Microsoft Steps into Healthcare – Again

Analyst: John Moore
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During its virtual Build conference on May 19th, Microsoft announced the release of its first vertical industry cloud solution, Microsoft Cloud for Healthcare. While Microsoft (MSFT) never fully left the healthcare sector after the demise of HealthVault and the disbandment of the healthcare group that was led by Peter Neupert, this announcement clearly signals the company's intent to play a much larger role in the healthcare IT arena.

Key Take-Aways

> Cloud for Healthcare is an amalgamation of existing Microsoft (MSFT) products including cloud platform Azure, CRM solution Dynamics, BI solution Power and Teams. These solutions have been "verticalized" for the healthcare sector.

> Initial release is targeted solely at the provider market and will leverage existing independent software vendors (ISVs) and its extensive value added resellers (VAR) network to further develop industry specific capabilities. The company intends to offer a similar solution in the future for the payers as well as other industry sectors.

> Today, the solution is free to use as a beta customer till late fourth quarter of 2020. Microsoft has yet to define a clear pricing model for this solution suite.

> This is the most significant announcement by a major cloud vendor, others include Amazon, Google and IBM, of its clear intent to go beyond just cloud hosting to actually delivering a range of industry specific capabilities for healthcare providers. Only Salesforce's Health Cloud can be seen as a direct competitor to Cloud for Healthcare.

Background

Microsoft has a long history in the healthcare sector. Over a decade ago, under CEO Steve Ballmer, the company went all in on developing or acquiring various solutions to serve the healthcare provider market. HealthVault, a consumer facing solution, targeted the need for an independent patient portal where a consumer could store their complete medical records. The company also developed leading edge technology to support remote patient monitoring (RPM) and even acquired an EHR company, Global 2000.

Despite massive investments and aggressive moves by MSFT, the market was simply not ready and many of the solutions developed were not a perfect match for the market. For example, the Global 2000 acquisition was seen as a serious threat to its existing base of EHR ISVs in North America. The company was left with no alternative but to agree not to sell Global 2000 into the most lucrative market at the time, the U.S. market. HealthVault went in the other direction, relying too heavily on ISVs in the immature personal health records (PHR) market to deliver key functionality. Ultimately, this group was dissolved with many key people leaving MSFT or being reassigned into other groups within MSFT.

Critical to note that MSFT is not the only large multi-vertical company to struggle in the healthcare sector. Intel tried – they failed. GE tried and for most part failed but still have a thriving business in imaging. IBM Watson Health stills struggles to gain significant traction despite massive investments. Salesforce, whose Health Cloud is most similar to Cloud for Healthcare, has been attempting to extend its reach in healthcare, but results have been quite modest. McKesson, after many years of ups and downs with its healthcare IT business, pulled out completely when it spun-out Change Healthcare and sold its EHR assets to Allscripts. Even Google's first attempts with its PHR, Google Health met its own demise a few short years after launch.

Healthcare is a difficult market to penetrate. But it is also a massive market, representing nearly 20% of GDP and a market that has been slow to move to a digital construct. This makes it difficult for any large technology company to not salivate at the growth opportunities the healthcare sector may represent for their company.

Microsoft Gives Healthcare a Second Chance

Microsoft never completely left the healthcare sector. It has been courting a wide range of healthcare IT vendors to use its cloud solution Azure. The company has been actively selling Dynamics as well as Teams into this sector and its AI-based Healthcare Bot Service technology is claimed to be the brains behind more than 1,500 COVID-19-based apps today.

But with the announcement of Cloud for Healthcare, Microsoft is clearly doubling down on the healthcare sector going far further in providing industry specific functionality than its leading competitors in cloud services, Amazon, Google and IBM – only Salesforce comes close. It is an impressive suite of offerings that providers of all shapes and sizes should evaluate closely.

Cloud for Healthcare – an Impressive Array of Services

Tapping into its extremely broad array of applications and cloud services, MSFT's Cloud for Healthcare offers a wide range of capabilities that have been tailored to serve providers. That tailoring is clearly not complete yet as they refer to a care manager or nurse in its CRM Dynamics as an "agent" instead of nurse, care manager, care navigator, etc. Other legacy terminology may lurk deeper in other solutions in this suite. Of course, Cloud for Healthcare is HIPAA compliant and fully on-board with latest FHIR interoperability standards.

At a high level, the architecture of Cloud for Healthcare begins with the Azure data platform, logically layered by Power, MSFT's business intelligence (BI) software (see Figure 1). At the application layer, MSFT's own applications, 365, in which Teams is embedded, and Dynamics 365, their CRM are shown, but any applications (e.g. MSFT ISVs) will be able to layer in at this level. The relatively new industry interoperability standard, FHIR, will be used up and down the Cloud for Healthcare stack, including pulling data into Azure.

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Microsoft Cloud for Healthcare logical architecture

Figure 1: Cloud for Healthcare Architecture

Within Power, MSFT has created its own industry specific data model. While MSFT plans to enable customers to bring data into Azure, they have yet to make a decision as to whether or not they will normalize the data to their data model in Power or let others (VARs) tackle that Herculean task. The company has also built out a few healthcare specific BI templates, including physician referral stats and care team member analytics. MSFT has not built any reporting tools for say quality measures such as HEDIS stating it will look to its ISVs to provide such capabilities. There is also no mention of providing risk assessment algorithms within Power though it may be possible to invoke such through other "Healthcare Capabilities".

While MSFT has promoted heavily its healthcare Bot technology in this announcement, which will be used primarily for engagement, there are more interesting facets in Cloud for Healthcare. Teams with its omni-channel communication capabilities could become an interesting play not only internally, within a healthcare organization for care coordination, but also to support virtual care. In optimizing Dynamics for healthcare, MSFT has added the capability to accept Admission, Discharge and Transfer (ADT) feeds in support of care coordination and also a critical need for those providers operating on a value-based care contract. How this ADT functionality will be enabled is less clear.

Lastly, there is Azure IOT capabilities, MSFT's answer to the industry's need for a common platform to support RPM. Over the years, MSFT has built out an impressive stack of technologies to support remote monitoring in multiple industries. In Cloud for Healthcare, MSFT is combining these capabilities with industry-specific ones (e.g. use of FHIR), and Power to serve-up RPM measures within Dynamics (see Figure 2) to a care manager. While we have yet to see broad adoption of RPM, even during the current COVID pandemic, this is a coming need as the industry continues to seek ways to lower total costs of delivered care and more consumers seek care-at-home options.
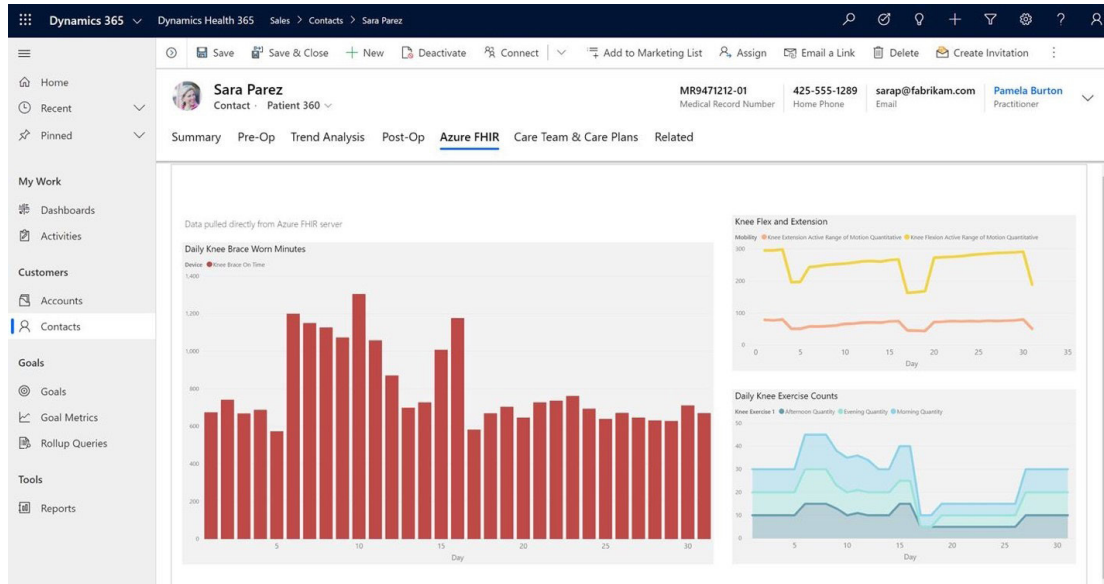
Figure 2: RPM Measures for Care Management

Significant Overlap with Solutions in Market Today

One of the more confusing aspects though of all these MSFT services is where does MSFT technology end and services provided by its large ecosystem of ISVs and VARs begins? There is quite a bit of overlap in numerous application/service areas (see Table 1). It will be interesting to see to what extent healthcare providers flex Cloud for Healthcare products and services to meet their needs versus other vendor solutions they may currently use or are considering.

For example, within MSFT Teams there is the capability to launch a telehealth visit. Will providers use this capability or the one from say their EHR provider or one from a wide array of best of breed vendors such as MDlive or AmWell? The capabilities of MSFT's Dynamics also overlap with countless existing applications that providers may be using, from scheduling, to patient relationship management (PRM) to care coordination. The impact to physician workflow of choosing one option over another will likely be the deciding factor.

Product/Service	Capabilities	Potential Impact to
Azure	Cloud platform,	AWS, Google Health, IBM, Oracle, Salesforce, specialty healthcare cloud vendors
Azure IOT	Remote patient monitoring	Apple, Amazon, Validic, med. device vendors (e.g., Abbot, Philips, Medtronic, etc.)
Power	Analytics, healthcare specific data ontology	Arcadia, Health Catalyst, Qlik, Tableau, Oracle, EHR & PHM vendors
Dynamics	Customer & Patient Relationship Mgmt., Care Coordination, Patient Engagement, Scheduling	CRM/PRM (Salesforce, Solution Reach, etc.) Care Mgmt., PHM and Patient Engagement (Medfusion, FollowMyHealth, EHR vendors)
Teams	Multi-Channel Communication, Telehealth	MDlive, AmWell, existing EHR vendor solutions/ partners

Table 1: Features of Cloud for Healthcare Suite

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Today, Cloud for Healthcare is lightly tailored to healthcare needs. However, this is only a starting point, a beta product from MSFT and changes will be made between now and its official release in late Q4'2020. Potential adopters of Cloud for Healthcare should closely monitor how this solution suite evolves over the next several months before making a strong commitment to its use.

How Big an Impact?

The MSFT Cloud for Healthcare is a big announcement, but just how much impact it will have on the sector remains to be seen. Much will depend on its pricing model and how MSFT will engage its ecosystem of partners (ISVs and VARs). What is clear is that MSFT is once again re-entering the healthcare sector in a larger, more concerted fashion with a fairly cohesive set of capabilities that will resonate across a broad swath of the provider market – from small practices to large systems.

The solution suite will not displace most solutions that providers are currently using. However, Cloud for Healthcare has the real potential to augment many of those solutions. One area that appears particularly attractive is the combination of Azure IOT with Power analytics for RPM needs. Market adoption of such capabilities is still lagging with a primary reason lack of a true platform play and scalability. MSFT brings both to the table and this may ultimately be where we see Cloud for Healthcare's biggest impact.

Darkening Clouds

Much of the future of enterprise software will reside in the Cloud. All major EHR vendors have a Cloud strategy (Allscripts, Cerner, Epic) - if not already in the Cloud since their inception (athenahealth). Major Cloud vendors such as Amazon (AWS), Google, IBM and MSFT have been aggressively targeting EHR and other health IT vendors to build on their Cloud platforms. All of them have also gone direct to provider organizations (mostly larger healthcare systems) to provide hosted services as well.

But of all of the major Cloud vendors, only MSFT and Salesforce have both generic Cloud services and software applications on offer. They also have rich developer ecosystems, BI/analytical tools and a strong intent to serve the healthcare provider market with some customization of their existing application offerings. While MSFT calls theirs Cloud for Healthcare, Salesforce's branding is not too dissimilar – Health Cloud. Looking ahead, these two will be aggressively competing for the hearts and minds of the provider sector. Our initial assessment is that Salesforce will target larger enterprises, while MSFT will seek to address its traditional sweet spot – small to medium size businesses (SMBs) in the provider market.

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Contact

For more information please feel free to contact the author:

John Moore
john@chilmarkresearch.com

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