



PURPOSE CASE
BUILT STUDY

Viet Nam Health Care System

Philanthropy joined with government and created facilities to expand access to quality services and demonstrate models that would strengthen the nation's continuum of care and prevention.

Executive Summary

Organizations

Hue Central Hospital and Khanh Hoa Provincial Health Services

Location

Central Region, Viet Nam

Construction Type

Renovation and new construction

Key Dates

2002 Hue Central Hospital improvements

2005 Khanh Hoa commune health center pilot

Project Area

9.9 hectares (24.5 acres) Hue Central Hospital campus

350 square meters (3,767 square feet) Commune health center

The Atlantic Philanthropies Investment

\$16.7 million Hue Central Hospital

\$5.1 million Khanh Hoa commune health center pilot



After the ravages of war and adoption of the *Doi Moi* economic reforms in 1986, Viet Nam entered a period of sustained growth. However, the reforms contributed to government disinvestment in a health care system rated among the lowest performing globally in a 2000 World Health Organization report. In particular, ethnic minorities, impoverished people, and others living in rural areas lacked access to quality care.

When Charles F. “Chuck” Feeney, founder of The Atlantic Philanthropies, visited Hue Central Hospital in 1998, he saw an overcrowded, underfunded facility serving a region of 20 million people. Atlantic went on to make multiple investments at this site, relying on the construction expertise of East Meets West Foundation (EMWF). This included funding a Cardiovascular Center, which introduced a center of excellence model that several of the hospital’s advanced care specialties would later adopt. Atlantic support attracted new investment by government and other funders to grow the hospital campus and its capabilities, helping Hue Central become one of the top three hospitals and medical training centers in Viet Nam.¹

After Atlantic’s investments in hospitals at Hue, and later Da Nang, it was clear that these facilities would become even more crowded—the number of patients grew dramatically as the quality of care improved. Atlantic saw that the poor state of health care in Viet Nam resulted from too little emphasis on primary care. Atlantic’s strategy evolved to consider the system as a continuum of care—spanning local prevention and treatment centers to specialized central hospitals.

By 2003, Atlantic had opened an office in Ha Noi and hired Vietnamese program executives who began to forge a relationship with members of the provincial and national government. A shared

vision emerged among government officials, care providers, and foundation staff, setting the stage for Atlantic to pilot models that could systematize delivery of health care and prevention services in the nation’s 11,000 commune health centers (CHCs). Working closely with the Provincial Health Service, local governments, and residents, Atlantic expanded from pilot sites to ultimately build or renovate 940 CHCs across eight underserved provinces to demonstrate models for the rest of the country.

New facilities at the Hue Central Hospital as well as the redesigned and rebuilt local health centers helped elevate the standards of care in Viet Nam. These projects resulted from Atlantic’s decision to invest in Viet Nam’s health care system as a way to improve lives on a large scale and advance health equity for vulnerable populations. Viet Nam’s big, multi-tiered health care system requires greater resources to realize full improvement, and today funders from Australia, Japan, and the United States are making investments to strengthen the system. The national government’s resources and ability to support the transformed system have also increased.

This report focuses on capital projects in two tiers of the system—a central hospital (tertiary care) and pilot commune health centers (primary care). These projects were instrumental in Atlantic’s comprehensive strategy, representing \$21.8 million of the \$269 million it invested in the national continuum of care over 15 years.

Case study research was conducted by MASS Design Group in August 2015. Funded by The Atlantic Philanthropies, this study illustrates how capital projects supported by public-philanthropic partnerships can initiate large-scale interventions that can dramatically improve public health care systems and services.

Purpose Built Series

Capital projects often bring lasting benefits to nonprofit organizations and the people they serve. Given this opportunity, foundations grant more than \$3 billion annually to construct or improve buildings in the United States alone.ⁱ Each capital project affects an organization's ability to achieve its mission—signaling its values, shaping interaction with its constituents, influencing its work processes and culture, and creating new financial realities. While many projects succeed in fulfilling their purpose, others fall short of their potential. In most instances, organizations fail to capture and share lessons learned that can improve practice.

To help funders and their nonprofit partners make the most of capital projects, The Atlantic Philanthropies and the S. D. Bechtel, Jr. Foundation commissioned *Purpose Built*—a multi-faceted study by MASS Design Group, a nonprofit architecture and research firm. In 2015 and 2016, MASS conducted interviews, reviewed literature, and examined a diverse set of completed projects around the world; each project was supported by one of the above funders.

The study generated a set of core principles as well as tools for those considering or conducting capital projects:



Introducing the Purpose Built Series is an overview of the study and its core principles.



Making Capital Projects Work more fully describes the *Purpose Built* principles, illustrating each with examples.



Planning for Impact is a practical, comprehensive tool for those initiating capital projects.



Charting Capital Results is a step-by-step guide for those evaluating completed projects.



Purpose Built Case Studies report on 15 projects to illustrate a range of intents, approaches, and outcomes.

See the full *Purpose Built* series online at www.massdesigngroup.org/purposebuilt.

i Foundation Center, *Foundation Maps* data based on grants made in the United States, 2006-2015.

“You had a problem where the government [over-utilized] tertiary centers and [underutilized] the primary care facilities. Our idea was easy: If you improve the lower levels to the point that you can get the patients to return, you [can] ease up the burden on the tertiary centers.”

**—Dr. Le Nhan Phuong,
Viet Nam country director,
The Atlantic Philanthropies**



Above. Vietnamese women wait in an open-air room to see a doctor at a commune health center.

Cover. A father and daughter wait on the steps of a commune health center.

Introduction

DOI MOI, NATIONAL TRANSFORMATION, AND INEQUITY

Beginning in 1986,² Viet Nam launched its *Doi Moi* policy, a series of political and economic reforms across all levels of government to gradually replace the centrally-planned economy with a more dispersed and market-oriented system.³ With the loosening of the central government’s control, the private sector—along with public/private enterprises—emerged as an economic driver as well as a provider of social services. As a result of these reforms, Viet Nam’s economy boomed, transforming the country from one of the poorest in the world into a lower-middle income status country within three decades. Per capita income in 1986 was around US \$100 and rose to US \$2,100 by the end of 2015.⁴ Today, Vietnamese citizens generally experience lower levels of poverty, longer life expectancies, and higher levels of education.⁵

While its new economy produced tremendous growth and supported a new middle class, Viet Nam struggled to apportion gains equitably to all citizens.⁶ Ethnic minorities and populations in rural areas had significantly higher illiteracy rates, higher school dropout rates, lower pay, and longer distances to travel for services.⁷

A LOW-PERFORMING HEALTH CARE SYSTEM

Providing quality health services across the country was a particular challenge for both provincial and central governments. By the end of the 1990s, health care represented less than 1 percent of Viet Nam’s national budget. In comparison, China spent 37 percent of its national budget on health care, Thailand spent 14 percent, and Malaysia spent 6 percent.⁸

Total health care spending in Viet Nam had become overwhelmingly privatized, with the government supplying only one dollar out of every five spent on care.⁹ The emergence of private providers and insurance especially benefitted wealthy and urban Vietnamese citizens. However, ethnic minorities (13 percent of population), the impoverished, and people in rural areas relied on government-funded care, and as a result lacked access to quality services. In 2000, the World Health Organization ranked Viet Nam as one of the world’s lowest performing health care systems, with an “overall health system performance” ranking of 160 out of 191 member states.¹⁰

The resources the government provided were typically funneled to single-issue, “vertical” public health programs.¹¹ For example, the Ministry of Health introduced programs that achieved near-universal child immunization, compliance with safe practice guidelines for delivering newborn babies, and high levels of contraceptive use. These programs were independent of each other, each with its own goals as

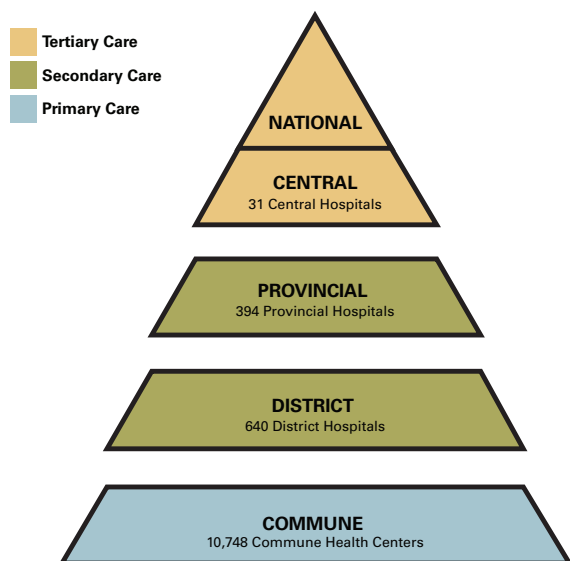
well as reporting requirements.¹² Overall, government interventions were not cohesive and created burdens for local health center medical staff who needed to deliver and manage multiple national programs and services.

MULTI-TIERED HEALTH CARE INFRASTRUCTURE

In Viet Nam, the public health system is organized across four scales: national, provincial, district, and commune. National and central hospitals are located in the country’s major urban centers and provide highly-specialized tertiary care for referrals from provincial hospitals.¹³ Provincial and district hospitals offer secondary care, accepting referrals for more specialized treatment from the lower levels. *Commune health centers* deliver basic primary care and prevention services on an outpatient basis.

THE ATLANTIC PHILANTHROPIES AND VIET NAM

American philanthropy in Viet Nam expanded following the end of the war in 1975, the initiation of *Doi Moi*, and the resumption of diplomatic relations between the two countries in 1995. In 1997, Charles F. “Chuck” Feeney—founding chairman of The Atlantic Philanthropies—read about a then-struggling charity, East Meets West Foundation (EMWF).¹⁴ Inspired by the work of EMWF, Feeney met with then Executive Director Mark Stewart in San Francisco and wrote a check supporting the organization. Starting with a first grant of \$500,000 in 1998, Atlantic would go on to invest \$105.6 million in EMWF as a trusted partner that could benefit Viet Nam. Many



Above. Viet Nam’s health care system features primary care at the commune level, secondary care through provincial and district hospitals, and tertiary care at national and central hospitals in major urban areas.

of these grants supported construction management projects, others funded EMWF operations.¹⁵

Atlantic’s work in Viet Nam continued through 2013, ultimately involving total investment of \$381.6 million, with grants largely focused on education and health care.¹⁶ Of this total, Atlantic dedicated 99 grants in the aggregate amount of \$193.2 million to capital projects, including \$56.7 million for hospitals and \$48.6 million for commune health centers.¹⁷

AN UNFAMILIAR NATIONAL CONTEXT

Viet Nam was a low-income country, as classified by the World Bank, at the turn of the 21st century; this reality required Atlantic to adapt its typical strategy. The foundation often leveraged its investments with matched spending by government, an approach that helped draw public and political attention as well as sustained resources to an area of need. However, this strategy did not fit the circumstances of Viet Nam at the outset of Atlantic’s involvement (although, over time, Atlantic was able to leverage sizeable funding from government and other donors). Dr. Le Nhan Phuong, Atlantic’s country director for Viet Nam, recalled that, because of the poverty and the state of reforms at the time, “The government just didn’t have the wherewithal to match us in the way that Atlantic has been used to.”

In many ways, Viet Nam was “more foreign” to Feeney and Atlantic, and communication and trust needed to be built before the foundation could work productively in this place. Looking back at Atlantic’s time in Viet Nam, Dr. Phuong described this relationship: “The country office needed to represent [both] the foundation to the people and the people to the foundation.”

DEVELOPING A LONG-TERM RELATIONSHIP

Atlantic’s establishment of an office in Ha Noi in 2003 signaled an extended commitment to Viet Nam. This set the stage for Atlantic to hire additional Vietnamese program executives who could understand, analyze, and navigate local and regional conditions and complexities. The staff worked “on the ground,” helping the foundation identify “needs, capacity, and commitment” that would have been difficult to recognize solely through reports submitted by grantees.¹⁸

According to one interviewee, major capital investments at Da Nang and Hue served as Atlantic’s “entry ticket” with the government, and marked the beginnings of mutual trust. Relationships deepened over time, and were the basis for Atlantic and Viet Nam leaders joining to examine root causes as well as forge a common mission, vision, and strategy to improve health nationwide. Atlantic would invest in developing new models that the government could adapt and expand throughout the national system.

Establishing local contacts and good lines of communication helped

Atlantic learn and adjust its strategy following initial grants in education and health care. Atlantic recognized it could improve on the partial results likely to come from investing in any single element in a massive, underfunded health care system still ravaged by the effects of a devastating war. By working with officials who understood the country's problems on the ground as well as its top-down central financing and political challenges, Atlantic began to pursue large-scale change in the health care system. Focusing on key elements—including physical infrastructure, equipment, and staff training—could improve health care in places of high need and strengthen the system. Improvement that led to more people receiving better primary care in local commune health centers could help alleviate stress and demand for services in hospitals, and hospitals and staff could provide more people needing advanced care with higher quality services. While Atlantic alone could not undertake simultaneous change across the multi-tiered system, it could demonstrate new and replicable approaches at key leverage points in the nation's continuum of care.

Improvement that led to more people receiving better primary care in local commune health centers would alleviate stress and demand for services in hospitals.

Atlantic's breadth of investment in Viet Nam, including its comprehensive approach to health care improvement, is well documented in multiple sources.^{19, 20, 21, 22} Atlantic recognized that facilities alone would not dramatically and systemically improve health outcomes. Its grantmaking included extensive support for medical education and training, including key partnerships with several Australian institutions such as the Royal Melbourne Institute of Technology (RMIT), the University of Queensland, and Queensland University of Technology. These partnerships enabled hundreds of Vietnamese physicians and government workers to receive training and advanced degrees abroad that could help them improve services and outcomes at home.²³

Atlantic also focused on key public health concerns—such as the high incidence of injury and death from motorbike accidents. The foundation collaborated with grantees and government leaders to advance national legislation that would require motorbike drivers and passengers to wear helmets, leading to a significant reduction in deaths and injuries.²⁴ This case study adds to the broader documentation of Atlantic investments in Viet Nam and its health care system by focusing on capital projects at Hue Central Hospital and the pilot project that led to an extensive investment in the network of commune health centers in a total of eight provinces.

Project Mission

Following initial health care investments and learning, Atlantic sought to intervene holistically in Viet Nam's national system, with particular concern for its most vulnerable people. At Hue Central Hospital, Atlantic intended to improve tertiary, specialized care for the underserved population in central Viet Nam, and to demonstrate a "center of excellence" model that would advance health outcomes. Through Atlantic's work at Hue and with other major hospitals in Viet Nam, it became clear that there was a great need for better primary health care and prevention efforts at the commune level; this led the foundation to pilot local models of commune health centers. With these capital projects, Atlantic sought to make specific improvements at vital points in Viet Nam's continuum of care, strengthening sections of the system to benefit millions of people and modelling approaches that could be adopted around the country.

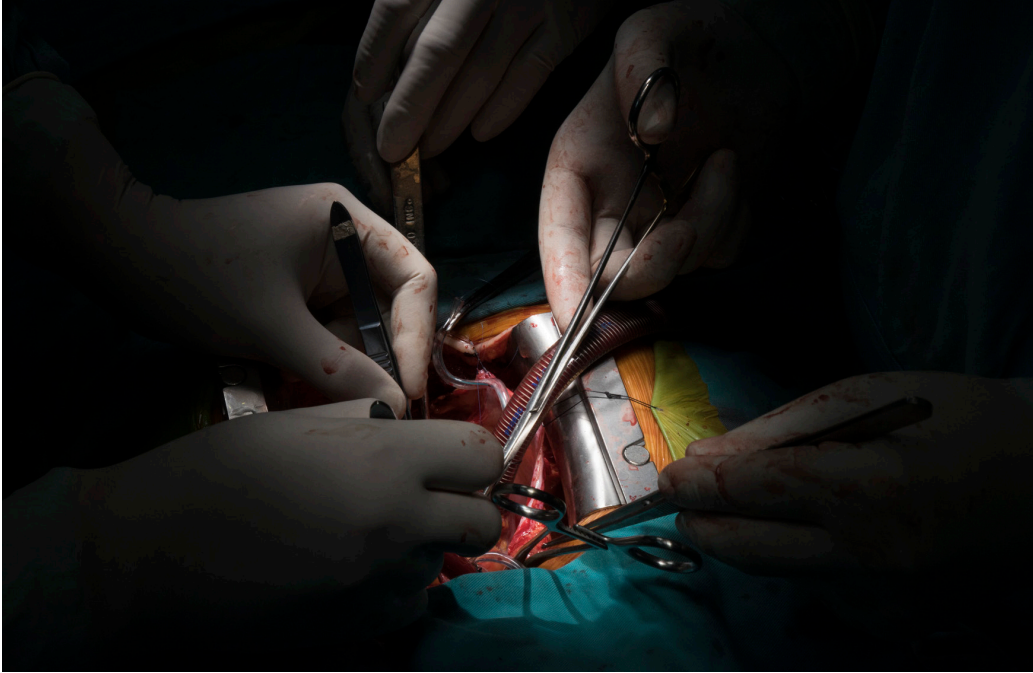
Process

RESPONDING TO THE NEEDS OF HUE CENTRAL HOSPITAL

Established in 1894, Hue Central Hospital is the oldest in Viet Nam. Today, the hospital's campus covers 65,000 square meters (6.5 hectares) and serves a population of about 20 million people²⁵ in the country's Central Region, including the Central Highlands. Viet Nam's population centers to the north and south, Ha Noi and Ho Chi Minh City (formerly Saigon), overshadowed the Central Region, which received comparatively less financial and governmental support. Dr. Bui Duc Phu, former Director of Hue Central Hospital, described the Central Region, saying, "Our region has typhoons and droughts, the worst of the war, the worst of the developing economy. No industry, no agricultural base."²⁶

When Feeney visited Hue Central Hospital, he observed severe overcrowding—a common plight in hospitals across Viet Nam. (As part of his introduction to the East Meets West Foundation, Feeney had visited Da Nang General Hospital, which also received sizeable grants from Atlantic.) At Hue, two or three patients would often share a single bed. Feeney, in his typical fashion, asked Dr. Phu what the hospital needed. Most pressing was replacement of the 50-year old pediatric ward. Atlantic funded that request, and the new four-story pediatric department opened in 2002.

Atlantic continued its partnership with Hue Central Hospital to build a six-story Cardiovascular Center, this responding to a shift in the



Top. Hue Central Hospital is famous for conducting the first-ever heart transplant surgery by a team of solely Vietnamese doctors.

Below. A staff member checks-in with a patient at a commune health center.





Above. Atlantic's investments on the Hue Central Hospital campus.

country's disease burden (a measure of the overall health impact of a disease) from infectious to chronic disease at the turn of the century. As Atlantic reported, "In 2002, [chronic] diseases accounted for 66 percent of patient deaths, and 35 percent of these [were due to] cardiovascular problems."²⁷ The cardiovascular services expansion was part of a larger vision and master plan for the Hue medical campus. The construction of an ophthalmology facility and training center for health personnel throughout the country, and an upgrade of the wastewater treatment facility would follow, with Atlantic supporting all of these projects.

ENGAGING THE EAST MEETS WEST FOUNDATION

In many instances, including at Hue Central Hospital, Atlantic funded projects through EMWF rather than make direct grants to organizations in Viet Nam. Atlantic issued grants to EMWF on a case-by-case basis, bypassing EMWF when an organization had

the capacity to execute a capital grant independently. When an organization lacked grant or construction management capacity, Atlantic engaged EMWF in a turnkey agreement—EMWF would lead design and construction then hand the completed facility over to the occupant.

This arrangement spared each organization from needing to conduct construction or grant management. However, some organizations expressed that "[EMWF] had too much control over the design [at times]." Reflecting on this approach, Dr. Phuong believes the EMWF partnership and process was right for that time and context in Viet Nam, even though some organizations considered the relationship a "forced marriage."

EMWF gained experience and credibility as it worked on a range of projects in regions across the country and established a presence in Viet Nam. EMWF (which became Reach Vietnam and is now Thrive

Networks) grew to be a multimillion-dollar organization working in several countries in Asia and sub-Saharan Africa. Several interviewees consider the growth of EMWF to be a major, enduring outcome of Atlantic's investments in building infrastructure and human capital in Viet Nam. In total, 28 percent of Atlantic's grantmaking in the country (\$106 million of \$382 million) went to EMWF, largely to support the implementation of capital projects.²⁸

DEVELOPING A NEW MODEL: CENTERS OF EXCELLENCE

For pediatric, cardiovascular, and ophthalmology services, Hue Central Hospital employed a new, decentralized management structure to establish individual "centers of excellence." Each specialty functioned with a high degree of autonomy in guiding the design of its facility and in conducting day-to-day activities.

Every center had an advisory board of about 15 members who informed the design and construction phases, and ensured that financing mechanisms were in place to operate the new facility. Each team was responsible for supervising the process and reporting to the hospital's board of directors. Dr. Phu, a noted heart surgeon, contributed knowledge from cardiovascular centers in Europe where he trained and worked. Atlantic supported teams as they toured and learned from related projects. For example, during the ophthalmology building project, the advisory board visited relevant facilities in Ho Chi Minh City and Singapore.



Above. Doctors conduct heart surgery in high-quality facilities at the Cardiovascular Center on the Hue Central Hospital campus.



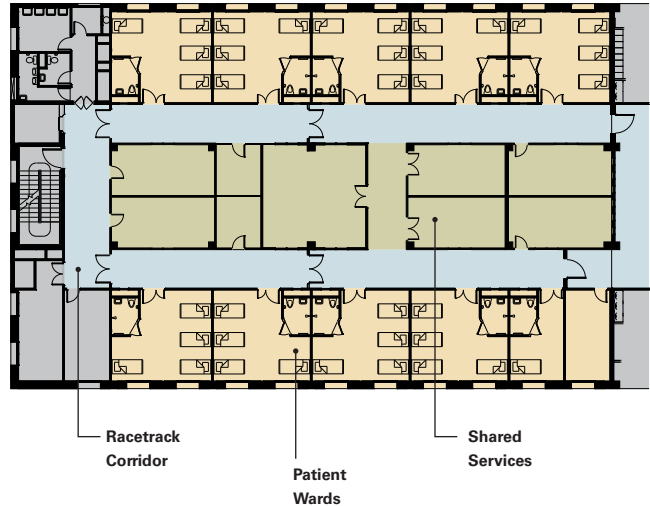
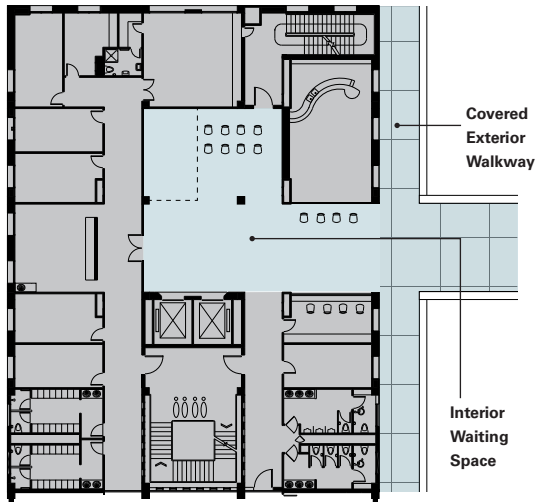
Above. The ground floor of the Ophthalmology Center serves as a training facility, with large meeting and seminar rooms.

DESIGNING THE CARDIOVASCULAR CENTER

The Cardiovascular Center design was similar to "bar hospitals" that locate shared services, storage, and technology in the center of the facility. This narrow type of building typically uses a racetrack design in which a corridor with patient rooms circles these central resources, saving steps for staff. As this design approach became popular in the last half of the 20th century, and as medical care facilities increasingly relied on high-technology equipment and mechanized systems, hospitals became sealed from outside temperatures and regulated by mechanical heating, ventilation, and air-conditioning (HVAC) systems.

The racetrack corridor used in the Cardiovascular Center design is less ideal for facilities in hot, humid climates that rely on natural ventilation. The width of such facilities and number of interior walls prevent cross-ventilation. In some hospitals that rely on natural ventilation but have interior walls, design solutions such as cutouts or vents in the top or bottom of the walls can promote airflow. The Cardiovascular Center did not employ these approaches. The building façade held operable windows and vents in the top floor, but the building design as a whole did not effectively dispel interior heat that rose to the upper floors of the facility.

One interviewee said that observations of other health care facilities in Viet Nam influenced some design elements. Smoking was popular among visitors to hospitals, including in patient rooms, even though Viet Nam law technically banned the practice. This factor, as well as the need to address the challenge of solar heat gain, led to exterior



Above. A covered exterior walkway merges with a waiting room, helping to bring natural ventilation into the building.

Right. An interior “racetrack” corridor reduces staff steps between patient rooms and service areas, but adds width to the building, impeding cross-ventilation.

balconies being included in the Cardiovascular Center’s layout. The balconies would deflect the sun’s glare off the building and provide space for smokers away from patient rooms. In some cases, a balcony’s placement would coincide with a waiting room, and a large cutout of the wall would facilitate natural airflow into the building. Louvers added to windows would help prevent glare and heat gain in the rooms. Despite these design devices, the built facility can become very warm, and family members and other visitors frequently rest in darkened stairwells where the temperature is cooler.

PLANNING AT HUE CENTRAL HOSPITAL

Both EMWF and Atlantic insisted on ensuring that the hospital had the capacity and capital to manage ongoing operations and improvements after new facilities were constructed. Mark Conroy, former EMWF director in Viet Nam, described why this approach was essential. First, the bathrooms in the original buildings on the campus lacked air flow because fans installed 20 years prior were broken. Second, both Conroy and Chuck Feeney knew that Vietnamese contractors were not yet familiar with multistoried facilities that included elevators. Conroy recalled the thought process:

Elevator maintenance is fairly expensive, so it was likely that it would get cut from operating expenses. And if you’re not doing maintenance, elevators can be pretty dangerous . . . So, Chuck called me up one day and wanted me to go to Saigon to meet with the elevator

companies, to evaluate which elevators should be going in these buildings, and what was going to happen [after] we started putting them in.

UNDERSTANDING NEEDS IN PRIMARY HEALTH CARE

After Atlantic’s initial investments in hospitals at Hue and Da Nang, it was clear that these facilities were destined to become even more crowded. As one assessment conducted from 1998 to 2003 described, “Patients [sic] crowding continues to be a problem in some departments and wards, as the number of patients have increased dramatically with the improvements in the quality of the facilities and services.”²⁹ Atlantic realized that the poor state of health care in Viet Nam resulted from “an overall national health system that placed too little emphasis on prevention, public health, and primary care.”³⁰ This realization informed Atlantic’s strategy to treat the system as a whole, and led the foundation to evolve its focus to include primary health care and public health.

Recommendations from the World Health Organization at the 1978 Alma Ata International Conference shaped Viet Nam’s postwar primary health care system.³¹ The system featured hospitals as well as local commune health centers (CHCs). However, this primary tier was not a focal point for the government, which directed its resources to tertiary care through central hospitals. One report noted that “government authorities are still not fully conscious of the important role played by [the primary care system], neglecting [it] in the local

planning, management, and investment.”³² This disregard of primary health care and its role in the entire system further exacerbated the conditions of overcrowding at tertiary care facilities. Dr. Phuong summarized Atlantic’s analysis and shift in strategy:

The tertiary hospitals were overburdened by people who did not trust the primary system. At that time, if you walk[ed] into any tertiary hospital, you [would] see people everywhere! On the floor, two to three people per bed . . . You had a problem where the government over-utilizes tertiary centers and underutilizes the primary care facilities. Our idea was easy: If you improve the lower levels to the point that you can get the patients to return, you [can] ease up the burden on the tertiary centers.³³

Atlantic gained from the experience of other international donors in Viet Nam. Most hesitated to invest in the health care system as a whole, given its size, complexity, and challenges. However, isolated investments would not bear fruit in a country that was in the aftermath of a long and destructive war, undergoing economic and political transformation, and lacking education and training for its workforce. Creating or improving a building would be futile if it lacked the staff or equipment to serve patients. Supplying equipment would be useless without people who could use the technology and read its results. Even with the finest equipment and most qualified staff, a rundown facility would repel patients and staff members alike, “causing the best employees to transfer elsewhere . . . and encouraging patients to bypass their CHC altogether.”³⁴ Analysis showed that “these internationally-funded efforts had . . . failed because they did not include examination of how to improve the system as a whole.”³⁵

COMMUNE HEALTH CENTERS

CHCs are the most wide-reaching level of Viet Nam’s system, providing primary care and prevention for patients in more than 11,000 locations. These local centers were once an effective method of primary health care, operating with support from communal cooperatives. After the war and the initiation of *Doi Moi*, the CHCs came to rely on the central government for support—but the government lacked the resources to fund such an expansive, far-flung system.³⁶ By the time Atlantic began its grantmaking in Viet Nam, most CHCs had fallen into significant disrepair, thus limiting access to quality care for large parts of the population, especially those in the poorest, rural and most remote areas. Many structures were ill-suited to medical use, having been converted from residences or schools. Single-floor CHCs in flood-prone areas would be underwater during the rainy season.

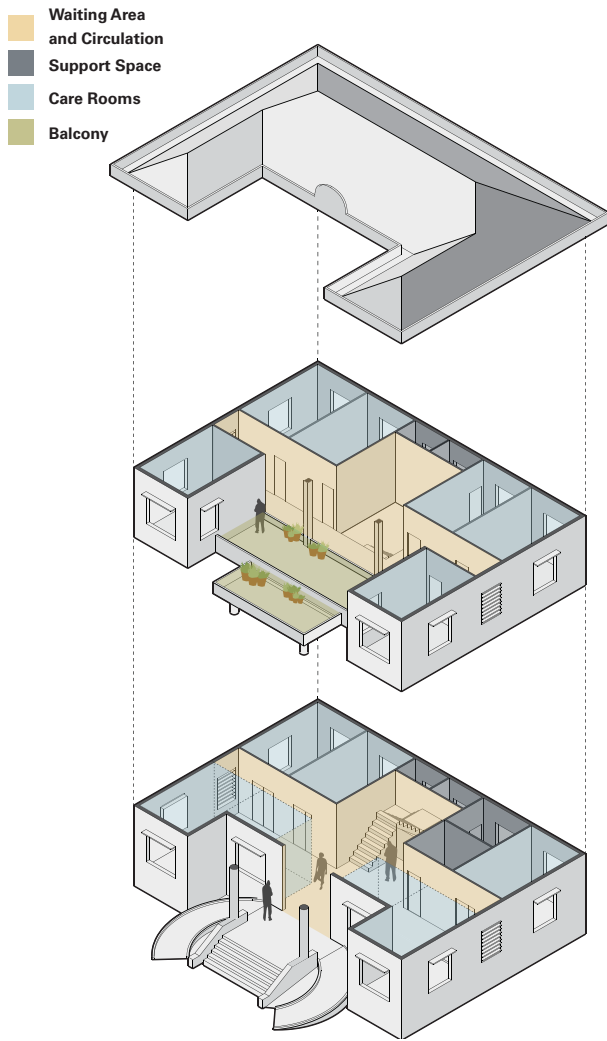
Both patients and staff felt disheartened by the poor quality of these facilities. One person interviewed recalled, “There was just no pride

in a place like that. [When we visited] we would see dejected looks on the face of the staff. Usually, there weren’t any patients around because [the CHC] didn’t have anything. There might be a few pills and a stethoscope, maybe. It was just a crumbling building with weeds all over the yard.” Dr. Phuong described the feeling when inside older CHCs that “the building could literally fall on you at any time.” The public did not trust in the ability of the CHCs and their staffs to provide quality health care services. Consequently, patients waited until absolutely necessary to seek medical attention, and would then travel to provincial and central hospitals. The demand for primary care in turn prevented those hospitals from focusing on the more specialized services they were intended to provide.³⁷ Compounding these problems, CHC staff who went to larger hospitals in urban centers for training would often not return to their home facilities.

The Population Council, an international health research nonprofit, conducted a study of 40 commune health centers in the Da Nang and Khanh Hoa provinces during 2005. Funded by Atlantic, the study revealed that none of the CHCs in this sample met the Viet Nam Ministry of Health’s national standards. The study highlighted important shortcomings involving staff, equipment, medicine, and facilities. Although the number of staff was sufficient for some CHCs,³⁸ interviews indicated that additional, qualified staff members were needed.³⁹ Interviews with staff members revealed that balancing the requirements of multiple national health programs was onerous and limited their ability to provide quality care.⁴⁰ Only 25 percent of the sample CHCs had the minimum level of equipment set by national standards.⁴¹ Many lacked proper equipment for infection control or were not properly staffed to use all equipment.⁴² Additionally, CHCs lacked essential drug inventories, forcing patients to use private pharmacies or travel to district and provincial hospitals.⁴³

The experience in Khanh Hoa further underscored the challenge facing CHC facilities. The Provincial Health Service initiated an intervention to rebuild and upgrade 90 percent of its CHCs from 1999 to 2003, with funding from international donors. However, “because of poor planning, corruption, and poor quality construction, these [centers] began to fall apart after only two years.”⁴⁴

Atlantic recognized that a partnership with government was essential to leveraging its strategy to pilot, replicate, and sustain a system of CHCs that would promote equitable access to quality primary care. Atlantic spoke with leaders in the primary system, including Dr. Truong Tan Minh, the former director of the Provincial Health Service in Khanh Hoa. Atlantic and Dr. Minh analyzed the components and needs of the system in light of the available resources of the central and provincial government. They concluded that, given the level of government spending at the time, it would take 100 years



Above. The commune health center pilot was designed to be a two-story, 350-square-meter facility, allowing space for multiple medical services. The second story, and often-raised first floor, offered ability to provide services in the rainy season when floods might occur.

to implement a successful comprehensive intervention. Dr. Phuong described Atlantic’s reaction, saying, “We thought, with Atlantic’s resources, we could help accelerate that timeline.”

BEGINNING WITH A PILOT PROJECT

In Khanh Hoa, Atlantic began with a plan to build and refurbish eight commune health centers (ultimately, only seven were built due to cost escalations). These pilot facilities would benefit local populations while testing an approach that could be adapted for CHCs elsewhere—with the potential to decrease stress on the secondary and tertiary layers of Viet Nam’s health infrastructure.

Khanh Hoa is urban lowland covering over 5,000 square kilometers with a population of 1.2 million. Five provincial hospitals, six district health centers, 16 inter-commune clinics, and 137 CHCs serviced the province.⁴⁵ Atlantic selected Khanh Hoa as the pilot site for two main reasons. First, Dr. Minh was a ready partner who shared the foundation’s interests. Second, Atlantic considered Khanh Hoa to be one of the easier provinces in which to test a project at multiple communes. This province had urban infrastructure and systems, but less population density than others. While it lacked resources, the Khanh Hoa provincial health system was relatively well-organized and well-led. Atlantic’s program team felt that “if it didn’t work here, it wouldn’t work in a harder environment.”

DESIGNING THE COMMUNE HEALTH CENTERS

The pilot CHCs engaged a Vietnamese architect to develop an initial design, approved by the East Meets West Foundation following the addition of wheelchair accessible ramps. The CHCs being replaced each had a single story ranging from 90 to 200 square meters. The new 350-square-meter layout featured two stories—the first floor was often raised above ground level, and the second story could be used if flooding occurred. The facilities would allow space for multiple medical services, including birthing, dentistry, ophthalmology, and ear, nose, and throat programs. The balcony on the second floor and portions of the entire site would be used to grow plants for food or traditional medicine. There would be a central area for check in and waiting before staff escorted patients to the left, right, or up the stairs to receive specialized care and treatment. This design would support the staff practice of conducting triage in the entry room before deciding where each patient would go. Contractors would decide the placement of each building on its site based on local conditions. The pilot CHCs opened in 2005 to high enthusiasm in their communities.

The project team for the pilot communes also served as a partnership model for future communes outside of Khanh Hoa. The Provincial Health Service worked with district governments to identify which communes would get a CHC, and to establish the contribution each district would make. Atlantic noted that architects for the projects “should be well versed with the local environment, needs, expectations, and even the dreams of the local communities.”⁴⁶

CONNECTING WITH COMMUNITY

The site selected for each CHC was typically in a location central and accessible to its entire commune, preferably on higher ground in flood-prone areas. When provinces or districts were able to leverage additional investments, the services in a CHC would change accordingly. For example, several CHCs in Khanh Hoa included a room for providing contraceptive and family planning services—an



Above. A view of the front of a commune health center in Khanh Hoa. Pilot facilities generated community pride, and citizens actively participated in the construction process.

approach that deviated from the standard design.

The construction approach sought to balance the twin priorities of getting projects completed efficiently and hiring local labor. The district government, the Provincial Health Service, Atlantic, other donors, and commune representatives all worked together to identify local contractors—a departure from the practice of bringing in contractors from Saigon. Through a bidding process, a contractor would be awarded the opportunity to build three CHCs. If deadlines or a base level of construction quality were not met, the contracts would be terminated and the contractor “exclude[d] from future bidding.”⁴⁷ Every project had four layers of construction management: the construction company itself, an independent contractor for quality control, a team of supervisors—usually from the Provincial Health Service—and a community team comprised of local staff and residents. Project budgets incorporated payment for the first three teams, while the community team served in a volunteer capacity.

Each project typically involved commune residents who prepared sites, built fences, created parking lots, or provided landscaping around the completed building. Several doctors and nurses recounted many citizens being so excited for the new project that they were on-site every day for the five months of construction.

EXPANDING SCALE—AND INFLUENCE

Based on indicators of increased patient loads at pilot CHCs, Atlantic invested in a full implementation in the Khanh Hoa province,

replacing or creating 139 CHCs. Ultimately, seven additional provinces—Da Nang, Thai Nguyen, Thua Thien Hue, Vinh Long, Ca Mau, Dak Lak, and Yen Bai—replicated the partnership between Atlantic and Khanh Hoa. Each of these provinces contained large rural populations and/or high numbers of ethnic minorities.

Impact

IMPACT OF THE HUE CENTRAL HOSPITAL

The new pediatric department, Cardiovascular Center, ophthalmology department, training center, and wastewater treatment facility at the Hue Central Hospital have been accelerators of the rapid transformation in health care services and infrastructure in the Thi Thien Hue province and across Viet Nam. The Cardiovascular Center was the site of the first successful heart transplant conducted solely by Vietnamese doctors. As of 2014, it had served more than 57,000 outpatients and more than 24,000 inpatients, and its doctors have performed over 6,000 open-heart surgeries.⁴⁸ Staff members interviewed report that patients express confidence in the high-quality treatment and care they expect to receive at Hue Central Hospital. Interviewees also feel more energized to work in facilities that support their needs. One respondent summarized the impact, saying, “The buildings simply give people a more comfortable existence.”

New training facilities—as well as a partnership with Hue Medical College—help develop human capital that reaches to other regions of Viet Nam. In addition to being the leading institution for pediatrics in the Central Region, the pediatric department also helps supervise professional development and training in other provinces. The center of excellence model and respect for the quality of service at Hue Central Hospital has helped the hospital attract new funding from governments and private donors in Australia, Japan, and the United States, as well as through medical tourism in its International Pavilion. Dr. Phu concluded, “The new Cardiovascular Center was a meaningful turning point in the development of the hospital, a move that motivated people to believe in the future and that we could do anything if we had the dreams and ambition.”⁴⁹

IMPACT OF THE COMMUNE HEALTH CENTERS

The commune health centers in the Khanh Hoa pilot opened to great fanfare and immediate effect on local communities. Many respondents recalled their first impression, seeing a new CHC as a facility that was worthy of placement at a district level or higher. One remembered when “this center was still a run-down place and small and poor. Now this is much different: roomy, clean, [it has] everything, [it’s] almost a hospital. [The staff are] friendly and always welcoming.”⁵⁰ Respondents—from local patients to staff in the central government’s Ministry of Health—believe that the CHCs have helped introduce the concept of family medicine in a formal capacity into the communes. In the Dien Son commune (in the Khanh Hoa province), for example, the CHC reports more than doubling the number of patients on a daily basis, from 24 to between 50 and 60.⁵¹

Overall, use of services has increased at levels between 30 percent and 200 percent at CHCs in the eight provinces that have constructed new facilities. Improved health outcomes accompany these facilities—for example, there have been significant declines in maternal mortality, as well as neonatal mortality, in places with new centers.⁵²

Internally, staff members’ perception of their work has also changed. Some reported that the upgraded facilities have increased retention, and that when younger staff members leave to receive training, they return to work at their CHC more often than before. Whereas CHCs were once perceived to provide subpar quality health care, some have now become desirable practice locations for medical students and schools in their province.⁵³

Some staff commented that the design of the new centers left room for improvement. They described the patient journey as inefficient—rather than having a single direction of flow, staff frequently bring patients back and forth through the central hallway, leading to congestion. Although the central hallways helped facilitate air flow through the building, the design did not account for storage or filing.

In two out of three facilities observed for this report, large storage bureaus placed in the hallway blocked natural ventilation.

As Atlantic extended beyond the initial pilot to full implementation in the Khanh Hoa province, designers were encouraged to adapt the prototype to community needs in each site. However, they often lacked the skills to do so in a way that was appropriate to each commune health center’s geographic and social context. As a result of their limited experience, some of the addressable design flaws uncovered in the prototype persisted in newly constructed CHCs.

Staff members at the communes, in Viet Nam’s Ministry of Health, and at Atlantic believe that investment in CHCs helped draw the central government’s attention to the Provincial Health Service system as a whole. Local pride in the new centers prompted other communes to demand that they “are entitled to have [a] similar CHC.”

Together, the 940 CHCs funded by Atlantic span eight provinces with a collective population of more than 9 million people. This expansion of the public/private partnership piloted at Khanh Hoa has helped change the Provincial Health Services’ policy and fiscal relationship at both the central and local levels of government. Dr. Minh affirmed “that positive changes in the [centers] . . . have changed the way the [leadership] thinks and acts about CHCs.”⁵⁴

At the national level, this approach to CHCs fueled primary care reform, providing a means to improve quality and access to treatment, and increase preventive care. After demonstration in several locations, the design can now be adapted and implemented one CHC at a time, making it affordable to a broader range of donors.

INVESTING IN THE SYSTEM

Despite success in advancing models for improving primary and tertiary care through the CHCs as well as centers of excellence at Hue Central Hospital, limited resources continue to constrain widespread improvement in all parts of Viet Nam’s health care system.

Although Viet Nam has elevated its overall economic status, the central government and the Ministry of Health lack adequate funds to invest in buildings, equipment, and human capital in all 11,000 CHCs across the country. As of 2015, the Ministry of Health was still focused on acute care at the secondary and tertiary levels, rather than on primary care and disease prevention. According to one respondent, it was “setting budgets based on the number of inpatients, not on the number of outpatients.” As a result, commune health centers “cannot rely on the budget from the national level for implementation.” International funders are bringing support to the health care system today; Atlantic’s experiences, partnerships, and contributions at the local, provincial, and national levels inform their approaches.

Conclusion

Atlantic's strategy of investing in key purpose-built projects within Viet Nam's health care system has resulted in lasting changes that improve quality of care and equity of access in previously underserved parts of the country.

Facilities and programs that earn public trust replaced dilapidated structures containing inadequate equipment and demoralized, often under-trained staff. Advances in primary care and prevention through 940 new commune health centers help alleviate pressure on hospitals providing specialized care. Well-regarded centers of excellence established at Hue Central Hospital provide a model for what is achievable in other facilities at the tertiary level of the system.

Atlantic originally encountered a central government without the ability to invest in crucial aspects of its health system. Through 15 years of partnership and progress with national and provincial health leaders, and with greater resources from a rising economy, new government dollars are now supporting health care in substantive

ways. International donors are also making greater investments in Viet Nam and its health care system.

According to all interviewed, the outcomes of Atlantic's work in Viet Nam's continuum of care are inextricably linked to two elements of its approach. Atlantic took a broad view and invested in ways that could improve more than one part of the system at a time. The foundation also committed to developing trust-based relationships that could sustain progress over the extended number of years needed to generate results.

Below. A cardiovascular center patient recuperates in a garden.



Lessons from the Viet Nam Health Care System

Connect with partners to scale outcomes.

Large-scale change requires a systems lens: While one building can make a worthwhile difference, strengthening that building's programs and its connection with other parts in a larger system can multiply the gain from a capital project. Working to improve Viet Nam's sprawling, underfunded health care system, The Atlantic Philanthropies observed that isolated investments in human resources, equipment, and facilities were not enough to move the needle. A complex system called for a more comprehensive strategy to elevate overall effectiveness and create more equitable access to public health care in the country—especially for low-income, rural, and minority populations. The initiative to build and renovate 940 commune health centers in eight provinces began with a modest-size pilot conducted in partnership with committed leaders from the Khanh Hoa Provincial Health Service. This approach generated models that gained broader government support and stimulated reform in the primary health care system—and that allowed new funders of all sizes to participate in their replication across Viet Nam. These models were accompanied by Atlantic's investments in human capital to improve health outcomes. Atlantic funded Australian higher education institutions—including the Royal Melbourne Institute of Technology, Queensland University of Technology, and the University of Queensland—to train hundreds of Vietnamese physicians, other health care workers, and government officials.

Relationships are a means for progress: The Atlantic Philanthropies valued building relationships on the ground in communities as well as with Viet Nam's central government. Commitment and trust were essential elements in pursuing health care system reform in a nation recovering from a devastating war and in the midst of economic and political change. Atlantic demonstrated its commitment to Viet Nam in three ways that were meaningful to central government officials: making major capital investments at Hue and Da Nang, opening a country office in Ha Noi, and hiring in-country staff. These factors contributed to a relationship that in turn allowed both parties to examine root causes and needs, align on goals, and develop a strategy that addressed multiple points in the system to improve health care. Atlantic's key relationships extended beyond the central government. Collaboration with the Provincial Health Service was crucial to initiating and expanding the new approach for commune health centers. Similarly, Atlantic's long-term investment in the East Meets West Foundation resulted in that organization growing its knowledge and ability to implement many capital projects throughout Viet Nam.

Lessons from the Viet Nam Health Care System

Combine inside knowledge with outside expertise.

Capital projects can grow local capacity: Atlantic's approach included a commitment to develop the skills, knowledge, and experience of health care professionals in the places where its projects took place. This investment in human capital did not fully extend to design or construction professionals. Atlantic frequently relied on the East Meets West Foundation to conduct turnkey design and construction, believing this approach minimized the burden on local organizations that would occupy built facilities—and helped projects be completed in an efficient, timely manner. While some case study interviewees stated that this practice was appropriate given the context in Viet Nam when these projects began, others have criticized it for not providing full autonomy to local organizations. In cases where local construction teams were allowed autonomy to adapt designs to contextual conditions, the design professionals frequently did not have the capacity or ability to do so in meaningful and helpful ways.

Identify the correct metrics for success.

Designs should be tested and improved: Atlantic and the Provincial Health Service originally partnered to design, build, and operate a small number of pilot commune health centers (CHCs) in the Khanh Hoa province. The seven facilities were well regarded by both community members and local health professionals, and an early assessment indicated that the approach was generating needed trust and attracting a greater number of patients. With Atlantic providing funding and others committing land, labor, and staffing, the partners proceeded to invest in a full implementation of 139 CHCs in the Khanh Hoa province. The assessment of the pilot accurately indicated that the CHC built environment was improved, but did not go deeper with a detailed design analysis. The design implemented across the province therefore retained some ineffective elements included in the pilot—for example, air flow, circulation, and storage requirements could have been enhanced through more thorough evaluation.

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p. 4 Courtesy of Chien-Chi Chang/Magnum Foundation. “Women in Waiting Area.”

p. 5 Adapted from: USAID Health Finance and Governance Project. “Health System Assessment in 8 provinces of Vietnam,” p. 4. Accessed online: <https://www.hfgproject.org/wp-content/uploads/2015/02/Measuring-Health-Systems-Performance-in-Vietnam-Results-from-Eight-Provincial-Health-Systems-Assessments.pdf>. July 22, 2016.

p. 7 Courtesy of Chien-Chi Chang/Magnum Foundation. “Heart Surgery.”

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