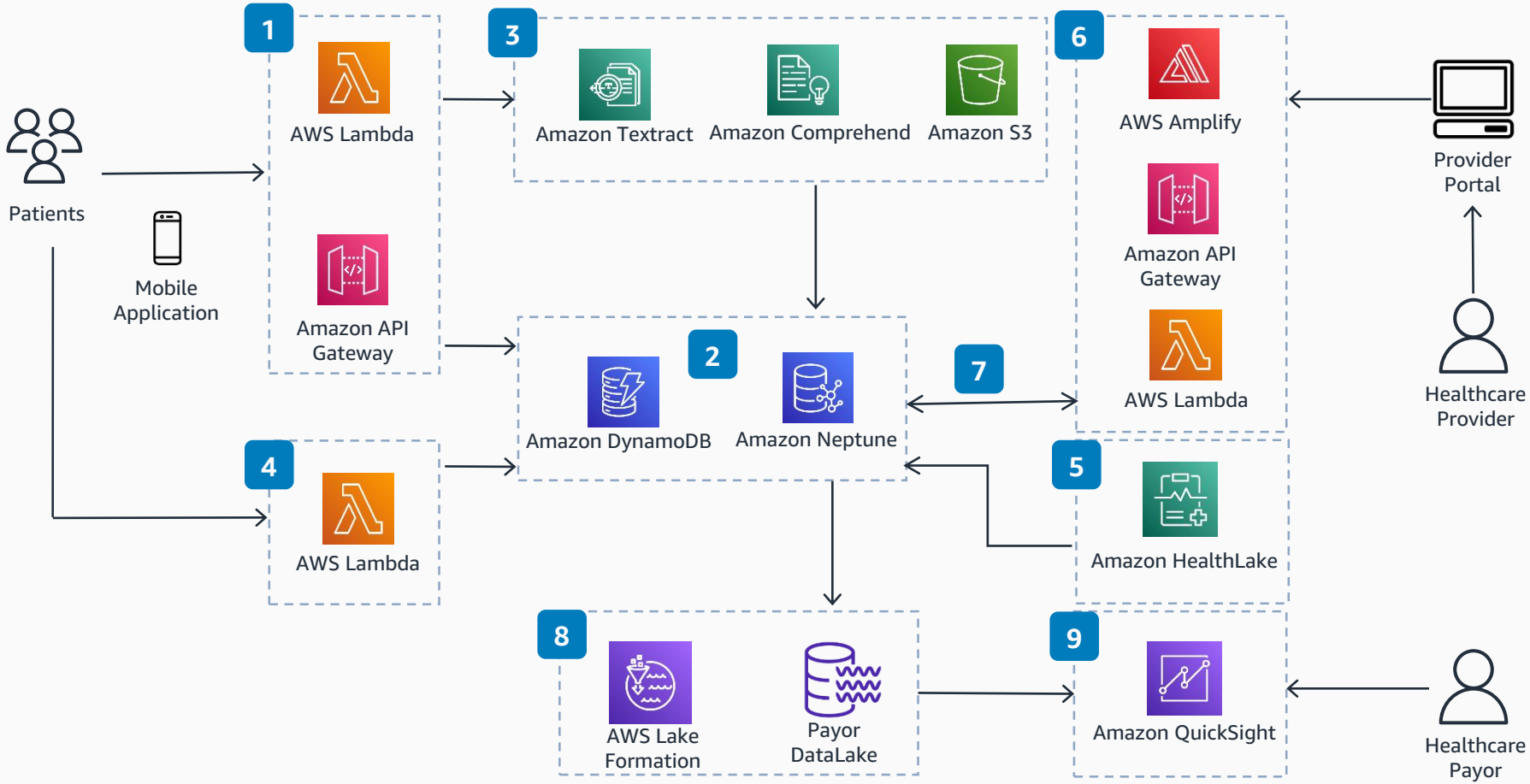
Guidance for Patient 360 on AWS

This architecture would be hosted by the payor and shows how to set up a patient-managed, centralized repository of a patient's healthcare records. Patients access the repository through either a standalone mobile app or one integrated with an existing payor app. Authorized providers access patient records through a provider portal.



1. Patients will use mobile devices to manage their healthcare data. Patients will input data manually by uploading photos of medical records and through future wearables. All data interactions will occur through **Amazon API Gateway** and **AWS Lambda**.
2. Health data from multiple sources will be added to **Amazon Neptune**.
3. When patients upload pictures of medical records, such as a lab report or diagnosis, the text will be extracted from the image using **Amazon Artificial Intelligence (AI) services**, and data will be sent to **Neptune**.
4. Patients will authorize providers with view access for a duration of time (such as 90 days) to their medical records. A token will be managed in **Amazon DynamoDB** to represent provider authorization and expiry.
5. The payor will enrich the patient data from other sources. The data may come from the payor's source systems or from **Amazon HealthLake** if the payor has one set up.
6. The provider will have access to a secure portal for accessing the patient's authorized 360 medical records.
7. Providers will also have the ability to add medical episode and other relevant information to the patient data.
8. Data captured in **Neptune** will be added to the payor's data lake and used for generating personalized medical tips for the patient.
9. The payor will have access to patient population data in the data lake to generate business insights. Dashboards may be created using **Amazon QuickSight**.

Reviewed for technical accuracy February 13, 2023

AWS Reference Architecture