ohio Medicaid Basics 2013. http://a5e8c023c8899218225edfa4b02e4d9734e01a28.gripelements.com/pdf/publications/medicaidbasics2013_final.pdf. Published March 2013. Accessed September 23, 2013.)

- An average of 162,000 (or 14% of Ohio's children age 0-18) were covered by the Children's Health Insurance Program (CHIP) for the 2012 fiscal year. (Health Policy Institute of Ohio. Ohio Medicaid Basics 2013. http://a5e8c023c8899218225edfa4b02e4d9734e01a28.gripelements.com/pdf/publications/medicaidbasics2013_final.pdf. Published March 2013. Accessed September 23, 2013.)

- Ohio's 2012 FMAP was 64.15%, meaning that for every $1.00 of state expenditure, the federal government contributed $1.79. (Health Policy Institute of Ohio. Ohio Medicaid Basics 2013. http://a5e8c023c8899218225edfa4b02e4d9734e01a28.gripelements.com/pdf/publications/medicaidbasics2013_final.pdf. Published March 2013. Accessed September 23, 2013.)

- Public health and the health care system are increasingly driving towards interrelated goals….the commitment to prevention and focus on population health that is embedded in the affordable care act; shifts in reimbursement and an urgent need to reduce costs; an emphasis on quality, performance measurement, and accountability; growing interest in interdisciplinary strategies and teamwork; and widespread recognition that communities play an essential role in health. (Association of Schools and Programs of Public Health. Public health trends and redesigned education. http://www.aspph.org/userfiles/BlueRibbonPublicHealthEmployersAdvisoryBoard_Report.pdf Published September 6, 2013. Accessed September 30, 2013.)

- Law and policy are core tools for intervening to advance public health. Policy is a fundamental tool for bringing about change — for example, through food and menu calorie labeling, removal of toxins, and advancing workplace safety. Increasing public awareness of the issues, understanding the impact of the political process, learning where influence resides, cross-walking public health and other parts of the health system, advocating for changes in laws and regulations, engaging the media, and bringing the public and private sectors together are all tools for influencing policy. (Association of Schools and Programs of Public Health. Public health trends and redesigned education. http://www.aspph.org/userfiles/BlueRibbonPublicHealthEmployersAdvisoryBoard_Report.pdf Published September 6, 2013. Accessed September 30, 2013.)

- Vast amounts of data are becoming available to researchers, practitioners, policymakers, and the public. Technology and the information revolution are bringing about "big data" — information that can be analyzed to guide decision-making, provide information for health impact assessments, influence how consumers think about health, and point the way to effective prevention. (Association of Schools and Programs of Public Health. Public health trends and redesigned

education.
http://www.aspph.org/userfiles/BlueRibbonPublicHealthEmployersAdvisoryBoard_Report.pdf
Published September 6, 2013. Accessed September 30, 2013.)

Public health workforce trends

- The current public health workforce is inadequate to meet the health needs of the US and global population. (Association of Schools of Public Health. Confronting the public health workforce crisis. http://www.asph.org/UserFiles/WorkforceShortage2008Final.pdf. Published 2008. Accessed September 25, 2013.)

- The Association of Schools of Public Health estimates that 250,000 more public health workers will be needed by 2020. (Association of Schools of Public Health. Confronting the public health workforce crisis. http://www.asph.org/UserFiles/WorkforceShortage2008Final.pdf. Published 2008. Accessed September 25, 2013.)

- Over 23% of the current public health workforce—almost 110,000 professionals—were eligible for retirement in 2012, compounding the issue. (Association of Schools of Public Health. Confronting the public health workforce crisis.
http://www.asph.org/UserFiles/WorkforceShortage2008Final.pdf. Published 2008. Accessed September 25, 2013.)

- The public health workforce is diminishing over time even as the U.S. population increases. In 2000, the total workforce was 448,000, or 50,000 less than in 1980. (Association of Schools of Public Health. Confronting the public health workforce crisis.
http://www.asph.org/UserFiles/WorkforceShortage2008Final.pdf. Published 2008. Accessed September 25, 2013.)

- The picture is brightening for the state and local government workforce, although 33% still report pay freezes and 18% report layoffs. That compares with 51 percent reporting pay freezes in 2012 and 28% reporting layoffs. (Center for State and Local Government Excellence. Survey findings: State and local government workforce 2013 trends. http://slge.org/wp-content/uploads/2013/05/Workforce-Trends-2013_13-3541.pdf. Published May 2013. Accessed September 24, 2013.)

- Hiring freezes in public health workforces have dropped, with only 27% of state and local govern reporting a freeze vs. 42% in 2012. . (Center for State and Local Government Excellence. Survey findings: State and local government workforce 2013 trends. http://slge.org/wp-content/uploads/2013/05/Workforce-Trends-2013_13-3541.pdf. Published May 2013. Accessed September 24, 2013.)

- HRSA currently is investing $36 million through more than 100 active workforce training grants in over 25 sites in Ohio, including in colleges, universities and clinical settings. For example, [HRSA is] funding primary care programs at Ohio State for the training of primary care medical residents and advanced practice nurses. [HRSA is] also support training programs in medicine, nursing, public health, faculty development, and geriatric care at many other schools and hospitals, and institutions, including the University of Cincinnati, Northeast Ohio Medical University, Case Western

Reserve, the University of Toledo, Marietta College, and Children's Hospital Medical Center in Cincinnati, just to name a few. (Wakefield MK, Remarks to the Health Policy Institute of Ohio. http://www.hrsa.gov/about/news/speeches/2012/12052012ohio.html. Published December 5, 2012. Accessed September 25, 2013.)

- Using ACA resources, HRSA has invested in grants to expand overall enrollment in training programs in primary care professions, including physicians, nurse practitioners, physician assistants, and mental/behavioral health professionals. For example, through one ACA funding stream, [HRSA] expect[s] to have trained by 2015 an additional 500 primary care physicians; 600 primary care advanced practice nurses; 600 PAs; and 200 more mental/behavioral health providers. (Wakefield MK, Remarks to the Health Policy Institute of Ohio. http://www.hrsa.gov/about/news/speeches/2012/12052012ohio.html. Published December 5, 2012. Accessed September 25, 2013.)

- Ohio has been a major beneficiary of the Affordable Care Act's expansion of the National Health Service Corps (NHSC). Today there are 178 NHSC clinicians in Ohio, compared with just 69 in 2008. In Ohio, those NHSC clinicians include 56 physicians; 43 mental and behavioral health providers; 41 nurse practitioners; 30 dental health providers; 7 physician assistants; and one certified nurse midwife. And of those 178 NHSC clinicians in Ohio, 140 are ACA-funded, as of September 30. Talk about a big ACA impact! (Wakefield MK, Remarks to the Health Policy Institute of Ohio. http://www.hrsa.gov/about/news/speeches/2012/12052012ohio.html. Published December 5, 2012. Accessed September 25, 2013.)

- Fiscal constraints are a given, but shifting priorities will weigh against some areas more than others. Decreasing governmental support for public health will focus more attention toward return-on-investment principles, and put a higher value on budgeting, priority-setting, and efficient program implementation. New financing mechanisms may emerge, such as through the Affordable Care Act, and public health offers many of the tools needed to emphasize and measure population-based outcomes. (Association of Schools and Programs of Public Health. Public health trends and redesigned education. http://www.aspph.org/userfiles/BlueRibbonPublicHealthEmployersAdvisoryBoard_Report.pdf Published September 6, 2013. Accessed September 30, 2013.)

Academia—public health trends

- Master's degrees awarded have been rising consistently (a 47% increase between 2000 and 2009 for all master's programs compared with a 33% increase for SPH), particularly in health-related fields. Master's degrees in Public Policy, in Social Work, and in Nursing are all trending upwards, with the first two seeing application increases of about 20% in 2010. Medical School applications also saw an increase of applicants. Despite concerns to the contrary, these upward trends currently show no signs of abating. (Association of Schools of Public Health. Trends in higher education and schools of public health. http://www.asph.org/userfiles/TrendsinHigherEducationSPH-20111017.pdf. Published October 17, 2011. Accessed September 25, 2013.)

- Schools of Public Health and other graduate programs have similar levels of diversity. A further commonality in demographics is in regard to Hispanics, who represent a smaller percentage of students within graduate programs than in the general U.S. population (11% less at SPH and 12%

less among all graduate students than in the U.S. at large). (Association of Schools of Public Health. Trends in higher education and schools of public health. http://www.asph.org/userfiles/TrendsinHigherEducationSPH-20111017.pdf. Published October 17, 2011. Accessed September 25, 2013.)

- Graduate schools are predominantly women, as they make up 60% of the general graduate school population and as much as 70% of the student body at SPH.
  (Association of Schools of Public Health. Trends in higher education and schools of public health. http://www.asph.org/userfiles/TrendsinHigherEducationSPH-20111017.pdf. Published October 17, 2011. Accessed September 25, 2013.)

- A significant portion of international students come from China and India (39% at SPH and 45% generally in 2009), and while this has been a trend for a decade, there are some signs that growth from India is slowing. Nigeria is not among the top ten sending countries generally, but it is the third largest sender of applicants to Schools of Public Health (14% of all applicants in 2009). The percentage of international students at SPH (15%) is slightly higher than the national average (12%), a statistic that has been noted for at least the past ten years.
  (Association of Schools of Public Health. Trends in higher education and schools of public health. http://www.asph.org/userfiles/TrendsinHigherEducationSPH-20111017.pdf. Published October 17, 2011. Accessed September 25, 2013.)

- The number of people taking online courses has doubled since 2002, and for-profit institutions are leading the way in meeting the growing demand for distance education. This trend takes some students away from other schools, particularly public institutions. An even larger proportion of public health-related master's degrees are being awarded by for-profit institutions (14% of public health degrees come from non-profits) than in all other programs nationally (10%). (Association of Schools of Public Health. Trends in higher education and schools of public health. http://www.asph.org/userfiles/TrendsinHigherEducationSPH-20111017.pdf. Published October 17, 2011. Accessed September 25, 2013.)

- The cost of tuition and fees, the total cost of attending school, and the total debt burden of students have all risen two to three times faster than the rate of inflation (36%) since 1995, suggesting that these school-related costs are rising faster than students' ability to pay. Tuition, fees, and debt burden are even higher for Schools of Public Health thanthey are for all programs nationally ($1,400 more for in-state tuition annually and almost $10,000 more in debt burden upon graduation for students in SPH than other graduate degree programs).
  (Association of Schools of Public Health. Trends in higher education and schools of public health. http://www.asph.org/userfiles/TrendsinHigherEducationSPH-20111017.pdf. Published October 17, 2011. Accessed September 25, 2013.)

- Recent regulations targeted at for-profit institutions will affect all institutions, including Schools of Public Health, and especially those with distance programs.
  (Association of Schools of Public Health. Trends in higher education and schools of public health. http://www.asph.org/userfiles/TrendsinHigherEducationSPH-20111017.pdf. Published October 17, 2011. Accessed September 25, 2013.)

- Enrollment specifically in Schools of Public Health, which is included in the health sciences, grew by 8.1% between 2008 and 2009. Between 2000 and 2010, enrollment in Schools of Public Health increased by 57%, from 16,777 to 26,340 students. However, growth between 2009 and 2010 tapered to 4.4%, slower than the previous year by 3.7%. (Association of Schools of Public Health. Trends in higher education and schools of public health. http://www.asph.org/userfiles/TrendsinHigherEducationSPH-20111017.pdf. Published October 17, 2011. Accessed September 25, 2013.)

- Public health skills can be applied in many fields. A public health degree focuses on specialized critical thinking and analytical skills, combined with generalized knowledge in a number of topic areas, and offers a unique way to problem solve that can be used in many fields. This training allows public health workers to move beyond an immediate problem to a larger and more conceptual view when contributing effectively as a team member. (Association of Schools and Programs of Public Health. Public health trends and redesigned education. http://www.aspph.org/userfiles/BlueRibbonPublicHealthEmployersAdvisoryBoard_Report.pdf Published September 6, 2013. Accessed September 30, 2013.)

- A commitment to social justice and the common good is woven through education in public health. Schools and programs should view the public health curricula as a tool to serve a larger good. In general, public health training draws altruistic people interested in social causes and eager to serve. Attracting committed, hard-working people who recognize the relationship between personal and social benefit has special importance, particularly when public health is at times under political scrutiny. (Association of Schools and Programs of Public Health. Public health trends and redesigned education. http://www.aspph.org/userfiles/BlueRibbonPublicHealthEmployersAdvisoryBoard_Report.pdf Published September 6, 2013. Accessed September 30, 2013.)

- Graduates of public health schools and programs need a solid foundation in the fundamentals of public health, both as generalists and specialists, whether they pursue a career in public health, or a related career in law, medicine, government, health care systems, etc. Any public health curriculum must impart a broad range of skills and knowledge to help students understand how the world works – but importantly, it must also promote the passion and capacity to make it work better and lay the foundation for lifelong learning. (Association of Schools and Programs of Public Health. Public health trends and redesigned education. http://www.aspph.org/userfiles/BlueRibbonPublicHealthEmployersAdvisoryBoard_Report.pdf Published September 6, 2013. Accessed September 30, 2013.)

- More management skills should be incorporated into education for public health so that graduates become effective managers who understand how to work in teams and across disciplines. Their skill set should include knowledge of organizational culture and process improvement, including how organizations work, develop, and change. (Association of Schools and Programs of Public Health. Public health trends and redesigned education. http://www.aspph.org/userfiles/BlueRibbonPublicHealthEmployersAdvisoryBoard_Report.pdf Published September 6, 2013. Accessed September 30, 2013.)

- Public health graduates must understand the relationship among medical care, the public health system, and the factors that promote or damage health, and how they interact, including behavior,

environment, genetics, and clinical care, along with health policy, and the role of government. (Association of Schools and Programs of Public Health. Public health trends and redesigned education. http://www.aspph.org/userfiles/BlueRibbonPublicHealthEmployersAdvisoryBoard_Report.pdf Published September 6, 2013. Accessed September 30, 2013.)

- Development of leadership skills to build relationships are key in order to advocate for public health and engage other parts of the health sector as well as non-health focused sectors. By inculcating elements of leadership into education, graduates will be prepared to lead in their chosen fields. (Association of Schools and Programs of Public Health. Public health trends and redesigned education. http://www.aspph.org/userfiles/BlueRibbonPublicHealthEmployersAdvisoryBoard_Report.pdf Published September 6, 2013. Accessed September 30, 2013.)

- Policy should be rolled into education for public health, so that graduates have a fuller understanding of the policy process and are prepared to advocate for change. An historical perspective should be part of the curricula so that students understand the nation's past policies as they help to form future ones. They also need a fuller understanding of how public health professionals interact with advocacy groups. The case study method can be applied to demonstrate strategies for influencing policy. (Association of Schools and Programs of Public Health. Public health trends and redesigned education. http://www.aspph.org/userfiles/BlueRibbonPublicHealthEmployersAdvisoryBoard_Report.pdf Published September 6, 2013. Accessed September 30, 2013.)

- Knowledge about the public health science of epidemiology, biostatistics, and quantitative analysis is significant in the training of public health graduates in order to create and access data from multiple sources, and analyze and quantify that information. In addition, qualitative methodology is important for adding substantive knowledge to systems functions and evaluations. Using various analytic methods to understand how information can be optimized for decision-making is an essential problem-solving tool. (Association of Schools and Programs of Public Health. Public health trends and redesigned education. http://www.aspph.org/userfiles/BlueRibbonPublicHealthEmployersAdvisoryBoard_Report.pdf Published September 6, 2013. Accessed September 30, 2013.)

- As the world becomes ever-more technologically sophisticated, public health students need to understand and use information technology, social media, and mobile applications effectively. These will have enormous implications for health and health care in ways that cannot yet be anticipated – for example, some kind of "tele-public health," comparable to what is happening in medicine could offer a partial solution to workforce shortages. (Association of Schools and Programs of Public Health. Public health trends and redesigned education. http://www.aspph.org/userfiles/BlueRibbonPublicHealthEmployersAdvisoryBoard_Report.pdf Published September 6, 2013. Accessed September 30, 2013.)

- Finance is not a strong component of public health curricula, but fuller knowledge of budgeting, financial modeling and planning, economics, resource sustainability, and other core business skills is increasingly required. Even public health workers who are not directly managing budgets are affected by them and expected to make decisions based on available resources. While there is only so much time in the public health degree curriculum, budget and finance skills may be developed

through case studies and capstone projects. (Association of Schools and Programs of Public Health. Public health trends and redesigned education. http://www.aspph.org/userfiles/BlueRibbonPublicHealthEmployersAdvisoryBoard_Report.pdf Published September 6, 2013. Accessed September 30, 2013.)

- Writing and public speaking should be woven throughout the curriculum, with exposure to the use of technology to enhance communication. In addition, learning how to identify, analyze, and effectively communicate with multiple audiences is key for information exchange with partners and populations. (Association of Schools and Programs of Public Health. Public health trends and redesigned education. http://www.aspph.org/userfiles/BlueRibbonPublicHealthEmployersAdvisoryBoard_Report.pdf Published September 6, 2013. Accessed September 30, 2013.)