# LIVING WELL

*Less Stress, Better Health and More Love*

HONORED BY
AARP
SOCIAL IMPACT AWARD
…AS "A SIMPLE MIND-BODY-SPIRIT PROGRAM
FOR SENIORS, ADULTS AND TEENS
OF ANY FAITH, OR NO FAITH."

**IMPROVING THE WELLNESS OF SENIORS, ADULTS AND TEENS**

WHILE HELPING PAID AND UNPAID CAREGIVERS TO MEET THEIR NEEDS

## REFERENCES USED TO DEVELOP

***Living Well: Less Stress, Better Health and More Love*** (2023)

***And***

***Caregiver Stories and Stress Solutions*** (2008, 2018)

www.LivingWellNow.info

**FOR MORE INFORMATION, PLEASE CONTACT:**

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# REFERENCES USED TO DEVELOP

## *Living Well: Less Stress, Better Health and More Love* (2023)

## *And*

## *Caregiver Stories and Stress Solutions* (2008, 2018)

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Contents

**References Used in "Caregiver Stories and Stress Solutions"**

Caregiver Stories and Stress Solutions  (2018) by Dr. Tom DeLoughry (originally published as *What I Wish I Knew: Stories and Strategies to Be Your Best at Any Age in 2008*)  is the textbook upon which *the* *Less Stress, Better Health and More Love* workbook is based.  **The workbook is a free download published under a Creative Commons license.**

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## Benefits and Rates of Volunteering

Anderson, N. D., Damianakis, T., Kröger, E., Wagner, L. M., Dawson, D. R., Binns, M. A., Bernstein, S., Caspi, E., Cook, S. L., & BRAVO Team (2014). The benefits associated with volunteering among seniors: a critical review and recommendations

for future research. *Psychological bulletin*, *140*(6), 1505–1533. https://doi.org/10.1037/a0037610

There is an urgent need to identify lifestyle activities that reduce functional decline and dementia associated with population aging. The goals of this article are to review critically the evidence on the benefits associated with formal volunteering among older adults, propose a theoretical model of how volunteering may reduce functional limitations and dementia risk, and offer recommendations for future research. Database searches identified 113 papers on volunteering benefits in older adults, of which 73 were included. Data from descriptive, cross-sectional, and prospective cohort studies, along with 1 randomized controlled trial, most consistently reveal that volunteering is associated with reduced symptoms of depression, better self-reported health, fewer functional limitations, and lower mortality. The extant evidence provides the basis for a model proposing that **volunteering increases social, physical, and cognitive activity (to varying degrees depending on characteristics of the volunteer placement) which, through biological and psychological mechanisms, leads to improved functioning; we further propose that these volunteering-related functional improvements should be associated with reduced dementia risk.** Recommendations for future research are that studies (a) include more objective measures of psychosocial, physical, and cognitive functioning; (b) integrate qualitative and quantitative methods in prospective study designs; (c) explore further individual differences in the benefits associated with volunteering; (d) include occupational analyses of volunteers' specific jobs in order to identify their social, physical, and cognitive complexity; (e) investigate the independent versus interactive health benefits associated with volunteering relative to engagement in other forms of activity; and (f) examine the relationship between volunteering and dementia risk.

Jenkinson, C. E., Dickens, A. P., Jones, K., Thompson-Coon, J., Taylor, R. S., Rogers, M., Bambra, C. L., Lang, I., & Richards, S. H. (2013). Is volunteering a public health intervention? A systematic review and meta-analysis of the health and survival of volunteers. *BMC public health*, *13*, 773. https://doi.org/10.1186/1471-2458-13-773

**Volunteering has been advocated by the United Nations, and American and European governments as a way to engage people in their local communities and improve social capital, with the potential for public health benefits such as improving wellbeing and decreasing health inequalities**. Furthermore, the US Corporation for National and Community Service Strategic Plan for 2011-2015 focused on increasing the impact of national service on community needs, supporting volunteers' wellbeing, and prioritising recruitment and engagement of underrepresented populations. The aims of this review were to examine the effect of formal volunteering on volunteers' physical and mental health and survival, and to explore the influence of volunteering type and intensity on health outcomes.

**Cohort studies showed volunteering had favorable effects on depression, life satisfaction, wellbeing** but not on physical health. These findings were not confirmed by experimental studies. Meta-analysis of five cohort studies found **volunteers to be at lower risk of mortality** (risk ratio: 0.78; 95% CI: 0.66, 0.90). There was insufficient evidence to demonstrate a consistent influence of volunteering type or intensity on outcomes.

**Observational evidence suggested that volunteering may benefit mental health and survival** although the causal mechanisms remain unclear.

Owen, R., Berry, K., & Brown, L. J. E. (2022). Enhancing Older Adults' Well-Being and Quality of Life Through Purposeful Activity: A Systematic Review of Intervention Studies. *The Gerontologist*, *62*(6), e317–e327. https://doi.org/10.1093/geront/gnab017

**Population aging represents a significant challenge for health and social care services. Older adults who engage in activities that offer a sense of purpose have significantly better physical and psychological health outcomes.** However, age-related functional limitations and losses of social roles can present barriers to engaging in purposeful activity, especially for those older adults within the "oldest-old" age range (i.e., 80 years and older). This review aimed to determine the nature and effectiveness of purposeful activity interventions in older adults, aged 80 years and older, with respect to well-being and quality-of-life outcomes.

Three databases were searched from their inception to April 2020. The search yielded 8,916 records, which resulted in eight eligible studies. **The interventions were divided into two groups: (a) interventions that gave participants a specific functional role, such as volunteer or mentor (n = 5), and (b) interventions that supported participants to develop a new skill (n = 3).** The quality of the evidence was variable. **The strongest evidence was for interventions that assigned a functional role, which appeared to be somewhat effective in improving well-being outcomes.**

**Discussion and implications:** There is preliminary evidence that **purposeful activity interventions, particularly those that involved taking on a functional role, can improve well-being and quality-of-life outcomes in older adults aged 80 years and older.** These findings have implications for professionals and carers to support older adults to access more purposeful social roles and create opportunities for helping and reciprocation.

Dietz, N. et al. (2019) A Less Charitable Nation: The Decline of Volunteering and Giving in the United States

https://cppp.usc.edu/wp-content/uploads/2019/03/Grimm-Robert-Dietz-and-Grimm_A-Less-Charitable-Nation_March-2019-USC-Conference-Paper.pdf

**The nationwide decline in volunteering and giving appears related to a series of profound transformations that have changed the United States over the last couple decades. Religious organizations serve as a rather unique hub for community engagement but participation in them is becoming less prevalent today. More and more Americans age 20 to 40 are redefining adulthood in ways that make it harder (but certainly not impossible) to get them involved in volunteering and giving. The highly-anticipated retirement of Baby Boomer is now in full bloom and the decision to retire at least leads many to also (at least temporarily) disengage from their community.**

A political scientist recently characterized America as in a period of great “uncivil disagreement,”44 which one could easily suggest is related to the troubling and pervasive findings about charitable behaviors outlined in our paper. The first step to reversing negative trends in volunteering and giving is to recognize and understand their breadth and possible reasons. The next step is to commit resources and time to the challenging work of pioneering initiatives and approaches that will reverse America's loss of charitable activities. We must put more Americans back to work improving their communities in ways that will also improve their own lives and interactions with others.

Lenkowsky, L. (2023) "Americans Are Volunteering Less. What Can Nonprofits Do to Bring% Them Back?" (2023) The Chronicle of Philanthropy
https://www.philanthropy.com/article/americans-are-volunteering-less-what-can-nonprofits-do-to-bring-them-back

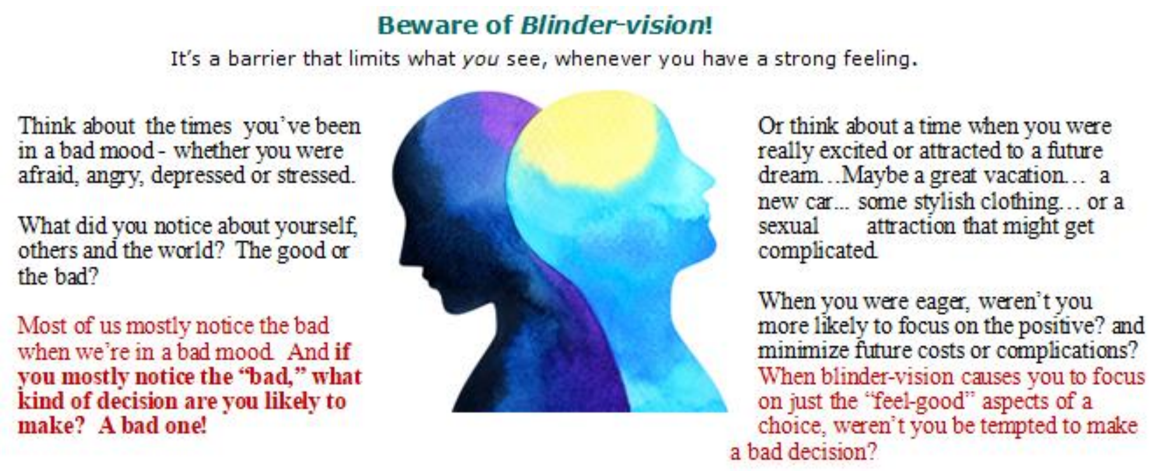
A report released last month by AmeriCorps and the U.S. Census Bureau shows that **a smaller share of the American population is volunteering now than it did two decades ago and devoting fewer hours to such activities.** While the recent data is attributable in part to the pandemic, the larger issues at play were decades in the making.

**From September 2020 to 2021, less than one-quarter of Americans age 16 and older volunteered for an organization or association, according to the survey. That's down from 30 percent in 2019 and from 27.6 percent 20 years earlier when**, as head of AmeriCorps's predecessor, the Corporation for National and Community Service, I helped launch the survey — the first official count of volunteering in the United States. The drop-in hours donated each year by volunteers was especially sharp during the past two decades, plunging from 52 in 2002 to 40 in 2017, and 26 in the pre-pandemic year of 2019. Data from the latest survey put the number of hours Americans devote annually to volunteering at just 25.

### Blinder-Vision, Polarization and Blocks to Love

DeLoughry, T. (2023) Less Stress, Better Health and More Love Buffalo: Center for Health Management and Unity of Buffalo

Living Well suggests that the root cause of polarization and prejudice is fear which causes "blinder-vision " "blocks to love" and "bad personal decision as described in these excerpts from page 5 and 18 from the workbook.



**Beware of *Blinder-vision*!**

It's a barrier that limits what *you* see, whenever you have a strong feeling.

Think about the times you've been in a bad mood - whether you were afraid, angry, depressed or stressed.

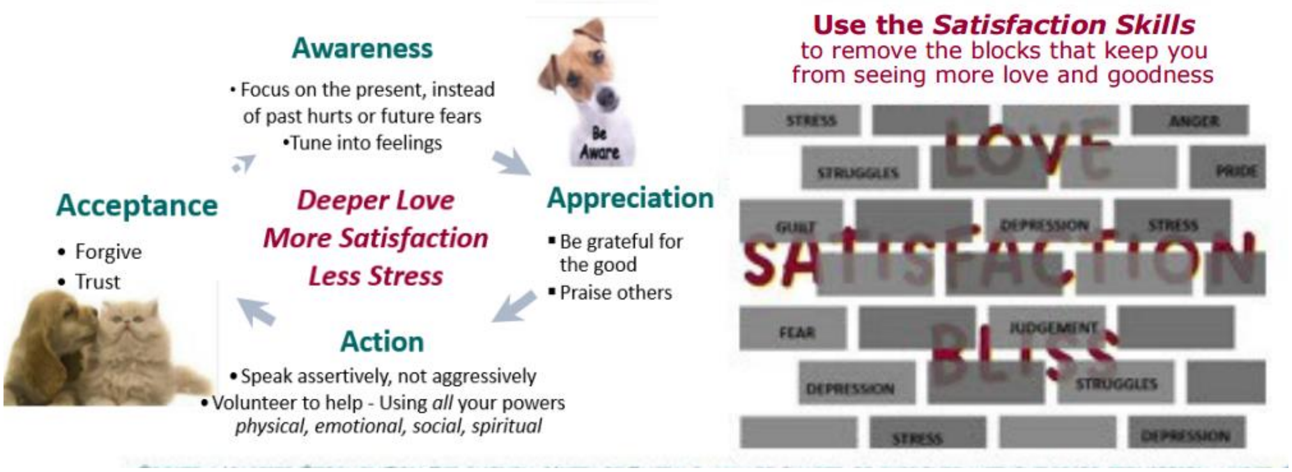
What did you notice about yourself, others and the world? The good or the bad?

Most of us mostly notice the bad when we're in a bad mood. And **if you mostly notice the "bad," what kind of decision are you likely to make? A bad one!**

Or think about a time when you were really excited or attracted to a future dream…Maybe a great vacation… a new car... some stylish clothing… or a sexual attraction that might get complicated.

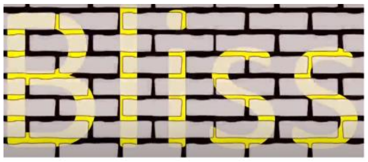
When you were eager, weren't you more likely to focus on the positive? and minimize future costs or complications? When blinder-vision causes you to focus on just the "feel-good" aspects of a choice, weren't you be tempted to make a bad decision?

The best public-health strategy to address polarization and prejudice may be through stress management, a topic with broad appeal.  The same four satisfaction skills that can stop stress (at least for a minute) can also decrease the frequency and intensity of the blinder-vision that causes bad personal and/or political decisions.



Groverland, Shad  [Then, Now and Into the Future  -  A video presentation](#)  to Unity of Tulsa on May 29, 2022

The following graphic was used by Rev. Shad Groveland, Executive Director of Unity Worldwide Ministries, to illustrate the concept that "bliss" is always available but most of us do not see it.   In the "Less Stress, Better Health and More Love" workbook,  this concept was expanded to also include "love" and "satisfaction."



Haidt, J. (2012). The righteous mind: Why good people are divided by politics and religion  Penguin Books

Drawing on his twenty-five years of groundbreaking research on moral psychology, Jonathan Haidt shows how **moral judgments arise not from reason but from gut feelings**. He shows **why liberals, conservatives, and libertarians have such different intuitions about right and wrong, and he shows why each side is actually right about many of its central concerns.**

**Social Determinants of Health**

“Social Determinants of Health 101 for Health Care: Five Plus Five.” *National Academy of Medicine* (blog), October 9, 2017. https://nam.edu/social-determinants-of-health-101-for-health-care-five-plus-five/.

As a determinant of health, medical care is insufficient for ensuring better health outcomes.
**Medical care is estimated to account for only 10-20 percent of the modifiable contributors to healthy outcomes for a population [7]. The other 80 to 90 percent are sometimes broadly called the SDoH: health-related behaviors, socioeconomic factors, and environmental factors.** Although we as a country spend a higher percentage of our gross domestic product on medical care expenditures than other developed countries, it is more difficult to compare spending on the SDoH. We do know that many developed countries proportionately spend more on social services than the United States [8]. Although social services do not correspond directly to the SDoH, this comparison gives one view of proportional expenditures in our country.
*Despite* ***our significant spending, our outcomes are among the lowest for developed countries, including significant inequities [9]. For health care, the hope is that addressing the more upstream social determinants will improve health outcomes, reduce inequities, and lower costs.*** *What can we learn from other nations’ medical and nonmedical system efforts that are achieving better health outcomes?*

April A. Strickland, Charles S. Taber, Milton Lodge; Motivated Reasoning and Public Opinion. *J Health Polit Policy Law* 1 December 2011; 36 (6): 935–944. doi: https://doi.org/10.1215/03616878-1460524

Citizens, especially those who are knowledgeable and care the most about politics, are motivated to defend their beliefs and attitudes in the face of discrepant information. These **motivated biases strongly influence the way people think** about health care policies and the politicians and parties that propose or attack these contentious policies. Three cognitive mechanisms are identified**: a prior belief effect, confirmation bias, and disconfirmation bias. Together, these information processes conspire to produce persistence and polarization of opinion on health care policies.**

Clarke, Christopher E., Jeff Niederdeppe, and Helen C. Lundell. 2012. "Narratives and Images Used by Public Communication Campaigns Addressing Social Determinants of Health and Health Disparities" *International Journal of Environmental Research and Public Health* 9, no. 12: 4254-4277. https://doi.org/10.3390/ijerph9124254

Researchers have increasingly focused on how social determinants of health (SDH) influence health outcomes and disparities. They have also explored strategies for raising public awareness and mobilizing support for policies to address SDH, with particular attention to narrative and image-based information. These efforts will need to overcome low public awareness and concern about SDH; few organized campaigns; and limited descriptions of existing message content. To begin addressing these challenges, we analyzed characteristics of 58 narratives and 135 visual images disseminated by two national SDH awareness initiatives: The Robert Wood Johnson Foundation’s Commission to Build a Healthier America and the PBS-produced documentary film *Unnatural Causes.* Certain types of SDH, including income/wealth and one's home and workplace environment, were emphasized more heavily than others. **Solutions for addressing SDH often involved combinations of self-driven motivation (such as changes in personal health behaviors) along with externally-driven factors such as government policy related to urban revitilization. Images, especially graphs and charts, drew connections among SDH, health outcomes, and other variables, such as the relationship between mother's education and infant mortality as well as the link between heart disease and education levels within communities**. We discuss implications of these findings for raising awareness of SDH and health disparities in the US through narrative and visual means.

Our results have implications for messages that **communicate the importance of SDH and the need for policy interventions to address their impacts. Future work should explore how narrative and image characteristics used by The Commission and *Unnatural Causes* are perceived by both the public and policymaker**s, focusing on the potential challenges we have identified here.

Magnan, S. 2021. Social Determinants of Health 201 for Health Care: Plan, Do, Study, Act. *NAM Perspectives.* Discussion Paper, National Academy of Medicine, Washington, DC. https://doi.org/10.31478/202106c

With the engagement of community partners, health care organizations can take next steps to change the delivery of care and the context for their patients' health and well-being. Leadership perspectives and involvement are key to the success of such initiatives. Health care leaders can begin by selecting a framework for the organization for upstream SDoH and downstream social risk factors and HRSN (Health Related Social Needs). Such a framework can guide their internal thinking and their interactions with CBOs and community entities. The next step is to **consider the multiple factors related to screening some or all patients for selected social risk factors** and HRSN. With community partners, health care organizations should use the Plan-Do-Study-Act (PDSA) cycle to explore the data and determine what is to be accomplished, starting with the greatest needs identified from the data and the community perspective—including both the individual social risk factors and HRSN and the community conditions where people live, work, play, pray, and learn. They should then review what is known about evidence-based interventions, e.g., by consulting the SIREN network and determining what interventions clinically and in the community can address prioritized HRSN, social risk factors, and SDoH. **It is important to pay close attention to where policy, system, and environmental changes will provide the greatest impact inside the clinical walls and outside in the community**; collaborate with QI experts and evaluators to know that change represents an improvement**; and listen carefully to communities that have suffered the greatest disparities and inequities** – particularly where they see community assets and needed partnerships.

Niederdeppe, J., Bu, Q. L., Borah, P., Kindig, D. A., & Robert, S. A. (2008). Message Design Strategies to Raise Public Awareness of Social Determinants of Health and Population Health Disparities. *The Milbank Quarterly*, *86*(3), 481–513. http://www.jstor.org/stable/25434103

Niederdeppe J, Roh S, Shapiro MA (2015) Acknowledging Individual Responsibility while Emphasizing Social Determinants in Narratives to Promote Obesity-Reducing Public Policy: A Randomized Experiment. PLoS ONE 10(2): e0117565. doi:10.1371/journal.pone.0117565

This study tests whether policy narratives designed to increase support for obesity-reducing public policies should explicitly acknowledge individual responsibility while emphasizing social, physical, and economic (social) determinants of obesity. We use a web-based, randomized experiment with a nationally representative sample of American adults (n = 718) to test hypotheses derived from theory and research on narrative persuasion. Respondents exposed to narratives that acknowledged individual responsibility while emphasizing obesity's social determinants were less likely to engage in counterargument and felt more empathy for the story's main character than those exposed to a message that did not acknowledge individual responsibility. Counterarguing and affective empathy fully mediated the relationship between message condition and support for policies to reduce rates of obesity. Failure to acknowledge individual responsibility in narratives emphasizing social determinants of obesity may undermine the persuasiveness of policy narratives. **Omitting information about individual responsibility, a strongly-held American value, invites the public to engage in counterargument about the narratives and reduces feelings of empathy for a character that experiences the challenges and benefits of social determinants of obesity.**

## Storytelling

*(Also see Niederdeppe references under "Social Determinants of Health"*

Fitzgerald, K., Paravati, E., Green, M. C., Moore, M. M., & Qian, J. L. (2020). Restorative Narratives for Health Promotion. *Health communication*, *35*(3), 356–363. https://doi.org/10.1080/10410236.2018.1563032

**Stories may provide a useful way of communicating about health and promoting engagement for health promotion campaigns**. In this study, we examined the effectiveness of a particular type of narrative, restorative narratives (stories that highlight hope and resilience), relative to negative narratives (stories that focus on suffering or challenges). We also tested the effect of labeling the story as fact or fiction. **The results suggested that restorative narratives may foster greater prosocial behavior than negative narratives and effectiveness does not differ depending on whether a story is labeled as "factual" or "fictional."** Our findings offer encouraging implications for future promotional efforts by health organizations.

### *The core principles of storytelling interventions*

The most prominent objective across the interventions was to get participants to reflect on their illness experience and create meaning from it through storytelling [15, 20, 23–25, 27, 28]. At the core of all the interventions' agendas was the importance of participants finding personal meaning from self-reflection, as well as from the shared meaning-making processes which occurred within the group context when discussing the various interpretations of the stories. Stories also facilitated significant meaning in the context of relationships with family, friends, and work colleagues [23, 24], and they comprised actual life events and reflections or were representative of opinions and emotions.

Stargatt J, Bhar S, Bhowmik J, Al Mahmud A. Digital Storytelling for Health-Related Outcomes in Older Adults: Systematic Review. J Med Internet Res. 2022 Jan 12;24(1):e28113. doi: 10.2196/28113. PMID: 35019845; PMCID: PMC8792772.

Older adults face a unique set of challenges and may experience a range of psychological comorbidities. **Digital storytelling is an emerging tool for sharing and recording lived experiences and may have the potential to support well-being** but is yet to be systematically reviewed for use among older adults.

The aim of this review is to examine the methods for creating digital stories, the health-related outcomes associated with creating digital stories, and the potential for implementing digital storytelling with older adults.

A total of 8 studies were included in the review. Participants were primarily community-dwelling older adults living with dementia, involving family caregivers and professional care staff. Studies have taken various approaches to digital storytelling and reported diverse benefits associated with digital storytelling, including improvements in mood, memory, social engagement, and quality of relationships. Although the potential for implementation was not widely examined, some studies have presented evidence for acceptability and feasibility. Generally, studies were of high quality, despite the absence of comparator groups and confounder analyses.

**The evidence reviewed suggests that despite the various approaches taken, digital storytelling shows promise as an effective approach for supporting well-being in older adults.**

Suzuki, W. A., Feliú-Mójer, M. I., Hasson, U., Yehuda, R., & Zarate, J. M. (2018). Dialogues: The Science and Power of Storytelling. *The Journal of neuroscience : the official journal of the Society for Neuroscience*, *38*(44), 9468–9470. https://doi.org/10.1523/JNEUROSCI.1942-18.2018

Skillful storytelling helps listeners understand the essence of complex concepts and ideas in meaningful and often personal ways. For this reason, storytelling is being embraced by scientists who not only want to connect more authentically with their audiences, but also want to understand how the brain processes this powerful form of communication. Here we present part of a conversation between a group of scientists actively engaged with the practice and/or the science of storytelling. **We highlight the brain networks involved in the telling and hearing of stories and show how storytelling is being used well beyond the realm of public communication to add a deeper dimension to communication with our students and colleagues, as well as helping to make our profession more inclusive.**

## Solutions Journalism

Dahmen, N. S., Thier, K., & Walth, B. (2021). Creating engagement with solutions visuals: testing the effects of problem-oriented versus solution-oriented photojournalism. Visual Communication, 20(2), 271–288. https://doi.org/10.1177/1470357219838601

An increasing number of news organizations are reporting stories about responses to persistent societal problems, a reporting form known as solutions journalism. While this type of reporting practice is typically text-based, visual reporting can also be solutions journalism**. Photojournalism theory and practice pose particular insights for advancing academic understanding of solutions journalism. This study uses an experiment to examine effects of exposure to problem-oriented versus solution-oriented photojournalism for three different story topics. The study examines important variables such as narrative engagement, interest, self-efficacy, and behavioral intentions.** Study data suggest **that narrative engagement can play an important role in involving audiences in visual solutions reporting, with data showing that solutions visual reporting is more engaging on average. Further, when audiences are more engaged in the visual solutions reporting, participants report more positive outcomes for interest, self-efficacy, and behavior intentions**. Study findings have implications for both journalism theory and for the practice of visual solutions journalism.

. Climate Solutions Reporting Guide. *Covering Climate Now*. Retrieved March 22, 2023, from https://coveringclimatenow.org/resource/climate-solutions-reporting-guide/

This document — prepared collaboratively by Covering Climate Now (CCNow) and Solutions Journalism Network (SJN) — **offers guidance on how to report on climate solutions with journalistic rigor and integrity.** Good solutions reporting is not about cheerleading for this or that approach; **it's about *interrogating* those approaches to inform the public and policymakers about what works and what doesn't.**

There are climate solutions related to politics, business, economics, technology, culture, and how we, as people, live and work. Below, we outline by category some prompts for story ideas. But first we discuss an overarching theme that should permeate all these categories — equity and justice — and we share a framework created by SJN for how to conceptualize and carry out solutions reporting.

What is Solutions Journalism. Retrieved March 22, 2023, from https://www.solutionsjournalism.org/about/solutionsjournalism

Solutions journalism investigates and explains, in a critical and clear-eyed way, how people try to solve widely shared problems**. While journalists usually define news as "what's gone wrong," solutions journalism tries to expand that definition: Responses to problems are also newsworthy. By adding rigorous coverage of solutions, journalists can tell the whole story.**

Solutions journalism complements and strengthens coverage of problems. **Done well, solutions stories provide valuable insights that help communities with the difficult work of tackling problems** like homelessness or climate change, skyrocketing housing prices or low voter turnout. **We also know from research that solutions stories can change the tone of public discourse, making it less divisive and more constructive. By revealing what has worked, such stories have led to meaningful change.** The **four pillars** of solutions journalism are:

1. A solutions story focuses on a **RESPONSE** to a social problem — and how that response has worked or why it hasn't.
2. The best solutions reporting distills the lessons that make the response relevant and accessible to others. In other words, it offers **INSIGHT**.
3. Solutions journalism looks for **EVIDENCE** — data or qualitative results that show effectiveness (or lack thereof). Solutions stories are upfront with audiences about that evidence — what it tells us and what it doesn't. A particularly innovative response can be a good story even without much evidence — but the reporter has to be transparent about the lack, and about why the response is newsworthy anyway.
4. Solutions stories reveal a response's shortcomings. No response is perfect, and something that works well for one community may fail in others. A responsible reporter covers what doesn't work about a response and places it in context. Reporting on **LIMITATIONS**, in other words, is essential.

### Improving Transitions of Care

Coleman, Eric A., and Sung-Joon Min. "Patients' and Family Caregivers' Goals for Care During Transitions Out of the Hospital." *Home Health Care Services Quarterly* 34, no. 3–4 (2015): 173–84.
The aims of this study were to (a) describe the nature of patients' goals upon discharge from hospital, family caregivers' goals for their loved ones, and family caregivers' goals for themselves; (b) determine the degree of concordance with respect to the three elicited goals; (c) ascertain goal attainment across the three elicited goals; and (d) examine factors predictive of goal attainment. **Our findings support the position that eliciting patient and family caregiver goals and promoting goal attainment may represent an important step toward promoting greater patient and family caregiver engagement in their care.**

### Health Literacy

Clarke, C. E., Niederdeppe, J., & Lundell, H. C. (2012). Narratives and images used by public communication campaigns addressing social determinants of health and health disparities. *International journal of environmental research and public health*, *9*(12), 4254–4277. https://doi.org/10.3390/ijerph9124254

Researchers have increasingly focused on how social determinants of health (SDH) influence health outcomes and disparities. They have also explored strategies for raising public awareness and mobilizing support for policies to address SDH, with particular attention to narrative and image-based information. **These efforts will need to overcome low public awareness and concern about SDH; few organized campaigns; and limited descriptions of existing message content.** To begin addressing these challenges, we analyzed characteristics of 58 narratives and 135 visual images disseminated by two national SDH awareness initiatives: The Robert Wood Johnson Foundation's Commission to Build a Healthier America and the PBS-produced documentary film Unnatural Causes. Certain types of SDH, including income/wealth and one's home and workplace environment, were emphasized more heavily than others. **Solutions for addressing SDH often involved combinations of self-driven motivation (such as changes in personal health behaviors) along with externally-driven factors such as government policy related to urban revitilization. Images, especially graphs and charts, drew connections among SDH, health outcomes, and other variables, such as the relationship between mother's education and infant mortality as well as the link between heart disease and education levels within communities**. We discuss implications of these findings for raising awareness of SDH and health disparities in the US through narrative and visual means.

McNaughton, Candace D., Courtney Cawthon, Sunil Kripalani,
Dandan Liu, Alan B. Storrow, and Christianne L. Roumie. "Health Literacy and Mortality: A Cohort Study of Patients Hospitalized for Acute Heart Failure." *Journal of the American Heart Association* 4, no. 5 (May 26, 2015): e001799.
**Background More than 30% of patients hospitalized for heart failure are rehospitalized or die within 90 days of discharge.**
Conclusions **Lower health literacy was associated with increased risk of death after hospitalization for acute heart failure**. There was no evident relationship between health literacy and 90-day rehospitalization or emergency department visits.

Institute of Medicine (US) Committee on Health Literacy. *Health Literacy: A Prescription to End Confusion*. Edited by Lynn Nielsen-Bohlman, Allison M. Panzer, and David A. Kindig. Washington (DC): National Academies Press (US), 2004..
To maintain their own health and the health of their families and communities, consumers rely heavily on the health information that is available to them. This information is at the core of the partnerships that patients and their families forge with today's complex modern health systems. This information may be provided in a variety of forms – ranging from a discussion between a patient and a health care provider to a health promotion advertisement, a consent form, or one of many other forms of health communication common in our society. **Yet millions of Americans cannot understand or act upon this information. To address this problem, the field of health literacy brings together research and practice from diverse fields including education, health services, and social and cultural sciences, and the many organizations whose actions can improve or impede health literacy.**

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Niederdeppe, J., Bu, Q. L., Borah, P., Kindig, D. A., & Robert, S. A. (2008). Message design strategies to raise public awareness of social determinants of health and population health disparities. *The Milbank quarterly*, *86*(3), 481–513. https://doi.org/10.1111/j.1468-0009.2008.00530.x

**Context: Public awareness of the importance of social determinants of health (SDH) and health disparities presents formidable communication challenges.**

**Methods:** This article reviews three message strategies that could be used to raise awareness of SDH and health disparities: message framing, narratives, and visual imagery.

**Findings:** Although few studies have directly tested message strategies for raising awareness of SDH and health disparities, the **accumulated evidence from other domains suggests that population health advocates should frame messages to acknowledge a role for individual decisions about behavior but emphasize SDH. These messages might use narratives to provide examples of individuals facing structural barriers (unsafe working conditions, neighborhood safety concerns, lack of civic opportunities) in efforts to avoid poverty, unemployment, racial discrimination, and other social determinants. Evocative visual images that invite generalizations, suggest causal interpretations, highlight contrasts, and create analogies could accompany these narrative**s. These narratives and images should not distract attention from SDH and population health disparities, activate negative stereotypes, or provoke counterproductive emotional responses directed at the source of the message.

**Conclusions:** The field of communication science offers valuable insights into ways that population health advocates and researchers might develop better messages to shape public opinion and debate about the social conditions that shape the health and well-being of populations. The time has arrived to begin thinking systematically about issues in communicating about SDH and health disparities. This article offers a broad framework for these efforts and concludes with an agenda for future research to refine message strategies to raise awareness of SDH and health disparities.

Niederdeppe J, Gollust SE. Excess Medical Care Spending: An Opportunity but a Communication Challenge. Am J Public Health. 2020 Dec;110(12):1753-1754. doi: 10.2105/AJPH.2020.305970. PMID: 33180583; PMCID: PMC7662005.

## Screening

Garland, T. N., N. Oyabu, et al. (1988). "Stayers and leavers: a comparison of nurse assistants employed in nursing homes." J Long Term Care Adm **16**(4): 23-9.
Careful screening of **the attitudes and values of nurse assistant applicants is an important aspect of selecting good care providers who will remain in their positions.**

Keller, P. (2000). "Pre-employment intentions of home care aides." Caring **19**(4): 26-31.

The demand for home care aides (HCA) is projected to increase substantially over the next several years. One of the reasons for this projection is the high turnover rates associated with the occupation. Although there are many reasons for the high turnover after HCAs have been hired, their pre-employment intentions are unclear. **A better understanding of HCAs' pre-employment intentions may**

**help to decrease recruitment and training costs for home care agencies and improve continuity of care for clients.**

Kettlitz, G. R., I. Zbib, et al. (1997). "Reducing nurse aide turnover through the use of weighted applications blank procedure." Health Care Superv **16**(2): 41-7.

High turnover rates among hospital nurses demand rigorous and valid processes of research to determine the reasons motivating such attrition. This study was designed to determine whether use of a weighted application blank has the potential to improve the selection of employees in the nursing home industry**. The use of weighted application blanks is, in essence, a proactive approach to reducing turnover. The initial results exhibit great potential to reduce high levels of turnover by reducing the number of poor candidates selected for employment.**

Kettlitz, G. R., I. Zbib, et al. (1998). "Validity of background data as a predictor of employee tenure among nursing aides in long-term care facilities." Health Care Superv **16**(3): 26-31.

Employee turnover and its associated costs continue to be an important concern for American industry. The purpose of this study was to determine whether differences exist in personal history data (biodata) of nurses aides who remained with the target nursing home corporation and those who either voluntarily or involuntarily separated employment. **Results indicate that significant differences exist between the groups with respect to several important dimensions of personal history data.**

Wagnild, G. and R. W. Manning (1986). "The high-turnover profile. Screening and selecting applicants for nurse's aide." J Long Term Care Adm **14**(2): 2-4.

In summary, this study supports previous research and suggests that the high-turnover profile can be described by the following characteristics (the reader is reminded that these characteristics describe the sample in this study and cannot be readily applied to the population of all nurse's aides**): Individuals who appeared likely to terminate employment in one year were less than 28 years of age, not married, and trained or educated beyond the job's requirements. Previous employment histories of individuals who left their jobs within one year indicated that they were more likely to have had less than 18 months in previous positions, and worked in two or more nursing homes within a three-year period.** Nursing home management may find it helpful to refer to high-turnover characteristics when screening and selecting applicants for the position of nurse's aide. Through careful selection of employees, nursing homes can expect a reduced rate of turnover, which may, in turn, improve the quality of resident care.

## Factors Influencing Turnover

Caudill, M. E. and M. Patrick (1991). "Turnover among nursing assistants: why they leave and why they stay." J Long Term Care Adm **19**(4): 29-32.

Overall, the data from the study show that nursing assistants who were planning to leave their present employment within the next three months were younger, had been in their positions less time, were paid less, and were better educated than those who were planning to stay in their present jobs. Also, the assistants who were planning to leave were not planning to stay in nursing as a life's career. **They were planning to leave their present jobs because they had less input into the planning of care and conferences on care, attended fewer in-**

**service programs, and ranked their own nursing skills lower than their peers. Changing patient assignments on a daily basis was more often associated with plans to leave than was changing patient assignments weekly or never. Finally, nursing assistants who were planning to leave cared for more patients per shift than those who were planning to stay.** Nursing assistants who were planning to leave their jobs imminently had been employed for 12 or fewer months more frequently than nursing assistants who were planning to stay. The leavers were also in their first nursing job more frequently than the latter group and seemed to be a more critical group as well: 27% of those who were leaving reported that they criticized the policy or procedure of their facility sometimes or even frequently, a higher percentage than almost any other variable tested in the study. Another variable that was different between the two groups was what they considered most important to them.(ABSTRACT TRUNCATED AT 250 WORDS)

Cohen-Mansfield, J. (1997). "Turnover among nursing home staff. A review." Nurs Manage **28**(5): 59-62, 64.

Turnover is especially critical in nursing homes**: continuity of care and personal relationships between care-givers and residents are important determinants of quality of care**. Additionally, for the cognitively impaired nursing home resident, constant change of staff is bound to aggravate disorientation. Research demonstrates links between turnover and employment/employee characteristics and employment availability.

Davidson, H., P. H. Folcarelli, et al. (1997). "The effects of health care reforms on job satisfaction and voluntary turnover among hospital-based nurses." Med Care **35**(6): 634-45.

OBJECTIVES: Among the consequences of downsizing and cost containment in hospitals are major changes in the work life of nurses. As hospitals become smaller, patient acuity rises, and the job of nursing becomes more technical and difficult. This article examines the effects of changes in the hospital environment on nurses' job satisfaction and voluntary turnover between 1993 and 1994. METHODS: Data were collected in a longitudinal survey of 736 hospital nurses in one hospital to examine correlates of change in aspects of job satisfaction and predictors of leaving among nurses who terminated in that period. RESULTS: Unadjusted results showed decline in most aspects of satisfaction as measured by Hinshaw and Atwood's and Price and Mueller's scales. **Multivariate analysis indicated that the most important determinants of low satisfaction were poor instrumental communication within the organization and too great a workload. Intent to leave was predicted by the perception of little promotional opportunity, high routinization, low decision latitude, and poor communication. Predictors of turnover were fewer years on the job, expressed intent to leave, and not enough time to do the job well.** CONCLUSIONS: The authors conclude that although many aspects of job satisfaction are diminished, some factors predicting low satisfaction and turnover may be amenable to change by hospital administrators.

Gaddy, T. and G. A. Bechtel (1995). "Nonlicensed employee turnover in a long-term care facility." Health Care Superv **13**(4): 54-60.

The purpose of this study was to analyze nonlicensed employee turnover in a long-term care facility using Maslow's hierarchy of needs as a framework. During exit interviews, a convenience sample of 34 employees completed an attitudes and beliefs survey regarding their work environment. Findings were mixed; **39.6**

**percent of the employees stated positive personal relationships were a strength of the organization, although 24.3 percent resigned because of personal/staff conflicts. Financial concerns were not a major factor in their resignations. The study suggests that decreasing nonlicensed employee stress and increasing their personal satisfaction with patient care may decrease employee turnover.**

Helmer, F. T., S. F. Olson, et al. (1993). "Strategies for nurse aide job satisfaction." J Long Term Care Adm **21**(2): 10-4.

**With average turnover costs equaling four times an employee's salary**, administrators cannot afford to lose nurse aides. This study explored why aides leave and ways to improve your facility's work environment.

Mathews, J. J. and C. Nunley (1992). "Rejuvenating orientation to increase nurse satisfaction and retention." J Nurs Staff Dev **8**(4): 159-64.

The current nursing shortage has forced nursing managers to examine the reasons for nurse turnover and to evaluate institutional programs and policies that may strengthen staff nurse retention. For the past two decades, the nursing profession has concluded that nurse retention is linked to job satisfaction. Accordingly, **employers have attempted to improve job satisfaction by permitting self-scheduling, nurse selection of unit assignment, and bonus pay for less desirable shifts. In spite of these and other efforts designed to retain nurses, the turnover rate generally has remained high.**

Mesirow, K. M., A. Klopp, et al. (1998). "Improving certified nurse aide retention. A long-term care management challenge." J Nurs Adm **28**(3): 56-61.

In the long-term care industry, the **turnover rate among nurse aides is extremely high. This adversely affects resident satisfaction, resident care, morale, and finances.** It presents a challenge to long-term care administration. Refusing to accept high turnover as an impossible situation allows changes to be made. The authors describe how the staff at one intermediate care facility identified its problems, assessed the causes, and implemented corrective action.

Prevosto, P. (2001). "The effect of "mentored" relationships on satisfaction and intent to stay of company-grade U.S. Army Reserve nurses." Mil Med **166**(1): 21-6.

This study examined the strategic implications of mentoring relationships perceived by company-grade U.S. Army Reserve nurses. The effects of mentorship on professional socialization, job satisfaction, and intent to stay were examined using the adapted framework of Hunt and Michael. The study population consisted of U.S. Army Reserve nurses from all three components of the ready reserve. One hundred nurses from each category were randomly selected and provided a questionnaire. The questionnaire combined Dreher's Mentoring Scale, Price's Intent-to-Stay Scale, and Hoppock's Job Satisfaction Scale. The overall response rate was 57%. Seventy-two of the 171 respondents reported at least one mentored experience**. Findings indicate that mentored nurses report more satisfaction and have a higher intent to stay than nonmentored nurses**. Continued research and encouragement of mentoring are recommended.

Proenca, E. J. and R. M. Shewchuk (1997). "Organizational tenure and the perceived importance of retention factors in nursing homes." Health Care Manage Rev **22**(2): 65-73.

Health care organizations can avoid substantial turnover costs through retention strategies geared to the varying needs of employees. The study on which this article is based examined retention needs of registered nurses in nursing homes and found that they varied by tenure**. Low tenure nurses preferred learning opportunities and advancement potential while high tenure nurses favored work flexibility.** Implications for retention policy in nursing homes are discussed.

Shader, K., M. E. Broome, et al. (2001). "Factors influencing satisfaction and anticipated turnover for nurses in an academic medical center." J Nurs Adm **31**(4): 210-6.

OBJECTIVES: The purpose of this study was to examine the relationships between work satisfaction, stress, age, cohesion, work schedule, and anticipated turnover in an academic medical center. BACKGROUND DATA: Nurse turnover is a costly problem that will continue as healthcare faces the impending nursing shortage, a new generation of nurses enter the workforce, and incentives provided to nurses to work for institutions increase. A variety of factors influence the retention of nurses in adult care settings, including work satisfaction, group cohesion, job stress, and work schedule. In general, previous research has documented positive relationships between work satisfaction, group cohesion, strong leadership, and retention rates and a negative relationship between stress, work schedule, and retention. In addition, age and experience in nursing are related to job satisfaction. METHODS: This study used a cross-sectional survey design in which nurses from 12 units in a 908-bed university hospital in the Southeast completed questionnaires on one occasion. The following factors were measured using self-report questionnaires: nurse perception of job stress, work satisfaction, group cohesion, and anticipated turnover. RESULTS**: The more job stress, the lower group cohesion, the lower work satisfaction, and the higher the anticipated turnover. The higher the work satisfaction, the higher group cohesion and the lower anticipated turnover. The more stable the work schedule, the less work-related stress, the lower anticipated turnover, the higher group cohesion, and the higher work satisfaction. Job Stress, work satisfaction, group cohesion, and weekend overtime were all predictors of anticipated turnover.** There are differences in the factors predicting anticipated turnover for different age groups. CONCLUSIONS: As healthcare institutions face a nursing shortage and a new generation of nurses enter the workforce, consideration of the factors that influence turnover is essential to creating a working environment that retains the nurse.

Song, R., B. J. Daly, et al. (1997). "Nurses' job satisfaction, absenteeism, and turnover after implementing a special care unit practice model." Res Nurs Health **20**(5): 443-52.

The purpose of the study was to compare job satisfaction, absenteeism, and turnover between nurses working in a nurse-managed special care unit (SCU) and those working in traditional intensive care units (ICU). A case management practice model with a shared governance management model and minimal technology was implemented in the SCU while contrasting features of a primary nursing practice model with a bureaucratic management model and high technology already in place in the traditional ICU. Individual nurses' perceptions of and their preferences for the SCU practice model also were examined related to job satisfaction. **Using analysis of covariance, greater satisfaction with a lower absenteeism rate was found in nurses working in the SCU. Nurses' perceptions and preferences for the SCU practice model were closely related to their job satisfaction and growth satisfaction.** The findings suggest that individual perception and preference should be taken into account before implementing autonomy, authority, and responsibility at the organizational level to lead to the desired nurse outcomes in a given working environment.

van Wijk, C. (1997). "Factors influencing burnout and job stress among military nurses." Mil Med **162**(10): 707-10.

Burnout among military nurses has been found to lead to job absenteeism, staff conflicts, and a high turnover of personnel. Factors influencing nurses working in smaller and often isolated military installations of the South African National Defence Force were investigated using a job-stress and burnout questionnaire and a semi-structured interview. Investigation focused on registration categories, geographic location, and age. It was found that the senior registration categories experienced more burnout, and nurses in isolated areas reported almost double the number of cases of burnout than nurses in larger centers. Age played a role in the very young (19-25 years) and older (40-50 years) nurses**. The lack of support from supervisors, high responsibility, long working hours, and task overload were the four most common stressors reported.** Some suggestions are forwarded to manage the risk of burnout among military nurses in similar situations.

HOME HEALTH AIDES

Buelow, J. R., K. Winburn, et al. (1999). "Job satisfaction of home care assistants related to managerial practices." Home Health Care Serv Q **17**(4): 59-71.

This article addresses the question. "How do specific managerial practices support home care assistants' job satisfaction?" Staff from three home care agencies were surveyed regarding their perceptions of specific managerial practices and intrinsic job satisfaction. Results of a hierarchical regression model indicate that **supportive leadership practices, client-centered in-service training style, and mission implementation together explained 52% of the variance in intrinsic job satisfaction. Supportive leadership was described as the extent to which a supervisor communicates effectively, shows personal concern or caring, and maintains high professional standards. Mission implementation was defined as how strongly the staff felt the mission influenced the hiring process, orientation, in-services, and everyday management. Effective in-services included discussions of types of clients and how to effectively handle common challenges.**

Dutcher, L. A. and C. E. Adams (1994). "Work environment perceptions of staff nurses and aides in home health agencies." J Nurs Adm **24**(10): 24-30.

Nurse executives are responsible for ensuring a therapeutic work environment in their organizations. Understanding how staff members perceive their environment is the first step in creating such an environment. In this study, perceptions of the work environment between staff nurses and home health aides in home health agencies were compared. **The results suggest that nurse executives need to foster home health aides' job commitment and support for one another and increase opportunities for staff nurses to be innovative and autonomous in their practice.**

Guariglia, W. (1996). "Sensitizing home care aides to the needs of the elderly." Home Healthc Nurse **14**(8): 618-23.

**Creative teaching strategies can be used to teach all home care providers how to empathize with their elderly patients**. This article describes a simulation exercise used successfully by one educator to allow home care aide students to experience the limitations of aging and to better understand the situations of their patients.

Najera, L. K. and B. A. Heavey (1997). "Nursing strategies for preventing home health aide abuse." Home Healthc Nurse **15**(11): 758-67; quiz 769-70.

One of home care's most important resources is the home health aide. Home care nurses play a critical role in preventing abuse of home health aides and identifying violence-prone environments. **A prevention strategy that nurses can use to identify and prevent abuse of both patients and aides is presented using an Assessment, Communication, Education, and Supervision model.**

Richman, F. (1997). "Home care aides and the business of people." Caring **16**(4): 62-3.

A home care aide (HCA) needs both patient care skills and people skills to do the job well. Recruiting HCAs with those skills can assist in HCA retention while improving customer service.

Richman, F. (1998). "The entrepreneurial spirit and home care aides." Caring **17**(4): 56-7.

Emphasis in the home care industry is being placed on the development of private services in home care. Traditional management characteristics are necessary for this, but so are entrepreneurial ways of thinking--and those may come from all levels of an organization, even and especially home care aides.

Rosengarten, L., F. Milburn, et al. (1996). "Helping home care aides work with newly dependent elderly in a cluster care setting." Home Healthc Nurse **14**(8): 638-46.

A Cluster Care Aide Model of home care was implemented within a senior apartment complex in New York City. Many unforeseen difficulties arose when traditional home health aides were teamed with newly dependent elderly. Cooperation between the administrators of the two agencies created a specialized orientation and in-service program with positive outcomes.

Royse, D., S. Dhooper, et al. (1988). "Job satisfaction among home health aides." Home Health Care Serv Q **9**(1): 77-84.

This study reports on job satisfaction from a survey of 132 home health aides using Locke's Action Tendency Interview Schedule. **The major findings were that respondents who had been employed in home health care for five years or less were more satisfied than those who had been working in the area for a longer period and that there were no differences in job satisfaction by age.**

Schmidt, K. and E. Kennedy (1998). "Reduce home care aide turnover: give aides real jobs." Caring **17**(8): 56-7.

What do home care aides want even more than a raise? **Consistent, full-time work hours.** That's what one agency found out in its attempt to decrease employee turnover. There are other steps agencies can take, too, to keep their aides coming back.

Surpin, R., K. Haslanger, et al. (1994). "Better jobs, better care: building the home care work force." Pap Ser United Hosp Fund N Y: 1-54.

This paper focuses on providing quality care in the paraprofessional home care industry. Despite government policies that have encouraged home-based care for 20 years, home health care still remains relegated to second-class status by the rest of the health care industry. Home care is unique because it relies primarily on paraprofessional care delivered by a home care aide working alone, essentially as a guest in the client's home. The resulting interpersonal dynamic between patient and caregiver--which develops far from the eyes of the primary physician, regulators, and third-party payers--is one unlike any other patient-caregiver relationship in the health care system. **The quality of care received by the client is linked directly to the quality of the paraprofessional's job**: "good jobs" are prerequisite for "good service." Good jobs, however, are not enough. They must be supported by paraprofessional agencies that add real value to the home care service. Part I We define quality home care as meeting the client's needs. Unfortunately, since home care is provided in dispersed, minimally supervised settings, measuring quality of service is very difficult. For this reason, we suggest that it is the front-line employee--the home care aide who is present for hours every visit--who can best determine if the client's needs are being met, and who is best positioned to respond accordingly. Part II To best meet client needs, paraprofessional home care must be built around the home care aide. This requires that home care **aides (1) be carefully selected during the hiring process, (2) be well trained, and (3) be empowered with considerable responsibility and capacity to respond to the daily needs of the clients.** This Model, one that emphasizes the front-line employee, is in full keeping with the "total quality management" innovations that are currently reorganizing America's service industries. Unfortunately this model is not typically reflected in current paraprofessional home health care practice. Part III Building the home care service around home care aide requires redesigning the paraprofessinal's job in 5 ways: 1. Make work pay, by providing a minimum of $7.50 per hour and a decent benefits package.(ABSTRACT TRUNCATED AT 400 WORDS)

Walter, B. M. (1996). "Home care aide retention: building team spirit to avoid employee walkouts." Home Healthc Nurse **14**(8): 609-13.

While home care agencies work to increase productivity and decrease costs, it is easy to lose sight of the value of employees. Because home care aides are seldom in the office, their value to the organization may get overlooked. **In this article, one home care agency shares ways to build team spirit among the home care aides and empower them to be better employees. The result has been increased productivity, improved morale, and a more stable workforce.**

Wilner, M. A. (1999). "Recruiting qualified home care aides: new candidate pools." Caring **18**(4): 44-5.

With the demographic surge of baby boomers and the number of women aged 25-45 projected to decline, the coming decades will see a shortage of workers to care for the elderly. Home care aide agencies will only be able to retain their competitive edge if they widen the pool of candidates from which they recruit and create an attractive and decent job. **Creating a decent job with adequate pay, benefits, and support is a business strategy that will attract a wider range of workers**, including those with minimal experience, and have positive ramifications for health care in the future--and now.

## Occupational Stress

Blegen, M. A. (1993). "Nurses' job satisfaction: a meta-analysis of related variables." Nurs Res **42**(1): 36-41.

The purpose of this study was to describe the magnitude of the relationships between nurses' job satisfaction and the variables most frequently associated with it. A meta-analysis of data from 48 studies with a total of 15,048 subjects revealed that **job satisfaction was most strongly associated with stress (-.609) and organizational commitment** (.526**). Seven variables had correlations between .20 and .50: communication with supervisor, autonomy, recognition, routinization, communication with peers, fairness, and locus of control**. Four other variables frequently included in these studies had low correlations (less than .20): age, education, tenure, and professionalization. The influence of employment site, date of study, and measures used on the size and consistency of estimates was described.

Kawakami, N. and T. Haratani (1999). "Epidemiology of job stress and health in Japan: review of current evidence and future direction." <u>Ind Health</u> **37**(2): 174-86.

With the increasing concern about job stress, there is a growing body of literature addressing psychosocial job stress and its adverse effects on health in Japan. This paper reviews research findings over the past 15 years concerning the assessment of job stress, the relationship of job stress to mental and physical health, and the effects of worksite stress reduction activities in Japan. Although studies were conducted in the past using ad-hoc job stress questionnaires, well-established job stressor scales have since been translated into Japanese, their psychometric properties tested and these scales extensively used in recent epidemiologic studies. While the impact of overtime and quantitative job overload on mental health seems moderate, **job control, skill use and worksite support, as well as qualitative job demands, had greater effects on psychological distress and drinking problems in cross-sectional and prospective studies. These job stressors also indicated a strong association with psychiatric disorders, including major depression, even with a prospective study design**. Long working hours were associated with a higher risk of myocardial infarction, diabetes mellitus and hypertension. There is evidence that the job demands-control model, as well as the use of new technology at work, is associated with higher levels of blood pressure and serum lipids among Japanese working populations. **Fibrinolytic activity, blood glucose levels, immune functions and medical consultation rates were also affected by job stressors.** It is further suggested that Japanese workers tend to suppress expression of positive feelings, which results in apparently higher psychological distress and lower job satisfaction among Japanese workers compared with workers in the U.S. Future epidemiologic studies in Japan should focus more on a prospective study design, theoretical models of job stress, job stress among women, and cultural difference and well-designed intervention studies of various types of worksite stress reduction.

Smith, M. J., F. T. Conway, et al. (1999). "Occupational stress in human computer interaction." <u>Ind Health</u> **37**(2): 157-73.

There have been a variety of research approaches that have examined the stress issues related to human computer interaction including laboratory studies, cross-sectional surveys, longitudinal case studies and intervention studies. A critical review of these studies indicates that there are important physiological, biochemical, somatic and psychological indicators of stress that are related to work activities where human computer interaction occurs**. Many of the stressors of human computer interaction at work are similar to those stressors that have historically been observed in other automated jobs. These include high workload, high work pressure, diminished job control, inadequate employee training to use new technology, monotonous tasks, por supervisory**

**relations, and fear for job security**. New stressors have emerged that can be tied primarily to human computer interaction. These include technology breakdowns, technology slowdowns, and electronic performance monitoring. **The effects of the stress of human computer interaction in the workplace are increased physiological arousal; somatic complaints, especially of the musculoskeletal system; mood disturbances, particularly anxiety, fear and anger; and diminished quality of working life, such as reduced job satisfaction.** Interventions to reduce the stress of computer technology have included improved technology implementation approaches and increased employee participation in implementation. Recommendations for ways to reduce the stress of human computer interaction at work are presented. These include proper ergonomic conditions, increased organizational support, improved job content, proper workload to decrease work pressure, and enhanced opportunities for social support. A model approach to the design of human computer interaction at work that focuses on the system "balance" is proposed.

Melchior, M. E., G. J. Bours, et al. (1997). "Burnout in psychiatric nursing: a meta-analysis of related variables." J Psychiatr Ment Health Nurs **4**(3): 193-201.

The purpose of this study was to describe the relative strengths of a number of variables on burnout among psychiatric nurses. A meta- analysis of correlations revealed that **burnout was negatively associated with job satisfaction, staff support and involvement with the organization and positively associated with role conflict.** The results of the meta-analysis were in line with results of other studies in which different populations were investigated. Therefore, the findings as such are not specific to psychiatric nurses. Based on the literature, three typical risk factors of burnout among psychiatric nurses were found: the patient group the nurse works with, such as patients who are aggressive and suicidal; the inequity in the exchange process between nurses and patients; and the unrealistic expectations of nurses of the patients' potential for rehabilitation.

## Health Care and the Internet

Bell, D. S. and C. E. Kahn, Jr. (1996). "Health status assessment via the World Wide Web." Proc AMIA Annu Fall Symp: 338-42.

We explored the use of the World Wide Web to collect health status information for medical outcomes research. The RAND 36-Item Health Survey 1.0 (RAND-36), which contains the 36 multiple-choice questions of the Medical Outcomes Study SF-36 "Short Form" and differs only in its simplified scoring scheme, was made available for anonymous use on the Internet. Participation in the survey was invited through health- related Internet news groups and mailing lists. Participants entered data and received, their scores using the World Wide Web protocol. Entries were recorded from 15 June 1995 to 14 June 1996 (1 year). The survey was completed anonymously by 4876 individuals with access to the World Wide Web. Two-thirds completed the survey within 5 minutes, and 97% did so within 10 minutes. The item-completion rate was 99.28%. Values of Cronbach's alpha of 0.76 to 0.90 for the scoring scales matched the high reliability found in the Medical Outcomes Study. **The World Wide Web provides a method of rapidly measuring individual health status and may play an important role in advancing health services research and outcomes-based patient care.**

Elson, R. B. and D. P. Connelly (1995). “Computerized patient records in primary care. Their role in mediating guideline-driven physician behavior change.” Arch Fam Med **4**(8): 698-705.

Implementation of practice guidelines remains problematic in spite of enormous efforts to develop and disseminate them, to establish their credibility, and to create incentives for physicians to adopt them. These strategies have failed to systematically change physician behavior because they do not address the involuntary time and mental processing constraints that have been clearly demonstrated to hamper physicians' ability to comply with guidelines**. Computerized patient record systems directly address these constraints, and evidence is mounting that they are effective tools for changing physician behavior. A properly configured computerized patient record system provides decision support, facilitates work flow, and enables the routine collection of data for performance feedback. A synthesis of relevant research from the domains of practice guidelines and medical informatics strongly suggests that the operational support provided by computerized patient record systems will have a major impact on physician compliance with practice guidelines.**

Ellwood, Paul and George D. Lundberg (1996), “Managed Care
A Work in Progress.” JAMA. 27(13) 1083-6.
*Excerpt from editorial:*
…**The easy ways to cut costs--like shorter hospital stays--are reaching their limits**. Now it is time to evaluate the content of care, but few health plans have information systems or organizational structures to fundamentally challenge traditional approaches to
medical care….
….At present, their **largely uncomputerized clinical record systems and weak epidemiological perspective leaves them unprepared for population-based medical care… It's time for outcomes accountability.**

Menduno, M. (1998). “Prognosis: wired. Why Internet technology is the next medical breakthrough.” Hosp Health Netw **72**(21): 28-30, 32-5, 3.

One observer calls it "e-mail on steroids." Whizzing along the Internet and encrypted against hacking**, clinical messaging lets doctors consult on tough cases, speed up test results, even chat with their patients. So why aren't these systems widely used? Blame politics, not the technology.**

Mold, J. W., J. R. Cacy, et al. (1998). “Patient-physician E-mail communication.” J Okla State Med Assoc **91**(6): 331-4.

A significant number of Oklahomans are using computers and have e-mail access either at home or at work. Consecutive patients seen by 23 family physician members of the Oklahoma Physicians Research/Resource Network (OKPRN) were queried regarding their use of computers and access to e-mail. The numbers are higher in urban and suburban areas than in medium and smaller towns and rural areas**. Of those who have e- mail access now or are planning to get it within six months, a substantial majority would like to use this medium to interact with their family physician.** Potential uses for e-mail technology and problems to be overcome are discussed.

Lowe, H. J., E. C. Lomax, et al. (1996). "The World Wide Web: a review of an emerging internet-based technology for the distribution of biomedical information." J Am Med Inform Assoc **3**(1): 1-14.

The Internet is rapidly evolving from a resource used primarily by the research community to a true global information network offering a wide range of databases and services. This evolution presents many opportunities for improved access to biomedical information, but Internet-based resources have often been difficult for the non-expert to develop and use**. The World Wide Web (WWW) supports an inexpensive, easy-to-use, cross-platform, graphic interface to the Internet that may radically alter the way we retrieve and disseminate medical data**. This paper summarizes the Internet and hypertext origins of the WWW, reviews WWW-specific technologies, and describes current and future applications of this technology in medicine and medical informatics. The paper also includes an appendix of useful biomedical WWW servers.

Wald, J. S., D. Rind, et al. (1995). "Patient entries in the electronic medical record: an interactive interview used in primary care." Proc Annu Symp Comput Appl Med Care: 147-51.

We describe the development, implementation, and use **of a computer-administered patient interview,** the Health History Interview, by over 300 new patients in a primary care practice at Boston's Beth Israel Hospital**. The interview has been well accepted by patients and rated positively by providers.** It electronically captures clinical information directly from patients for use during their initial encounter with a provider. It facilitates aggregate analysis of clinical data for quality improvement efforts, such as aiming preventive medicine interventions at identified problem areas within the clinic. Expectations management has been an important task throughout the project. Increasing use of the interview beyond the 30- 40% of new patients who have taken it will require greater communication with patients, greater convenience to patients and providers, and more evidence of the clinical, administrative, and research benefits of the technique. Most important, full implementation will require fundamental changes in physician practice habits and patterns of communication between patients and the health care system, as well as clearly demonstrated cost-benefit improvements through the use of these tools.

Lobach, D. F. and W. E. Hammond (1994). "Development and evaluation of a Computer-Assisted Management Protocol (CAMP): improved compliance with care guidelines for diabetes mellitus." Proc Annu Symp Comput Appl Med Care: 787-91. Disease-specific standards for directing patient management are becoming increasingly important. These standards, however, are often not followed because they are not sufficiently integrated into the clinical care setting. In this study we describe the development and evaluation of a Computer-Assisted Management Protocol (CAMP) of care guidelines for diabetes mellitus. While other studies have shown improved compliance with rule-based reminders, the CAMP customizes disease-specific care guidelines to individual patients over time. We evaluated the effect of the CAMP on compliance with guidelines in a prospective, randomized controlled study. The study was performed at a family practice clinic where much of the patient record is maintained electronically on The Medical Record (TMR). The management protocol was developed from standards published by the American Diabetes Association. Fifty-eight providers were randomized to either receive or not receive the CAMP for diabetes. Compliance with standards was assessed by chart audits of all encounters with diabetic patients during the study interval. **The**

**following conclusion was made: the Computer-Assisted Management Protocol resulted in a statistically significant improvement in compliance with diabetes care standards.**

Manchester, G. W., T. J. d. Raia, et al. (1992). "Primary Care Health Information System: a hybrid electronic-paper medical record system." J Ambulatory Care Manage **15**(3): 13-29.
In summary**, PCHIS is a hybrid electronic-paper medical record system that is clinically useful to health care providers**. The paper chart still contains the bulk of information but the key facts about any given patient (diagnoses, surgeries, medications, allergies) and about the process of care (frequency of visits, referral patterns, test ordering, etc.) are readily available in electronic form. These key data are easily coded, are quickly and simultaneously accessible in multiple locations, serve as an excellent chart substitute whenever the paper chart is unavailable, and can be retrieved for in- depth analysis at any time, whether for clinical, administrative, research, or quality assurance purposes. The process of care can be studied and, to some extent, can also be modified by the system, as demonstrated by the physician response to the reminder system within PCHIS. The medical record chart summary, mandated by Joint Commission for ambulatory patient charts, is easily provided in hard copy as well as electronically. Whereas physician compliance in providing data to the system was initially sporadic, physician support has increased tremendously as the system has become more clinically useful to them. It is a system that exists and functions well within a patchwork of multiple different medical information systems. It is a system with sufficient intrinsic flexibility that it can and will continue to evolve in response to the needs of physicians and administrators.

Perrine, M. W., J. C. Mundt, et al. (1995). "Validation of daily self-reported alcohol consumption using interactive voice response (IVR) technology." J Stud Alcohol **56**(5): 487-90.

OBJECTIVE: This study assesses the validity of daily self-reported drinking data obtained using an automated touch-tone interactive voice response (IVR) system. METHOD: Subjects (N = 30) reported alcohol consumption daily for 28 days using the IVR system. Concurrently, breath and saliva samples were obtained each night for objective determination of blood alcohol concentrations (BACs). Partners living with the subjects provided collateral reports daily. Retrospective drinking records were obtained from both partners at the outset of the study and from the target subjects at the end of the study, using timeline follow-back procedures referencing the target subjects' drinking over the previous 28-day period. RESULTS: Subjects reported drinking on 55.2% of the 840 possible subject days, and positive BAC readings were obtained on 25.9% of these days. The overall correlation between self-report and measured BAC was .72. Within-subject correlations between daily IVR reports and measured BACs ranged from - .07 to .92, with a mean of .57. The correlations between self-reported drinking and the collateral reports ranged from .18 to 1.0, with a mean of .89. Correlations between the daily self-reports and the timeline follow-back records obtained at the end of the study ranged from -.22 to .96, with a mean of .51. CONCLUSIONS: **IVR technology provides an innovative, user-friendly methodology for obtaining valid measures of daily alcohol consumption. The validity of these measures may be differentially highest for frequent, heavy drinkers, a group for whom traditional assessment methods often produce the most biased underestimates.**

Widman, L. E. and D. A. Tong (1997). "Requests for medical advice from patients and families to health care providers who publish on the World Wide Web [see comments]." Arch Intern Med **157**(2): 209-12.

BACKGROUND: The Internet is a novel, rapidly growing means of worldwide public communication. METHODS: We reviewed all unsolicited electronic mail and other communications from nonmedical individuals requesting medical information over a 12-month period from the physician at 1 established site on the World Wide Web. This site was the only Internet site with a primary focus on cardiac arrhythmias. RESULTS: Seventy unsolicited inquiries were received from 39 patients and 20 family members (the sources of 11 inquiries are unknown) from 20 states, Washington, DC, and 9 foreign countries (locations of 15 inquiries are unknown). Follow-up was obtained in 22 cases. The inquiries concerned cardiological conditions in 67 cases (96%) and cardiac electrophysiologic conditions and procedures in 52 cases (74%). The goals of the inquiries were diagnosis (15), therapy (48), prognosis (1), and patient education (6). On follow-up of 22 cases, the people initiating the inquiries stated that they were reassured (16), consulted a general cardiologist (1), consulted a cardiac electrophysiologist (4), or visited a tertiary care electrophysiology center (1). CONCLUSIONS: **The increasing use of the Internet by the general public seeking specific medical information for themselves and for their families suggests a widespread, unmet need for objective medical advice**. This study demonstrates that the public can choose accurately whom to ask for subspecialty advice in the area of cardiovascular diseases. Professional societies and regulatory agencies should develop physician guidelines for providing medical advice over the Internet.

### Factors Influencing Provider Behavior

Chassin, MR (1993) Explaining Geographic Variations: The Enthusiasm Hypothesis Med Care 31(5) 37-44.
The causes of geographic variations in the use of health care services continue to puzzle researchers. Some have proposed that physicians in geographic areas with high rates of use provide proportionally more unnecessary care than those in other areas. Available research does not support this hypothesis. Others contend that uncertainty about the effectiveness of health services leads physicians to differing conclusions about when to perform various services and is the primary cause of geographic variations. Available research also does not support this hypothesis. This article proposes a different explanation, i.e., the enthusiasm hypothesis. **Currently, research data suggest that geographic differences in the use of health care services are caused by differences in the prevalence of physicians who are enthusiasts for particular services**. This analysis explores the validity of the enthusiasm hypothesis using previously published data on carotid endarterectomy.

Davis, D. A., M. A. Thomson, et al. (1995). "Changing physician performance. A systematic review of the effect of continuing medical education strategies [see comments]." Jama **274**(9): 700-5.

OBJECTIVE--To review the literature relating to the effectiveness of education strategies designed to change physician performance and health care outcomes. DATA SOURCES--We searched MEDLINE, ERIC, NTIS, the Research and Development Resource Base in Continuing Medical Education, and other relevant data sources from 1975 to 1994, using continuing medical education (CME) and related terms as keywords. We manually searched journals and the bibliographies of other review articles and called on the opinions of recognized experts. STUDY SELECTION--We reviewed studies that met the following criteria: randomized controlled trials of education strategies or interventions that objectively assessed physician performance and/or health care. **CME delivery methods such as conferences have little direct impact on improving professional practice. More effective methods such as systematic practice-based interventions and outreach visits are seldom used by CME providers.**

DeLoughry, T. (1991). "Understanding and Managing Physician Satisfaction." Medical Interface **March**: 66-9.
A satisfaction survey that had been administered to physicians participating in an IPA model HMO was analyzed to determine what factors predicted their willingness to recommend the HMO to other physicians and their patients. **Although HMO managers had assumed that satisfaction with fees would be the most important predictor, a multiple regression analysis demonstrated that satisfaction with service (e.g., time spent on phone, paperwork) was the factor most strongly associated with physician satisfaction.**

Elson, R. B. and D. P. Connelly (1995). "Computerized patient records in primary care. Their role in mediating guideline-driven physician behavior change." Arch Fam Med **4**(8): 698-705.
Implementation of practice guidelines remains problematic in spite of enormous efforts to develop and disseminate them, to establish their credibility, and to create incentives for physicians to adopt them**. These strategies have failed to systematically change physician behavior because they do not address the involuntary time and mental processing constraints that have been clearly demonstrated to hamper physicians' ability to comply with guidelines. Computerized patient record systems directly address these constraints, and evidence is mounting that they are effective tools for changing physician behavior**. A properly configured computerized patient record system provides decision support, facilitates work flow, and enables the routine collection of data for performance feedback. A synthesis of relevant research from the domains of practice guidelines and medical informatics strongly suggests that the operational support provided by computerized patient record systems will have a major impact on physician compliance with practice guidelines.

Kottke, T. E., M. L. Brekke, et al. (1993). "Making "time" for preventive services." Mayo Clin Proc **68**(8): 785-91.

Although the implementation of clinical preventive services is a high priority on the national agenda and physicians acknowledge the importance of these services, implementation rates remain far below the target years after the recommendations have been released. **Physicians repeatedly report that the reason for not providing preventive services is that they do not have "time." In this article, we identify attributes of the health-services system that create this phenomenon. We present evidence that formal delivery systems for preventive services must be developed if the "time" problem is to be solved, and we review why preventive-services systems need to be integrated into the current health-services system**. Finally, we list the attributes that we believe a preventive-services system must have if it is to be successful. The success of clinical trials of such systems indicates that our goals of preventive services can be achieved if all persons who have an investment in clinical preventive services commit themselves to developing and supporting these systems.

Lomas, J., M. Enkin, et al. (1991). "Opinion leaders vs audit and feedback to implement practice guidelines. Delivery after previous cesarean section" JAMA 265(17): 2202-7.

**A randomized controlled trial with 76 physicians in 16 community hospitals evaluated audit and feedback and local opinion leader education as methods of encouraging compliance with a guideline for the management of women with a previous cesarean section.** The guideline recommended clinical actions to increase trial of labor and vaginal birth rates. Charts for all 3552 cases in the study groups were audited. After 24 months the trial of labor and vaginal birth rates in the audit and feedback group were no different from those in the control group, but rates were 46% and 85% higher, respectively, among physicians educated by an opinion leader. Duration of hospital stay was lower in the opinion leader education group than in the other two groups. **The overall cesarean section rate was reduced only in the opinion leader education group. There were no adverse clinical outcomes attributable to the interventions. The use of opinion leaders improved the quality of care.**

Mayne, K. (1994). "Practice-linked continuing medical education." Med J Aust **161**(10): 630-2.

Continuing medical education is successful when it results in improved outcomes for patients, but there may not be much connection between traditional didactic instruction and improvement in clinical practice. Greater emphasis could be placed on self-directed learning. **Using computer technology, doctors can audit their own practices to detect specific deficiencies and reveal individual educational needs. Learning and assessment can then be linked with improvements in practice.**

Slotnick, H. B. (1996). "How doctors learn: the role of clinical problems across the medical school-to-practice continuum." Acad Med 71(1): 28-34.

The author proposes a theory of how physicians learn that uses clinical problem solving as its central feature. His theory, which integrates insights from Maslow, Schon, Norman, and others, claims that physicians-in-training and practicing physicians learn largely by deriving insights from clinical experience. These insights allow the learner to solve future problems and thereby address the learner's basic human needs for security, affiliation, and self- esteem. Ensuring that students gain such insights means that the proper roles of the teacher are (1) to select problems for students to solve and offer guidance on how to solve them, and (2) to serve as a role model of how to reflect on the problem, its solution, and the solution's effectiveness. **Three principles guide instruction within its framework for learning: (1) learners, whether physicians-in- training or practicing physicians, seek to solve problems they recognize they have; (2) learners want to be involved in their own learning; and (3) instruction must both be time-efficient and also demonstrate the range of ways in which students can apply what they learn.** The author concludes by applying the theory to an aspect of undergraduate education and to the general process of continuing medical education.

Stanley, I., A. al-Shehri, et al. (1993). "Continuing education for general practice. 1. Experience, competence and the media of self-directed learning for established general practitioners" Br J Gen Pract 43(370): 210-4.

The arrangements under which continuing education for general practice is provided and attendance by general practitioners is rewarded have now been in operation for three years. More recently, reaccreditation has emerged as a significant issue for the profession. For these reasons it appears timely to review the whole basis of ongoing learning by established general practitioners. In this the first of two papers, learning by established professionals is considered in relation to the educational development of the learner, the role of experience and the goals of competence and performance. **It is concluded that self-directed learning based on experience should form the centre-piece of continuing education for general practice and that educational provision should adopt a complementary role in sustaining motivation to learn and by enabling learning from experience to be shared and enriched. A model of self-directed learning, connecting experience and competence through systematic application of three learning media, reading, reflection and audit, is proposed and related to appropriate educational participation by established general practitioners.**

Taylor, D. (1996). "Quality and professionalism in health care: a review of current initiatives in the NHS." BMJ 312(7031): 626-9.

Since the start of the 1990s the NHS and the clinical professions have made significant investments in quality management in health care, and a plethora of initiatives has been aimed at service improvement. From a patient's perspective the extent to which these exercises have been cost effective is uncertain, although they have certainly involved great effort and enterprise on the part of many clinicians and managers. An important opportunity now exists to integrate this work into the mainstream of clinical and general service management. **If clinicians can accept quality management concepts as central to their professional ethos and regulatory structures this could help them to maintain their professional authority and protect them and their patients from imposed decisions based on inadequate understanding of health care costs and benefits***.*

Woolf, S. H. (1993). "Practice guidelines: a new reality in medicine. III. Impact on patient care." Arch Intern Med 153(23): 2646-55.

Practice guidelines are being introduced throughout medicine, but expectations about their impact on patient care depend on whether one is a clinician, patient, payer, administrator, or politician. Proponents hope that guidelines will enhance the knowledge, attitudes, and behavior of practitioners and will optimize health outcomes, costs, and malpractice decisions, but scientific evidence of these effects is limited. There are also concerns that guidelines could harm patient care. Clinicians worry that guidelines will promote "cookbook medicine," decrease their autonomy and income, and increase medicolegal liability. A particular concern relates to the expansion of enforcement programs that require clinicians to follow guidelines or face financial or other penalties. Guidelines can rarely define optimal care with certainty, due to poor science, imperfect analytic processes, and differences in patients. Recommendations are often worded in highly specific language that achieves clarity at the expense of scientific validity. **Rigid enforcement of such guidelines could harm patients, interfere with the individualization of care, increase costs, and promote unfair judgments against clinicians who deviate from them for good reasons. A model that links the intensity of enforcement to the scientific and clinical quality of guidelines is proposed.**

Yano, E. M., A. Fink, et al. (1995). "Helping practices reach primary care goals. Lessons from the literature." Arch Intern Med 155(11): 1146-56.

We reviewed rigorous evaluations of programs to enhance the quality and economy of primary care. We identified 36 evaluations published from 1980 through 1992. We abstracted data on objectives, setting(s), patients and processes, outcomes, and costs of care. We identified successful programs, as well as significant gaps in our knowledge of how to improve aspects of care. **In specific, computer reminders and social influence-based methods fostered preventive and economic care. Nurse implementation of prevention protocols increased their performance. Multidisciplinary teams improved access and economy. Regional organization of practices or telephone management improved access; regionalization also reduced emergency care**. Improvements were not found in continuity, comprehensiveness, humanistic process, physical environment, or health outcomes. Primary care practices can implement several programs to continuously improve prevention and access, and to reduce costs and use of unnecessary services. Research documenting how to accomplish other major goals, including health outcome changes, in different practice types is needed.

**Quality Improvement**

"Human-Centered Design and Performance Improvement: Better Together." NEJM Catalyst, June 28, 2018.

**Kaiser Permanente's initiatives with combining human-centered design, or HCD, and performance improvement point to the potential to improve the health care experience and outcomes of patients and providers.**

Roth, David L., Lisa Fredman, and William E. Haley. "Informal Caregiving and Its Impact on Health: A Reappraisal from Population-Based Studies." *The Gerontologist* 55, no. 2 (April 2015): 309–19. https://doi.org/10.1093/geront/gnu177.

Adams, C. E. and M. Wilson (1995). "Enhanced quality through outcome-focused standardized care plans." J Nurs Adm **25**(9): 27-34.

Methods to improve the quality of care are a national issue for home healthcare agencies. In comparison with the traditional process- focused care plans**, outcome-focused care plans (OCPs) resulted in significantly better quality indicator scores for clients cared for by agency staff members**. Although OCPs are a valuable tool for enhancing quality, tools are only as good as the individuals who use them. Before deciding to change to an OCP format, administrators must assess all resources needed to effect the change.

DeLoughry, T., L. Bjurstrom, et al. (1994). "Feeling Fit: Preventing Illness and Improving Quality." Medical Interface: 109-114.

Feeling Fit is defined as a state where "the mind and body are working together to help you do your best in any situation." **Interventions which combine the power of exercise, nutrition , stress management as well as medications and/or vaccinations not only help individuals to feel fit, but also can prevent and control illness**. The paper discusses how this approach has been utilized in a series of programs including: managed-care member wellness; worksite wellness and school-based program supported by the New York State Education Department, New York State United Teachers and a IPA model health maintenance organization. The use of this approach to a program aimed at improving the quality of outcomes for diabetic and hypertensive patients is also discussed.

National Committee for Quality Assurance Standards for the Accreditation of Managed Care Organizations Washington, DC: National Committee for Quality Assurance 2001

Hayes, R. P. and D. J. Ballard (1995). "Review: feedback about practice patterns for measurable improvements in quality of care--a challenge for PROs under the Health Care Quality Improvement Program." Clin Perform Qual Health Care **3**(1): 15-22.
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Health Plan Employer Data & Information Set 3.0. Washington DC: NCQA 2001.

(McCauley and Bremer 1991)
McCauley, C. and B. A. Bremer (1991). "Subjective quality of life measures for evaluating medical intervention." Eval Health Prof **14**(4): 371-87.

Medical interventions are usually evaluated in terms of mortality and morbidity data, but there is recent interest in going beyond medical data to assess the impact of the therapy on the objective and subjective quality of the patient's life. Objective quality of life measures such as employment and functional status are relatively straightforward, but measuring subjective quality of life is a more complex task. This article reviews psychometric issues relevant to using subjective quality of life scales developed by Bradburn and by Campbell, Converse, and Rodgers for research with patient populations. **The evidence indicates that these relatively brief scales assess both affective and cognitive aspects of subjective quality of life, that they are measuring something more stable than mood but less enduring than personality, and that they can be as sensitive as physiological measures in distinguishing among treatment groups. It is concluded that these scales offer a useful complement to more objective measures of patient status for research evaluating medical interventions.**

Palmer, H. (1996). "Measuring clinical performance to provide information for quality improvement." Qual Manag Health Care **4**(2): 1-6.

**Measures of clinical performance summarize quality of care given to groups of patients by a practice, provider network, or plan. Clinical managers can use these measures to drive and track internal quality improvements, and purchasers and accreditors can provide benchmarks based on comparisons of performance in order to stimulate internal improvements.** This article explains desired properties of such clinical performance measures and the AHCPR Typology of Clinical Performance Measures Project.

## Patient-Provider Communication and Planning

Wakefield, Melanie A., Barbara Loken, and Robert C. Hornik. "Use of Mass Media Campaigns to Change Health Behaviour." *Lancet* 376, no. 9748 (October 9, 2010): 1261–71. https://doi.org/10.1016/S0140-6736(10)60809-4.

Mass media campaigns are widely used to expose high proportions of large populations to messages through routine uses of existing media, such as television, radio, and newspapers. Exposure to such messages is, therefore, generally passive. Such campaigns are frequently competing with factors, such as pervasive product marketing, powerful social norms, and behaviours driven by addiction or habit. In this Review we discuss the outcomes of mass media campaigns in the context of various health-risk behaviours (eg, use of tobacco, alcohol, and other drugs, heart disease risk factors, sex-related behaviours, road safety, cancer screening and prevention, child survival, and organ or blood donation). We conclude **that mass media campaigns can produce positive changes or prevent negative changes in health-related behaviours across large population**s. We assess what contributes to these outcomes, such as concurrent availability of required services and products, availability of community-based programmes, and policies that support behaviour change. Finally, we propose areas for improvement, such as investment in longer better-funded campaigns to achieve adequate population exposure to media messages.

Chadborn, N. H., Goodman, C., Zubair, M., Sousa, L., Gladman, J. R. F., Dening, T., & Gordon, A. L. (2019). Role of comprehensive geriatric assessment in healthcare of older people in UK care homes: realist review. *BMJ open*, *9*(4), e026921. https://doi.org/10.1136/bmjopen-2018-026921

Comprehensive geriatric assessment (CGA) may be a way to deliver optimal care for care home residents. We used realist review to develop a theory-driven account of how CGA works in care homes.

130 articles informed a theory which suggested **CGA had three main components: structured comprehensive assessment, developing a care plan and working towards patient-centred goals**. Each of these required engagement of a multidisciplinary team (MDT). Most evidence was available around assessment, with tension between structured assessment led by a single professional and less structured assessment involving multiple members of an MDT. Care planning needed to accommodate visiting clinicians and there was evidence that a core MDT often used care planning as a mechanism to seek external specialist support**. Goal-setting processes were not always sufficiently patient-centred and did not always accommodate the views of care home staff. Studies reported improved outcomes from CGA affecting resident satisfaction, prescribing, healthcare resource use and objective measures of quality of care.**

**Conclusion:** The theory described here provides a framework for understanding how CGA could be effective in care homes. It will be of use to teams developing, implementing or auditing CGA in care homes. All three components are required to make CGA work-this may explain why attempts to implement CGA by interventions focused solely on assessment or care planning have failed in some long-term care settings.

Delbanco, T. L. (1992). "Enriching the doctor-patient relationship by inviting the patient's perspective." Ann Intern Med **116**(5): 414-8.

Doctors and patients alike are saddened and angered by the distance that increasingly interferes with their interactions. **Two complementary strategies may enhance the human quality of clinical care and improve outcomes. First, the doctor and patient can undertake a systematic "patient's review" that addresses seven dimensions of care**: 1) respect for patient's values, preferences, and expressed needs; 2) communication and education; 3) coordination and integration of care; 4) physical comfort; 5) emotional support and alleviation of fears and anxieties; 6) involvement of family and friends; and 7) continuity and transition. Incorporating the "review" into the clinical encounter encourages both patient and doctor to confront individual preferences and values and offers patients an explicit framework for participating actively in their care. **Second, using survey instruments designed to solicit focused reports from patients that address each dimension of care, doctors can gather aggregate feedback about their practices. Such reports move beyond anecdote and can serve as screening tests that uncover areas in doctors' practices that merit improvement. In addition, patients can join doctors in developing solutions to problems uncovered by patients' reports.**

Kokorelias, K. M., Gignac, M. A. M., Naglie, G., & Cameron, J. I. (2019). Towards a universal model of family centered care: a scoping review. *BMC health services research*, *19*(1), 564. https://doi.org/10.1186/s12913-019-4394-5

**Families play an important role meeting the care needs of individuals who require assistance due to illness and/or disability. Yet, without adequate support their own health and wellbeing can be compromised. The literature highlights the need for a move to family-centered care to improve the well-being of those with illness and/or disability and their family caregivers.** The objective of this paper was to explore existing models of family-centered care to determine the key components of existing models and to identify gaps in the literature.

LaValley, Susan A., Marc T. Kiviniemi, and Elizabeth A. Gage-Bouchard. "Where People Look for Online Health Information." *Health Information & Libraries Journal* 34, no. 2: 146–55. Accessed June 23, 2018. https://doi.org/10.1111/hir.12143.

Objectives To identify health-related websites Americans are using, demographic characteristics associated with certain website type and how website type shapes users' online information seeking experiences. Methods Data from the Health Information National Trends Survey 4 Cycle 1 were used. User-identified websites were categorised into four types: government sponsored, commercially based, academically affiliated and search engines. Logistic regression analyses examined associations between users' sociodemographic characteristics and website type, and associations between website type and information search experience. Results Respondents reported using: commercial websites (71.8%), followed by a search engines (11.6%), academically affiliated sites (11.1%) and government-sponsored websites (5.5%). Older age was associated with the use of academic websites (OR 1.03, 95% CI 1.02, 1.04); younger age with commercial website use (OR 0.97, 95% CI 0.95, 0.98). Search engine use predicted increased levels of frustration, effort and concern over website information quality, while commercial website use predicted decreased levels of these same measures. Discussion Health information seekers experience varying levels of frustration, effort and concern related to their online searching. Conclusion There is a need for continued efforts by librarians and health care professionals to train seekers of online health information to select websites using established guidelines and quality criteria.

Schor, E. L. L., Debra J.; Malspeis, Sue (1995). "Physicians' assessment of functional health status and well-being: the patient's perspective." Archives of Internal Medicine, **155**(3): 309(6).

Background: Ascribing quality to medical care rests in part on the expectation of physician behavior and the content of care. **The adoption of functional outcomes of care as legitimate measures of quality will require greater**

**attention to patient-provided assessments of health and add new dimensions to medical practice and quality assessment.** Methods: We conducted a cross-sectional, national population survey of adults to obtain estimates of the frequency with which physicians reportedly inquire about patients' functional health status and emotional well-being, patients' attitudes about such assessments, and the perceived use of data thus obtained in the therapeutic process. Results: The majority of physicians rarely or never ask about the extent to which patients' health limits their ability to perform everyday activities (64.7% to 78.7%); neither do they inquire about limitations imposed by emotional problems (71.4% to 84.4%). Physicians are more likely to make such inquiries in the presence of chronic illness or diminished health status, or with older patients, although such assessments remain the exception to usual practice and a large portion of functional impairment is undiscovered. **More than 60% of respondents want their physicians to assess their functional health status and well-being. Conclusions: While individuals want their physicians to assess their functional performance and emotional well-being as a part of medical care, by their reports this occurs infrequently**. The content of care may be less comprehensive than physicians believe to be the case. (Arch Intern Med. 1995;155:309-314)

### Measuring Medication Compliance

Morisky, D. E., Lawrence W. Greene, and David M. Levine (1986). "Concurrent and Predictive Validity of a Self-Reported Measure of Medication Adherence." Medical Care **24**(1): 67-74.

Adherence to the medical regimen contnues to rank as a major clinical problem in the management of patients with essential hypertension, as in other conditions treated with drugs and life-style modification. This article reviews the psychometric properties and tests the concurrent and predictive validity of a structured four-item self-reported adherence mesure (alpha reliability=.0.61) which can be easilly integrated into the medical visit. Items in the scale address barriers to medication-taking and permit the health care provider to reiforce positive adherence behaviors. Data on patient adherence to the medical reimen were collected at the end of a formalized 18 month educational program. Blood pressure measurements were recorded throughout a 3 year follow-up period. **Results showed the scale to demonstrate both concurrent and predicive validity with regard to blood pressure control at 2 years and 5 years, respectively. Seventy-five percent of the patients who scored high on the four-item scale at year 2 had their blood pressure under adequate control at year 5, compared with 47% under control at year 5 for those patients scoring low on the scale.**

Rudd, P., R. L. Byyny, et al. (1988). "Pill count measures of compliance in a drug trial: variability and suitability." Am J Hypertens **1**(3 Pt 1): 309-12.

To evaluate pill counts as a compliance measure for drug trials, we followed 121 ambulatory hypertensives selected for good compliance over less than or equal to 12 months. The medication regimens consisted of either pinacidil or hydralazine as monotherapy or with propranolol and/or hydrochlorothiazide. Pill counts for the two primary drugs were obtained at each of the 20 return visits. The population was characterized by chronic uncomplicated hypertension and sociodemographic diversity; mean age was 53 years. Despite excellent average weekly pill counts (overall mean compliance rate [+/- SD] = 96.0 +/- 13.2%), we observed large intersubject and intrasubject variance in weekly pill count assessment: individuals' mean standard deviation = 13.7% (range = 0%-86%) and mean coefficient of variation = 0.138 (range = 0.001-0.410). By pill count, 35% of individuals exhibited greater than 110% compliance on at least 1 visit. We conclude that (a) pill count variability is large, even among highly selected subjects, (b) traditional reports of overall pill counts are suboptimal, and (c) **pill counts may unreliably measure medication-taking behavior because "supranormal" compliance by this method is improbable but common.**

Rudd, P. (1995). "Clinicians and patients with hypertension: unsettled issues about compliance." Am Heart J **130**(3 Pt 1): 572-9.

Ambulatory treatment of hypertension depends largely on long-term oral medications to lower blood pressure and delay or prevent cardiovascular morbidity and mortality. Failure to achieve the therapeutic goal may reflect biologic, pharmacologic, or behavioral factors. Ignoring behavioral factors may result in unnecessary or even dangerous regimen escalation. More than half of patients with insufficient reductions in blood pressure display suboptimal medication compliance as assessed by pill count or bioassay. Once- daily dosing may be an important part of enhancing compliance, patient convenience, and regimen simplification; however, drug concentrations may be subtherapeutic when dosing delays or omissions occur. **Electronic monitoring data in hypertension, glaucoma, seizure disorders, and other diseases indicate that 50% to 60% of patients adhere well to prescribed regiments, that 5% to 10% adhere poorly, and that the 30% to 45% adhere to an intermediate but markedly variable degree. A growing body of literature offers empirical support for focused and personalized interventions.**

Rudd, P., J. Ramesh, et al. (1993). "Gaps in cardiovascular medication taking: the tip of the iceberg." J Gen Intern Med **8**(12): 659-66.
OBJECTIVE: To search for major gaps in medication-taking behavior predisposing patients to cardiovascular morbidity and mortality. DESIGN: Convenience sample; cohort prospectively followed for < or = 5 months. SETTING: General internal medicine and cardiology clinics in a university medical center. PATIENTS: From among 893 patients, the authors identified 132 eligible individuals and entered 33 subjects (25%) with chronic cardiovascular conditions, 1-3 chronic oral medications for these conditions, overall regimen of < or = 6 drugs, regular visits at 1-3-month intervals, literacy in English, willingness to use electronic monitors, and physician permission to participate. OUTCOME MEASURES: Medication compliance rates and patterns by patient self-report, physician estimates, pill count, and electronic monitoring of pill vial opening. RESULTS: Despite moderately complex regimens (5.4 +/- 0.5 pills daily; range 1-11), most subjects took most medications according to the prescription: median intervals between pill vial openings were 1.00, 0.50, and 0.43 days for once, twice, and three times daily dosing, respectively. **Medication-taking gaps of > or = 2 times the prescribed interdosing interval occurred for 48% of the patients. Patients' dosing patterns often produced "uncovered" intervals (mean duration 3.7 days, range 0- 25) with doubtful pharmacologic effectiveness. These lapses were underestimated by patients and poorly perceived by their treating physicians, despite familiarity with their care. Baseline sociodemographic, psychosocial, medical system, or clinical characteristics did not predict the patterns or degrees of medication noncompliance**. CONCLUSIONS: **Major treatment gaps occur frequently, even in carefully selected ambulatory populations, and generally escape**

**detection. The compliance patterns and gaps may contribute to reported excesses of cardiovascular morbidity and mortality.**

Steiner, J. F. and A. V. Prochazka (1997). "The assessment of refill compliance using pharmacy records: methods, validity, and applications." J Clin Epidemiol **50**(1): 105-16.

The refill records of computerized pharmacy systems are used increasingly as a source of compliance information. We reviewed the English-language literature to develop a typology of methods for assessing refill compliance (RC), to describe the epidemiology of compliance in obtaining medications, to identify studies that attempted to validate RC measures, to describe clinical features that predicted RC, and to describe the uses of RC measures in epidemiologic and health services research. In most of the 41 studies reviewed, patients obtained less medication than prescribed; gaps in treatment were common. Of the studies that assessed the validity of RC measures, most found significant associations between RC and other compliance measures, as well as measures of drug presence (e.g., serum drug levels) or physiologic drug effects. Refill compliance was generally not correlated with demographic characteristics of study populations, was higher among drugs with fewer daily doses, and was inconsistently associated with the total number of drugs prescribed. **We conclude that, though some methodologic problems require further study, RC measures can be a useful source of compliance information in population-based studies when direct measurement of medication consumption is not feasible.**

## Measuring Health Status

Ware, J.E. and Sherbourne, C.D., The MOS 36-item short-form health survey (SF-36): Conceptual framework and item selection. Medical Care, 1992. **30**: p. 473-483. A 36 item sort-form (SF-36) was constructed to survey health status in the Medical Outcomes Study. **The SF-36 was designed for use in clinical practice and research, health policy evaluations and general population surveys. TheSF-36 includes one multi-item scale that assesses eight health concepts:** 1) limitations in physical activities because of health problems; 2) limitations in social activities because of physical or emotional problems; 3) limitations in social activities because of physical health problems; 4) bodily pain; 5) general mental health (psychological distress and well-being); 6) limitations in usual role activities because of emotional problems; 7) vitality (energy and fatigue); and 8) general health perceptions. The survey was constructed for self-administration by persons 14 years of age and older, and for administration by a trained interviewer in person or by telephone. The history of the development of the SF-36, the origin of specific items and the logic underlying their selection are summarized. The content and features of the SF 36 are compared with the 20 item Medical Outcomes Study short-form.

## Beliefs, Self-Efficacy and Adherence

Benson, H. and R. Friedman (1996). "Harnessing the Power of the Placebo Effect" Annu Rev Med **47**: 193-9.

The placebo effect yields beneficial clinical results in 60-90% of diseases that include angina pectoris, bronchial asthma, herpes simplex, and duodenal ulcer. Three components bring forth the placebo effect: **(a) positive beliefs and expectations on the part of the patient; (b) positive beliefs and expectations on the part of the physician or health care professional; and (c) a good relationship between the two parties.** Because of the heavily negative connotations of the very words "placebo effect, " the term should be replaced by "remembered wellness." Remembered wellness has been one of medicine's most potent assets and it should not be belittled or ridiculed. Unlike most other treatments, it is safe and inexpensive and has withstood the test of time.

Brown, S. A. and L. V. Hedges (1994). "Predicting metabolic control in diabetes: a pilot study using meta- analysis to estimate a linear model." Nurs Res **43**(6): 362-8.

The purpose of this pilot study was to determine the feasibility of using data from replicated descriptive studies to test a four- variable model designed to explain metabolic control in diabetes. Predictors of metabolic control selected for this analysis were knowledge; health beliefs (and the subscales of barriers, commitment, cues, expectancies, impact on lifestyle, support, and susceptibility); and compliance/adherence. A total of 17 studies, published between 1982 and 1991, were located that met inclusion criteria. Findings indicated that **health beliefs have direct and indirect effects on diabetes metabolic control,** depending on the individual health belief subscale analyzed. For example, commitment to the benefits of therapy was found to have a statistically significant direct effect on metabolic control; barriers had a statistically significant indirect effect through compliance. The effects of knowledge were consistent throughout the five path models explored. An inverse direct effect was noted on metabolic control and a positive indirect effect was noted on metabolic control through compliance.

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Glasgow, R. e. a. (1997). "Personal-Model Beliefs and Social-Environmental Barriers Related To Diabetes Self Management." Diabetes Care **20**(4): 556-61.
Objective: The specific aims of the present study were to report on the level of personal beliefs and social and environmental barriers across different regimen areas and patient subgroups and on the relationship of personal models and perceived barriers to the level of self management.
Conclusions: Both **the personal-model and barriers scales had good internal consistency and predicted variance in each of the self-management variables after controlling for demographic and medical history factors**. These brief self-report personal-model scales demonstrated good internal reliability and were as predictive of self management as the lengthier interview-based measures in previous studies. The assessment of the treatment effectiveness component of personal models may be sufficient for most clinical purposes

Grembowski, D., D. Patrick, et al. (1993). "Self-efficacy and health behavior among older adults." J Health Soc Behav **34**(2): 89-104.

**Self-efficacy has a well-established, beneficial effect on health behavior and health status in young and middle-aged adults, but little is known about these relationships in older populations**. We examined this issue as part of a randomized trial to determine the cost savings and changes in health-related quality of life associated with the provision and reimbursement of a preventive services package to 2,524 Medicare beneficiaries enrolled in Group Health Cooperative of Puget Sound. Baseline self-efficacy data were collected for all participants in five behavioral areas: exercise, dietary fat intake, weight control, alcohol intake, and smoking. Results reveal that efficacy and outcome expectations for these health behaviors are not independent. Correlational and factor analyses indicate two dimensions of efficacy expectations, one consisting of exercise, dietary fat, and weight control, and another consisting of smoking and alcohol consumption. Outcome expectations of the five behaviors form a single dimension**. Older adults with high self-efficacy had lower health risk in all behaviors and better**

**health.** Regression analyses detected a positive association between socioeconomic status and health-related quality of life (p < .02), but the strength of the association declined (p < .11) after the self-efficacy measures entered the model, indicating that self-efficacy explains part of the association between socioeconomic status and health status. **Interventions aimed at improving self-efficacy also may improve health status.**

Peck, C. and G. Coleman (1991). "Implications of placebo theory for clinical research and practice in pain management." Theor Med **12**(3): 247-70.

We review three possible theoretical mechanisms for the placebo effect: conditioning, expectancy and endogenous opiates and consider the implications of the first two for clinical research and practice in the area of pain management. Methodological issues in the use of placebos as controls are discussed and include subtractive versus additive expectancy effects, no treatment controls, active placebo controls, the balanced placebo design, between- versus within-group designs, triple blind methodology and the double expectancy design. Therapeutically, the possibility of shaping negative placebo responses through placebo sag, overservicing and the use of placebos on their own are explored. Suggestions for using conditioned placebos strategically in conjunction with nonplacebos are made and ways of maximizing the placebo component of nonplacebo treatments are examined. **Finally, the importance of investigating the placebo effect in its own right is advocated in order to better understand the long- neglected psychological aspects of the therapeutic transaction.**

Roberts, A. (1995). "The Powerful Placebo Revisited: Magnitude of Nonspecific Effects." Mind/Body Medicine **1**(1): 35-43.

Patients improve after treatment because of specific effecs, placebo effects, or a combination of the two. **Although it is commonly understood that placebo effects account for approximately 33 percent of treatment effectiveness, revence reviews and stdies indicate that placebo effects in clinical situations may be as high as 70 percent when both docotrs and patients believe that a treatment will be efficacious.** Some of the implications for clinical practice are discussed.

Rosenstock, I. M. (1985). "Understanding and enhancing patient compliance with diabetic regimens." Diabetes Care **8**(6): 610-6.

Behavioral research on patient compliance with regimens to manage diabetes has suffered from lack of conceptual rigor, although a handful of recent studies and reviews are more theoretically oriented. The present review proposes a comprehensive conceptual framework in the context of learning theory to explain patient compliance and to derive approaches for enhancing compliance. The conceptual framework is the health belief model (HBM) expanded to include the concept of perceived self-efficacy. This expanded model may both serve as an agenda for future research as well as a set of guidelines for the education of patients with diabetes. **A variety of educational interventions is recommended for use in patient education provided they succeed in reinforcing relevant health beliefs, behavioral skills, and the sense of self-efficacy.** The problem of long-term maintenance, of particular significance in chronic disease management, is addressed by the relapse prevention model derived from social learning theory and emphasizing self-efficacy and the learning of coping skills.

## Readiness to Change

Laforge, R. G., G. W. Greene, et al. (1994). "Psychosocial factors influencing low fruit and vegetable consumption." J Behav Med **17**(4): 361-74.

A major national health campaign has recently been initiated to promote consumption of 5 or more servings of fruits and vegetables each day. This paper investigates psychosocial factors related to fruit and vegetable consumption to understand better who might be receptive and who might resist the national 5-A-Day campaign. We studied 405 adult respondents to a random-digit dial telephone survey. Applying the Transtheoretical Model, respondents were classified by stage of readiness to adopt the practice of eating 5 or more fruits and vegetables each day. Logistic regression models were developed for persons consuming 2 or fewer servings daily and for persons in the Precontemplation stage. Education was directly related to fruit and vegetable intake and indirectly related to being in the Precontemplation stage. Males were twice as likely as females to be in the Precontemplation stage and eat fewer than 2 servings a day. Of special interest, respondents with children at home were at greater risk of eating 2 or fewer servings a day than those without children at home (OR = 1.63; 95% CI, 1.06-2.52). **These results imply that stage of readiness to change should be considered as well as other factors in planning interventions for increasing fruit and vegetable consumption.**

Prochaska, J. O. (1994). "Strong and weak principles for progressing from precontemplation to action on the basis of twelve problem behaviors." Health Psychol **13**(1): 47-51.

Two principles for progressing from the precontemplation stage of change to the action stage were discovered. **The strong principle states that progression from precontemplation to action is a function of approximately a 1 standard deviation increase in the pros of a health behavior change. The weak principle states that progression from precontemplation to action is a function of approximately a 1/2 standard deviation decrease in the cons of a health behavior change.** In Study 1, these principles were derived from cross-sectional data on 12 problem behaviors relating the pros and cons of changing to the stages of change. In Study 2, these principles were validated on cross- sectional data from an independent sample of 1,466 smokers. Discussion focuses on the implications of these principles for individual psychology and public health policy.

Prochaska, J. O., C. A. Redding, et al. (1994). "The transtheoretical model of change and HIV prevention: a review." Health Educ Q **21**(4): 471-86.

**The transtheoretical model of health behavior change is described and supporting empirical work is presented that reviews the central constructs of the model: the stages of change, processes of change, decisional balance,** confidence, and temptation. Model-based applications to a broad range of problem behaviors are summarized. **Applications to human immunodeficiency virus (HIV) prevention behavior changes** are highlighted for each variable. Finally, several questions about the area of sexual behavior change to reduce risk of HIV exposure are explored and future research ideas are described within the context of this model.

Smith, P. S., A. Reiche, et al. (1993). "Stages of change on the way to using condoms and talking about sensitive issues in HIV-infected adolescents and men with hemophilia." Int Conf AIDS **9**(2): 791 (abstract no. PO-D02-3441).

**Individuals typically go through characteristic stages in changing to a desired behavior. This has been shown in particular by Procheska in smoking cessation programs, in which individuals pass through defined behavior and attitudinal phases. In the precontemplation stage (PC) a person isn't even considering changing a behavior, in contemplation (C) there is an intention to do so, which in ready-for-action (RA) is imminent. During action (A) the change has taken place and in maintenance (M) the desired change has lasted a specified time, generally 6 months or more. Interventions to change behavior are more likely to succeed if promoting this transition through training is informed by, and adapted to, the current stage.** Consistently using a condom (SOCCNDM), to prevent HIV infection is an indispensable outcome in young men with hemophilia while ways to get there such as by discussing safer sex (SOCTALK), and revealing their serostatus (SOCTELL), is desirable. Interventions to change behaviors in order to prevent HIV transmission must above all be tailored to move those who are not yet practicing safer sex to do so. Improving communication skills to ease discussing delicate issues is desirable, but not necessarily linked to practicing safer sex.

**Suggested Books:**

Benson, H (1996) <u>Timeless Healing: The Power and Biology of Belief</u> New York: Scribner

Capra, F. (1996) <u>The Turning Point</u> New York: Wiley

Dossey, L (1993) <u>Healing Words: The Power of Prayer and the Practice of Medicine</u> San Franciso: Harper

Goleman, D. and J Gurin (1993) <u>Mind-Body Medicine: How to Use Your Mind for Better Health</u> Yonkers, NY: Consumer Report Books

## Social Support

Bruce, M. L. and R. A. Hoff (1994). "Social and physical health risk factors for first-onset major depressive disorder in a community sample." <u>Soc Psychiatry Psychiatr Epidemiol</u> **29**(4): 165-71.

Using prospective data on 3,170 respondents aged 18 years and over who were at risk for a first-onset major depression from the New Haven site of the Epidemiologic Catchment Area (ECA) study, these analyses assessed the effects of social status, physical health status, and social isolation on first-onset depression in a 1-year period, controlling for demographic characteristics and baseline psychiatric factors. Among the assessed potential risk factors, poverty status [odds ratio (OR = 2.034, $P < 0.05$)] and confinement to a bed or chair (OR = 4.015, $P < 0.05$) were independently associated with an increased risk for a first-onset depressive episode when controlling for gender, age, past history of substance abuse, and subclinical depressive symptoms. The effects of poverty, and to a lesser degree homebound status, were substantially reduced when controlling for degree of isolation from friends and family, suggesting that **social isolation mediates some of the relationships between social and physical statuses and major depression.**

Callaghan, P. and J. Morrissey (1993). "Social support and health: a review." J Adv Nurs **18**(2): 203-10.

**This paper addresses the importance of social support to health, drawing upon relevant literature from medical, psychological and social research.** Conceptual and methodological problems are addressed and two major theories ('buffer' and 'attachment') are evaluated for their relevance in explaining the nature, purpose and function of social support. Finally, possible directions for future research in this field are outlined.

Carrington, P., G. H. Collings, Jr., et al. (1980). "The use of meditation--relaxation techniques for the management of stress in a working population." J Occup Med **22**(4): 221-31.

The efficacy of meditation-relaxation techniques has been widely researched in the laboratory, but their effectiveness for management of stress in organizational settings is still relatively unexplored. The present study compared relaxation and control conditions as part of a program of stress-reduction in industry. A total of 154 New York Telephone employees self-selected for stress learned one of three techniques--clinically standardized meditation (CSM), respiratory one method meditation (ROM) or progressive relaxation (PMR)--or served as waiting list controls. At 5.5 months, the treatment groups showed clinical improvement in self-reported symptoms of stress, but only the meditation groups (not the PMR group) showed significantly more symptom reduction than the controls. The meditation groups had a 78% compliance rate at 5.5 months with treatment effect seen whether subjects practiced their techniques frequently or occasionally. **The safe and inexpensive semi-automated meditation training has considerable value for stress-management programs in organizational settings.**

Glass, TA, Leon CM, Marottoli, RA and Berkman, LF Population based study of social and productive activities as predictors of survival among elderly Americans British Medical Journal 1999;319:478-483 ( 21 August)

*Objectives*: To examine any association between social, productive, and physical activity and 13 year survival in older people.
*Design*: Prospective cohort study with annual mortality follow up. Activity and other measures were assessed by structured interviews at baseline in the participants' homes. Proportional hazards models were used to model survival from time of initial interview.
*Setting*: City of New Haven, Connecticut, United States.
*Participants*: 2761 men and women from a random population sample of 2812 people aged 65 and older.
*Main outcome measure:* Mortality from all causes during 13 years of follow up.
*Results:* All three types of activity were independently associated with survival after age, sex, race/ethnicity, marital status, income, body mass index, smoking, functional disability, and history of cancer, diabetes, stroke, and myocardial infarction were controlled for.
*Conclusions:* **Social and productive activities that involve little or no enhancement of fitness lower the risk of all cause mortality as much as fitness activities do**. This suggests that in addition to increased cardiopulmonary fitness, activity may confer survival benefits through psychosocial pathways. Social and productive activities that require less physical exertion may complement exercise programmes and may constitute alternative interventions for frail elderly people

House, J. S., K. R. Landis, et al. (1988). "Social relationships and health." Science **241**(4865): 540-5.

Recent scientific work has established both a theoretical basis and strong empirical evidence for a causal impact of social relationships on health. Prospective studies, which control for baseline health status, consistently show increased risk of death among persons with a low quantity, and sometimes low quality, of social relationships. Experimental and quasi-experimental studies of humans and animals also suggest that social isolation is a major risk factor for mortality from widely varying causes. Isolation is as significant to mortality rates as somoking, high blood pressure, high cholesterol and lack of physical exercise. **Smoking increases mortality risk by a factor of just 1.6, while social isolation does so by a factor of 2.0, making it a greater health risk**. The mechanisms through which social relationships affect health and the factors that promote or inhibit the development and maintenance of social relationships remain to be explored.

Kaplan, G. A., T. W. Wilson, et al. (1994). "Social functioning and overall mortality: prospective evidence from the Kuopio Ischemic Heart Disease Risk Factor Study." Epidemiology **5**(5): 495-500.

We studied the associations between 11 scales of social functioning and risk of death over an average follow-up time of 71 months in 42- to 60- year-old men in the Kuopio Ischemic Heart Disease Risk Factor Study. **In age-adjusted analyses, men were at increased risk of death if they reported few persons to whom they gave or received social support, nonparticipation in organizations, low quality of social relationships, a small number of friends, or not currently being married**. Frequency of interaction, shyness, and use of emotional support when troubled were not associated with risk of death; the use of instrumental support when troubled was associated with increased risk. There was little evidence of confounding of these associations by the presence of 31 chronic or acute conditions, perceived health status, or six risk factors. Consistent associations were found in a healthy subgroup. **These data add to the growing body of literature linking mortality risk with social functioning, especially in relation to organizational participation and quality of relationships.**

Matthews, D. M., MD Larson DB, Koenig, HG; Swyers, JP Milano, MG (1998). "Religious Commitment and Health Status." Arch Fam Med **7**(Mar/Apr): 118-24.

The empirical literature form epidemiological and clinical studies regarding the relationship between religious factors (e.g., frequency of religious attendance, private religious involvement, and relying on one's religious beliefs as a source of strength and coping) and physical and mental health status in the areas of prevention, coping and recovery was reviewed. Empirical studies from the published literature that contained at least 1 measure of subjects' religious commitment and at least 1 measure of their physical or mental health status were used. In particular, studies that examined the role of religious commitment or religious involvement in the prevention of illness, coping with illnesses that have already arisen, and recovery from illness were highlighted**. A large proportion of published empirical data suggest that religious commitment may play a beneficial role in preventing mental and physical illness, and facilitating recovery from illness**. However, much still remains to be investigated with improved studies that are specially designed to investigate the connection between religious involvement and health status**. Nevertheless, the available data suggest that practitioners who make several small changes in how patients' religious commitments are broached in clinical practice may enhance health care outcomes.**

Olsen, O. (1993). "Impact of social network on cardiovascular mortality in middle aged Danish men." J Epidemiol Community Health **47**(3): 176-80.

STUDY OBJECTIVE--To estimate quantitatively (the aetiological fraction) the impact of poor social network on premature death from cardiovascular disease in middle aged, white men. DESIGN--The causality of the relationship has already been discussed in a large review, and it is assumed to be well documented. The numerical estimation of the impact was based on a review of all published cohort studies on the relationship between social network and mortality in white, middle aged men. RESULTS--The studies reviewed are all of high epidemiological quality and present a consistent and stable dose-response pattern. The aetiological fraction was estimated to be 30%, with a plausible range of 20-40%. CONCLUSIONS--**Social network was an important, independent, risk factor for cardiovascular disease in white, middle aged men. It had a strong impact on mortality, comparable to that of traditional risk factors. Social network should have a more central role in future epidemiological research into cardiovascular disease. The factors that result in a strong social network should be identified and strategies applicable in preventive work should be developed.**

Sugisawa, H., J. Liang, et al. (1994). "Social networks, social support, and mortality among older people in Japan." J Gerontol **49**(1): S3-13.

This study examined the effects of social networks and social support on the mortality of a national probability sample of 2,200 elderly Japanese persons during a three-year period. The direct and indirect effects of social relationships were assessed by using hazard rate models in conjunction with ordinary least squares regressions. **Among the five measures of social relationships, social participation is shown to have a strong impact on mortality, and this effect remains statistically significant when other factors are considered**. Social participation, social support, and feelings of loneliness are found to have indirect effects on the mortality of the Japanese elders through their linkages with chronic diseases, functional status, and self-rated health. On the other hand, marital status and social contacts are not shown to have statistically significant effects on the risk of dying, either directly or indirectly.

Uchino, B. N. and T. S. Garvey (1997). "The availability of social support reduces cardiovascular reactivity to acute psychological stress." J Behav Med **20**(1): 15-27.

The influence of the availability of social support on cardiovascular reactivity to acute psychological stress was examined. Twenty-eight men and twenty-one women performed a speech task either in a support availability or no support availability condition while measures of systolic blood pressure (SBP), diastolic blood pressure (DBP), and heart rate (HR) were assessed. Consistent with past research, the speech stressor was associated with significant increases in SBP, DBP, and HR. More important**, the availability of social support moderated cardiovascular reactivity to the acute stressor: individuals in the support availability condition were characterized by lower SBP and DBP reactivity to the acute stressor compared to individuals in the no support availability condition. These data suggest that simply having potential access to support is sufficient to foster adaptation to stress in the absence of enacted support.**

## Beliefs and Placebos

Benson, H. and R. Friedman (1996). "Harnessing the power of the placebo effect and renaming it "remembered wellness"." Annu Rev Med **47**: 193-9.

The placebo effect yields beneficial clinical results in 60-90% of diseases that include angina pectoris, bronchial asthma, herpes simplex, and duodenal ulcer**. Three components bring forth the placebo effect: (a) positive beliefs and expectations on the part of the patient; (b) positive beliefs and expectations on the part of the physician or health care professional; and (c) a good relationship between the two parties.** Because of the heavily negative connotations of the very words "placebo effect, " the term should be replaced by "remembered wellness**." Remembered wellness has been one of medicine's most potent assets and it should not be belittled or ridiculed. Unlike most other treatments, it is safe and inexpensive and has withstood the test of time.**

Turner, J. A., R. A. Deyo, et al. (1994). "The importance of placebo effects in pain treatment and research [see comments]." Jama **271**(20): 1609-14.

OBJECTIVE. To estimate the importance and implications of placebo effects in pain treatment and research from the existing literature, with emphasis on their magnitude and duration, the conditions influencing them, and proposed explanations. DATA SOURCES. English- language articles and books identified through MEDLINE (1980 through 1993) and PsycLIT (1967 through 1993) database searching, bibliography review, and expert consultation. STUDY SELECTION. Articles were included if they pertained to the review objectives. RESULTS. **Placebo response rates vary greatly and are frequently much higher than the often-cited one third. Placebos have time-effect curves, and peak, cumulative, and carryover effects similar to those of active medications.** As with medication, surgery can produce substantial placebo effects, and this possibility is commonly overlooked in case series reports on back surgery. Individuals are not consistent in their placebo responses, and a placebo-responder personality has not been identified. Models advanced to explain placebo effects emphasize the role of anxiety, expectations, and learning. CONCLUSIONS. Placebo effects influence patient outcomes after any treatment, including surgery, that the clinician and patient believe is effective. Placebo effects plus disease natural history and regression to the mean can result in high rates of good outcomes, which may be misattributed to specific treatment effects. The true causes of improvements in pain after treatment remain unknown in the absence of independently evaluated randomized controlled trials.

Roberts, A. (1995). "The Powerful Placebo Revisited: Magnitude of Nonspecific Effects." Mind/Body Medicine **1**(1): 35-43.

Patients improve after treatment because of specific effects, placebo effects, or a combination of the two**. Although it is commonly understood that placebo effects account for approximately 33 percent of treatment effectiveness, recent reviews and studies indicate that placebo effects in clinical situations may be as high as 70 percent when both doctors and patients believe that a treatment will be efficacious**. Some of the implications for clinical practice are discussed.

## Prayer and Spiritual Care

Harmon, R. L. and M. A. Myers (1999). "Prayer and meditation as medical therapies." Phys Med Rehabil Clin N Am **10**(3): 651-62.

**Prayer and meditation have been used as health-enhancing techniques for centuries. Their use has been investigated more recently in the context of more conventional, allopathic medical approaches. These studies, despite methodological limitations, show some promise for the formal application and integration of these techniques into western medical practice. Some potential benefits from meditation include reduced perceived stress and improvement in mild hypertension. Prayer appears to offer subjective benefit to those who pray; the effects of intercessory prayer on the health status of unknowing individuals requires more investigation.**

Matthews, D. M., MD Larson DB, Koenig, HG; Swyers, JP Milano, MG (1998). "Religious Commitment and Health Status." Arch Fam Med **7**(Mar/Apr): 118-24.

The empirical literature form epidemiological and clinical studies regarding the relationship between religious factors (e.g., frequency of religious attendance, private religious involvement, and relying on one's religious beliefs as a source of strength and coping) and physicial and mental health status in the areas of prevention, coping and recovery was reviewed. Empirical studies from the published literature that contained at least 1 measure of subjects' religious commitment and at least 1 measure of their physical or mental health status were used. In particular, studies that examined the role of religious commitment or religious involvement in the prevention of illness, coping with illnesses that have already arisen, and recovery from illness were highlighted. **A large proportion of published empirical data suggest that religious commitment may play a beneficial role in preventing mental and physical illness, and facilitating recovery from illness. However, much still remains to be investigated** with improved studies that are specially designed to investigate the connection between religious involvment and health status. Nevertheless, the **available data suggest that practitioners who make several small changes in how patients' religious commitments are broached in clinical practice may enhance helath care outcomes.**

Larimore, WL (2001) "Providing Basic Spiritual Care for Patients: Should It Be the Exclusive Domain of Pastoral Professionals?" American Family Physician, 63 (1) 36-40

**A survey of 296 family physicians at a 1996 meeting of the American Academy of Family Physicians (AAFP) revealed that 99 percent believe that religious beliefs can heal, and 75 percent believe that others' prayers can promote healing**. Another survey of family physicians in Missouri reported that "**Most family physicians believed spiritual well-being is an important factor in health. Despite this belief, however, most reported infrequent discussions of spiritual issues with patients** and infrequent referrals of hospitalized patients to chaplains."(n2) Why? A lack of training seemed to be the common refrain.

Greasley P; Chiu LF; Gartland M (2001)The concept of spiritual care in mental health nursing. J Adv Nurs, 2001 Mar; Vol. 33 (5), pp. 629-37.

In this paper we aim to clarify the issue of spiritual care in the context of mental health nursing. BACKGROUND: The concept of spirituality in nursing has received a great deal of attention in recent years. However, despite many articles addressed to the issue, spiritual are remains poorly understood amongst nursing professionals and, as a result, spiritual needs are often neglected within the context of health care. METHODS: A series of focus groups was conducted to obtain the views of service users, carers and mental health nursing professionals about the concept of spirituality and the provision of spiritual care in mental health nursing. RESULTS: According to the views expressed in our focus groups**, spiritual care relates to the acknowledgement of a person's sense of meaning and purpose to life which may, or may not, be expressed through formal religious beliefs and practices. The concept of spiritual care was also associated with the quality** of interpersonal care in terms of the expression of love and compassion towards patients. Concerns were expressed that the ethos of mental health nursing and the atmosphere of care provision were becoming less personal, with increasing emphasis on the 'mechanics of nursing'. CONCLUSIONS: **The perceived failure of service providers to attend adequately to this component of care may be symptomatic of a medical culture in which the more readily observable and measurable elements in care practice have assumed a prominence over the more subjective, deeply personal components. In order for staff to acknowledge these issues it is argued that a more holistic approach to care should be adopted, which would entail multidisciplinary education in spiritual care.**

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**Relationship of Stress and Illness**

Castillo-Richmond, A., R. H. Schneider, et al. (2000). "Effects of stress reduction on carotid atherosclerosis in hypertensive african americans [In Process Citation]." Stroke **31**(3): 568-73.

Background and Purpose-African Americans suffer disproportionately higher cardiovascular disease mortality rates than do whites. Psychosocial stress influences the development and progression of atherosclerosis. Carotid intima-media thickness (IMT) is a valid surrogate measure for coronary atherosclerosis, is a predictor of coronary outcomes and stroke, and is associated with psychosocial stress factors. Stress reduction with the Transcendental Meditation (TM) program decreases coronary heart disease risk factors and cardiovascular mortality in African Americans. B-mode ultrasound is useful for the noninvasive evaluation of carotid atherosclerosis. Methods-This randomized controlled clinical trial evaluated the effects of the TM program on carotid IMT in hypertensive African American men and women, aged >20 years, over a 6- to 9-month period. From the initially enrolled 138 volunteers, 60 subjects completed pretest and posttest carotid IMT data. The assigned interventions were either the TM program or a health education group. By use of B-mode ultrasound, mean maximum IMT from 6 carotid segments was used to determine pretest and posttest IMT values. Regression analysis and ANCOVA were performed. Results-Age and pretest IMT were found to be predictors of posttest IMT values and were used as covariates. The TM group showed a significant decrease of -0.098 mm (95% CI -0. 198 to 0.003 mm) compared with an increase of 0.054 mm (95% CI -0.05 to 0.158 mm) in the control group (P=0.038, 2-tailed). Conclusions-**Stress reduction with the TM program is associated with reduced carotid atherosclerosis compared with health education in hypertensive African Americans.** Further research with this stress-reduction technique is warranted to confirm these preliminary findings.

Herbert, T. B. and S. Cohen (1993). "Stress and immunity in humans: a meta-analytic review." Psychosom Med **55**(4): 364-79.

This article presents a meta-analysis of the literature on stress and immunity in humans. The primary analyses include all relevant studies irrespective of the measure or manipulation of stress. **The results of these analyses show substantial evidence for a relation between stress and decreases in functional immune measures (proliferative response to mitogens and natural killer cell activity). Stress is also related to numbers and percent of circulating white blood cells, immunoglobulin levels, and antibody titers to herpesviruses. Subsequent analyses suggest that objective stressful events are related to larger immune changes than subjective self-reports of stress, that immune response varies with stressor duration, and that interpersonal events are related to different immune outcomes than nonsocial events**. We discuss the way neuroendocrine mechanisms and health practices might explain immune alteration following stress, and outline issues that need to be investigated in this area.

Olff, M. (1999). "Stress, depression and immunity: the role of defense and coping styles [comment]." Psychiatry Res **85**(1): 7-15.

**It is by now widely recognized that acute and chronic stress have an impact on the immune system. Acute stress may have a stimulating effect on the immune system, while in the case of chronic stress--and in particular in depression--the immune system may be down-regulated**. However, there is considerable individual variability in the immune response to stress. This seems to a large extent to be determined by the subject's way of dealing with stress. The perception and evaluation of a stressor and the specific ways of stress coping may in different ways be related to various aspects of the stress response: sympathetic nervous system (SNS) activation and activation of the hypothalamic- pituitary-adrenal (HPA) axis, both systems affecting the immune system. Prolonged exposure to stressors or to severe life stresses may outweigh the person's coping resources leading to feelings of depression. The affective changes with the accompanying changes in the HPA axis are one of the hypothesized mechanisms underlying the immune changes in depression. It should be noted that the relationship between depression and immunity is affected by several other factors, such as gender and age and other personal resources. **Increasing the subject's abilities to cope with stress and to reduce the negative affect by psychological interventions may on the other hand have a beneficial effect on the immune system**.

Shapiro, S. L., G. E. Schwartz, et al. (1998). "Effects of mindfulness-based stress reduction on medical and premedical students." J Behav Med **21**(6): 581-99.

The inability to cope successfully with the enormous stress of medical education may lead to a cascade of consequences at both a personal and professional level. The present study examined the short-term effects of an 8-week meditation-based stress reduction intervention on premedical and medical students using a well-controlled statistical design. **Findings indicate that participation in the intervention can effectively (1) reduce self-reported state and trait anxiety, (2) reduce reports of overall psychological distress including depression, (3) increase scores on overall empathy levels, and (4) increase scores on a measure of spiritual experiences assessed at termination of intervention. These results (5) replicated in the wait-list control group, (6) held across different experiments, and (7) were observed during the exam period**. Future research should address potential long- term effects of mindfulness training for medical and premedical students.

Solberg, E. E., R. Halvorsen, et al. (1995). "Meditation: a modulator of the immune response to physical stress? A brief report." Br J Sports Med **29**(4): 255-7.

OBJECTIVE: To test the hypothesis that stress reducing techniques such as meditation alter immune responses after strenous physical stress. METHODS: The hypothesis was tested by studying six meditating and six non-meditating male runners in a concurrent, controlled design. After a period of six months with meditation for the experimental group, blood samples were taken immediately before and after a maximum oxygen uptake test (VO2max). RESULTS: The increase in CD8+ T cells after VO2max was significantly less in the meditation group than in the control group (P = 0.04). The amount of CD2+ cells doubled after VO2max, mainly because of a rise in the CD8+ fraction. CONCLUSIONS: **Meditation may modify the suppressive influence of strenous physical stress on the immune system**.

## Efftiveness of Stress Management and Behavioral Interventions

Devine, E. C. (1992). "Effects of psychoeducational care for adult surgical patients: a meta- analysis of 191 studies." Patient Educ Couns **19**(2): 129-42.

A quantitative review of the literature (meta-analysis) was conducted with 191 studies of the effects of psychoeducational care on the recovery, postsurgical pain and psychological distress of adult surgical patients. Studies issued between 1963 and 1989 were included in the review. **Statistically reliable, small to moderate sized beneficial effects were found on recovery, postoperative pain and psychological distress.** In further analyses it was shown that these beneficial effects were not an artifact of the biases associated with the decision whether to publish a paper, low internal validity, measurement subjectivity, or a Hawthorne effect. The overall efficacy of psychoeducational care provided to adult surgical patients has been reconfirmed with this larger sample of studies. It is particularly noteworthy that these findings are of more than strictly historical interest. Despite changes in health care delivery, beneficial effects continue even in studies issued between 1985 and 1989. Implications for clinical practice are drawn.

Rood, Y. R., M. Bogaards, et al. (1993). "The effects of stress and relaxation on the in vitro immune response in man: a meta-analytic study." J Behav Med **16**(2): 163-81.

**The purpose of the present meta-analytic study was to combine and integrate the results of stress and relaxation studies for their reported changes in the in vitro immune response**. Twenty-four stress studies and 10 relaxation studies with a (quasi)-experimental design with pre- and postintervention measurements were selected. Twenty immunological variables tested in stress studies and five immunological variables tested in relaxation studies could be further analyzed. **The meta-analysis of the results of the stress studies indicated that the observed changes in interleukin-2 receptor expression on lymphocytes and antibody titers against Epstein Barr virus (EBV) were consistent for the direction of change and globally significant**, whereas the observed changes in percentage of natural killer (NK) cells, salivary immunoglobulin A (sIgA) concentration, and antibody titers against Herpes simplex virus (HSV) were not consistent and not significant. **Analysis of the results of the relaxation studies indicated that the observed changes in sIgA concentration were consistent for direction of change and significant,** the results for white blood cell count were consistent but not significant, and the results for percentage of monocytes were neither consistent nor significant.

Saunders, T., J. E. Driskell, et al. (1996). "The effect of stress inoculation training on anxiety and performance." J Occup Health Psychol **1**(2): 170-86.

Stress inoculation training is an intervention that has shown considerable promise; however, many questions arise regarding the application of this clinically based approach to more applied workplace settings. A meta-analysis was conducted to determine the overall effectiveness of stress inoculation training and to identify conditions that may moderate the effectiveness of this approach. The analysis was based on a total of 37 studies with 70 separate hypothesis tests, representing the behavior of 1,837 participants**. Results indicated that stress inoculation training was an effective means for reducing performance anxiety, reducing state anxiety, and enhancing performance under stress.** Furthermore, the examination of moderators such as the experience of the trainer, the type of setting in which training was implemented, and the type of trainee population revealed no significant limitations on the application of stress inoculation training to applied training environments.

Stetson, B. (1997). "Holistic health stress management program. Nursing student and client health outcomes." J Holist Nurs **15**(2): 143-57.

This descriptive study examines the application of stress management techniques by nursing students to their clients (i.e., patients, family members, friends) within a model holistic stress management nursing course. Out of 90 students, 88 completed a Client Teaching Relaxation Questionnaire during the course**. Responses indicated a decrease in clients' perceived levels of discomfort following a stress reduction intervention (paired t = 18.7, df = 84, p < .0001). The students further reported that stress management skills were applicable to clients with a wide range of diagnoses in hospitals, homes, and other community settings. Imagery (52%) was documented as the predominant strategy taught to clients. Study results suggest that with teaching time allowed for self-mastery during the course, students can successfully apply these simple to complex stress management skills to many different clients, enhancing the caring aspect for both client and student**. The course presented in this study provided students with essential foundational skills necessary to deal with client stress.

Kibby, M. Y., V. L. Tyc, et al. (1998). "Effectiveness of psychological intervention for children and adolescents with chronic medical illness: a meta-analysis." Clin Psychol Rev **18**(1): 103-17.

Outcomes from 42 studies of psychological interventions for children and adolescents with chronic medical conditions were analyzed using meta-analysis. Studies were divided into the four intervention categories suggested by LaGreca and Varni (1993), Disease Management, Emotional/Behavioral Problems, Health Promotion, and Prevention**. Results supported overall effectiveness of psychological interventions, with an effect size (ES) of 1.12, as well as maintenance of treatment gains for at least 12 months posttreatment. Psychological interventions directed at disease-related or emotional/behavioral problems were both found to be effective**, although too few studies of health promotion or disease prevention interventions were identified to be included in the analysis. Effectiveness of behavioral interventions, which were most heavily represented in the sample, demonstrated similar effects for disease management (ES = 1.20) and emotional/behavioral (ES = 1.03) problems. Although disease type, severity, and duration did not affect intervention effectiveness, some influences of patient age and gender were noted across studies. Recommendations for further intervention studies and improvements in study design are discussed.