KMS HEALTHCARE

MVP: Get Your Game-Changing Healthcare Software to Market Fast

If you're reading this there is a good chance it's your first time preparing to launch a brilliant healthcare software product. Or perhaps you have experience but now have a new product extension or startup vision.

We have been doing this a long time and have a ton of valuable guidance to get or keep your successful software launch moving with an MVP approach.

We broke it down into two parts: **(1) What to Know** and **(2) What to Do.**

PART 1

MVP: What to know

Let's start by saying: you have a brilliant healthcare software idea that can improve and save lives. It could help doctors make the best care decisions, give patients and families confident control of their healthcare experience, or even perform precise, delicate surgical procedures.

Your next step will determine your success or failure, especially if you have limited software development experience.

A **"most viable product" (MVP)** approach overcomes common pitfalls to get your life-improving, compliant healthcare technology to patients and doctors sooner.

What a Healthcare Software MVP Is. (And Isn't.)

The MVP approach draws the roadmap for you to define, build, and market-test a quality first version of your software. It forges the discipline for your successful healthcare software launch.

Eric Ries, an expert in launching successful startups using lean methodology, created and defined the term MVP:

> **The minimum viable product is the version of a new product that allows a team to collect the maximum amount of validated learning about customers with the least effort.**

MVP development gets your product to market quickly, with shorter development cycles and fast customer feedback. Developers can respond to measured user needs without managing bloat from non-essential features. This lets you iterate and create more robust versions with additional features.

But an MVP is not just a bare minimum of features. It still must effectively address your customers' priority problems to make their life better.

Start: Define Your Software Vision to Improve Care

Let's say you and your partners have a technology vision to improve healthcare. Typically you will be looking at one of two categories:

- Software to improve experience and care for patients
- Software to make it easier for doctors and caregivers to provide the best patient care

Consider a couple of examples:

- Leaders of a physician group want to let patients see their own records on apps, taking advantage of rules directing EHRs to connect and share data
- A doctor and a software developer have software idea to automate and improve collaboration rounding in hospital units

So what do you need to research and define for your healthcare software development mission? What makes your software better, more exciting, disruptive, helpful, and healing for patients, doctors, and underserved populations?

Profile and Listen to Your Users

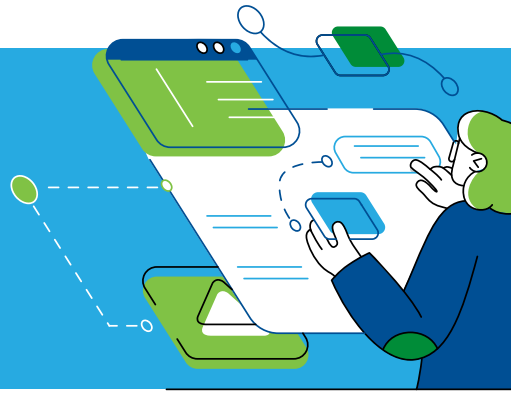
An eager entrepreneurial doctor might assume he or she already understands what other doctors or patients want from their software solution. Why spend extra time talking to them?

It's a common huge mistake to leap ahead of this critical step. Your potential customers hold the answers to your MVP launch success. They will steer you down the winning paths and away from the ones full of briars and dead ends.

On day one, have your product marketers and managers start researching and creating ideal customer and buyer profiles and engage those ideal customers for input. (If you don't have a product manager and marketer, get them. Outside development services partners can help fast.)

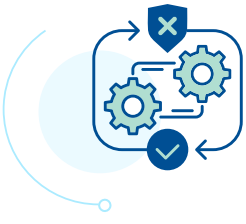
Your product team should then engage these profiled customers for product direction and input, to continue through the MVP release. These early helpers will likely become your beta customers.

“Minimum Viable” Means Unique, Important Things in Healthcare



Any software MVP in any industry plan must consider common things, such as user experience and interface, cloud hosting options, and performance and scaling metrics.

Healthcare software has some special, unique minimum requirements:

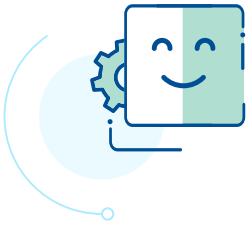


Absolutely protect the privacy of every glimpse of patient health information (PHI).

The HIPAA Privacy Rule has long established and refined the requirements for protecting PHI in software. Your MVP plan must identify where your software will potentially store or share PHI (as well as that of your tech partners). Your development requirements must specify what tools will protect PHI (such as encryption and authentication) and show compliance. As a new software venture, you should solicit guidance from a healthcare security compliance expert to establish rock-solid MVP security requirements.

Interoperability — Play well with other healthcare systems.

Healthcare software must work effectively in the flow of many existing IT and data systems. Use the best, right technologies to make all systems talk to each other in the ways that best enable exceptional care and patient access.



Make your users smile more often.

Vendors developed EHRs with little input from the physicians, which has led to decades of frustration among doctors who feel they spend far more time with computers than patients. Always remember that your technology must make satisfying quality care better and easier for nurses, doctors, and patients who hate redundant effort and data input. Your MVP must aspire to make the healthcare experience better and happier for everyone.

Choose the Right Healthcare Technologies

Healthcare has a bounty of cool, powerful, evolving technologies. Here's a quick rundown of the ones that will improve care quality, reduce costs, and elevate patient experience in 2023 and beyond:

Artificial Intelligence and Machine Learning

Healthcare artificial intelligence (AI) technology understands and interprets huge volumes of health data at an unprecedented scale and speed. It makes sense of billions of health data points from large, diverse populations to improve care decisions, analysis, clinical trials, and much more.

Machine learning is AI that lets healthcare software and devices learn from experience to do continuously smarter and more productive things.

FHIR (Fast Healthcare Interoperability Resources)

The FHIR standard for EHR APIs has moved interoperability ahead in groundbreaking ways, expanding the types of data systems can exchange. The standard establishes resources that define the content and structure of core health data, which developers use to build standardized APIs. FHIR also uses more modern web-based technologies such as RESTful protocol, JSON, XML, and RDF that developers know and prefer.

FHIR is the unquestionable future standard for healthcare data sharing. All major EHRs and big players such as Apple and Microsoft have adopted FHIR. And the 21st Century Cures Act and subsequent rules mandate FHIR adoption for many healthcare entities, identifying it as the "foundational standard to support data exchange via secure APIs."

SMART on FHIR

SMART (Substitutable Medical Applications and Reusable Technologies) on FHIR lets healthcare IT technology developers build single apps that work with any health information system. This has opened a new world of flexible apps that let providers and patients view patient records, monitor health, schedule tests and labs, and more, pulling data from any FHIR-connected EHR or system. Users see and use data from healthcare systems without the actual data moving from one system to another.

HL7

HL7v2 remains the most widely used healthcare interface standard, helping healthcare providers and software vendors open consistent, complete patient views of EHR system data. The common standard also helps developers invest more strategically in technology solutions and upgrades.

Internet of Medical Things (IoMT)

Healthcare goes with us everywhere now, thanks in large part to the IoMT. Wearables, home A1C monitors, implanted heart devices, and phone apps capture, track, and share personal health data securely so patients can better manage their care and collaborate with their doctors. physicians. IoMT devices and solutions connect people to healthier lives in ways we only dreamed of even five years ago.

Common Healthcare MVP Software Pitfalls to Avoid

1

Underestimating the effort, cost, and resources you need to succeed. Startups often just don't have the engineering teams and direction in place to launch a successful software product.

Established software vendors have resource challenges as well. They understandably devote more resources to core products with a reliable revenue stream, often squeezing out innovation.

And it's not just engineers. Your healthcare software endeavor needs product management, QA, testing, marketing, beta program management, and other functions depending on your vision.

What does that new budget or pro forma look like? What's it worth to get that return? Be willing to do strategically and confidently what it takes to make your vision succeed.

2

Ready, fire, aim. We've all heard stories about maverick code slingers creating breakthrough software in their garage. Ignore those stories. Architects should design before engineers build. That ensures that your product works reliably and does what you set out to do.

3

Finding and Hiring Specialized Healthcare Software Developers. Quality developers and testers are scarce in every corner of the software industry. The "Great Resignation", new employee expectations for remote work, and increasing global competition reduce the supply and increase the costly demand for exceptional software engineers.

Now amplify those hiring challenges for healthcare specialization. FHIR and SMART on FHIR. The Internet of Medical Things. AI and machine learning. There's a limited pool of specifically skilled engineers — making it harder to find, pay, and keep them.

4

Burning initial funding without enough product to secure more. Smart startups are looking ahead at each stage of funding they'll need and how to secure it. Investors want to see product progress and market feedback that boosts their confidence in contributing to later rounds of funding.

Common Healthcare MVP Software Pitfalls to Avoid

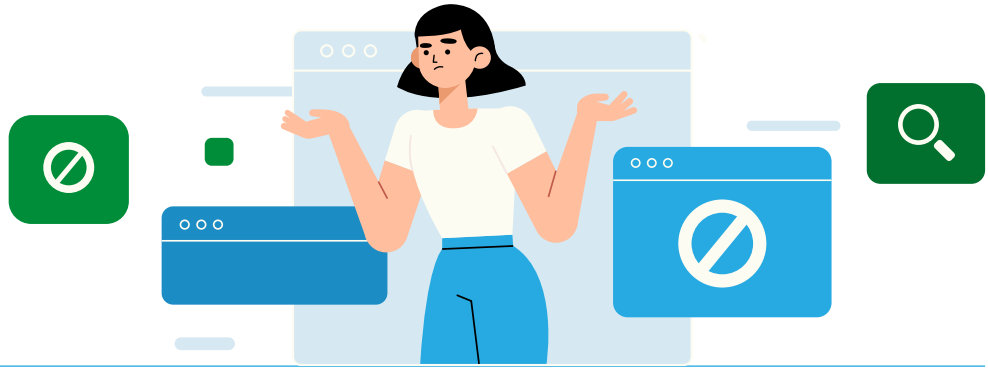
5 **Shrinking budgets stifle innovation.**
Tight budgets claim innovation as their victim. Here MVPs can stumble when leaders do not have the confidence or courage to invest in success.

6 **Trying to jam everything into version one.**
You've set out to change the world of healthcare and your mind is spinning with ideas for the sleekest, most comprehensive solution ever created. So paring down the features your MVP needs can be a downright emotional challenge.

7 **Over-customizing for the end user.**
MVP version one doesn't need to give every user every option to configure every feature and screen. The key goes back to focusing on the problem you're solving, and for whom you're solving it.

8 **Adding buzzy technology your MVP might not need.**
An example: Artificial intelligence and machine learning are powerful evolving technologies that can get precise answers from vast amounts of patient data and automate everything from surgical procedures to claims processing. But your use cases and specifications might point to a simpler algorithm that will deliver what your MVP needs with less effort.

9 **Starting without a product or marketing manager.**
Excellent product managers and marketers turn big partner and executive software visions into market and investor success. The product folks are smarter than founders and executives about how to get profitable software to market successfully. Ignore them at your peril.



PART 2

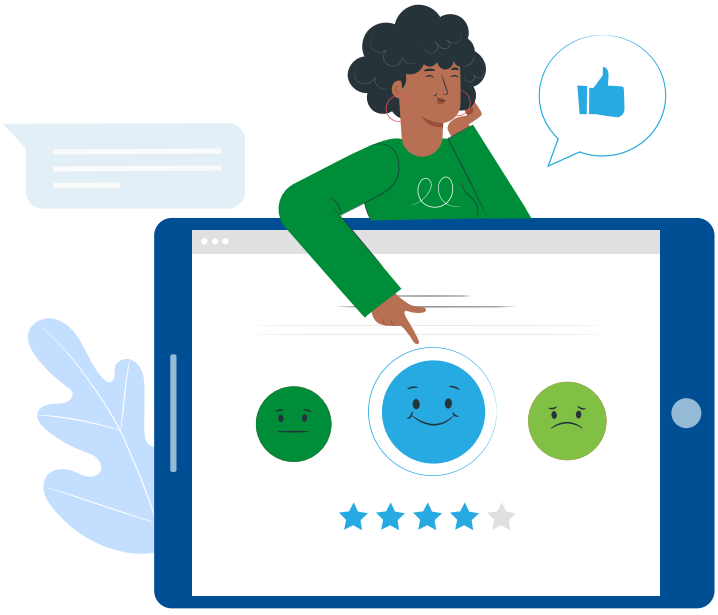
MVP: What to do

You understand why an MVP will carry you to a successful healthcare software. So how do you do it?

Define the MVP

We've already walked through the process of defining your vision and market. Here are a few other key steps:

1. Clearly establish what you want to build in the MVP, with a focus on user experience product considerations.



2. Marketing and product management should clearly define how you want to position your software in the market — what makes it different and exciting?

3. Identify three key beta customers :

- Involve them and solicit feedback throughout MVP development, not just at the end.
- Don't pick one person you already know who might be inclined to provide just the rosy feedback.
- Test for three different organizations and review with 8 to 10 additional users to build use cases by persona (doctors, nurses, billers, office staff)

What Healthcare MVP Development Team Do You Need?

Remember, success depends on more than just the software engineers.

Product Manager/Champion

Find an experienced, confident product manager. This hero of the MVP will:

- Build out specs and define what the fastest viable and successful healthcare technology solution looks like
- Define the minimum build for users to work with something and love it. Do you need every bell and whistle? What's critical for usability? For example:
  - Make things simple, easy, and fast for doctors
  - Identify key mobile device capabilities
  - Create a checklist for data privacy

Marketing

Your marketers will work with product management to define your ideal customer profiles and buyer personas. They also will help you engage and collect customer feedback.

As MVP development progresses, marketing will develop a go-to-market plan so you'll be ready to find new customers out of the gate. The plan might include messaging and positioning, building the company website, generating demand and leads. Marketing will also compile your initial customer case studies, likely starting with your betas.

Support/Customer Success

Don't make this team an afterthought. They are critical for training and keeping your beta and other earlier customers happy and productive using your software.

Technical Engineering Partner

This partner will help define a robust product development strategy and maintain focus to turn your healthcare technology idea into an actual engineered product.

Select a Skilled Healthcare Software Development Partner

Typically an MVP should not be a do-it-yourself venture. Consider working with an experienced healthcare technology development partner that can confidently articulate how the code will work and the architecture it's built upon.

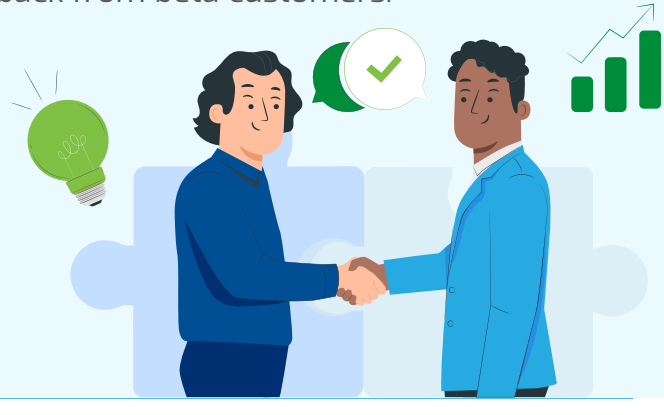
The right partner can guide you through MVP decision-making and establish a successful long-term product roadmap. They can also help your team understand how to think about each choice. Some other considerations for a successful partnership:

- Choose a partner with experience in late-stage development—it will reduce headaches and keep your MVP launch on track.
- Define the scope clearly and control it tightly (a good partner will help you do this).
- Get an estimate based on your initial research. Take a deep breath first; sticker shock is common. A good partner will help you understand the extensive returns on your investment in getting a quality MVP to market fast—it can make or break your entire business vision.

Working Successfully with Your Development Partner

Some tips to guide your successful MVP development collaboration:

- Establish monthly goals and KPIs: What should get completed each month?
- Target a workable release monthly
  - Hold a conference room pilot, where the team can see and discuss the direction of the current release.
  - Have the product manager incorporate feedback from beta customers.
- Have an executive monthly review.



Complete Your MVP in Four Months or Less

The whole point of an MVP is to get to market quickly and test your product. If you try to do too much and take too long, the market will sprint past you.

This requires discipline. For example, you might start out with 15 use cases in mind. Prioritize the top three for your MVP. The others become enhancements for future releases, and your MVP test will help you better define and prioritize future functionality.

Also, let your target customers help prioritize for you. What are the top three EHRs used by your ideal customers (the ones you profiled up front)? Integrate with only those three EHRs in your MVP.

And resist major scope changes at this point. The potential for failure increases, putting the launch and your funding at risk.

Beta Testing

Don't go live with a generally available release right after completing the MVP. Next up is three to four months of testing with customers to learn and refine your product for prime-time production:

- Those three beta customers you identified will use and provide feedback as to what works and what doesn't.
- Address any glitches and confirm with beta customers.
- Establish strong customer support and engineering teams to keep things on course.

Keep in mind these beta customers should become your first reference accounts. Pay them a lot of attention, appreciate them, and focus on solving their problems. Also, focus on training to keep them engaged and productive using your software.

Accelerating MVP Development

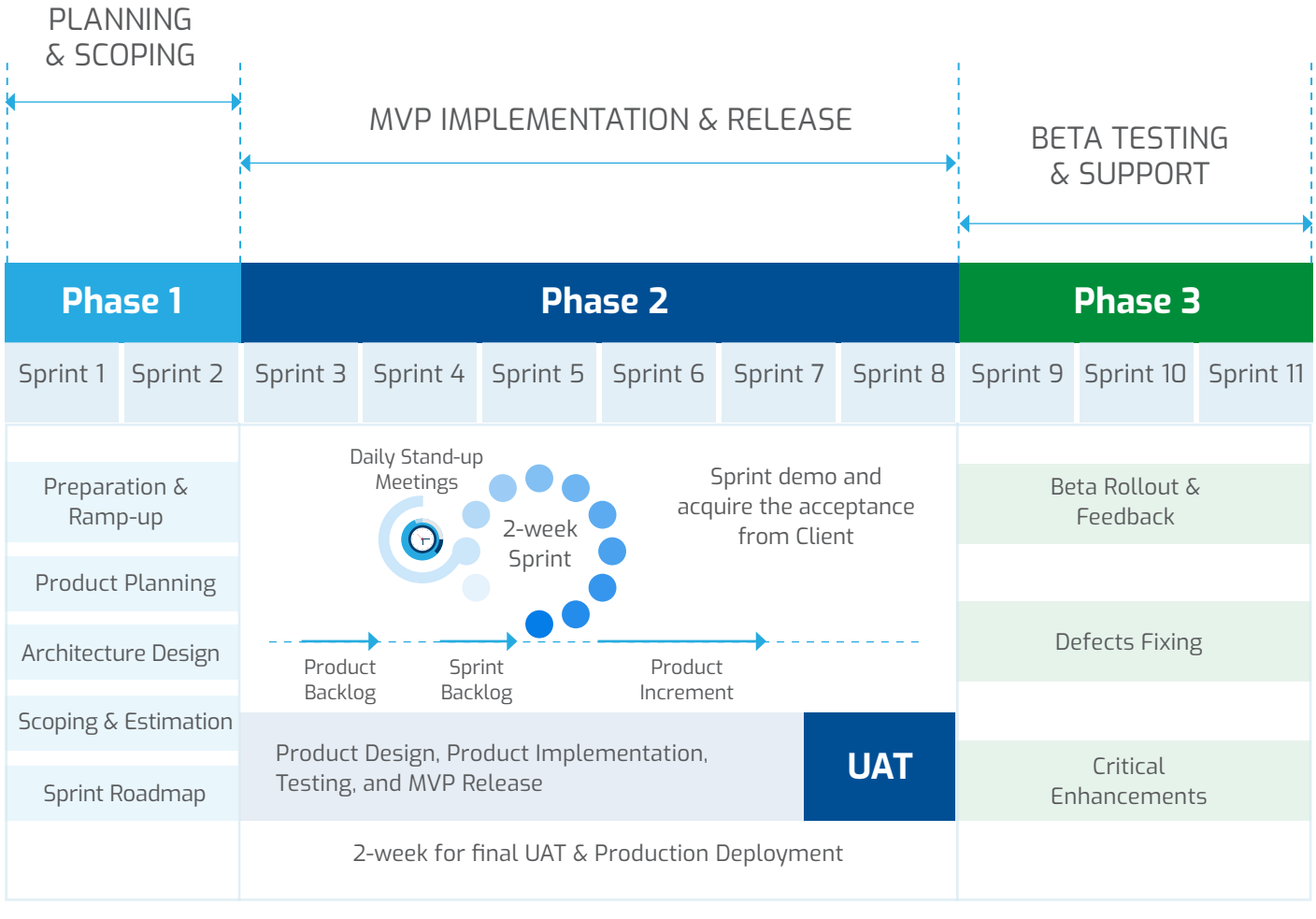
MVP development requires considerable work, knowledge, and skill.

Accelerate your MVP development with a trusted partner to enhance your team without the costs and challenges of hiring internal resources. KMS Healthcare can fill your talent gaps, guide you through common challenges, and help you execute each step with confidence.

KMS Healthcare can get you started much closer to the finish line with:

- A healthcare-experienced development team that can ramp up immediately
- Consulting guidance to ensure a successful delivery
- Skilled data scientists, AI/ML engineers, and leaders in emerging healthcare technologies
- Proven MVP development methodology for startups and enterprises
- Real-world experience from successfully launching our own MVP software

The MVP Development Timeline & Checklist



Ready to bring your healthcare MVP software vision to life?

Contact Us

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