Debate over the nation’s health care system has focused unprecedented attention on Americans’ health care needs and coverage. According to experts following the reform debate, some aspects of adolescent care have received solid support. But others warn that many health care issues affecting teenagers will not be addressed.

“The health needs of young people can be easily overlooked,” says Linda Bearinger, PhD, RN, FAAN, director of the Center for Adolescent Nursing at the UMN. “The people who are working with the aging population have much more of a voice. Adolescents don’t have an organization with the reach of AARP advocating on their behalf.”

With recent changes in the Senate composition, the future of health care reform remains unclear. As detailed in the Institute of Medicine’s 2008 report, Adolescent Health Services: Missing Opportunities, more than any other group, adolescents engage in behaviors that can put them at greater risk – from risky sexual behavior to substance use. Not surprisingly, motor vehicle accidents, homicide, and suicide continue to be the leading causes of death in the US.

Many mental disorders appear during adolescent years. Between 10 and 20 percent of adolescents show signs of mental disorders each year. Half of all adult life-long mental disorders start by age 14. The prevalence of asthma and diabetes, two common chronic diseases among adolescents, have increased recently. As many as 20 percent of high-school students have lifetime asthma, and more than 17 percent of adolescents are overweight, three times the rate in 1980.

These common adolescent health problems are even more prevalent among certain groups of teens. Youth in the juvenile justice system disproportionately have problems with drugs and alcohol, sexually transmitted infections, unplanned pregnancies, dental problems, and mental disorders. GLBTQ teens are far more likely to attempt suicide than other teens. Health concerns, including access to care, are especially acute for teens who are members of minority groups or whose families recently immigrated to this country.

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From The Director

Dear Readers:

At the time of writing, there is nary a front page of any newspaper without some updates about the latest developments on health care reform. The cover story of this issue of Adolescent Health highlights ramifications for young people . . . not the least of which is the challenge of covering costs while assuring confidentiality. You’ll read viewpoints from colleagues who are attuned to health reform issues on a daily basis, thinking from perspectives of certain populations and settings – Latino/a youth, school services, and community-based clinics.

While this dialogue continues and the US House and Senate converge on a single bill, those involved in the training of health providers are focused on a related concern – how to assure an adequate workforce equipped to work with adolescents.

What if health care reform means that all young people would be insured, eliminating today’s greatest constraint on youth’s access to health care? We hope this will be the outcome. But, would there be enough well trained providers to handle a potentially massive influx of young people into health systems? A year ago, prior to the health reform debate, a report from the Institute of Medicine, Adolescent Health Services: Missing Opportunities, called for the vast expansion of a well-trained workforce – an interdisciplinary workforce with skills and knowledge for working with adolescents.

Let me give you a sense of how adolescent health stacks up, in terms of the adequacy of a health care workforce.

Imagine this scenario: A report on a national interdisciplinary survey of thousands of geriatric health providers reveals that over half feel ill-equipped to address the most common health problems of elders – stroke, dementia, falls. This news would create a national emergency, and the headlines would read: ‘Nurses and physicians not prepared to care for elders.’ Sadly, this is exactly the conclusion of several national surveys of health providers who work with adolescents – primary care physicians, school nurses, nurse practitioners, psychologists, dieticians, and social workers. This is why we are concerned.

Right now, there are only seven federally-supported training programs in the country (funded by the Maternal and Child Health Bureau [MCHB]) targeted specifically toward interdisciplinary adolescent health education. Until last year, when MCHB awarded Alabama and UCSF with nursing training grants focused on adolescents, Minnesota’s Center for Adolescent Nursing was the only federally-funded program dedicated solely to preparing nurses for work in adolescent health. It is not enough, without question.

In this issue of Adolescent Health, we draw attention to a new avenue for nurses wanting to develop expertise with young people – the Doctor of Nursing Practice or DNP. Besides learning more about the DNP program, you can also enter into the thinking of two of our Center’s current students who chose between the DNP or PhD. And, we expect that some students will complete a dual degree – DNP and PhD.

Whether we focus on workforce needs within our borders, or on a global scale, we must plan for a future in which all young people can access quality care provided by health professionals who are skilled in addressing the unique needs of this population. To do this, we will need DPNs and PhDs ready to move into lead roles in health service, public health, and academic settings.

Linda H. Bearinger, PhD, MS, RN, FAAN
Professor and Director
Common Career Goals, Two Pathways: The PhD or DNP

“Nursing is so interconnected. That’s what’s cool about the DNP and the PhD—we can really work together and get our findings to experts in the clinical and public health arenas. This is where you see the link between research and practice come together.”

Karen Johnson, PhD student, Center for Adolescent Nursing

Karen Johnson, a current doctoral student focused in public health issues affecting adolescents, knew when she was finishing her degree in sociology that she wanted a graduate education, but she didn’t know which discipline was the right fit. “I thought about law school, social work, education,” she said. Johnson wanted to make a broad impact on the lives of underserved populations.

“It was actually my mom (a nursing professor at the University of Utah) who said, ‘You know, everything you’re saying you want to do, you can do with nursing.’” Johnson did some research, and saw that nursing was the perfect discipline for bringing together all her interests: promoting population-level health, doing research, working in academics, and touching lives. She completed an accelerated BSN program at the University of Colorado Denver and worked briefly as a public health nurse before moving to Minnesota for graduate school.

Sara Yaron, also a graduate student also focusing on adolescents, knew before she completed her BSN that an advanced degree in public health nursing was the right track for her. She first explored nursing in high school, working as a nursing assistant, then as a peer health educator and research assistant in college. Before finishing her undergraduate degree at University of Wisconsin-Eau Claire, Yaron researched master’s programs and discovered the BSN to DNP program at the University of Minnesota.

And while both Johnson and Yaron feel called to a career in adolescent health and public health nursing, they chose different tracks within UMN’s nursing program. Johnson is pursuing a PhD and Yaron a DNP.

The PhD’s emphasis on research in preparation for an academic career was appealing to Johnson. “I’m very interested in community-based participatory research, in working one-on-one with underserved communities on issues affecting the health of adolescents,” she said. Johnson is considering the health-promoting influence of sports programs on adolescents as a topic for her dissertation.

“I felt that the DNP route could get me hands-on client work, but I’m also very passionate about discovering new knowledge and disseminating that knowledge to policy makers, nursing students, and people in the community,” Johnson said she saw the PhD as a way to accomplish that.

Yaron was attracted to the DNP’s emphasis on taking the research conducted in the academic setting and implementing it in communities. “I think the research component is very important,” Yaron said. “I’d like to work together with people in academia, then, apply that research to the populations we serve.” Ultimately, Yaron wants to work with schools and youth programs that are critical for promoting the health and well-being of adolescents: building life-skills and competencies, reinforcing positive health behaviors, along with providing access to needed services.

“I love the patient/client interaction that comes with nursing, and I felt like the DNP would allow me to maintain that,” Yaron said.

Both Johnson and Yaron started their advanced degrees shortly after finishing undergraduate requirements, despite some advice to get work experience first. And each stressed that while work experience before graduate school has value, it isn’t always necessary. “If you care about a specific population or issue and you really want to make an impact, you should just go for it,” Johnson said. “You’ll find the support within the university – financial, faculty, and peer support.”

And while each of them researched graduate programs, UMN’s adolescent health resources and expertise “…stood out from the rest,” said Johnson. “The interdisciplinary faculty in adolescent health at Minnesota along with the resources available to graduate students here are just amazing, and that’s not something that I’ve found anywhere else.”
These days nurses wanting to return to graduate school have a new option – the Doctor of Nursing Practice or DNP. Cindy Kellet, BAN, RN, from Carlton County in northeast Minnesota, is a long-time public health nurse who specializes in working with mothers and children. She’s also a student in the University of Minnesota, School of Nursing’s new DNP program, where she is combining her two career loves: working with young families and practicing public health nursing.

In the past, Kellet, like many others, might have chosen to pursue an MS in public health nursing. However, in 2007 the School of Nursing transitioned from the MS degree to the new Doctor of Nursing Practice. The DNP prepares nurses for leadership roles as advanced practice nurses, clinical and public health experts, health care executives, policy experts, and informaticians.

What’s behind the change? Sandra Edwardson, PhD, RN, FAAN, the DNP program director and a key participant at the national level in developing the new degree program, cites three contributing factors.

First, increased specialization in health care is driving a need for additional content in educational programs. Then there’s the Institute of Medicine’s recommendation for more emphasis in health professionals’ education on non-clinical, structural issues such as health care financing and health care systems administration. Finally, the degree redresses an inequality in nursing education: “We realized the number of credits we required for our family nurse practitioner MS program was the same number required by the Doctor of Pharmacy degree,” Edwardson explains. “We needed to recognize the level of the programs we offered.” She also notes that many health care professions have moved toward the doctorate practice degree, such as physical and occupational therapy.

The Doctor of Nursing Practice is clearly an idea whose time has come. “It has taken off like nothing I’ve seen before,” marvels Edwardson. Currently more than 100 nursing schools offer the DNP, with about another 100 in the development process. The American Association of Colleges of Nursing has recommended that by 2015 the level of advanced practice nursing preparation will be completely transitioned from the master’s level to the doctorate level.

The University of Minnesota’s DNP program
The UMN School of Nursing offers two options for students wishing to obtain the DNP. The “Post-Master’s DNP” is designed for students who already hold a master’s degree in nursing and have nursing specialty preparation. Students can complete the program in one year of full-time studies, with an option of part-time attendance for two years for working students. The School enrolled its first Post-Master’s DNP cohort in January 2007; those students graduated in December 2007.

Then, in Fall 2009, the School enrolled its first “BSN to DNP” class. For those with a baccalaureate or entry-level master’s degree in nursing, the three-year, full-time program involves both coursework and a clinical internship which includes the foundations of advanced-practice nursing previously offered in the MS program. Four- and five-year options are being developed for students who continue in their jobs while in school.

The DNP curriculum is divided into four areas: core, specialty core, specialization, and scholarly leadership project (see Capstone sidebar). Students choose from 14 specialty areas, including adolescent nursing as part of public health nursing, nurse midwifery, pediatric nurse practitioner, informatics, nurse anesthesia, and more.

Students across the US are enrolling in the program via an executive distance-learning model. Web-based instruction is combined...
with three face-to-face, three-day campus visits for core courses each session—usually running Thursday, Friday, and Saturday. On-campus time for specialty courses varies by specialty area.

A World of Opportunity
The professional degree program prepares graduates for lead positions in public health and public health nursing, administrative, executive, and academic settings, as well as preparing advanced clinical practitioners.

“Public health nurses and primary care practitioners who return to former roles do so with a view of how systems of organizing care help or hinder outcomes for patients,” says Edwardson. “The program gives them tools for how to analyze and solve problems at a systems level, not patient by patient or facility by facility.”

Nurses who have obtained their DNP degrees have gone on to myriads of new opportunities – either in their existing jobs or in new ones, according to Edwardson. Some post-master’s program graduates have moved to tenure-track clinical faculty positions. A recent DNP graduate who previously worked at the University of Minnesota Children’s Hospital was recruited to Stanford University. Another returned to her job as a school nurse in Milwaukee, where she helped develop a protocol that introduced epinephrine syringes into the school. Two lives were saved as a result—a child and an adult, both experiencing life-threatening allergic reactions.

Student response to the DNP has been overwhelmingly enthusiastic. “Our initial students have been our best salespeople,” says Edwardson. “They are very excited about what they’ve learned and really talk up the program.” When the school considered reducing the number of on-campus visits to ease the burden on students, the students themselves objected. “They learn as much from each other as from us,” she concludes.

This focus on real-life problem solving lies at the core of the DNP degree. For those whose hearts and identities lie in academic research, the PhD remains the appropriate pathway. But if practice – in schools, clinics and public health settings – remains paramount, the DNP provides an ideal alternative.

“Doctoral students of both stripes share interest in advancing nursing research and improving the quality of clinical practice,” says Scott Harpin, MS, MPH, APRN-BC, and candidate for a PhD. “The future of nursing science and nursing practice is the assurance that those with research degrees and those with practice doctorates work together.”

For more information about the DNP, visit the School of Nursing’s website at www.nursing.umn.edu and click on the academic programs link.

International Association for Adolescent Health
9th World Congress

In October of 2009, Linda H. Bearinger, PhD, RN, FAAN, was elected to a four-year term as President of the International Association for Adolescent Health (IAAH) at the organization’s 9th World Congress in Kuala Lumpur, Malaysia. The conference, under the scientific leadership of Susan Sawyer, MBBS, MD, FRACP, included involvement of 36 countries and 770 participants. Bearinger is the first American and first nurse to ever serve as president of the organization.
"Many of their health needs are compounded by the challenges of acculturating, of balancing between two cultures," says Carolyn Garcia, PhD, MS, MPH, RN, assistant professor in the UMN’s School of Nursing and Center for Adolescent Nursing faculty. "So what’s the consequence? Many immigrant youth experience cultural conflicts that create considerable stress for them. Stress contributes to poor health behaviors and when these young people have a physical or mental health problems, such as diabetes or depression, they are often unable to get the timely health care they need."

Barriers include lack of knowledge about how the US health care system works, not having health insurance coverage, and not being able to find a provider who can communicate with them and their parents.

Current efforts to reform the nation’s health care system would offer some improvements. Any measures to expand coverage and make it more affordable will undoubtedly improve care to 5 million youth aged 10–18 who have no health insurance. Lack of coverage is especially common among the poor, minorities, and immigrant families. And, added to these constraints, the working poor often do not have health insurance through their employment. As adolescents turn 18, they often lose coverage through their families.

“If we can move away from a health insurance system that is primarily employer-based or income-based, then we may do a better job of serving adolescents and young adults,” says Garcia. “Because right now, in our current system, too many adolescents and young adults aren’t getting the care they need.”

Another potential winner in health care reform? School-based health centers – a primary source of care for many adolescents. “I think that there’s an understanding of the importance of providing services in school settings,” says Linda Juszczak, PhD, RN, executive director of the National Assembly on School-Based Health Care.

Presently, only state and local governments, or private foundations support school-based health centers, Juszczak says. Proposals that have been considered would establish a federal grant program to support new and existing programs. “This would also level the playing field for school-based health centers on reimbursement issues. Reimbursement from public insurance and the states for covered services delivered in school-based health centers can be quite variable,” says Juszczak.

Despite some gains for adolescents, certain reform ideas threaten to undo beneficial programs or remove young people from coverage. It is not entirely clear what will replace them.

“The legislation has the potential to fundamentally change the safety net for children and youth. The House bill that’s been under consideration proposes to eliminate the children’s health insurance program,” says Lisa Shapiro, who has tracked legislation for First Focus, and is the vice-president of health policy for First Focus, a bipartisan advocacy group for children’s health. The program, known as CHIP, is run by states and covers children in families that make a bit too much to qualify for Medicaid. It’s an important source of health care coverage for many adolescents from low-income families.

“While some children would be moved into Medicaid, a very large number of children would be moved into this new and untested health care exchange,” Shapiro says. “At First Focus we have serious concerns about whether the new exchange would be even comparable in terms of affordability and coverage to what children get currently under CHIP and Medicaid. These programs have done a terrific job of covering children and we must be sure that health reform does not cause young people to lose coverage they have now.” Youth experts are even more cautious about implications for adolescents.

However generous the coverage is for young people, important issues in adolescent health care will probably remain unsolved. As highlighted in a 2009 report by the National Research Council and Institute of Medicine, the health care system, regardless of coverage, falls short in several areas. According to the report, Adolescent Health Services: Missing Opportunities, health care better serves the acute conditions of adolescents than ongoing health needs such as disease prevention, health promotion, and behavioral health, which have huge implications for health in adult years. “Managing and treating those conditions requires ongoing care that, frankly, most of our current system isn’t able to provide these young people,” says Garcia.

It’s also unclear what referral options will be available for services of greatest importance to adolescents. For example, according to a recent national survey, State Adolescent Health Coordinators in most of the 50 states, cited reimbursement for mental health and substance abuse counseling services as a “moderate or substantial barrier to providing or expanding these services.” Many adolescents are now covered by insurance but still don’t have ready access to health care providers who are well trained to deal with adolescents or can guarantee the confidentiality needed so teens will communicate freely and reliably.

“Health care reform probably won’t fix these problems,” says Bearinger, who helped write the Institute of Medicine report. So in the years ahead, advocates for adolescent health services will have to continue to press for improvements. These changes include improving screening and health management at the primary care level, strengthening the link between primary and specialty care, giving more attention to ongoing health care, and providing training to help health care professionals more effectively care for adolescents.

Says Bearinger, “When we can assure that all young people in the US can access quality care, provided by health professionals who have been trained to work with the health issues common to adolescents, then we will have achieved a huge milestone toward improving the health of young people.”

For more information on the Institute of Medicine’s Adolescent Health Services: Missing Opportunities, please visit: www.iom.edu/Reports/2008/Adolescent-Health-Services-Missing-Opportunities.aspx
New CAN Fellows and Students

Early in her nursing career, Cindy Kellet, BAN, recognized the special challenges that adolescent parents face; working in NICU created an opportunity to teach teen parents. Over the past six years, she developed a passion for working with adolescent parents as a public health nurse in a rural county in Minnesota. All these experiences led her to pursue a DNP; she is supported by the Center for Adolescent Nursing’s Maternal and Child Health Bureau (HRSA/DHHS) grant. Once she obtains her DNP, Kellet plans to focus her energy on expanding the role of public health nurses in rural areas, concentrating her energies on young families.

Even before completing her undergraduate nursing degree in May 2009, Sara Yaron, RN, BSN, knew she dreamed of continuing on the educational pathway leading to an advanced degree in nursing. Previously working as an acute care nurse on medical, surgical, and pediatric units, and with a developing passion for public health nursing, particularly, with adolescents, Yaron was drawn to the new DNP program at the University of Minnesota. Supported by a nursing training grant from the Maternal and Child Health Bureau (HRSA/DHHS) to the Center for Adolescent Nursing, she is looking forward to learning how to weave youth development into everyday practice. After getting her DNP, Yaron plans to focus her career on advocating for improved health education and access to services for adolescents in her community.

Center for Adolescent Nursing, Facebook, and You!

Join the UMN’s Center for Adolescent Nursing, the Healthy Youth Development – Prevention Research Center, Leadership Education in Adolescent Health, and anyone else who is interested in adolescent health on Facebook. This group allows “friends” to network with other adolescent health professionals from around the world. With an open wall and a discussion tab, members are encouraged to engage others in adolescent health topics, questions, or concerns, or post items related to adolescents. This page provides a strong vehicle for adolescent health communication. To become part of the University of Minnesota, Adolescent Health group, search University of Minnesota, Adolescent Health on Facebook. Or send a message to Scott Harpin or Jenna Baumgartner via Facebook requesting to become a member. For questions related to adolescent nursing, please send an e-mail to adolnurs@umn.edu.
The Center for Adolescent Nursing received an additional $259,000 from the CDC to continue support for the Adolescent Health Protection Research Training grant. This additional award will provide stipend/tuition for pre- and post-doctoral trainees for a 6th year of the institutional research training grant (T01).

Former CDC T01 Adolescent Health Protection Research Training post-doctoral fellow, Daheia Barr-Anderson, PhD, MSPH, was selected for the Deborah E. Powell Center Women’s Health Scholar Program, a part of the Building Interdisciplinary Research Career’s in Women’s Health (BIRCWH). The BIRCWH program fosters the career development of junior faculty members who are engaging in basic, clinical, translational, behavioral, or health services research in any area relevant to women’s health. In addition, Barr-Anderson was also awarded a $75,000 grant from the Robert Wood Johnson Foundation to examine perceived and objective environmental influences on physical activity among high school girls.

Kate Bauer, MS, pre-doctoral trainee on the CDC T01 Adolescent Health Protection Research Training grant, received a highly competitive Doctoral Dissertation Fellowship (DDF) award from the University of Minnesota. This stipend/tuition award gives final-year PhD candidates the opportunity to devote full-time effort toward dissertation completion. Awards are based on the importance of research and its potential for significantly contributing to science, along with the potential for the student to become an influential leader in their field.

Professor and Director of the Center for Adolescent Nursing, Linda H. Bearinger, PhD, MS, FAAN, participated in a panel discussion series titled, “Developing Successful Interdisciplinary Teams and Proposals.” This panel was part of a workshop for the Collaborative Leadership Development Series for the Institute of Medicine. Based on this work, Bearinger was also quoted in the article, “It’s Not Easy Being Teen,” in the March issue of the American Journal of Nursing.

In Bengaluru, Karnataka, India, Linda H. Bearinger, PhD, MS, FAAN, participated in an interdisciplinary educational institute focused on globalization and health strategies for a healthy workforce. Pairing with the other UMN Schools of Nursing and Public Health faculty, Bearinger spoke on global perspectives on adolescent sexual and reproductive health.

Lynn Choromanski, MS, a former Center for Adolescent nursing trainee, was elected to one-year appointment as the Student Representative on the Nursing Informatics Working Group for the American Medical Informatics Association (AMIA).

Maggie Dexheimer-Pharris, PhD, MS, MPH, FAAN, the first graduate supported by the Center for Adolescent Nursing in the mid 1990s, co-wrote, “Transforming Nursing Education: The Culturally Inclusive Environment,” with Dr. Susan Dandridge Bosher. Dexheimer-Pharris is an associate professor at St. Catherine University where she teaches nursing courses at the bachelor’s and graduate levels.

Upon completion of a post-doctoral fellowship supported by a CDC interdisciplinary institutional research training grant (T01) housed in the Center for Adolescent Nursing, Nick Edwards, MD, MPH, accepted a position as an assistant professor in the Division of Sports Medicine, Department of Pediatrics at Cincinnati Children’s Hospital Medical Center. Edwards will have a dual appointment in the Department of Pediatrics at the University of Cincinnati. Half of his time will be dedicated to his research on childhood obesity, specifically the effects and promotion of physical activity.

Claudia Fox, MD, post-doctoral fellow on the CDC T01 Adolescent Health Protection Research Training grant, received the Hawley Student Research Award given by the Division of Epidemiology in the School of Public Health, UMN. The award will help support Fox’s research on parent attitudes regarding mental health services in schools.

Carolyn García, PhD, MS, MPH, RN, assistant professor, and her mentor, Lynn Rew, EdD, FAAN, professor, University of Texas at Austin, School of Nursing, received the 2009 Midwest Nursing Research Society (MNRS) Mentorship Grant Award. García was also awarded a grant from Sigma Theta Tau International – Zeta Chapter for her project, “Pilot of a Latina Mother-Daughter Photovoice Intervention to Promote Connectedness,” an intervention aimed at improving connectedness and communication.
Carolyn M. Garcia, PhD, MS, MPH, RN, assistant professor, received an award from the UMN Graduate School’s Grant in Aid Program for her proposal entitled, “Pilot of a Collaborative Family Intervention Addressing Latino Teen Mental Health.” This study will pilot a family-centric, school-based mental health intervention for Latino adolescents. In addition, along colleague Rosa María Aguilera Guzman (Institute Nacional de Psiquiatría, Mexico), Garcia received a grant from the Health Initiative of the Americas - University of California’s Programa de Investigacion de Migracion y Salud for, “Project Wings: Exploring Migration Effects on Mexican Adolescent-Parent Communication and Connectedness using Photovoice,” a project testing the feasibility of a trans-national photovoice intervention with Mexican parents and adolescents.

Scott Harpin, MS, MPH, APRN-BC, a PhD candidate was interviewed by the Minnesota Daily regarding his involvement with the University of Minnesota Medical Reserve Corp (UMRC). The article focused on UMRC’s efforts to assist nursing home patients who were evacuated from the Fargo-Moorhead area in 2009 due to the Red River flooding. Harpin is a Center for Adolescent Nursing pre-doctoral trainee supported by the CDC T01 Adolescent Health Protection Research Training grant.

Mentored by CAN assistant professor, Marti Kubik, PhD, RD, (Center graduate student) Aanna Johannes, MS, presented her research, “Barriers to Physical Activity Among Students Attending Alternative High School,” at the 2009 MNRS Annual Conference in Minnesota.

Barbara McMorris, PhD, senior research associate in the Center for Adolescent Nursing, received a subcontract from the Legal Rights Center (LRC) in Hennepin County, to serve as a program evaluator for the organization beginning fall 2009. The LRC is a community-based nonprofit law firm providing restorative justice services to low-income people, in particular, people of color. McMorris will be evaluating the LRC Youth Restorative Services program, which provides an alternative to exclusionary school discipline processes for students in Minneapolis Public School District. The program and evaluation will be supported by funds from the Justice Assistance Grant (JAG) American Recovery and Reinvestment Act (ARRA), administered by the Minnesota Office of Justice Programs.

Linda Olson-Keller, DNP, MS, APRN-BC, FAAN, clinical associate professor in the Center for Adolescent Nursing, became chair-elect of the American Public Health Association at the Fall 2009 annual meeting in Philadelphia. She also serves as treasurer on the Board of Directors of the Robert Wood Johnson Nurse Fellows Alumni Association. In addition, Olson-Keller delivered the keynote address “Igniting the Spark: Revitalizing Public Health Nursing” at the 2009 Ohio Public Health Association Annual Conference and Business Meeting.

Sigma Theta Tau International – Zeta Chapter awarded post-doctoral fellow Molly Secor-Turner, PhD, MS, RN, with funding to support her project, “Experiences of Instability and Risky Sexual Behaviors.” This exploratory study will examine the relationship between living in unpredictable and chaotic environments and risky sexual behaviors among urban adolescent girls at high risk for early pregnancy and sexually transmitted diseases. The study will use data from the Prime Time intervention project led by Renee Sieving, PhD, RN, associate professor in the Center for Adolescent Nursing.

Post-doctoral fellows Molly Secor-Turner, PhD, MS, RN, and Kari Kugler, PhD, MPH, along with Center for Adolescent Nursing faculty Linda Bearinger, PhD, RN, FAAN, and Renee Sieving, PhD, RN, were invited to publish an article in Adolescent Medicine: State of the Art Reviews (AMSTAR). Along with colleagues from five other continents, this series focused on global adolescent health. Their paper is titled: “A Global Perspective of Adolescent Sexual and Reproductive Health: Context Matters.”

Sarah Stoddard, PhD, MS, MPH, RN, completed her final oral in April 2009 based on her dissertation titled “Social Connections, Trajectories of Hopelessness and Serious Violence in Impoverished Urban Youth.” In addition, Stoddard presented a seminar for the UMN’s Center for Health Trajectory Research, (Director: Jean Wyman, PhD, RN, FAAN) on the use of a trajectory perspective to advance nursing science, focusing in particular on hopelessness among adolescents living in poverty. She is currently in a post-doctoral fellowship at the University of Michigan-Ann Arbor, School of Nursing.

Several Center post-doctoral fellows, Naomi Duke, MD, MPH, Nick Edwards, MD, MPH, and Claudia Fox, MD, presented their research at the Pediatric Academic Society annual meeting in Baltimore in May 2009. All are supported by the CDC T01 Adolescent Health Protection Research Training grant, housed in the Center for Adolescent Nursing.
Sociodemographic differences in selected eating practices among alternative high school students.

Chrisa Arcan, Martha Y. Kubik, Jayne A. Fulkerson, Mary Story

BACKGROUND: Students attending alternative high schools are an at-risk group of youth for poor health behaviors and obesity. However, little is known about their dietary practices. OBJECTIVE: To examine associations between sex, race/ethnicity, and socioeconomic status and selected dietary practices, including consumption of sugar-sweetened beverages, high-fat foods, and fruits and vegetables and fast-food restaurant use, among students attending alternative high schools. DESIGN: Population-based, cross-sectional study. Subjects/setting: A convenience sample of adolescents (n = 145; 52% men; 63% aged 18 years; and 39% white, 32% African American, and 29% other/multiracial) attending six alternative high schools in the St. Paul/Minneapolis, MN, metropolitan area completed a survey. Students were participants in the Team COOL (Controlling Overweight and Obesity for Life) pilot study, a group randomized obesity prevention trial. Statistical analyses performed descriptive statistics were used to describe dietary practices. Mixed model multivariate analyses were used to assess differences in dietary practices by sex, race/ethnicity, and socioeconomic status. RESULTS: Regular soda was consumed at least five to six times per week by more than half of students. One half of students reported eating or drinking something from a fast-food restaurant at least three to four times a week. African-American students had the highest consumption of sugar-sweetened beverages (P < 0.025), high-fat foods (P = 0.002), and highest frequency of fast-food restaurant use (P = 0.025). Mean fruit/vegetable intake was 3.6 servings/day; there were no sociodemographic differences in fruit/vegetable consumption. Higher socioeconomic status was associated with a higher consumption of regular soda (P = 0.027).


Parental support for the Human Papillomavirus Vaccine.


This study examined support for the human papillomavirus (HPV) vaccine among a representative sample of Minnesota parents after approval from the US Food and Drug Administration. Support for the vaccine was high; 87% supported its use. Although individual characteristics predicted support, support was high across subgroups with two-thirds or more of parents supporting the vaccine.


Young adult support for clean indoor air laws in restaurants and bars.

Debra H. Bernat, Elizabeth G. Klein, Lindsey E.A. Fabian, et al.

This study examined support for clean indoor air (CIA) laws among 2044 young adults in Minnesota during 2006 and 2007. Two-thirds of young adult participants supported restaurant CIA laws and 40% supported bar/club CIA laws. A higher proportion of young adults living with CIA laws supported the laws compared with young adults living without them. Nonsmokers, college students, those with nonsmoking friends, and those living with home smoking bans were consistently more supportive of both CIA laws.


Area-level variation in adolescent smoking.

Debra H. Bernat, DeAnn Lazovich, Jean L. Forster, et al.

INTRODUCTION: The purpose of this study is to 1) examine the variability in the prevalence of adolescent smoking in 60 geographic areas of Minnesota and 2) assess how variability in area-level smoking prevalence is associated with area-level sociodemographic characteristics. METHODS: Smoking data were collected from 3,636 adolescents residing in 60 areas of the state of Minnesota. Area-level characteristics were obtained from the 2000 US Census. Coefficient of variation was calculated to assess variability in smoking prevalence across areas, and mean smoking prevalence was compared above and below the median for each area-level characteristic. RESULTS: Substantial variation was found in adolescent smoking prevalence rates. Across the 60 areas, the percentage of adolescents that ever smoked varied from 13% to 53%, and the percentage of adolescents that smoked in the past 30 days ranged from 3% to 19%. Mean lifetime smoking prevalence was higher in areas with a higher percentage of residents with less than a high school education, a lower percentage of residents living in an urban area, lower median housing value and a lower median household income, a higher percentage of residents aged 16 years or older who were unemployed, and a higher percentage of residents with an income-to-poverty ratio less than 1.5. Similar results were found for past 30-day smoking prevalence among girls; however, no area-level characteristics were significantly associated with past 30-day smoking prevalence among boys. CONCLUSION: Results suggest that area-level characteristics may play an important role in adolescent smoking, particularly for girls.

Preventing Chronic Disease, (2009); 6(2), A42.

Animal-assisted therapy as a pain intervention for children.

Carie Braun, Teresa Stangier, Jennifer Narveson, Sandra L. Pettingell

Animal-assisted therapy (AAT) is a healing modality involving a patient, an animal therapist, and handler with a goal of achieving a specified therapeutic outcome. Despite the myriad of studies documenting the benefits of AAT, no studies have yet determined the impact of animals on alleviation of pain in children. Therefore, a quasi-experimental intervention design was used to capture the change in pain and vital signs with (n = 18) or without (n = 39) AAT in children ages 3–17 in one acute care pediatric setting. The AAT intervention group experienced a significant reduction in pain level compared to the control group, t(55) = f2.86, p = .006. Although blood pressure and pulse were not impacted, respiratory rates became significantly higher in the AAT group (by an average of 2.22 breaths/min) as compared to the control group, t(55) = f2.63, p = .01. This study provides further support to the numerous health benefits of AAT, particularly for children in pain.

From adolescent connections to social capital: Predictors of civic engagement in young adulthood.

Naomi N. Duke, Carol Skay, Sandra L. Pettingell, Iris W. Borowsky

PURPOSE: This study examined the ability of adolescent connection in family and community contexts to promote an aspect of healthy youth development and transition into adulthood, civic engagement.

METHODS: Data are from Wave 1 (1995) and Wave 3 (2001–2002) of the in-home interviews from the National Longitudinal Study of Adolescent Health. The sample for this study included 9130 young adults aged 18–26 years. Linear and logistic regression models were used to measure the influence of connection in family and community contexts (Wave 1) on outcomes of civic engagement in young adulthood (Wave 3). RESULTS: Stronger connection in all family and community contexts during adolescence predicted greater likelihood of voting, community volunteer service, involvement in social action/solidarity groups, education groups, and/or conservation groups, and endorsement of civic trust in young adulthood. Select connections in family and community contexts were also significant predictors of political voice/involvement and blood product donation. In a final multivariate model, frequency of shared activities with parent(s) and school connection during adolescence emerged as unique predictors of young adult civic engagement. CONCLUSION: Connections in family and community contexts during adolescence promote healthy youth development through facilitation of multiple aspects of civic engagement in young adulthood. The importance of these connections in fostering youth capacity to bond to a broader community construct is discussed.


Condom provision and education in Minnesota public schools: A telephone survey of parents.


BACKGROUND: Increasing correct and consistent condom use among sexually active adolescents continues to be a critical public health goal, with schools serving as key agents for achieving this goal through sexuality education and condom use provision. This research aims to describe the views of parents regarding school-based condom distribution and education programs, and examines how these views differ across demographic groups. METHODS: Parents of school-age children in Minnesota were surveyed in telephone interviews (N = 1605; 63% participation) regarding their beliefs about condom availability and education. Chi-square tests of significance were used to detect differences in agreement with each statement for 10 demographic and personal characteristics. RESULTS: A majority of respondents held supportive views about condom availability and education programs. Strongest support centered on statements in the survey about teenagers needing information about condoms (86%) and showing actual condoms during classroom lessons (77%). Approximately two thirds of the parents agreed that school-based instruction about condoms should be “allowed” at the high school level (65%), and one fifth (21%) believed that this type of education should be “required.” Support for condom availability and education programs differed significantly according to certain personal characteristics, with less supportive views from self-identified Born Again Christians and politically conservative parents. CONCLUSIONS: Public discourse regarding school-based sexuality education should include the viewpoints of parents of school-aged children as key stakeholders. Parents’ perspectives provide unique and critical insights that school administrators and educators should consider as they develop educational and programmatic offerings regarding condoms.


Are there nutritional and other benefits associated with family meals among at-risk youth?

Jaye A. Fulkerson, Martha Y. Kubik, Mary Story, Leslie Lytle, Chrisa Arcan

PURPOSE: The literature suggests positive associations between family dinner frequency and dietary practices and psychosocial well-being, and inverse associations between family dinner frequency and overweight status among general adolescent populations. The present study aims to examine these associations among a population of adolescents at-risk of academic failure. METHODS: A racially diverse sample of adolescents (n = 145, 52% male, 61% nonwhite) from six alternative high schools (AHS) completed surveys and had their heights and weights measured by trained research staff. Mixed-model logistic regression analyses assessed associations between family dinner frequency and overweight status, healthy and unhealthy weight management, and food insecurity, whereas mixed linear models assessed associations with breakfast consumption, fruit and vegetable consumption, high-fat food intake, fast food intake, substance use, and depressive symptoms. Analyses adjusted for race/ethnicity, age, gender, socioeconomic status, and the random effect of school. RESULTS: Family dinner frequency was positively associated with breakfast consumption and fruit intake (p < .01 and p < .05, respectively), and inversely associated with depressive symptoms (p < .05). Adolescents who reported never eating family dinner were significantly more likely to be overweight (odds ratio [OR] 1/4 2.8, confidence interval [CI] 1/4 1.1–6.9) and food insecure (OR 1/4 6.0, CI 1/4 2.2–16.4) than adolescents who reported five to seven family meals per week. CONCLUSION: In this at-risk sample of youth, some, but not all of the benefits of family meals found in other studies were apparent. Intervention programs to increase the availability and affordability of healthful foods and promote family meals for families of AHS students may be beneficial.


Food hiding and weight control behaviors among ethnically-diverse, overweight adolescents: Associations with parental restriction, monitoring, and dissatisfaction with adolescent body shape.

DenYelle B. Kenyon, Jayne A. Fulkerson, Harsohena Kaur

The present study aims to extend previous research conducted with children by examining associations between parental behaviors (food
restriction, food monitoring) and parental perceptions (dissatisfaction with adolescent body shape) with adolescent behaviors (food hiding and weight control behaviors) among an ethnically diverse sample of overweight adolescents. Survey data were collected from overweight adolescents and their parents/guardians (n = 116 dyads) at an urban Midwest adolescent health clinic. Adjusting for parent and adolescent demographic characteristics, logistic regression analyses revealed a significant positive association between parental food restriction and adolescent food hiding. No significant associations were found between dissatisfaction with adolescent body shape or parental food monitoring and adolescent food hiding and adolescent weight control behaviors when controlling for demographic factors. Interventions with parents of overweight adolescents should focus on helping parents talk with their adolescents about weight concerns in a non-judgmental way and teaching parents strategies to both create a healthy home food environment and guide and support their adolescents to lose weight in a healthful manner.

Appetite, (2009); 52, 266-272.

Alternative high school students: Prevalence and correlates of overweight.
Martha Y. Kubik, Cynthia Davey, Jayne A. Fulkerson, John Sirard, Mary Story, Chrisa Arcan

OBJECTIVE: To determine prevalence and correlates of overweight among adolescents attending alternative high schools (AHS).

METHODS: AHS students (n=145) from 6 schools completed surveys and anthropometric measures. Cross-sectional associations were assessed using mixed model multivariate logistic regression. RESULTS: Among students, 42% were overweight, with female, low-income and racial/ethnic minorities disproportionately affected. The odds of being overweight were significantly associated with self-described health status, social support, family meals, intentions to eat healthy at school, and use of healthy weight management strategies. CONCLUSION: Overweight was prevalent among AHS students and requires further study. Correlates provide targets for future research.


Food use in middle and high school fundraising: Does policy support healthful practice? Results from a survey of Minnesota school principals.
Martha Y. Kubik, Leslie Lytle, Kian Farbakhsh, et al.

This descriptive, cross-sectional study aimed to examine classroom, school-wide, and club/sports teams fundraising policies and practices of middle and high schools; concordance between policy and practice; and associations between healthful practice/practice scores and selected school characteristics. In 2006, principals/designees of middle (n = 45) and high (n = 71) schools in the St Paul/Minneapolis, MN, metropolitan area completed a self-administered mailed survey. Schools were attended by a convenience sample of students (n = 349) participating in a longitudinal measurement study of children and their environments to assess obesity-related factors. Descriptive statistics, tests, and multivariate linear regression were used to examine variables and associations of interest. Across schools, 50% had policies addressing the nutrient quality of food and drink items used in fundraising or disallowed food use for fundraising. More than one third used chocolate, candy, and high-fat baked goods for classroom and school-wide fundraising; 60% sold these items for club/sports teams fundraising. More middle than high schools reported healthful fundraising policies or practices, as well as greater concordance between policies and practices. For cash fundraising activities, high schools had significantly lower healthful policy/practice scores than middle schools (P < 0.01). For school-wide fundraising, scores were significantly lower for public than private schools (P < 0.02). Policies to regulate food used for fundraising were common and most supported healthful practice, particularly in middle schools. However, use of foods high in fat and added sugars remains a prevalent fundraising practice, especially in high schools and for club/sports teams, and requires additional attention.


Generalized anxiety disorder in a nonclinical sample of children: Symptom presentation and predictors of impairment.

Presentation of generalized anxiety disorder (GAD) in a nonclinical sample of children (7–11 years old) and factors that predict overall impairment were examined. Symptom presentation was compared in children with GAD (n = 49) and anxious children without GAD (n = 42). Children with GAD endorsed significantly more worries, greater intensity of worries, and more DSM-IV associated symptoms than anxious children without GAD. Eighty-six percent of children with GAD had a co-morbid diagnosis with 4% having a depressive disorder. Number of associated symptoms was the most predictive of GAD impairment based on child perspective and intensity of worry was the most predictive based on clinician perspective. Overall, findings from the current study are consistent with reports based on clinical samples. The DSMIV-TR criteria for GAD were supported, with the exception that children with GAD typically present with several associated symptoms, rather than only one.

Journal of Anxiety Disorders, (2009); 23(2), 283-289.

Children’s perceptions of healthcare survey.
Linda Lindeke, Jayne A. Fulkerson, Mary Chesney, et al.

BACKGROUND: Few validated pediatric tools exist to directly gather data about children’s perceptions of their own healthcare; parent surveys are typically used as proxies. A psychometrically sound, child-focused survey captures children’s unique perceptions for quality improvement. OBJECTIVES: This study developed and evaluated reliability of a survey, assessed score differences by children’s age, and compared the responses of children and parents. METHOD: The Children’s Perceptions of Healthcare Survey was developed for inpatient and outpatient quality improvement. Following expert review, the tool was administered to 237 parent-child dyads at the time of discharge from an inpatient pediatric unit (n = 121) and after
outpatient clinic visits (n = 116). Responses were analyzed and compared. RESULTS: Internal consistency reliability for the tool was high (child/adolescents: alpha = .84; parents: alpha = .86), with no significant differences by child age or child gender. Parent and child scores were significantly correlated (r = 0.29, P < .001). About half of parents’ scores were higher than their children’s scores. DISCUSSION: This tool worked well to collect data from a wide age range of children across healthcare settings. Children’s perceptions were unique; involving children in care assessment is worthwhile and captures insights missed when only parents are surveyed. The Children’s Perceptions of Healthcare Survey is a valid, psychometrically sound tool to capture children’s unique perspectives regarding their healthcare and may be useful for system quality improvement.

*Nursing Administration Quarterly.* (2009); 33, 26-31.

**Use of web and in-person survey modes to gather data from young adults on sex and drug use: An evaluation of cost, time, and survey error based on a randomized mixed-mode design.**


In a randomized test of mixed-mode data collection strategies, 386 participants in the Raising Healthy Children (RHC) Project were either (a) asked to complete a survey via the Internet and later offered the opportunity to complete the survey in person or (b) first offered an in-person survey, with the Web follow-up. The Web-first condition resulted in cost savings although the overall completion rates for the 2 conditions were similar. On average, in-person-first condition participants completed surveys earlier in the field period than Web-first condition participants. Based on intent-to-treat analyses, little evidence of condition effects on response bias, with respect to rates or levels of reported behavior, was found.

*Evaluation Review.* (2009); 33(2), 138-158.

**Comparing maternal child health problems and outcomes across public health nursing agencies.**

Karen A. Monsen, Jayne A. Fulkerson, Amy B. Lytton, et al.

To use aggregated data from health informatics systems to identify needs of maternal and child health (MCH) clients served by county public health agencies and to demonstrate outcomes of services provided. Participating agencies developed and implemented a formal standardized classification data comparison process using structured Omaha System data. An exploratory descriptive analysis of the data was performed. Summary reports of aggregated and analyzed data from records of clients served and discharged in 2005 were compared. Client problems and outcomes were found to be similar across agencies, with behavioral, psychosocial, environmental and physiological problems identified and addressed. Differential improvement was noted by problem, outcome measure, and agency; and areas for enhancing intervention strategies were prioritized. Problems with greatest improvement across agencies were Antepartum/postpartum and Family planning, and least improvement across agencies were Neglect and Substance use. Findings demonstrated that public health nurses address many serious health-related problems with low-income high-risk MCH clients. MCH client needs were found to be similar across agencies. Public health nurse home visiting services addressed important health issues with MCH clients, and statistically significant improvement in client health problems occurred consistently across agencies. The data comparison processes developed in this project were useful for MCH programs, and may be applicable to other program areas using structured client data for evaluation purposes. Using informatics tools and data facilitated needs assessment, program evaluation, and outcomes management processes for the agencies, and will continue to play an integral role in directing practice and improving client outcomes.


**Protective factors in the lives of bisexual adolescents in North America.**

Elizabeth M. Saewyc, Yuko Homma, Carol Skay, Linda H. Bearinger, et al.

OBJECTIVES: We compared protective factors among bisexual adolescents with those of heterosexual, mostly heterosexual, and gay or lesbian adolescents. METHOD: We analyzed 6 school-based surveys in Minnesota and British Columbia. Sexual orientation was measured by gender of sexual partners, attraction, or self-labeling. Protective factors included family connectedness, school connectedness, and religious involvement. General linear models, conducted separately by gender of sexual partners, attraction, or self-labeling. Protective factors included family connectedness, school connectedness, and religious involvement. General linear models, conducted separately by gender and adjusted for age, tested differences between orientation groups. RESULTS: Bisexual adolescents reported significantly less family and school connectedness than did heterosexual and mostly heterosexual adolescents and higher or similar levels of religious involvement. In surveys that measured orientation by self-labeling or attraction, levels of protective factors were generally higher among bisexual than among gay and lesbian respondents. Adolescents with sexual partners of both genders reported levels of protective factors lower than or similar to those of adolescents with same-gender partners. CONCLUSIONS: Bisexual adolescents had lower levels of most protective factors than did heterosexual adolescents, which may help explain their higher prevalence of risky behavior. Social connectedness should be monitored by including questions about protective factors in youth health surveys.

Not long ago, Terryann Clark, PhD, MPH, was a doctoral student and Daheia Barr-Anderson, PhD, MSPH, was a post-doctoral fellow at the University of Minnesota. Though focused in nursing, and nutrition, respectively, both were part of the Center for Adolescent Nursing in the School of Nursing. Since completing their programs, both of these women have become faculty at world-renowned universities. We caught up with them to ask how their education helped them prepare for their current positions. Here's what they had to say...

**Center for Adolescent Nursing (CAN): What have you been doing since earning your PhD?**

**Dr. Terryann Clark (TC):** Well, I have two major roles. As a senior lecturer (tenure-track) in the School of Nursing at the University of Auckland, New Zealand, I am teaching the post-graduate nursing research course. I enjoy teaching this course because I can help shape nurses’ research questions and help inspire them to see nursing research as a tool to improve practice. Many of them are really intimidated by research, and it is wonderful to see them realize that the questions they ask in everyday practice are a form of research. It also helps them recognize that nurses are developing their own science for practice. Also, I am chair of the Adolescent Health Research Group, a multidisciplinary group of scientists at the University of Auckland who have undertaken two large-scale national youth surveys that are providing a picture of the health and well-being of New Zealand’s youth. I am currently writing the national Maori youth health status report that has very important policy implications for indigenous youth in New Zealand.

**Dr. Daheia Barr-Anderson (DBA):** I am a tenure-track assistant professor in the School of Kinesiology at the University of Minnesota. My first day was just days after I finished my post-doc supported by the Center for Adolescent Nursing. I didn’t teach my first semester, but I, along with another faculty member, spent time developing a new course titled: Youth Physical Activity and Sedentary Behavior. It focuses on the psychological, physical, and environmental factors that influence the activity level of adolescents and children. I also teach yoga at the Midway YMCA, and I’m involved in several community service projects. For example, I’ve been volunteering my time and energy to help with the 50 Million Pound Challenge, a national weight-loss initiative led by Dr. Ian Smith from Celebrity Fit Club. My group signed up 225 African American adults, and they’ve lost 1,250 pounds in less than a year. It’s very rewarding.

**CAN: What led you to take your current position?**

**TC:** I am Mäori (the indigenous people of New Zealand) and have lived in New Zealand all my life until I moved to Minnesota in 2003. I came to Minnesota to learn skills in adolescent health and research so that I could bring those skills back home to improve the health and well-being of my people.

**DBA:** While completing my post-doctoral fellowship, an opportunity arose to pursue a faculty position in the School of Kinesiology. I’m from South Carolina, but my post-doctoral training was such a good experience, and I was excited about the option of continuing my work here in Minnesota. After learning more about the kinesiology faculty and their research at the UMN, it was a natural fit.

“*I’ve developed a new course with another faculty member... focusing on the psychological, physical, and environmental factors that influence how active adolescents and children are.*”

– Dr. Daheia Barr-Anderson

**CAN: What influenced your decision to attend the University of Minnesota?**

**DBA:** While I was at the University of Maryland-College Park finishing my PhD in kinesiology, I worked on a large-scale international study. There were six sites involved, including Minnesota, and Dianne Neumark-Sztainer, a professor in the School of...
Public Health, was a co-investigator on the study. I enjoyed working with Dr. Neumark-Sztainer as a PhD student, so when I started looking for post-doc opportunities, I contacted her and she told me about the Adolescent Health Protection Research Training Program. It was exciting to think about receiving funding support from the CDC that provides the money for the fellowship program housed in the Center for Adolescent Nursing.

**TC:** I came to Minnesota after meeting Linda Bearinger, Michael Resnick, Bob Blum, and Elizabeth Saewyc several years before at a Society for Adolescent Medicine conference. It was wonderful to think about being educated by some of the world experts in adolescent health. Youth health nursing in New Zealand is still in its infancy, and I wanted mentorship and the skills to learn how to develop the skills among health professional in my country working with youth. Dr. Bearinger and her Center colleagues were incredibly supportive in helping me get into the School of Nursing, negotiate immigration issues, and secure scholarship funding.

**CAN:** How did your training at the Center help you prepare for your current position?

**TC:** I learned about leadership and collaboration with communities. I also learned how to write and develop research ideas and grants. The grant-writing skills have already helped me secure several grants. I would say that the thing I found most valuable at the University of Minnesota was developing a group of colleagues who have been supportive, knowledgeable, and skilled. These mentors have helped shape my academic career and inspired me to want to make a difference for the young people in my country.

**DBA:** During my first year of the fellowship, fellows participated once a week in a full day of seminars. A wide range of topics related to healthy youth development and professional development and skills were covered, including six intensive sessions focusing on manuscript writing, including how to resubmit when turned down the first time. Those sessions laid down a solid foundation on the fundamentals of being successful in getting published in a peer-reviewed journal. Since then, I’ve been able to publish a couple of papers. I’m currently writing my first grant, using experience I gained during my fellowship, assisting others with their grant submissions, and from an excellent grant-writing seminar I attended through funding available from the CDC-supported fellowship. But I think the most important knowledge I gained as a result of being part of the fellowship program is the importance of interdisciplinary research to address issues related to my research topic — physical activity and obesity prevention in adolescents.

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“**Youth health in New Zealand is still in its infancy, and I wanted mentorship and the skills to learn how to develop the youth health workforce in my country.**”

— Dr. Terryann Clark

In the past decade, 8 of the graduate students in the Center for Adolescent Nursing have gone on to faculty positions in university and college settings; another 6 post-doctoral fellows have done the same. Currently the Center supports 22 graduate students and post-doctoral fellows in nursing, medicine, nutrition, and psychology. Their faculty mentors have appointments in the Schools of Nursing, Medicine, and Public Health. For more information about graduate or post-doctoral options in adolescent health, e-mail the director, Dr. Linda Bearinger, at bearir001@umn.edu or adolnurs@umn.edu.
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