Abstract

In 2017, significant increases in opioid overdoses and the crippling effect of substance use on the health of Hoosiers heightened a sense of urgency to address this major health crisis. Indiana University (IU) initiated a Grand Challenge: Responding to the Addictions Crisis (AGC) through a $50 million investment in intramural research and projects to address addictions in Indiana in synergy with state and health system partners. The announcement resulted in immediate response from the community via email and calls with request for engagement from the people of Indiana, groups, organizations and policy makers. The challenge was: How can a public university partner with communities to advance our understanding of a complex problem like addiction while developing strategies to address that problem? To organize quickly, initial contacts were categorized into an AGC Community Engagement Framework with five potential levels of engagement - curiosity, interest, advocacy, project partners, and initiative partners. To guide our team’s responsiveness, each level was mapped to specific AGC goals, mechanisms of engagement, and engagement owners. The engagement framework developed has high utility for universities and other public institutions who seek to engage the broad community in public health responses.

Keywords: Engagement; Health; Addictions; Community; Partnerships
INTRODUCTION

In 2017, Indiana reached its highest age-adjusted drug overdose death rate at 29.4 per 100,000 people, significantly higher than the national rate and the 2016 Indiana rate. As the opioid epidemic ravaged the nation, the stark reality that Americans are more likely to die from accidental opioid overdoses than from car crashes riveted communities (National Safety Council, 2019). Indiana University (IU) responded to this crisis by launching one of the nation’s largest and most comprehensive state-based responses to the opioid addiction crisis — and the largest led by a university. As one of IU’s three Grand Challenges, the response to the addictions crisis is rooted in the university’s commitment to rigorous interdisciplinary research with public impact, an expression of the university’s responsibility to serving the public.

President Michael A. McRobbie, announced the Grand Challenge in October 2017 alongside Indiana Gov. Eric J. Holcomb, IU Health CEO Dennis Murphy and lead investigator Robin Newhouse. The Addictions Grand Challenge (AGC) funds projects led by teams of IU faculty, many working alongside community members, business, nonprofit and government partners (Indiana University, 2019a). The AGC focuses its work on five areas of IU’s greatest capacity: data infrastructure and analysis; training and education; policy and policy analysis; basic, applied and translational research; and community and workforce development. All projects focus on at least one of three goals: reduce deaths from opioid overdose, ease the burden of substance use on Hoosier communities and reduce exposure to unplanned substances for babies before birth (including medication-assisted treatment for mothers when indicated) (Indiana University, 2019b).

A Steering Committee (SC) chaired by the lead investigator includes research leaders and faculty from each research-intensive campus [Bloomington (IUB) and Indiana University Purdue University Indianapolis (IUPUI)]. The SC is responsible for the AGC five-year strategy, goal attainment and evaluation. Prior to the IU AGC commitment, the SC assessed IU’s capacity to respond to the addictions crises, developed a five-year plan to fund proposals aligned with three primary goals, and continue to advise the AGC strategy and monitor evaluation outcomes. A Scientific Leadership Team (SLT) was appointed. The team included one faculty from each research-intensive campus [Bloomington and Indiana University Purdue University Indianapolis (IUPUI)] and one representative of the five IU Regional campuses. They advise on the science and priorities, invited proposals, act as a resource in their area of expertise, conduct scientific review of proposals and recommend proposals to be funded.

A Socio-Ecological Model (SEM) for Responding to Addictions was adapted to addictions to inform the AGC’s strategy recognizing that

![Figure 1: A Socio-Ecological Model for Response to Addiction](https://example.com/figure1.png)
change is shaped by multiple levels of influence that must be considered if population level health benefits of AGC interventions were to be achieved (Figure 1). The ecological perspective introduced by McLeroy, Bibeau, Steckler and Glanz (1988) frames determinates of change or outcomes as intrapersonal, interpersonal and institutional, community and public policy. Over the past three decades SEM models have provided a framework for health improvements (National Cancer Institute, 2005) and specific diseases alike (Pearson, 2011). As a result, AGC projects needed to align with interventions and outcomes that affect each level and engage with community members and partners.

From the beginning of the planning process, a range of potential partners aligned with research priorities were identified – including government agencies, nonprofit and community groups, and private sector companies. Many of our first project teams funded in January 2018 (Phase 1 funding) could initiate studies quickly, as they drew on existing partnerships outside the university to shape their research and intended impacts. Phase 2 projects were funded in October 2018, after open addiction related discussion groups, scoping sessions, and the opportunity to participate in an Ideas Lab1 intended to create proposals and teams able to respond to the request for proposals. An undergirding tenet of Phase 2 required engagement with community partners. The basic principle was to create teams that include relationships enhancing and informing the design; methods and outcomes used for the studies; as well as supplementing expertise on research teams. Engagement was based on the 1999 Kellogg Commission on the Future of State and Land-Grant Universities characterized by “a commitment to sharing and reciprocity ... partnerships, two-way streets defined by mutual respect among the partners for what each brings to the table,” (Kellogg Commission on the Future of State and Land-Grant Universities, 1999). This reciprocal engagement with community partners is both a practical and ethical imperative for initiatives like the Addictions Grand Challenge. In practical terms, university efforts to address critical problems facing society will work only to the degree that they address community priorities, draw on community capacities, and respond to community challenges. Any “solution” a university develops to critical social problems like the addictions epidemic must be implemented by those with boots on the ground – often ground that is geographically or culturally distant from universities. The ethical imperative for universities – particularly for public universities like Indiana University – is equally critical. Universities are members of the larger community, and have an ethical responsibility to contribute directly to community. To be good citizens, universities must expand efforts to focus research toward critical social problems, while continuing to engage in fundamental research focused on expanding the boundaries of knowledge.

The Kellogg Commission identified seven characteristics of an engaged institution (Table 1) that resonate with the AGC efforts, providing not only important principles, but also an ethical framework and imperative for healthy partnerships to address common public health goals (Kellogg
Commission on the Future of State and Land-Grant Universities, 1999). Applying these characteristics to our engagement plan offers a helpful evaluation framework: listening carefully to partners; engaging in dynamic exchange of information; and promoting a shared understanding in order to assess, enhance, and amplify mutual efforts. Questions aligned with each characteristic can guide both short and long-term evaluation efforts.

**ANNOUNCEMENT AND COMMUNITY RESPONSE**

In the week after the AGC announcement, the team was inundated with emails from more than 100 community members, organizations and business owners asking how they could become involved with the initiative. Two facts were clear in the initial response: 1) the AGC resonated with Hoosiers’ experiences and needs, and 2) the variety of responses required an undergirding commitment to engagement with all levels of influence in our socio-ecological model. The immediate focus was to develop strategies to address the community requests for engagement and partnership. The challenge presented was: How can a public university partner with communities to advance our understanding of a complex problem like addiction while developing strategies to address that problem?

The solution was clear. A framework and process were needed to ensure responsiveness to our community and handle inquiries in a way that we can enable partners to come together, collaborate, and focus on multiple attributes of the problem in an integrated manner.

**APPROACH TO DEVELOPING THE AGC COMMUNITY ENGAGEMENT FRAMEWORK**

In reviewing the variety of inquiries received, it was clear that a single form of response would not suffice. To address the interest generated by the announcement effectively, a framework...
identifying five distinct levels of engagement was developed, with specific goals for each level and mechanisms for engaging. Our priorities were to respond to community queries, link potential project partners to researchers or teams engaged in related work, and dialog with businesses to understand their interest while connecting them to the best-aligned partner either within or outside the university.

The five levels of engagement with the IU AGC range from curiosity to initiative partners (see Table 2). Examples of queries from our community are included in Table 3. Curiosity (e.g. How will this work?) requests information without higher levels of connection, requiring communication through multiple media. Interest (How can I connect?) requests a higher level of linkage to resources, requiring various strategies of communication – extending from email to in-person invitations (e.g. public interest sessions such as scoping reviews or discussion groups). With Advocacy, (How can I advance this work?) requests went beyond interest toward action to help disseminate, for example, tools or information. Project partners actively engaged with research teams to write research proposals or serve as community advisory boards for specific projects. Initiative partners (How can we synergize our efforts?) actively en-

---

**Table 2: Addictions Grand Challenge Community Engagement Framework**

| Engagement Level | Engagement Goals | Engagement Mechanisms | Engagement Outcome | Engagement Responsibility |
|------------------|------------------|-----------------------|--------------------|--------------------------|
| Curiosity        | Keep the curious informed about our work | Earned media, paid media, social media | Be informed at a basic level | Communications |
| Interest         | Build on interest to create connections, link to resources | As above, + newsletter, websites, public interest sessions | Be informed at a moderate level about the crisis and IU’s response | Communications |
| Advocate         | Use connections to disseminate information, connect with communities | As above, + dissemination and education tools, occasional partnerships on outreach | Be asked for input, assistance in spreading information | Director of Operations |
| Project Partners | Enhance our activity through partnership with community members, agencies | As above, + link to specific projects and faculty; membership on Community Stakeholders’ Board | Help develop solutions through partnership with IU, inform, advocate for our work | VPR office, SC, SLT Director of Operations |
| Initiative Partners | Coordinate across multiple levels and stakeholders; maximize impact across sectors | As above, + Coordinating Committee and External Advisory Board | Help deliver services and solutions to reduce addiction in Indiana | VPR, PI |

Notes: VPR: IU Vice President of Research, PI: AGC Lead Investigator, SLT: AGC Scientific Leadership Team, SC: AGC Steering Committee | Source: Authors
TABLE 3: EXAMPLES 2017 COMMUNICATION FROM COMMUNITY FOR EACH LEVEL OF ENGAGEMENT

**Curiosity**

“We were curious if there were funding opportunities...” or “How will you involve families who have lost someone to addiction?”

How is this going to work? (Student group response)

**Interest**

“Would like to....explore possibilities, in using XXX to relieve pain”

How can I get involved? (Scoping sessions, discussion groups)

**Advocate**

“Please take the time to investigate the XXX program”

How can I help to advance your work? (Families who have lost someone to addiction)

**Project Partner**

“....would love to provide any assistance I can as you implement this initiative....”

“We are implementing a....system-wide project to standardize and improve the care and treatment, of medical patients who also have substance abuse problems...would like your input.”

How can I work with you to move XX forward? (Project advisory board or participant in ideas lab)

**Initiative Partner**

Would like to “discuss options with the addictions work aligned .... noted the number of projects at XX already underway that could be a basis for future work... and goal setting.”

How can we synergize our efforts? (AGC Community Advisory Board)

DISCUSSION

IU’s AGC Community Engagement Framework provided an effective approach responding to our community’s interests. Our team was able to reply quickly to each level of query linking the intent of the contact to AGC specific goals, potential mechanisms of engagement, and engagement owners. The experience also taught us a number of lessons. First, IU’s AGC Community Engagement Framework applied principles of engagement to create a rapid organizational response to a public health crisis. Second, the experience of responding to our community enabled priority setting for communication strategies. Third, we began to approach our AGC scientific Phase II formative efforts differently, incorporating our community into discussion groups, scoping reviews and proposal development events.

There were also lessons learned in developing and using IU’s AGC Community Engagement Framework for application to communication strategies. For example, the first two levels of engagement indicate curiosity and interest from the public. Curiosity and interest informed discussions resulting in planned actions to keep information flowing in response to public interest. The need for information led to a strategic communications plan that includes a website dedicated to the AGC, paid media (advertisements in publications and social media) and use of multiple social media strategies. The dedicated AGC website provides resources for the community, both looking for opioid/substance use information and seeking a partner on research projects. As engagement with the community grew, there were opportunities to provide resources and information on the topic of the AGC and other substance use/addictions related topics via public panels, training and our website. Because of lessons learned about the engagement processes and need for information among stakeholders, community members,

gaged with the AGC leaders (e.g. AGC Community Advisory Board). Each level was mapped to the best area of responsibility and person that could respond in a timely manner and have the ability to link the community member to the right investigator, team, leader or organizational affiliate.
research teams and IU in general, the position of Assistant Director of Research Communications was created for the AGC.

It is important to note, that what we learned from our robust early AGC community response experience informed our approach to Phase II efforts. There was an increasing awareness and appreciation for the importance of community engagement needing to extend beyond just responding to inquiries. It became important to implement a processes in which those inside and outside the university could meaningfully contribute to the development of future research efforts. We initiated across campus dialog and innovative partnership building strategies between community members facilitated by Knowinnovation (KI), an organization dedicated to fostering interdisciplinary scientific innovation. With the KI team, we first hosted “Scoping Sessions,” attended by more than 200 university and community individuals. In these Scoping Sessions, participants were challenged to step outside their typical frames of reference and connect with others whose experience and expertise might offer surprising avenues of inquiry and research. Numerous new collaborations resulted, ranging from short-term collaborations that increased the degree to which community expertise and research priorities informed long-term impact-focused research partnerships, and researchers through a research and team development process. After the scoping sessions, a multi-day Ideas Lab was held bringing university researchers and community partners together to develop fully-formed draft research projects in response to the AGC Phase II request for proposals.

Throughout the past two years more than 130 community partnerships in 27 counties are actively engaged throughout the state. These partnerships have played a vital role in informing our research projects by partnering and providing researchers real-time information around predictions issues throughout the state. The role of engagement in a large university project focused on a major public health crisis is a natural extension in synchronizing many individual efforts into a common goal toward higher impact.

CONCLUSION

Engaging with the community and community partners throughout Indiana became the foundation of the AGC. Creating the AGC Community Engagement Framework guided connections between the community and IU faculty and teams to advance our understanding for how best to respond as a public health priority while simultaneously developing strategies to address that problem. Mapping engagement levels to specific AGC goals, mechanisms of engagement, and engagement owners resulted in a model and process with high utility for universities and other public institutions who seek to engage the broad community in public health responses.

The expectation for community and stakeholder engagement in research has emerged quickly over the last decade to promote the conduct of rigorous relevant research informed by communities and people that will use the results of research. The Patient Centered Outcomes Research Institute (PCORI) has led the study and development of methods of patient and stakeholder engagement in all phases of comparative effectiveness research.
(Sheridan, et al., 2013). Effective engagement methods are publicly available in a rubric to guide investigators submitting proposals to PCORI, with additional resources on the website (PCORI, 2019). Other major federal organizations including the U.S. Federal Drug Administration (FDA) [FDA, 2019] and funders have initiatives underway to promote patient and stakeholder engagement, including the National Institutes of Health (NIH) [NIH: National Center for Advancing Translational Sciences, 2019], Agency for Healthcare Research and Quality (AHRQ) [AHRQ, 2017], and Center for Medicare and Medicaid Services (CMS) [CMS, 2019]. These efforts are working toward embedding engagement into organizational policies and procedures broadly. IU’s AGC Community Engagement Framework sought to organize response to our community rapidly and optimize community member’s expected level of engagement with IU to solve a mutually experienced community and state problem.

Other universities and institutions of public education could use this model to involve and engage their community in research taking place at their institution and to create long-lasting partnerships that connect the university with those working on the frontline of public issues. We are certain that we could have done better to engage our community as we learned together. We are just as certain that a response to addictions can only be successful if we partner with people, organizations, and the state officials and engage with communities that share common goals.

**References**

Agency for Healthcare Research and Quality (AHRQ). (2017). *Introduction: Guide to Improving Patient Safety in Primary Care Settings by Engaging Patients and Families*. Retrieved from https://www.ahrq.gov/patient-safety/reports/engage/intro.html.

Center for Medicare and Medicaid Services (CMS). (2019). *Stakeholder Engagement*. Retrieved from https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/Stakeholder-Engagement.

Indiana University (IU). (2019a). *IU’s Grand Challenge: Responding to the addictions Crisis*. Retrieved from https://addictions.iu.edu/responding-to-crisis/grand-challenge.html.

Indiana University (IU). (2019b). *Addictions: Projects*. Retrieved from https://addictions.iu.edu/responding-to-crisis/projects/index.html.

Kellogg Commission on the Future of State and Land-Grant Universities. (1999). *Returning to Our Roots: The Engaged Institution*. Available at: https://www.aplu.org/library/returning-to-our-roots-the-engaged-institution/file.

McLeroy KR, Bibeau D, Steckler A, Glanz K. (1988). An ecological perspective on health promotion programs. *Health Education Quarterly*, 15, 351–377.

National Cancer Institute. (2005). *Theory at a Glance: A Guide for Health Promotion Practice* (second edition). National Institutes of Health, U.S. Department of Health and Human Services. NIH Pub. No. 05-3896. Washington, DC. Available at: https://cancercontrol.cancer.gov/brp/research/theories_project/theory.pdf.

National Institutes of Health (NIH: National Center for Advancing Translational Sciences (NCATS). (2019). *Research: Patient/Community Engagement & Health Information*. Retrieved from https://ncats.nih.gov/engagement.

National Safety Council. (2019). *Make a Difference on International Overdose Awareness Day*. Retrieved from https://www.nsc.org/home-safety/safety-topics/opioids/international-overdose-awareness-day.

Patient Centered Outcomes Research (PCORI). (2019). *Engagement Resources*. Retrieved from https://www.pcori.org/engagement/engagement-resources.

Pearson, T.A. (2011). *Public Policy Approaches to the Prevention of Heart Disease and Stroke*. *Circulation*, 124, 2560-2571.

Sheridan, S., Schrandt, S., Forsythe, L., Hilliard, T.S, Paex, K.A., Advisory panel of patient and stakeholder engagement panel. (2013). The PCORI Engagement Rubric: Promising Practices for Partnering in Research. *ANN Fam Med.*, 15, 165-170. Doi:10.1370/afm.2042.

US Food and Drug Administration (FDA). (2019). *Stakeholder Engagement Staff: Also Referred to as: FDA Stakeholder Engagement*. Retrieved from https://www.fda.gov/about-fda/office-external-affairs/stakeholder-engagement-staff.