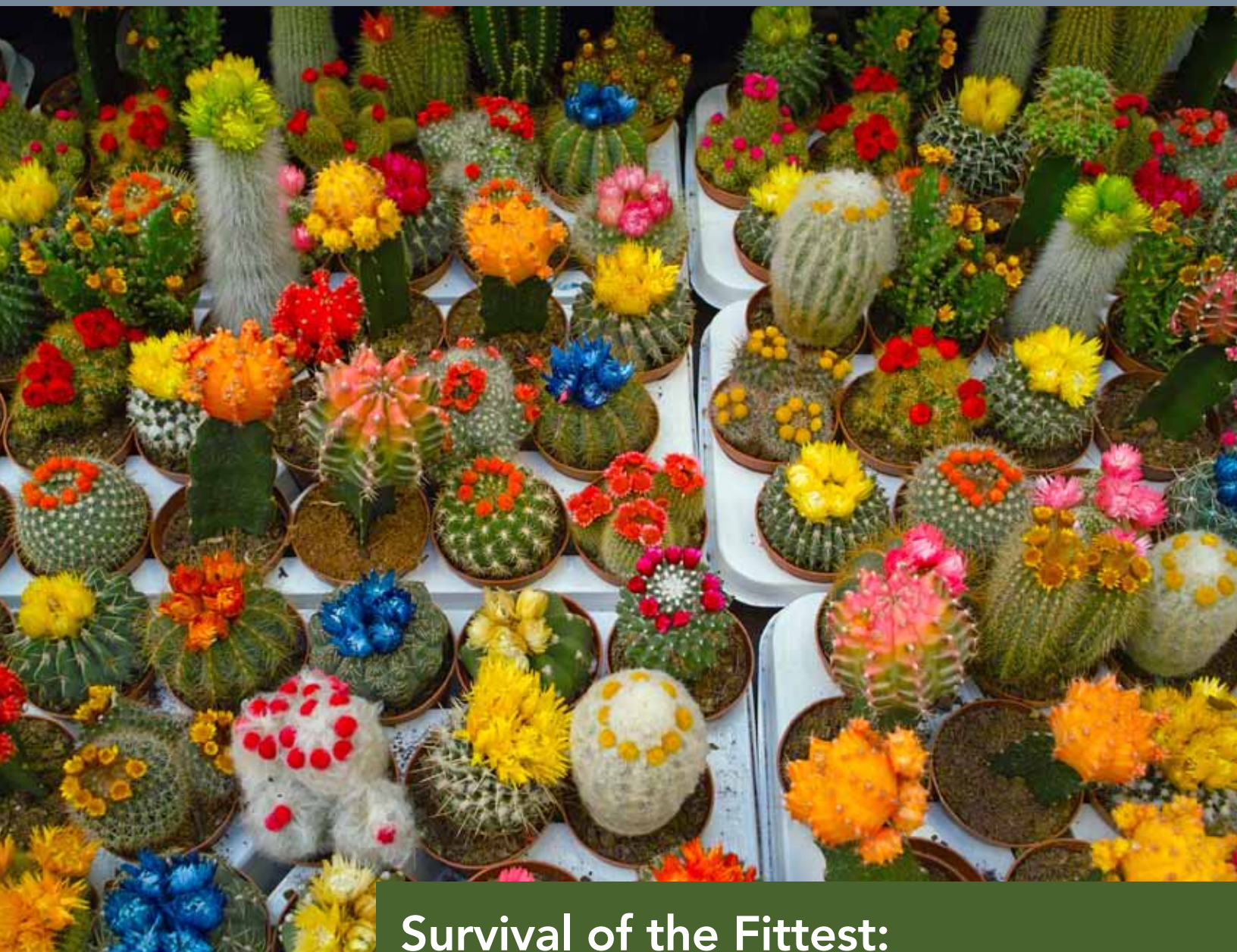




CALIFORNIA HEALTHCARE FOUNDATION



## **Survival of the Fittest:** Health Care Accelerators Evolve Toward Specialization

OCTOBER 2014

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## About the Author

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## About the Foundation

The **California HealthCare Foundation** works as a catalyst to fulfill the promise of better health care for all Californians. We support ideas and innovations that improve quality, increase efficiency, and lower the costs of care. For more information, visit [www.chcf.org](http://www.chcf.org).

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# Acceleration Is Accelerating

As health care accelerators were beginning to take shape in 2012, CHCF published a descriptive report called *Greenhouse Effect: How Accelerators Are Seeding Digital Health Innovation*.<sup>1</sup> Just two years later, the title's double-entendre may have more meaning than it did then. While greenhouses are needed to nurture seedlings until they can flourish in the real world, the "greenhouse effect" conjures artificial overheating of the environment to the detriment of healthy growth. The recent massive proliferation of health accelerators, and the results that we have seen so far, suggest that both of these definitions are valid. In other words, there is a tipping point at which too much business acceleration may do more harm than good.

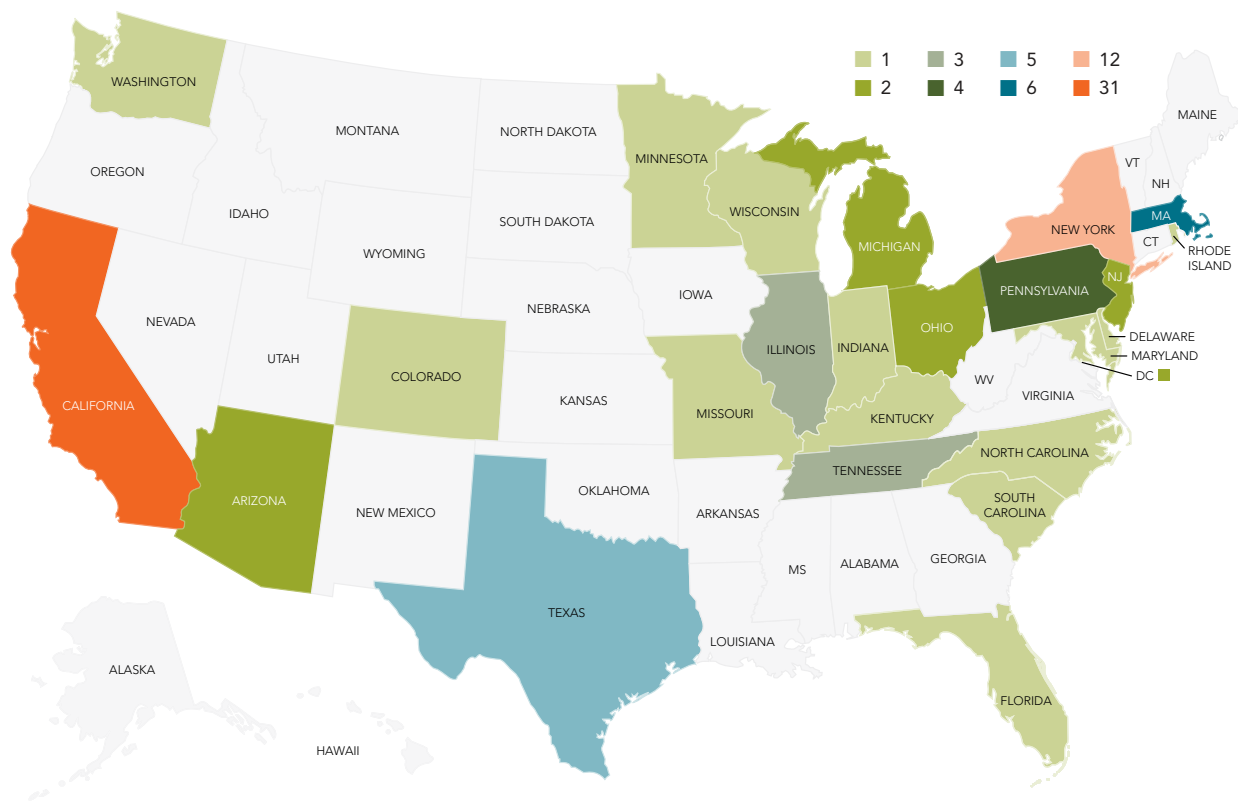
What is clear is that acceleration is accelerating. Two years ago, there were approximately two dozen dedicated health accelerators capitalizing on the growing

demand for technology-based solutions to traditional health system challenges. Today there are more than 115 dedicated health care accelerators worldwide.<sup>2</sup> This doesn't count the technology accelerators that sometimes wake up to find they've admitted a health care technology company. In the US alone, as of late 2014, there are 87 health accelerators (see Figure 1). Of these, the vast majority focus on digital health and are less than two years old.

Although much is in flux, it is clear that we are still on the front end of that Gartner Hype Cycle,<sup>3</sup> and new accelerators keep on coming. This report looks at these entities and their environment and offers clues on where they might be going. Leading entrepreneurs, sponsors, and accelerator founders who live in this ecosystem have developed their own points of view on what works and what will happen next, and many of their perspectives are included in the following sections.

**New to Health Care Accelerators?**  
See glossary of terms at [www.chcf.org](http://www.chcf.org).

**Figure 1. Number of Health Care Accelerators, by State**



Source: This information comes from a web-based database of accelerators that is maintained by CHCF and that will be accessible to the public.



## Seeking the Network Effect

**T**he vast majority of health care accelerators — about 80% of those identified in this report — are focused on digital health, which also intersects with biotechnology/pharma, medical technology, health care services, health care IT, and genomics.<sup>4</sup> Pioneers that catapulted first into the digital health space include Rock Health, Blueprint Health, Healthbox, Janssen Labs, Start-Up Health, and several others.

When health care IT accelerators began, they simply mimicked what they had seen in the non-medical technology and medical device side of the accelerator world with entities such as YCombinator, Tech Stars, and The Foundry. Typically, the recipe called for three months of intensive and centrally administered mentoring programs combined with co-work spaces, small amounts of seed capital (in exchange for equity), and a belief that a multi-entrepreneur environment had a network effect, making the combined community greater than the sum of its parts. These entities were designed to help take the weird and wonderful ideas of entrepreneurs, put them in close proximity to each other, wrap them in high-quality resources and experienced mentors, and bake for a few months. What hopefully emerged from the oven would be a tantalizing array of companies that appealed to venture capitalists and corporate giants.

Given the typical life cycle of health care companies from formation to exit — often seven to 10 years — it is far too early to tell whether this model, applied to health care, has real legs or whether the occasional successful companies that have emerged would have made it on their own anyway. But it has already become clear to many industry observers that accelerators must evolve to respond to market demand and create meaningful results. The Darwinian process of specialization that is characteristic of an evolving marketplace is well under way.

## Demand Ratchets Up

**T**he environment is changing fast for accelerators. Just two years ago, there was little clarity about whether the ACA would roll out as expected. Now, it is clear that significant change has occurred and that far more is to come. Payers and providers are recognizing

that their old ways of doing business will no longer suffice and that technology is the only way to ensure long-term operational efficiency and, therefore, profitability.

With the ACA has come a much greater push toward accountable care and pay-for-performance models, which have driven provider organizations to seek out new ways of doing business with patients and payers. The ACA has also driven millions of people to health insurance exchanges, forcing payers and providers to interact in ways that can only be made efficient through technology. For many of the big players in health care, the accelerator is the weapon of choice in the battle to stay relevant and innovative.

Adding to the demand are consumers who are looking for ways to observe and manage their own health care; they want to find provider pricing or self-diagnose or receive services remotely to minimize their personal spending and improve their overall experience. They are turning to technology for help.

On the supply side, all this attention to health care as an industry has encouraged legions of technology experts to set their sights on the one massive sector left to modernize. Newly minted entrepreneurs have been drawn to the field in record numbers to solve the challenges clearly identified by payers, providers, and consumers.

At the same time, the proliferation of low-cost technologies and shared services has pushed down the cost of and barriers to starting a new company. This is particularly notable in technology-driven businesses, where capital costs have been driven floor-ward and where the work of many can now be done by the few or in a highly distributed way. Observers of the entrepreneurial world sometimes joke that these would-be founders need only an idea, a Starbucks card, and an iPad to turn their notion into a start-up. But it is not so easy to know how that startup fits into the health care landscape, and thus many entrepreneurs need and want the support of those who have walked this path before.

Entrepreneurs are also finding that venture capital has become significantly less available to early-stage companies. The vast majority of venture investors want to see greater proof of concept and revenue before they invest. Getting a health care company off the ground is time-consuming and complicated. When there are regulatory

considerations involved, such as FDA approval, or when payer reimbursement presents a high hurdle to adoption, as with biotech and medical technology companies, venture investors have moved even further down the path to later-stage investing.

In fact, time to market is an important key to the rise of accelerators, according to Lynne Chou, a partner at the Silicon Valley investment firm Kleiner Perkins Caufield & Byers. “It’s such a slow path to market in health care vs. technology,” she said. “From incorporation to Series A takes far longer” for health tech businesses.<sup>5</sup> In other words, the length of time from starting a company to having enough substance to warrant significant venture investment is often much more extensive than in other industries.

Accelerators have leaped in to fill the void in early-stage funding, and many of them are now becoming indistinguishable from seed-stage venture capital funds.<sup>6</sup> While the earliest health care-focused accelerators committed, on average, \$10,000 to \$25,000 to their selected companies, it is common now to see investments or grants of \$100,000 to \$500,000 from today’s programs. Several of them, such as Healthbox, Rock Health, QB3, and Aging 2.0, have or are raising side-car funds that add to the initial capital or follow-on funds where \$1 million or more may be available to the best in class.<sup>7</sup>

Not surprisingly, entrepreneurs and former entrepreneurs are starting up their own accelerators, as they see emerging seed companies garner juicy valuations, and are capitalizing on the relative ease with which accelerators can be formed.

Today, with some experience under their belts, accelerators are searching for new and sustainable business models and methods of demonstrating value. In some cases they are morphing into early venture capital forms, thus risking the “outsider” street cred that they had used to their advantage. In other cases they are becoming more like research and development initiatives of large companies. Still others are becoming more like corporate partnership dating services than business training grounds.

## Six Models and Counting

As a field, accelerators have diversified and specialized to fit into at least six different types, some with more than one variant. Each of the different models has its own set of motivations for establishing programs and investing time and capital, and thus often has different metrics for measuring success.

The known models include:

- ▶ Independent commercial model
- ▶ Enterprise-based innovation model
- ▶ Product- or sector-amplification model
- ▶ Economic development model
- ▶ University-affiliated program
- ▶ Collaboration platform

### 1. Independent Commercial Model

These accelerators are generally owned by a group of shareholders but are not beholden to the specific goals of any organizations. They typically have a CEO or equivalent and their own governance structure that sets policy and process for selecting incoming start-ups. They can be either for-profit (e.g., Healthbox, Launchpad Health) or nonprofit in structure (e.g., Rock Health, Breakout Labs, American Heart Association Science & Technology Accelerator). Most of these accelerators focus on creating companies without specific regard to who might ultimately be their customer, investor, or acquirer.

Most receive operating capital from sponsor/affiliates or from the management team themselves and also take equity in the companies they choose to support as the primary means of making money. Since this equity may get significantly diluted over time and is unlikely to generate returns for five to seven years or more, accelerators following this model must ensure a constant stream of other revenues for long-term survival. Such revenues may come in the form of ongoing sponsorships, but accelerators in this category are also beginning to charge for services including conferences (Rock Health), consulting services (Healthbox), and use of the physical space and shared services (Janssen’s Healthcare Innovation Center, an incubator/accelerator in San Diego).

For entrepreneurs, the advantage to an independent model is that there are no strings to any pre-existing

organization, and it is typically possible to pick an accelerator based on the business partners you wish to work with. The downside of these models is that the accelerators have an incentive to maximize the number of sponsors and thus there may be too many cooks in the kitchen to have meaningful collaboration.

## 2. Enterprise-Based Innovation Model

These accelerators are initiatives of individual or small groups of companies, and in many cases are a core part of the organization's innovation strategy. They can be thought of as "corporate-captive" models.

The organizing companies generally provide grants or seed capital to entrepreneurs and a full suite of services that includes mentoring from the company's executives, subject matter experts, and affiliates; access to hardware and software for free or cheaply; and other support services, such as co-location worksites. However, the accelerators select only companies with products that have a strategic value — even if tenuous — to the enterprise itself. Among the companies that have developed such accelerators for the health care world are Sprint, Microsoft, Alexandria Real Estate, Optum/United Healthcare, J&J/Janssen, Nike, and Boston Children's Hospital.

Entrepreneurs working within these models face two risks. First, they are building a product and company that may serve only one customer — the owner of the accelerator. It is possible that entrepreneurs will specialize too early and limit their ultimate customer base. Second, there is a risk that graduates, forced to give some equity to their corporate benefactor, will be less desirable candidates for future investment or acquisition by competing companies.

On the other hand, the resources of large companies are hard to match and the ability to build and test one's products and services with the market leaders is a significant advantage for nascent companies that would otherwise struggle to get a return phone call from these enterprises.

## 3. Product- or Sector-Amplification Model

Similar to the enterprise model, these accelerators are even more specific, being formed around the enhancement of a particular product. Generally they are intended to: (1) increase the visibility and viability of a platform product from a large corporate entity; or (2) encourage development of products in a very specific sector of

health care even if they don't have a common underlying platform.

Athena Health has recently launched a product-specific accelerator to expand use of its platform. Likewise, Glassomics (now Lensomics) was created to encourage development around Google Glass.<sup>8</sup> An example of a sector-specific accelerator is Aging 2.0, which was established to "enhance the lives of older adults and improve long term care."

The advantages and disadvantages of product- and sector-amplification model programs are essentially the same as the enterprise programs, except even more specific and thus high in business risk.

## 4. Economic Development Model

Accelerators focused on economic development are typically funded by local governments, corporations, and others interested in building jobs in their community. While they may have other measures of success, these programs tend to require local engagement, favor local entrepreneurs, and preferably, long-term residence in the locale of the program. Several of these models amplify existing efforts to create "economic zones" — geographic concentrations of health care businesses targeting a sector, such as biotechnology or digital health.

While the program content for these models may be similar to other accelerator programs, the mentors, partners, and entrepreneurs that populate them tend to be locally based. An example of this model is 100health based in Madison, Wisconsin. 100health says it is "positioned to be the center of health care innovation in the US." It points out that Madison is home to world-class health care systems, one of the largest patent-producing research universities, a city government focused on supporting startup activity, and a large community of health care professionals. 100health expressly states it is taking advantage of the ecosystem that has grown up around Epic's corporate headquarters. The Iron Yard, with locations in nine cities known for their startup "tech scene," is another example of this strategy.

DreamIt Health, with programs in Baltimore and Philadelphia, is a hybrid program. It has both public and private sponsors, and serves the purpose of local job creation, while also aiming to launch companies more widely. The New York Digital Health Accelerator is a similar hybrid, devoted to supporting local hospitals'

business needs as well as the economic development goals of local government entities.

The economic development model's key advantage is access to local partners, including potential clients and collaborators. Furthermore, with economic development the goal, these programs may offer non-dilutive capital, long-term low rents, and other perks that encourage companies to remain in the vicinity. On the other hand, such a concentration of business relationships can be limiting, particularly in communities without sufficient ecosystem to build a company of scale or where there is a dearth of engineers or others needed to grow the business.

## 5. University-Affiliated Programs

These models vary greatly, from glorified tech transfer programs to fully articulated mentoring and funding entities. The most basic programs have co-work locations and mentoring services, mostly derived from the university community. The more sophisticated provide virtually all of the services one would see at the independent commercial programs, including access to broad and deep industry expertise and sources of capital.

While the vast majority of these programs do not take equity in the companies they support, there is often a relationship between the companies and the tech transfer offices of the university, which provides the university a longer-term potential source of revenue beyond royalties. More often than not, this also means that university-affiliated programs have a broader focus than digital health — sweeping in medical technology and biotechnology enterprises that have greater potential for royalty-producing intellectual property.

Notable exceptions include UCSF's Catalyst program and the yet-to-launch USC's Body Computing program, which focus exclusively on digital health.

Among the most sophisticated university-affiliated programs is QB3, an initiative of the University of California. QB3 helps emerging bioscience companies start and grow using the funding of UC's Office of the President and a wide array of professional mentors drawn from the corporate and venture capital worlds. QB3 has an incubator, an accelerator, a follow-on venture fund, and a variety of surrounding services to help seed-stage companies succeed.<sup>9</sup> UC recently indicated its intention to double down on the incubator/accelerator strategy and

expand its ability to take equity in companies or services that UC has supported through these various programs. The change also permits UC to make direct financial investments in companies and services if it is deemed to be favorable to the university and a way of expanding value beyond traditional fee and licensing models.

Another example is the Center for Integration of Medicine and Innovative Technology (CIMIT), which has a mission of rapidly improving patient care by facilitating interdisciplinary collaboration. CIMIT is a nonprofit consortium of several large Boston-area universities and teaching hospitals. With a primary focus on medical device innovators, CIMIT places experienced leaders (often former CEOs) with emerging teams to build companies with "a reasonable chance of hand-off to industry or widespread clinical adoption within 12 to 18 months."

## 6. Collaboration Platforms

An emerging group of entities are far more focused on creating large company / small company partnerships than on teaching the skills of entrepreneurship or assisting in the securing of venture funding. These programs, such as Health XL, Pre-Backed, and Avia, make it their mission to help very large strategic corporate partners create meaningful partnerships with small companies and entrepreneurs who might not otherwise be able to find their way to such relationships. These programs — which generally do not refer to themselves as accelerators — tend to have a defined set of corporate sponsor partners who are seeking particular solutions to specific business challenges.

Collaboration programs are not primarily focused on providing safe havens for entrepreneurial growth, but they do offer guidance to navigate the significant challenges that start-ups face in finding customers and building market credibility and product validation. For those entrepreneurs who have the skills, resources, and prior experience to build a business but who need help getting their first customers on board, these can be excellent opportunities for meaningful partnerships. However, they seldom provide capital or guarantee long-term customer relationships. It is expected that entrepreneurs will use their own resources and skills to capitalize on the opportunities presented for business development.

## Revising the Original Recipe

The early health care accelerators largely took a page from the YCombinator and TechStars models and launched programs that looked essentially the same. Most of them involved three- to four-month residential programs featuring co-work spaces; seed capital of \$10,000 to \$25,000 in exchange for 2% to 6% equity; regular mentorship meetings; and marketing support to help create websites and pitches. Occasionally, there were opportunities to visit with potential customers, investors, and other stakeholders or to be coached by experienced entrepreneurs.

Most of the programs were built *by* entrepreneurs for entrepreneurs. Often there was little to no involvement of traditional health care players. The primary goal for each “class” of entrepreneurs, usually eight to 12 companies, was to present at “demo day,” the culmination of those 12 to 16 weeks of effort. The idea was to ensure that the company was ready to tell a great story at demo day to potential venture investors and business partners looking for the free flow of new startup-led innovation.

Some of the current health care accelerator programs still look almost exactly like this model. However, a huge amount of variation, customization, and diversification has created marked differences in how the programs operate. The changes offer significant opportunities to better match startups and their needs to accelerator programs. They are briefly discussed below.

**Co-location vs. virtual models.** Many accelerators, including Launchpad Digital Health, DreamIt Health, and Aging 2.0, require the companies they select to relocate to their co-work space, believing that entrepreneurial sharing and learning can be significantly amplified by the effect of living and working in close proximity with each other and with accelerator leaders. But there is some question that this creates a bias toward young, single, mobile entrepreneurs who have the ability to pick up and move to San Francisco or Kansas City or New York for a few months.

As a result, some programs have established virtual models, where participants engage in distance learning and then come together for occasional group events and activities. StartUp Health was perhaps the first virtual

accelerator, calling itself an academy where entrepreneurs come together monthly or otherwise to share and learn, but who are only loosely connected in between. Health XL, Pre-Backed, and most of the collaboration-model programs now use this configuration (and don’t refer to themselves as accelerators).

**Geographic reach.** While most of the accelerators are generally focused on the region or country in which they reside, a growing number are looking to serve global entrepreneurs. Organizations like Healthbox, StartUp Health, and Health XL seek companies from all over the world for their programs and look for opportunities to share best practices across borders.

**Selection schedule.** Rather than the traditional selection of two or three “classes” of companies a year, some accelerators have a perpetual selection process. Rock Health, for instance, started with a class model but now continually monitors applications and invites startups to begin anytime. Launchpad Digital Health has also adopted this approach.

**Types of participants.** Some accelerators have become diligent about selecting applicants that represent potential companies versus those that have gadgets or products that are not destined to be stand-alone businesses.

Many of the accelerators have migrated from a focus on consumer-facing companies to those that could potentially serve the interests of hospitals, payers, or large health care companies. In fact, some accelerators seek to solve a specific organization’s challenges; examples include Avia, Athena Health, Prebacked, and HealthXL. Finally, some accelerators favor software-only solutions, while others are comfortable with hardware or service offerings as well.

**Program length.** A number of accelerators have adopted longer-term approaches of six months to three years. StartUp Health was always intended as a three-year program, billing itself as an academy for continuous entrepreneurial learning. Launchpad Digital Health expects its companies to spend a year in their residential program working hands-on with mentors. 100health allows its companies to enter in one class and stay for up to four sessions — over a year altogether — if they feel it to be worth the price (entrepreneurs relinquish 5% equity per 16-week stay for a maximum of 20%).



Interestingly, some accelerators have jettisoned the traditional demo day model, substituting occasional company showcases for investors and potential customers.

**Investment and equity.** The traditional \$10,000 to \$25,000 investment in exchange for 2% to 6% equity is evolving in recognition that it can take a long time to build a viable, fundable enterprise that demonstrates value. Several new models are emerging:

- ▶ Breakout Labs, CIMIT, and Launchpad Health provide as much as \$200,000 to \$500,000 in up-front or milestone-based capital to companies.
- ▶ Rock Health now offers selected companies a choice of \$20,000 in grants or \$100,000 in a convertible note that comes from a seed fund supplied by Mayo Clinic and venture capital firms Mohr Davidow and Kleiner Perkins.
- ▶ Aging 2.0 has raised a follow-on fund to continue to supply its standout companies with additional capital, as has QB3; Healthbox is in the process of doing the same.

In fact, it is safe to say that today's more experienced accelerators are migrating upstream to become more seed fund than training program. As Lindy Fishburne of Breakout Labs noted: "We see ourselves as an entity responsible for the care and feeding of seed-stage companies and as a combination of seed-stage capital and development support."

Many accelerators take equity for their services, although the terms differ. StartUp Health expects between 2% and 10% ownership in exchange for their program, the amount determined by stage of company. DreamIt Health expects 8% equity, and Healthbox requires 2% to 5% with no investment and a greater amount if the companies accept a funded convertible note of \$50,000 to \$250,000. Launchpad Digital Health provides up to \$400,000 of seed capital and values each company on a pre-money basis between \$1 million and \$3 million, depending on its status; Launchpad then takes the associated amount of equity that their invested capital represents in the form of preferred stock.<sup>10</sup>

## How Do You Measure Success?

**M**easuring success for accelerators is not straightforward. The most obvious metric of success is the value created by companies that participate, but it is too early in the life cycle of most to measure hard results. The average health care company does not realize a return on capital for its investors for at least seven years, and most of the accelerators themselves are still in their infancy, with the oldest digital health accelerator program having been around for only three years. However, The Foundry, which launched in 1998 and which employs a more hands-on incubator model focused on medical technology, claims to have generated in excess of \$2 billion of value for its founders and investors.

Accelerators often measure success by looking at participating companies' ability to raise new investment capital after exiting the program. For example, Healthbox claims that 83% of its companies have raised subsequent capital. Breakout Labs reports its companies have reaped \$50 million in outside capital, amounting to 10 times the capital put into them by the accelerator. The UCSF Catalyst program claims a six-times "return" on funding, meaning that for every dollar they have invested, the companies have successfully raised \$6 more. Rock Health reports its companies found their way to \$192 million in post-program funding.

What isn't clear from these numbers is how many of the companies are "haves" and "have nots" when it comes to follow-on funding, as large investments in any one company can skew the numbers. Furthermore, tracking follow-on funding doesn't begin to measure a company's lasting financial or market impact.

Niko Skievaski, co-founder of 100health, shared his thinking about the vagaries of results measurement: "It is difficult to decide how to measure success. Most use fundraising after the program, but I'm not convinced that's proof of value. You can look at acquisitions, but I'm not sure that's right either because there is no guarantee it means there was health care system value created. We tend to use job creation in Madison as our primary measure."

Some accelerators use financial returns from equity as a measure of success. However, because there are only

a handful of exits from the hundreds of companies that have populated accelerators, this measure is available for only a few.<sup>11</sup> Rock Health, for instance, has seen five of its 55 portfolio companies sold, although returns information is not available. The New York Digital Health Accelerator has seen two companies acquired out of its eight-company portfolio. StartUp Health reports that three of its 71 affiliated companies have been acquired. Unfortunately, there are no data available on whether this created positive returns for the accelerators themselves.

Instead, accelerators often count the number of companies that have demonstrated viability, generally measured by profitability or sustainable revenue in the first few years following graduation. Conventional wisdom suggests that, on average, 60% to 70% of venture-backed companies will fail, with as many as half of those failures occurring within the first few years. CIMIT reports results that fall within these norms, as has Janssen. However, other accelerators claim to have better-than-average company “survival” rates, particularly as compared to firms that go it alone and find venture backing. With timelines for measurement as short as one to two years, this is a misleading number to focus on. Company viability is not yet a particularly good metric for differentiating the contribution of the accelerator versus the natural course of things.

An additional measure of success is the number of customer relationships and partnerships created as a result of a company’s tenure in the accelerator — which could be considered a proxy for revenue and growth, albeit a somewhat tenuous one. However, too often the customer relationships that come through accelerators result in unpaid or low-paid pilot programs that never quite mature into long-term revenue agreements.

Job creation is frequently cited as an important measure of success, suggesting that for many, the accelerator movement can serve to stimulate the economy and, in this particular case, the health care economy. This is clearly an important objective, but not one that translates into a sustainable financial business model for accelerators unless they can secure long-term government funding as a result.

There are several other measures that accelerators use to track their own success, including the number of companies helped and the number of patients impacted, the ability to draw entrepreneurs to health care, and

the number of awards and publications that result from the company’s evolution — the latter being more associated with university-sponsored than commercially run programs.

## Sponsors Weigh In

With results still hard to measure, it is informative to ask those companies that sponsor and pay for the operations of accelerators to weigh in on their view of success in the interim. Do they believe that value is being created and that they are realizing a return on their investment?

A sponsor of multiple accelerators voiced some doubt: “I wouldn’t necessarily attribute company successes to accelerators. I’m not sure it’s a causative situation. The accelerators increase visibility, but I’m not sure if there are really differences between success and failure as a result.”

In general, however, the sponsors stated that they have realized real value — at least so far — by joining up with various accelerators. The primary returns for sponsors have come in the form of marketing and business development advantages as opposed to solutions to business strategy challenges or new company/product acquisition. These are the top reasons sponsors said they engage with accelerators:

- ▶ Networking value, as they develop relationships with people in the space that they might not otherwise know
- ▶ Public relations value, including a higher profile for the sponsor’s interest/role in the health care field, particularly digital health
- ▶ Lead generation, both for investment and partnership deal flow, and especially those that amplify the sponsor’s own products and services
- ▶ Ability to say they are engaged in innovation initiatives, whether or not they bear fruit for the larger business

Walgreens’ Bill Wafford noted, “We get access to great entrepreneurs and learn how people are thinking about the digital health space.” Wafford is vice president and managing director of Well Ventures, the venture and

growth capital investment arm of Walgreens, a Healthbox sponsor.

Another key advantage that sponsors see is that entrepreneurs, particularly those new to health care, gain enough knowledge and exposure to make better products and either advance or fail faster.<sup>12</sup> This is particularly important given the complexity of health care. Accelerators “help companies move beyond meaningless pilots,” commented Lynne Chou of Kleiner Perkins Caufield & Byers. “This is a good role for accelerators.”

There is a clear bias emerging among the sponsors toward accelerators with longer programs and “translational” approaches, where the sponsors define a problem to be solved, and start-ups work with sponsors to address it. Programs such as the New York Digital Accelerator, Avia, HealthXL, and to a certain extent, Healthbox, seem to be gaining in favor for these reasons, sponsors said.

“I think that the second- and third-generation programs that bring users, consumers, and companies together and become translational in nature have real potential,” said Matt Hermann of Ascension Health Ventures, which has participated with Healthbox and an internally created accelerator group.

Only one of the sponsors identified financial returns as a primary motivator. However, it is possible that sponsors might someday realize returns in those cases where they have bought in as limited partners. A challenge is that early equity takes significant dilution risk and, unless the sponsor agrees to future funding of a particular enterprise, may or may not return a meaningful amount of capital even if companies are successful.

On the downside, the ecosystem of accelerators has also received some criticism from sponsors.

One sponsor stated, “The accelerators have really complicated the early-stage markets by creating lots of companies that are too similar. What they tend to do is help create the best second-quartile companies, attracting young, green entrepreneurs with no network, or older entrepreneurs coming to health care from other fields. The best serial entrepreneurs aren’t attracted to accelerators.”

The significant run-up in the number of health care-focused accelerators was a particular concern to many

sponsors. With health care vulnerable to disruption, cities everywhere seeking to become the hub for new tech and health innovation, and a large supply of payers, providers, and other large corporations seeking to participate in the innovation movement, accelerators have proliferated in the US and abroad. For sponsors, this amplifies the concern about oversupply of services to an under-supply of good ideas.

One sponsor forcefully noted: “The accelerators have too much overlap and too many companies vying to create too many redundant ideas. They are pumping up these companies with unrealistic expectations about their odds of success and their ability to be transformative, and it is a disservice to the whole industry when the funnel gets overloaded; it is dilutive of talent and bandwidth and capital.”

Tom Rodgers, formerly director of strategic investments at Cambia Health Solutions (sponsor of Aging 2.0) said, “There are some diamonds in the rough and some valuable purposes to be served by the accelerators if they weren’t so oversaturated.”

JC Simbana, vice president of life science and digital health at Silicon Valley Bank, echoed Rodgers’ concerns: “They are endeavoring to make targeted connections with investors, which is key to success. But the number of companies outweighs the early-stage funding capacity, and we are seeing a bit of an incubator bubble.” SVB is involved with Health XL, StartUp Health, QB3, Illumina, and Blueprint Health.

## Entrepreneurs — the Ultimate Judges

It is the entrepreneurs who will be the ultimate judges of the value of accelerators. More than a thousand companies have gone through the programs mentioned in this report. The entrepreneurs associated with those companies overwhelmingly believed that the experience was worth it.

Paul McCurry, CEO of Axial Healthcare, put it this way: “To break in with the big boys in health care, a startup needs every advantage they can get, every warm introduction they can get. And for the accelerators, like a venture capital firm, they can count on one out of seven or 10 companies doing well. But the more they practice,

the better they'll get at predicting success and connecting partners."

While many cautioned that the advantages are significantly amplified by the entrepreneurs' own efforts to engage with the program, virtually all of those interviewed felt that the value had been well worth the time and equity. In fact, in all but two cases, the entrepreneurs said they would have chosen the same programs if they had to do it again.

Their reasons for joining accelerators ranged from getting access to free space and/or capital to the belief that the affiliation would create more marketing awareness and customer contact possibilities. A few said they were new to health care and needed help to jump ahead of the learning curve in a complex field.

Sean Duffy, CEO of Omada Health, focused on the relationships.<sup>13</sup> "The single greatest benefit was meeting other health care entrepreneurs . . . such a wonderful, helpful community."

Interestingly, entrepreneurs cited a strong belief that the network relationships to be gained are far more valuable than what the accelerator's own mentors have to offer.

When asked why entrepreneurs selected a particular program, the top reason was the perceived quality of the network relationships that the entity had. Many entrepreneurs preferred programs close to home. For those with families and connections to their community, relocation for several months would be difficult, and also add to the operating cost of their new venture. Other reasons included: brand quality (defined as name recognition and reputation); people; program focus; support services. Entrepreneurs also mentioned joining an accelerator in order to gain attention and credibility for their company.

Anish Sebastian, founder and CEO of 1EQ, stated it this way: "The primary reason why we decided to join was to differentiate ourselves from the 90K+ companies that exist within the ever-growing mobile/digital arena. We calculated that applying to a high-profile accelerator would act as a filtering mechanism to separate ourselves from all the noise. . . ."

Even those who had a very positive experience had recommendations for improvement. Addressing the engagement of potential customers through more

meaningful strategic partnerships was far and away the number one suggestion. This speaks to the emerging trend of "translational" programs where would-be customers participate in identifying and selecting the companies asked to join programs in order to solve specific challenges.

The role of accelerators as an important source of capital was met with mixed reviews. About half felt the accelerator's funding had significantly helped the startup raise additional capital from those in the venture, angel, or strategic communities. The remaining half believed this was a real weakness and that relationships with sources of subsequent funding were not meaningful and/or coaching to help raise that money did not lead to a successful outcome.

Entrepreneurs also held strong opinions about the amount of capital provided. Many felt that the typical \$20,000 or thereabouts was not adequate, particularly in a field where the product testing cycle is long and the time it takes to acquire customers can feel infinite. This is a problem that the accelerator industry seems to have recognized, as many are now offering their new entrants far larger sums, and also serving as follow-on sources of capital.

### Who Would Benefit Most?

Accelerator leaders interviewed for this report reached a consensus around who stands to get the most out of acceleration:

- ▶ Entrepreneurs from outside of health care who want to break in
- ▶ Entrepreneurs with consumer experience who want to learn to navigate the health care enterprise
- ▶ Entrepreneurs at companies who have more than an idea (e.g., working prototype and/or proof of concept) but not yet garnered customer relationships or institutional capital
- ▶ Entrepreneurs who are willing to put in as much as they get out of the programs, including networking time, peer-to-peer assistance, and proactive outreach to sponsors/partners



Other requests for improvement centered upon enhanced curriculum and the addition of senior technical mentors. Several entrepreneurs said most of the advice available was on the business front, but did not assist in solving technical challenges. Similarly, some accelerators feature a wealth of entrepreneurial and startup expertise but not enough intensive health care experience, which is a particularly important feature for those coming from the technology world. It is possible that accelerator programs may reach a point of bifurcation in the future, as some specialize more on the new entrepreneur or those new to health care (a better fit for the “original” accelerator model), while others go slightly later stage and focus more on entrepreneurs who are ready to build partnerships with customers to solve market challenges with solutions that are nearer term.

Several entrepreneurs noted that one of the things they most hoped to gain — peer interaction with other entrepreneurs — was far less frequent than hoped. Most attributed it to the full-time, heads-down nature of starting a company, but would like to see the emphasis on peer interaction amplified as programs mature.

## Caution: May Be Habit Forming

With satisfaction running high among entrepreneurs and funding for early-stage companies more challenging than ever, a recent phenomenon among entrepreneurs has been serial enrollment — signing up for multiple accelerator programs. Some new companies are placing themselves in two or three such programs, demonstrating an addiction to the warm accelerator feeling. As one young CEO said, “Why not? New programs add new connections, which is a bottleneck for many tech folks or scientists getting into health care.” Another added, “If it’s a really prestigious program, which garners a lot of press, investment, and attention, then that can be helpful.”

One of the reasons for partnering with multiple accelerators is that, unlike in the tech world, it takes far longer to build a health care product that gains customer traction. While “fail fast” is a mantra in the accelerator world, the definition of “fast” is vastly different in the tech world than in health care, in which companies typically need more time, more capital, and more sales cycle time. Furthermore, moving from one program to another

allows another bite at the seed-funding apple, which can be the difference between company life and death at the earliest stages.

On the other hand, over-dependence on accelerators can be an expensive addiction. Each one, with rare exception, takes around 5% equity in each business. As one sponsor put it, “I see companies getting equity fatigue. They give up 6% at Rock Health, then 6% at StartUp Health, and then start wondering if it’s really worth it.”

Accelerator leaders generally voiced support for companies that might start with a general program, such as a Rock Health or Healthbox, and then join a more vertically focused accelerator, such as Aging 2.0. There is also recognition that joining multiple programs may be the only way for a company to get funding in the short term. On the other hand, some questioned the motivation and leadership capabilities of those who join multiple programs. As one accelerator CEO said, “It’s a bad thing. At some point, why do you need another one and to give up more equity? It’s a sign of an effective CEO to be able to move on, and others just have to fail. You can’t stay in a protected environment forever.”

Several accelerator leaders said that if CEOs feel they need a second program, then the first program they joined has, in a sense, failed.

## A Frothy, Noisy Space

The market conditions for accelerators appear to be strong, for now, thanks to demand for innovation within every sub-sector of health care. Everyone coming out of business school, it seems, wants to start a company, and many of those who had success want to pass it along by starting an accelerator. And, frankly, it is not excessively expensive to start a new program. With a loft-like space, an unlimited electrical supply, some former entrepreneurs, and a good network of local supporters, virtually anyone can start an accelerator.

The wealth of large problems to solve in health care — complicated by the evolving regulatory landscape and changing role of traditional players — suggests that sponsors will continue to find accelerators an interesting place to make lucrative bets. As Erik Wullschleger, former executive director of the Sprint Mobile Health Accelerator, put it, “When I hear the statistics on the

size of health care spending and see MDs in the average hospital used to crinkled paper being forced to adopt mobile solutions, I can't help but get excited about the potential. There is such a large savings opportunity, and everyone wants to get in on it."

Ignacio Fanlo, co-founder of Lively, agreed: "Accelerators are a sign that there is a big need and few solutions."

Widespread interest in job creation also works in accelerators' favor, inspiring local municipalities or regions to band together to leverage what they perceive to be unique local assets on behalf of entrepreneurs.

But there are strong cautions as well. JC Simbana of Silicon Valley Bank said, "There is an oversupply of programs with few real successes. It's not helpful if companies can get seed funding but never a Series A venture round. It is hard to see the justification for more programs than already exist, and we are likely to see some consolidation."

Nina Nashif, CEO of Healthbox, agreed: "The accelerator model really took off. . . .The success of the first few drew others, but not all will survive, especially those with mostly venture/angel backing. Most will run out of money and go away."

And Elliott Menschik, founder of DreamIt Health, described the environment this way: "It is frothy, noisy in this space. There is an element of 'entrepreneurship is the new black,' and lots of entities want to tap into that vibe for innovation and economic development. But it will shake out based on who has the long-term financial support and real successes. We are all competing for a finite set of high-quality applicants and partners."

The interviewees commented on what they see as the likeliest evolution of the accelerator environment going forward. Four main themes emerged:

- Greater specialization and more configuration around verticals such as aging and cancer
- Longer, more intensive programs, including virtual/remote models
- More collaboration-style models that enable customer/sponsor organizations to co-create solutions with entrepreneurs.

- More access to capital as accelerators develop a greater "fund" mentality, raising early-stage and seed funds

## What Doesn't Kill You Makes You Stronger

In the end, the accelerators that survive will be those that can draw a direct line between their program and a company's positive outcome. In the next few years there will be enough data to connect exits and failures back to their origins. Today's entrepreneurs clearly welcome these programs, but tomorrow's may be more selective about what specific benefits and customer/investor relationships they get for their time and equity.

More importantly, as some accelerators move upstream to become seed- or early-stage funds, they will likely be judged just as the venture funds are — on the financial returns the companies actually deliver and the cash flows they produce to sustain their businesses over the long term. Industry experts suggest this will necessitate that accelerators broaden the skills of their teams and be more careful in selecting companies. They will need to overcome the challenges that have led early-stage venture capital firms to move further upstream with respect to stage.

The path ahead is not likely to be easy and straightforward for accelerators or for the entrepreneurs and investors who have come to look to them for inspiration. As this research suggests, savvy inhabitants of the accelerator world will need to adapt to the market shifts we are seeing and find a path to specialization. Over the next few years, we can expect Darwin's depiction of universal law will hang heavy in the air: "Let the strongest live and the weakest die."

## Appendix: Interviewees

### Accelerators

Michael Dempsey, program leader  
CIMIT

Anuj Desai, VP, Market Development  
New York eHealth Collaborative (NYeC)

Garrett Dunham, founder/CEO  
Prebacked

Katy Fike, co-founder  
Aging 2.0

Lindy Fishburne, executive director  
Breakout Labs/Thiel Foundation

Neena Kadaba, industry alliances director  
QB3

Martin Kelly, founder/CEO  
Health XL

Elliot Menschik, managing partner  
DreamIt Health

Nina Nashif, founder/CEO  
Healthbox

Aditya Polsani, program leader  
CBID

Orlando Portale, founder  
Lensomics (formerly Glassomics)

Ruben Rathnasingham, associate director  
UCSF Catalyst Awards ETR Program

Niko Skievaski, co-founder  
100health

Unity Stoakes, co-founder/president  
StartUp Health

Halle Tecco, founder and managing director-NYC  
Rock Health

Fred Toney, co-founder/CEO  
Launchpad Digital Health

Erik Wullschlager, general manager  
Sprint Mobile Accelerator

### Sponsors

Lynne Chou, partner  
Kleiner Perkins Caufield & Byers

Matt Hermann, senior managing director  
Ascension Ventures

Jeff Makowka, senior strategic advisor  
AARP

Diego Miralles, head  
Janssen Healthcare Innovation

Tom Rodgers, director, Strategic Investments  
Cambia Health Solutions

JC Simbana, VP Life Science and Digital Health  
Silicon Valley Bank

Rafael Torres, head of healthcare  
GE Ventures

Bill Wafford, VP and managing director, Well Ventures  
Walgreens

Jack Young, senior investment manager  
Qualcomm Life

### Entrepreneurs

Joe Blewitt, founder, Epion Health

Erik Douglas, founder, CellScope

Sean Duffy, founder, Omada Health

Ignacio Fanlo, founder, Lively

Jonathon Feit, founder, Beyond Lucid Technologies

Shiv Gaglani, founder, Osmosis

Mark Hadfield, founder, HelloMD

Paul McCurry, founder, Axial Healthcare

Eric Page, founder, Amplify Health

Davide Rossi, founder, FitBark

Anish Sebastian, founder, 1EQ

Sherwin Shiek, founder, CareLinx

Josh Stein, founder, AdhereTech

## Endnotes

- 1 See full report here: [www.chcf.org](http://www.chcf.org).
- 2 These data are based on the primary research done by CHCF and the author.
- 3 The IT research and advisory firm Gartner branded the Hype Cycle as a graphical tool for representing the maturity, adoption, and social application of specific technologies. The cycle begins with a “Technology Trigger” or potential breakthrough innovation, then moves through four other phases called Peak of Inflated Expectations, Trough of Disillusionment, Slope of Enlightenment, and finally, Plateau of Productivity. [www.gartner.com](http://www.gartner.com)
- 4 Some accelerators focus on medical technology and/or biotechnology and do not cross over into the health care IT technology realm. Such organizations as The Foundry, The Foundry@CITRIS (unaffiliated with The Foundry), CIMIT, and QB3, for instance, are primarily focused on the traditional life sciences. Still others seek to advance a broad health care mission. Octane Launchpad SBDC, Singularity University’s Start-Up Program, Breakout Labs, UCSF Catalyst, and Bayer’s Grant4Apps program nurture companies across the health care disciplines and, in some cases, beyond health care.
- 5 Series A refers to the first round of significant funding for a young company.
- 6 “Seed stage” refers to ideas that are yet to be companies or products in the making; “early stage” refers to young companies that have been formed to implement seed-stage ideas.
- 7 A side-car fund is established alongside the main fund to add further investment to selected deals; a follow-on fund is one established to provide Series A or other later-stage capital to companies after the seed-stage capital has been spent. Series A refers to the first round of significant funding for a young company.
- 8 Glassomics is currently dormant and not taking new applicants.
- 9 While there is much overlap between incubators and accelerators, incubators generally take ideas that they generate internally or that others bring them and match them with management to bring them to life; they often own large portions of the companies before they spin out on their own. Accelerators generally take equity in already independent companies that bring with them both management and partially realized ideas.
- 10 Pre-money value is the dollar value ascribed to a company for all of its equity prior to a new financing.
- 11 The term “exits” refers to companies being sold, going public, or otherwise producing returns for their investors in a change of control.
- 12 The point of these programs is to help determine if there is a meaningful business model to be had and, if not, to end the endeavor quickly so as not to waste more time and money. It is considered a positive thing in the business world to “fail fast” rather than draw it out and ultimately die anyway.
- 13 The California HealthCare Foundation has invested in Omada Health.