

A detailed summary of the intellectual content of the event and its implications for the future intersection of art, design, and healthcare.

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***MAKE IT BETTER:
A SYMPOSIUM ON ART,
DESIGN, AND THE FUTURE OF HEALTHCARE.***

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SUMMARY

*With support from the Robert Wood Johnson Foundation Pioneer Portfolio, the Rhode Island School of Design hosted **Make It Better: A Symposium on Art, Design, and the Future of Healthcare** in March 2011. The symposium brought together a diverse group of artists, designers, public health leaders, healthcare providers, entrepreneurs, and innovators for two days of presentations and discourse on the intersection of art, design, and healthcare. This white paper presents an overview of the symposium, key findings, and implications. Finally, this paper proposes realistic next steps to continue interdisciplinary dialogue and promote innovative collaborations that optimize health and healthcare.*

INTRODUCTION

Background

Innovation through interdisciplinary collaborations is required to address today's complex health challenges. Novel approaches to inspire transformation must include the participation of disciplines seemingly outside the traditional health arena. This white paper describes formative work by the Rhode Island School of Design (RISD) to enhance the integration of art and design into health innovation. This white paper is intended as a catalyst for continued discussion and action in respect to this promising collaboration.

Strategy

Art and design have historically supported health and healthcare, yet this relationship is not well-understood in health research and practice. To support this potential nexus, a dedicated effort to better integrate art and design into interventions in healthcare and healthy behavior is required. In 2010, RISD was awarded a Pioneer Portfolio grant from the Robert Wood Johnson Foundation (RWJF) to explore and refine the intersection of art, design, and health. RWJF Pioneer Portfolio grants seek to transform the future of health and healthcare through exploratory projects that have the potential to significantly improve the health of all Americans.¹ With this grant, RISD proposed to host a symposium designed to connect health and healthcare experts with RISD faculty and students, and other artists and designers who are actively engaging in health issues. Goals were to 1) bring an expert external perspective to RISD to deepen understanding of the most pressing issues in health and healthcare that need new approaches; 2) introduce the full portfolio of art and design disciplines to leaders in the health and healthcare fields; 3) increase public knowledge and advance the public discussion of the legacy and the potential of art and design to improve health and healthcare; and 4) generate creative ideas and collaborations to integrate art and design into solving health problems.

Project Overview

On March 11 and 12th of 2011, the Rhode Island School of Design hosted *Make it Better: A Symposium on Art, Design, and the Future of Healthcare*. *Make It Better* provided a productive forum to renew focus on the role of art and design in health and healthcare, to explore the potential of interdisciplinary collaborations across art and science, and to brainstorm future directions to increase institutional capacity for health research and solutions at RISD.

Invited speakers and panelists included RISD faculty and students, influential artists and designers, health entrepreneurs, public health and healthcare professionals, and governmental officials. Keynote speakers included Dr. Howard Koh, Assistant Secretary for Health, U.S. Department of Health and Human Services, Ms. Donna Garland, Associate Director for Communication, Centers for Disease Control and Prevention, Mr. Mel Chin, artist, Dr. Raynard Kington, President, Grinnell College, and Dr. Sara Diamond, President, OCAD University. Additional speakers that supported the potential of *Make It Better* included RISD President John Maeda, Rhode Island Senator Sheldon Whitehouse, and Rhode Island Lieutenant Governor Elizabeth Roberts.

Presentations provided examples from research and practice demonstrating how art and design have been used to improve health through industrial design, architecture, graphic design, digital media, and the fine arts. In addition to these ‘case studies,’ presentations and discussions examined how artists and designers - inside and outside of RISD - are creatively engaging with health and wellness issues. Invited speakers and audience members brainstormed how to best

expand the role of art and design in health, while also critically evaluating the professional capacity of artists and designers to interact with health professionals.

Over one and a half days, five keynote speakers, four panel discussions, and several hundred participants generated a wealth of information and ideas to inform the future of art, design, and healthcare. This white paper summarizes the intellectual content of the event under Key Findings and presents implications and next steps under Conclusions & Implications and Future Directions. Additional information from the symposium not captured in this report is available through videos, recordings, press releases, and other commentary on the *Make It Better* website (<http://makeitbetter.risd.edu/>).

KEY FINDINGS

- **Make it better, don't just make it pretty: change preconceptions of artists and designers and reframe their role in health and healthcare innovation.**
- **Faculty and students have introduced modern health challenges into the RISD curriculum and demonstrated the benefits of art and design education to problem solving in health and healthcare.**
- **Health is more than the absence of disease, and all individuals, including consumers, healthcare providers, researchers, artists, and designers, can participate in public health.**
- **Promote health behavior change by making the healthy choice the desirable choice, not just the easy choice.**
- **The built environment can support uptake of healthy behaviors, impact health outcomes, and encourage engagement and participation.**
- **The design of interactive tools and visual communications for complex health information can extract the signal from the noise.**
- **Art inspires community-based participatory models of health activism.**
- **Interdisciplinary research collaborations between artists, designers, and health scientists promote healthcare innovation and advance research.**
- **Some evidence indicates a positive relationship between art and health outcomes; future research is needed to investigate the implications of art to health and healing.**

DETAILS ON KEY FINDINGS

- **Make it better, don't just make it pretty: change preconceptions of artists and designers and reframe their role in health and health care innovation.**

Make It Better opened with a student panel discussion, “*Start Here: RISD Students Make it Better.*” Student panelists described their experiences working on health-related projects and addressed the practical challenges of interdisciplinary collaborations. **Mr. Andy Chen**, a graduate student in Graphic Design, was the first speaker to introduce a theme that would emerge throughout the symposium: preconceptions of artists and designers, and their role in health and healthcare innovation, would need to be corrected to permit productive collaborations between disciplines.

Mr. Aidan Petrie, Co-Founder and Chief Innovation Officer of Ximedita and panel speaker for “*New Models and Opportunities for Art and Design Research,*” later endorsed Chen’s perspective with the stark remark that “it’s not about putting lipstick on the pig, it’s about the pig.”² In other words, artists and designers seek to make a system *better*, not just make it *pretty*. A strategic focus on improving the system from the ground up challenges the preconceptions that artists and designers are limited to repairing poor aesthetics or designing logos. Preconceptions may be propagated by the fact that art and design methodology is not well understood by health professionals, and the connection between health, art, and design is still unclear. *Make It Better* corrected such schemata by demonstrating how artists and designers are successfully interfacing with health professionals to share expertise as partners for better health.

Examples from *Make It Better* showed how talented students are connecting RISD academics to pressing health problems, industrial designers are providing expert research for health care companies, architects are imagining healthier built environments, and graphic designers are re-envisioning the visual display of scientific information. In this reframed role, artists and designers use their skills and training to fully participate in health problem solving, and they are involved at the onset of project planning as collaborative partners. Diffusion of these effective interdisciplinary models to the art, design, and health professions is the first step to promoting integration across disciplines.

- **Faculty and students have introduced modern health challenges into the RISD curriculum and demonstrated the benefits of art and design education to problem solving in health and healthcare.**

Five student panelists formed *Start Here: RISD Students Make it Better* and shared their academic experiences rethinking health. **Soaib Grewal**, in collaboration with Brown University students, used his Industrial Design training and systems analysis expertise to bring clean water technologies to South Asian slums.³ **Emily Sara Wilson**, working with a pharmaceutical company, used her Graphic Design training to improve health education materials to promote HIV antiretroviral adherence among resource-poor Haitian farmers. **Jessica Fanning** used her Interior Architecture training as “design for behavior change” and planned built environments to promote healthy eating by increasing access to fresh produce.³ These and other students are designing original, effective, and creative approaches to global and local health priorities within the RISD curriculum.

In and out of the classroom, RISD faculty is engaging with local communities to promote health and wellness. The “*Presentations: RISD in Collaboration*” panel provided a sample of collaborative projects among RISD faculty, students, and local healthcare professionals. **Critic Lindsay Kinkade** of the Graphic Design department taught “Making It Understandable: Visual Translation and Public Policy.”⁴ Collaborating with healthcare experts, students used their infographic design skills to make information about state healthcare reform clear and useable to the public. **Professor Susan Doyle** of the Illustration department taught “PICU 2011/Art and Design in the Local Community.”⁵ Partnering with Hasbro Children’s Hospital’s Pediatric Intensive Care Unit, Professor Doyle and students redesigned patient rooms, hallways, and treatment rooms to enhance way-finding, efficiency, and patient comfort. Finally, **Kelli Auerbach**, Visiting Assistant Professor in the English Department, and **Dr. Jay Baruch** of the Alpert Medical School of Brown University team-taught a multidisciplinary course titled “No Innocent Eye” that enrolled Brown medical and RISD students. Students participated in creative writing about art and medicine and engaged in a cross-disciplinary discourse about the meaning of health.

These applied experiences show how artists and designers concerned with health can relate their specific training to real-world health needs of local communities. Panelists summarized projects that began with clear problem statements and ended with effective solutions. These results indicate a growing institutional capacity for future health research at RISD and development of solutions based on this research.

- **Health is more than the absence of disease, and all individuals, including consumers, healthcare providers, artists, and designers, can participate in public health.**

The World Health Organization defines health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.⁶ Ecological models of health that address the personal, social, economic, and environmental determinants of health are re-emerging in public health. In his keynote address, **Dr.**

Howard Koh, Assistant Secretary for Health, US Department of Health & Human Services, described the ecological approach to health that guides Healthy People 2020, the nation’s public health plan. Recognizing that most factors affecting individual health occur outside of the health care setting, Healthy People 2020 has dedicated a new objective to developing collaborations across diverse sectors.⁷

The broad goals of Healthy People 2020 lend support to the interdisciplinary approach behind *Make It Better*. While Dr. Koh advised the audience to reconsider health as what happens outside the healthcare setting, artist and designer panel members of “*Public Practices: Artists, Designers, and Health Activism*” (**Ms. Amale Andraos, Mr. Damon Rich, Ms. Claire Pentecost, and Mr. Darrell Hammond**) extracted health from the medical model and reframed it as a complex political, cultural, and economic construct able to engage artists, designers, and community activists. In a later panel, “*Public Practices: Rethinking Health Education and Participation*,” **Ms. Alexandra Drane**, President and Co-Founder of Eliza Corporation⁸, addressed engagement in healthcare and poor adherence to prescribed health behaviors. She proposed that healthcare systems may be “missing what matters” to overall well-being; evidence-based health predictors including little occupational stress, robust interpersonal relationships, and financial security are basic and psychological needs often unaddressed in the health setting.

A key message is that a new definition of health is emerging that considers a whole-person approach to well-being. Dr. Koh described the goal of public health as helping each person reach their highest attainable standard of health.⁹ To optimize individual health, ecological approaches will require participation from diverse stakeholders outside of the medical model. *Make it Better* revealed that artists and designers are a unique group of stakeholders who intuitively perceive health from the holistic perspective. This perspective reframes health as a multifaceted human experience and stimulates new ideas to increase engagement in healthcare.

- **Promote health behavior change by making the healthy choice the desirable choice, not just the easy choice.**

Individual health behavior is an established predictor of health outcomes. To reduce the incidence of chronic disease and lower healthcare costs, health behavior change interventions are widely promoted by health professionals.¹⁰ Despite advances in health behavior change science, many individuals struggle to initiate or maintain healthy behaviors, and may live or work in environments that fail to reinforce change. To support behavior change, keynote speakers **Dr. Koh** and **Ms. Donna Garland** proposed that health professionals, artists, and designers could work together to “make the healthy choice the easy choice.”

Dr. Koh provided examples of how art and design have supported public health goals of tobacco prevention and healthy eating with new graphic warning labels for cigarette packages and visual representations of serving sizes imprinted on plates. Further, Ms. Garland offered suggestions for redesigning built environments that encourage stair climbing, walking, and healthy eating. While all these examples demonstrate practical applications of art and design to health promotion, Dr. Koh's last example of a musical staircase¹¹ introduced a different strategy: don't just make the healthy choice easy, make it fun. The musical staircase revealed how art and design can enhance strategies for health behavior change through fun, play, and creativity.

For example, **Mr. Darrell Hammond**, CEO of Kaboom!¹², and panelist on "*Public Practices: Artists, Designers, and Health Activism*," spoke about the "play deficit" among American children and linked lack of play to health outcomes. Mr. Hammond proposed the solution was not just to create access to more playgrounds, but to create better playgrounds with better programs designed to build intrinsic motivation for play. **Mr. Ben Sawyer**, co-founder of the Games for Health Project¹³ and panelist on "*Public Address: Rethinking Health Education and Participation*" specializes in the use of game technology to improve health and healthcare. Going "beyond Wii Fit," Mr. Sawyer explained how cutting-edge games - developed in collaboration with medical professionals, researchers, and game developers - are being used for health behavior change, exergaming, biofeedback, rehabilitation, emotional and cognitive health, and health education. By connecting play and fun to health, these strategies have important implications for not only engaging, but also sustaining individuals in long-term health behavior change.

- **The built environment can support uptake of healthy behaviors, impact health outcomes, and encourage engagement and participation.**

Within the past decade, there has been a renewed public health interest in the relationship between the built environment and health.¹⁴ Interventions to create built environments supportive of physical activity and other health behaviors have been promoted by the Centers for Disease Control and the World Health Organization.^{15,16} To encourage the design of healthier built environments, promising collaborations among public health, policy, architecture, and urban planning are emerging.

Connections between the built environment and health were made throughout *Make It Better* and provided a clear, research-based example of how design influences health. Public health experts, **Dr. Howard Koh, Ms. Donna Garland, and Dr. Raynard Kington**, quickly identified opportunities to modify built environments for prevention of obesity, asthma, diabetes, and heart disease through increased walkability and

proximity to healthy foods. In addition to promoting health behaviors, better built environments can also inspire public participation to improve community health. **Mr. Damon Rich**, Founder of the Center for Urban Pedagogy (CUP) and panelist on “*Public Practices: Artists, Designers, and Health Activism*,” described how CUP’s network of art and design professionals, government officials, researchers, and service providers collaborate to create teaching tools that increase public participation in city-planning and address health and housing issues specific to the contemporary urban form¹⁷. Another panelist, **Ms. Amale Andraos**, Partner at Work Architecture Company, envisioned healthier, sustainable urban infrastructures and referenced the relationship between architecture, the urban environment, and food with her work on P.F.1 (a temporary urban farm), designed for MoMA’s P.S. 1 2008 Young Architects Program.¹⁸

Built environments are modifiable to support ecological models of health, reinforce individual health behavior, and empower communities. Public health recognizes the need for design expertise to increase the long-term public health impact of built environment interventions. Designers, particularly in architecture, can advance interventions by translating their technical expertise and vision into public health practice.

- **The design of interactive tools and visual communications for complex health information can extract the signal from the noise.**

According to **Ms. Donna Garland**, 9 out of 10 Americans struggle to understand health information.¹⁹ The National Action Plan to Improve Health Literacy aims to provide everyone with access to accurate and actionable health information. Health information for consumers is often overwhelming, confusing, and inhibitive to informed healthcare decision-making. Improved information design can promote health literacy, action, and understandable science by extracting the signal from the noise.

Make It Better provided several examples of how artists and designers have collaborated with health professionals and scientists to improve the quality of information display. As mentioned previously, the RISD graphic design course, “Making It Understandable: Visual Translation and Public Policy,”⁴ (with **Critic Lindsay Kinkade**) developed consumer-driven infographics to summarize and explain complicated legislative information about healthcare reform. Infographics aimed to reduce confusion and support informed decision-making about new healthcare choices. **Ms. Pam Wescott**, Director of Patient Perspectives and Evaluation at the Foundation for Informed Medical Decision Making, explained how multimedia patient decision aids can effectively translate medical information to

complement counseling from a healthcare professional. The use of decision aids have been shown to improve healthcare decision quality in randomized clinical trials.²⁰

In addition to translating complex health information, artists and designers are collaborating with scientists to translate science to broader audiences through improved visual display of scientific findings. In her keynote address, **Dr. Sara Diamond** described her work in data visualization with The Centre for Information Visualization and Data-Driven Design,²¹ a collaborative research initiative of health scientists, artists, designers, and user groups. From developing 3D imaging of multivariate data to visualizing patient medical record information, artists and designers are helping scientists reveal key findings and meaningful patterns within increasingly large, complex data sets. Each of these information design examples demonstrates how art and design can support science and healthcare to make information actionable.

- **Art inspires community-based participatory models of health activism.**

Modern public health emphasizes community-based approaches to health promotion.²² Community-based approaches, such as the ecological model promoted by Healthy People 2020, address the complex interaction between individual health behavior and the social environment. The success of these public health strategies depends on high levels of community participation, engagement, and agency. Art may offer a fresh approach to inspiring community-based participatory models of health activism.

Make it Better offered several examples of how artists have interacted with communities to develop grassroots responses to local health priorities. **Mr. Mel Chin**, artist and keynote speaker, designed *Operation Paydirt/Fundred Dollar Bill*²³ in response to Hurricane Katrina. Artist-driven and interdisciplinary, *Operation Paydirt* advocates for the treatment of all lead-contaminated soil in New Orleans, while *Fundred* engages the community, particularly teachers and children, to symbolically raise the required \$300,000,000 by drawing and mailing Fundred Dollar Bills to local collection centers across the country. **Ms. Claire Pentecost**, artist and panelist on “*Public Practices: Artists, Designers, and Health Activism*,” focused on the health impacts of industrial agriculture and bioengineering, and advocated for “The Public Amateur”²⁴ approach to generating collective health activism amid public mistrust of experts, science, and industry. Finally, **Ms. Natalie Jeremeijenko**, artist and panelist on “*Public Address: Rethinking Health Education and Participation*,” described her Environmental Health Clinic at New York University.²⁵ Collaborating with concerned individuals who present at the clinic (“impatients”), she prescribes action strategies to creatively address their local environmental health needs. These playful and participatory prescriptions, such as the NoPark zone or

Clear Skies mask, address the relationship between society, environmental health, and technology.

Community engagement is a key factor for multilevel interventions, though engagement in public health programs can be challenging to develop and sustain. These original artist-driven approaches to community health activism have demonstrated a successful level of public participation. Examining the processes that promote participation in artist-driven community health projects may inform public health interventions challenged by low community engagement.

- **Interdisciplinary research collaborations among artists, designers, and health scientists promote healthcare innovation and advance research.**

To integrate art and design into health and healthcare, new research models need to be developed that capitalize on diverse expertise and realize the value of mixed methodological approaches. Collaborations among artists, designers, and health scientists can benefit from a strategic combination of the traditional quantitative and qualitative methods of each discipline. Ideally, interdisciplinary research collaboration can fuel discovery and health innovation.

A priority of *Make It Better* was to bring awareness to existing research collaborations. **Professor Khipra Nichols** of RISD's Industrial Design department and panelist on "*Presentations: RISD in Collaboration*," described "Toys for Rehabilitation,"²⁶ a collaborative research project among Brown University, Hasbro Children's Hospital, and RISD. Funded by the Rhode Island Research Alliance, the interdisciplinary team developed toys to support neurological rehabilitation among children. As lead designer, Professor Nichols applied his health and safety design research expertise to toy development and prototype testing. **Mr. Aidan Petrie**, an alumnus of RISD's Industrial Design program, co-founder and Chief Innovation Officer at Ximedica and panelist on "*New Models and Opportunities for Art and Design Research*," showed how design research interfaces with health research for medical device development. As an ISO-certified and FDA-registered company specializing in research and development, Ximedica uses a combination of qualitative and quantitative methods for concept testing, product strategy, optimization studies, and clinical trial design.²⁷

These and other models presented at *Make It Better* are helping to further an interdisciplinary research agenda, yet there are still barriers to integrating art and design into the scientific enterprise. In a climate of scarce resources, funding is competitive and decisions are often made based on empirical evidence. To advance the status of artists and designers in research, **Dr. Sara Diamond** advised artists and designers to demonstrate measurable outcomes, publish findings in peer-reviewed

journals, and write for competitive research grants. Trained as a health scientist, **Dr. Raynard Kington**, offered a different perspective. Dr. Kington framed important questions about the relationship between measurement and art. He questioned the capacity of current evidence-based approaches to accurately measure the effect of art and design on health, and compared “evidence-based art to impressionistic science.” The acknowledgment of inherent differences between disciplines may advance research by asking for new models rather than forcing one model to conform to another.

- **Some evidence indicates a positive relationship between art and health outcomes; future research is needed to investigate the implications of art to health and healing.**

A review of the published research specific to arts and healing found that patient engagement with the creative arts has positive effects on psychological and physiological health.²⁸ Interventions to improve health through creative processes validate a holistic approach to health and healing. Whole-person approaches endorse the definition that good is more complex than the absence of disease.

Dr. Jeremy Nobel of the Harvard School of Public Health, President of the Foundation for Art & Healing, and panelist on “*New Models and Opportunities for Art and Design Research*,” co-authored the cited review. In his presentation, he proposed art-based interventions as an additional tool to reduce the public health burden of heart disease. Citing the challenges and potential of research on creative engagement and health, Dr. Nobel outlined Foundation strategies to improve the knowledge body specific to art and healing.²⁹ In addition to art as a clinical intervention, art can be used to decrease anxiety and stress in hospital environments. **Dr. Sara Diamond**, also a “*New Models*” panelist, presented several examples of how ambient design and artistic representations of nature can improve patient experiences and accelerate healing times by alleviating stress and discomfort. As mentioned previously, **Professor Susan Doyle** and her students also integrated art and design into the hospital setting while working within the constraints of the local environment.⁵ For example, art was installed from the patient’s vantage point to create an illusion of increased space in patient’s rooms.

While the body of empirical evidence for art and health is small, existing research suggests outcomes worth investigating. Dr. Kington noted that “art reminds us what it means to be human” and urged the audience to continue investigating the effects of art on health even though its therapeutic value may not be measurable. **Professor Kelly Dobson** of RISD, Interim Head of Digital Media and panelist on “*Presentations: RISD in Collaboration*” delighted the audience with her inventive *ScreamBody*. *ScreamBody* is a Wearable Body Organ that creates a portable space to capture and release screams without social consequence.³⁰ Ms. Dobson’s therapeutic

response to managing emotional distress in unsupportive environments reminds us that creative thinking about the human experience is what drives health innovation.

CONCLUSIONS & IMPLICATIONS

Health innovation is required to transform our healthcare system. Fresh approaches from diverse fields can stimulate innovation and improve population health. The Rhode Island School of Design and the Robert Wood Johnson Foundation agree that the strategic integration of art and design into health has the potential to positively impact healthcare systems, health promotion initiatives, and health outcomes. The *Make It Better* symposium revealed a high level of interdisciplinary support, successful examples of how art and design can impact health and wellness, and enthusiasm for continued discussions. Speakers and audience members contributed rich intellectual content. This white paper aims to synthesize and summarize the most important implications of the symposium into a disseminative and actionable form.

Make It Better and its findings should be considered the formative work and preliminary findings of an exploratory investigation into the intersection of art, design, and health. Designed to outline a targeted program of research to refine the role of art and design in health, *Make It Better* offers a substantial contribution to the fields of art and design, public health, and the health sciences. A renewed focus on ecological models in the public health sector combined with increased emphasis on innovation for healthcare underscore the optimal timing to develop novel collaborations.

Findings presented in this report are based on collaborative projects among artists, designers, and health professionals. These models of collaboration have fully benefited from art and design thinking and represent the future direction of art, design, and health. **Key findings include 1) clear examples of how art and design can influence health through the built environment, information design, and behavior change, 2) the potential and challenge of advancing research collaborations, and 3) the impacts of art and design in increasing engagement and participation in health promotion and healthcare.** Future directions should translate intellectual content into actionable next steps that promote an expanded role for art and design in health and healthcare.

FUTURE DIRECTIONS

Future directions address institutional capacity, interdisciplinary collaborations, research, and practice. Implementation of future directions will depend on sustaining enthusiasm, institutional investment, continued grant support, and interdisciplinary interest.

- An interdisciplinary committee should be developed to plan next steps to continue the dialogue and enthusiasm inspired by the symposium. *Make It Better* project leaders

should identify motivated individuals from different disciplines to further a sustainable, collaborative approach to integrating art, design, and healthcare. This new committee should strategize priorities for future projects and develop competitive grant proposals to support future initiatives.

- As a leader in art and design education, RISD should examine its potential to build institutional capacity for continued health research. Next steps may include developing a curriculum that includes health and healthcare issues, increasing service projects that address local health priorities, and supporting faculty with specific expertise in health and wellness. For example, RISD should explore collaborative courses between RISD's art and design departments and Brown University's medical and public health programs, identify more opportunities to involve students and faculty in real-world health issues, and better promote the health expertise of their faculty inside and outside of RISD.
- Models that promote effective interdisciplinary collaboration among artists, designers, and health professionals should be diffused across diverse sectors. Disseminating models that exemplify shared expertise can clarify the role of artists and designers in health projects, correct limited preconceptions about the contributions of artists and designers, and demonstrate the benefits of art and design systems thinking for health issues.
- A clear research agenda is needed that narrows the scope of *Make It Better's* formative findings and identifies the strongest demonstrations of using art and design for health problem solving. Demonstrations should be supported by research and practice and have a robust collaborative model. Examples may include the use of information design for health literacy or the design of the built environment for health behavior. Interdisciplinary teams should then be developed to thoroughly examine these demonstrations, identify opportunities for growth, and strategize solutions to overcome limitations.
- Artists and designers should actively participate in developing a research body that supports the intersection of art, design, and health. Art and design professionals should collaborate with health researchers to review the existing research on art, design, and health topics, synthesize findings, and disseminate them to broad audiences. For example, identify public health researchers interested in environmental interventions, review the published literature on the built environment and health, synthesize evidence and conclusions, and co-present or co-publish results.

REFERENCES

1. Robert Wood Johnson Foundation (2009). *Pioneer Portfolio*. Retrieved May 22, 2011 from <http://www.rwjf.org/programareas/PioneerFramingDoc.pdf>
2. Downs, S. (2011, March 16). Pioneering Ideas: Focus on the Pig: The Making It Better Symposium at RISD [Web Blog Post]. Retrieved from <http://rwjfblogs.typepad.com/pioneer/2011/03/focus-on-the-pig-the-making-it-better-symposium-at-risd-aidan-petrie-of-ximedica-said-it-bluntly-in-acknowledging-that-it-i.html>
3. Rhode Island School of Design (Producer). (2011). *RISD Rethinking Health*. [Video clip] Retrieved May 15, 2011 from <http://makeitbetter.risd.edu/video-gallery/>
4. Kinkade, L. (2011). *Making it (health care reform) Understandable*. Retrieved May 15, 2011 from <http://makingitunderstandable.tumblr.com/>
5. Doyle, S. (2011). *PICU/2011: Art + Design in the Community*. Retrieved May 15, 2011 from <http://picublog.tumblr.com/>
6. World Health Organization (2006). *Constitution of the World Health Organization*. Basic Documents, Forty-fifth edition, Supplement. Retrieved May 22, 2011 from http://www.who.int/governance/eb/who_constitution_en.pdf
7. U.S. Department of Health & Human Services (n.d.). *Healthypeople.gov: About Healthy People*. Retrieved May 9, 2011 from <http://www.healthypeople.gov/2020/default.aspx>
8. Eliza Corporation (2011). *About Eliza*. Retrieved May 13, 2011 from <http://www.elizacorporation.com/>
9. United Nations General Assembly (2006). *The right of everyone to the enjoyment of the highest attainable standard of physical and mental health*. (Report No. 06-51997 (E) 091006). Retrieved from http://www.who.int/medicines/areas/human_rights/A61_338.pdf
10. National Institutes of Health (2009). *The Science of Behavior Change*. (Contract No. HHSN271200900427P). Retrieved from http://commonfund.nih.gov/documents/SOBC_Meeting_Summary_2009.pdf
11. Volkswagen (2009). *The Fun Theory.com: Musical Staircase*. Retrieved May 12, 2011 from <http://www.thefuntheory.com/piano-staircase>
12. KaBOOM! (2011). *About KaBOOM!* Retrieved May 12, 2011 from http://kaboom.org/about_kaboom
13. Games for Health Project (n.d.). *The Games for Health Project*. Retrieved May 13, 2011 from <http://www.gamesforhealth.org/index.php/about/>

14. Northridge, M. (Ed). (2003). Built Environment and Health [Special Issue]. *American Journal of Public Health*, 93, 1369-1608.
15. Centers for Disease Control (2006). *CDC Fact Sheet: Impact of the Built Environment on Health*. Retrieved May 11, 2011 from <http://www.cdc.gov/nceh/publications/factsheets/ImpactoftheBuiltEnvironmentonHealth.pdf>
16. World Health Organization (2006). *Quantification of the disease burden attributable to environmental risk factors*. Retrieved May 10, 2011 from http://www.who.int/quantifying_ehimpacts/summaryEBD_updated.pdf
17. Center for Urban Pedagogy (n.d.). *About CUP*. Retrieved May 11, 2011 from <http://www.anothercupdevelopment.org/about>
18. Work Architecture Company (n.d.). *Above the Pavement – The Farm!* Retrieved May 11, 2011 from <http://work.ac/above-the-pavement-the-farm/>
19. Garland, D. (2011, March). *Designing Public Health*. PowerPoint presentation presented at the Make It Better Symposium, Rhode Island School of Design, Providence, Rhode Island.
20. Informedmedicaldecisions.org. (2011). *Patient Decision Aids*. Retrieved May 9, 2011 from http://www.informedmedicaldecisions.org/patient_decision_aids.html
21. York University (2010). *Research News and Events*. Retrieved May 11, 2011 from <http://science.yorku.ca/News/Research-News-Events/york-co-leads-115-million-project-on-visualization-tools.html>
22. Merzel, C. & D’Afflitit, J.D. (2003). Reconsidering community-based health promotion: Promise, Performance, and Potential. *American Journal of Public Health*, 93(4): 557-574.
23. Fundred (2010). *About Operation Paydirt*. Retrieved May 9, 2011 from <http://www.fundred.org/about/operation-paydirt.php>
24. Pentecost, C. (2011). *The Public Amateur* [Web Blog Post]. Retrieved May 15, 2011 from <http://publicamateur.wordpress.com/>
25. Jeremijenko, N. (2010). *Environmental Health Clinic*. Retrieved May 10, 2011 from <http://www.environmentalhealthclinic.net/environmental-health-clinic/>
26. Rhode Island Science and Technology Advising Council (2010). *Toys and Technology for Rehabilitation*. Retrieved May 12, 2011 from <http://stac.ri.gov/alliance/awardees/2007/toys-and-technologies-for-rehabilitation/>
27. Ximedita (2011). *Research and Strategy*. Retrieved May 12, 2011 from <http://www.ximedita.com/research-and-strategy-services>

28. Stuckey, H.L. & Nobel, J. (2010). The connection between art, healing, and public health: A review of the current literature. *American Journal of Public Health*, 100(2): 254-263.
29. Foundation for Arts & Healing (2010). *Programs*. Retrieved May 15, 2011 from <http://www.artandhealing.org/programs/>
30. Dobson, K. (n.d.). *Screambody*. Retrieved May 14, 2011 from <http://web.media.mit.edu/~monster/screambody>