

VENTURA COUNTY
Foster Health Link

Child Welfare Council
Data Linkage & Information Sharing Committee
September 7, 2016

Barry L. Zimmerman, Director
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Foster Health Link

Why Foster Health Link?

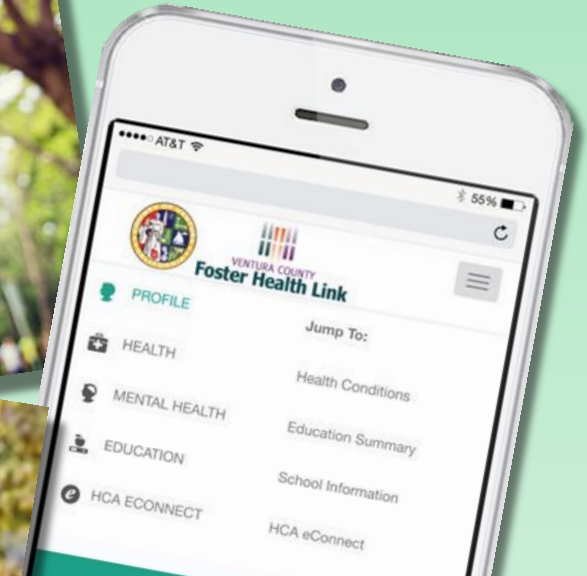
- Story . . . Antony Brennan
- Project Overview Video

Medical Records Integration

- Unique Technical Solution
- Live Application Demo

Impact

- Caregiver Feedback
- Results Video



Better information for better health decisions

Overview

Video Clip

Medical Records Integration

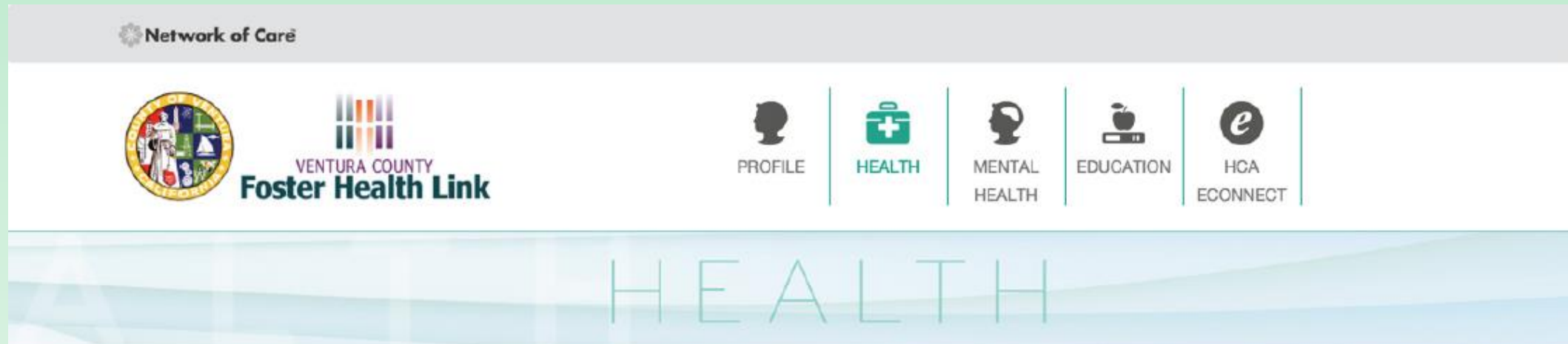
- Requirements
- Constraints
- Solution
- Security Analysis
- Risks
- Benefits



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Requirements

- Caregiver can view information available in VC Health eConnect for each child
- Medical record information for each child should be viewable within the context of the child's other information on **Foster Health Link**



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Constraints

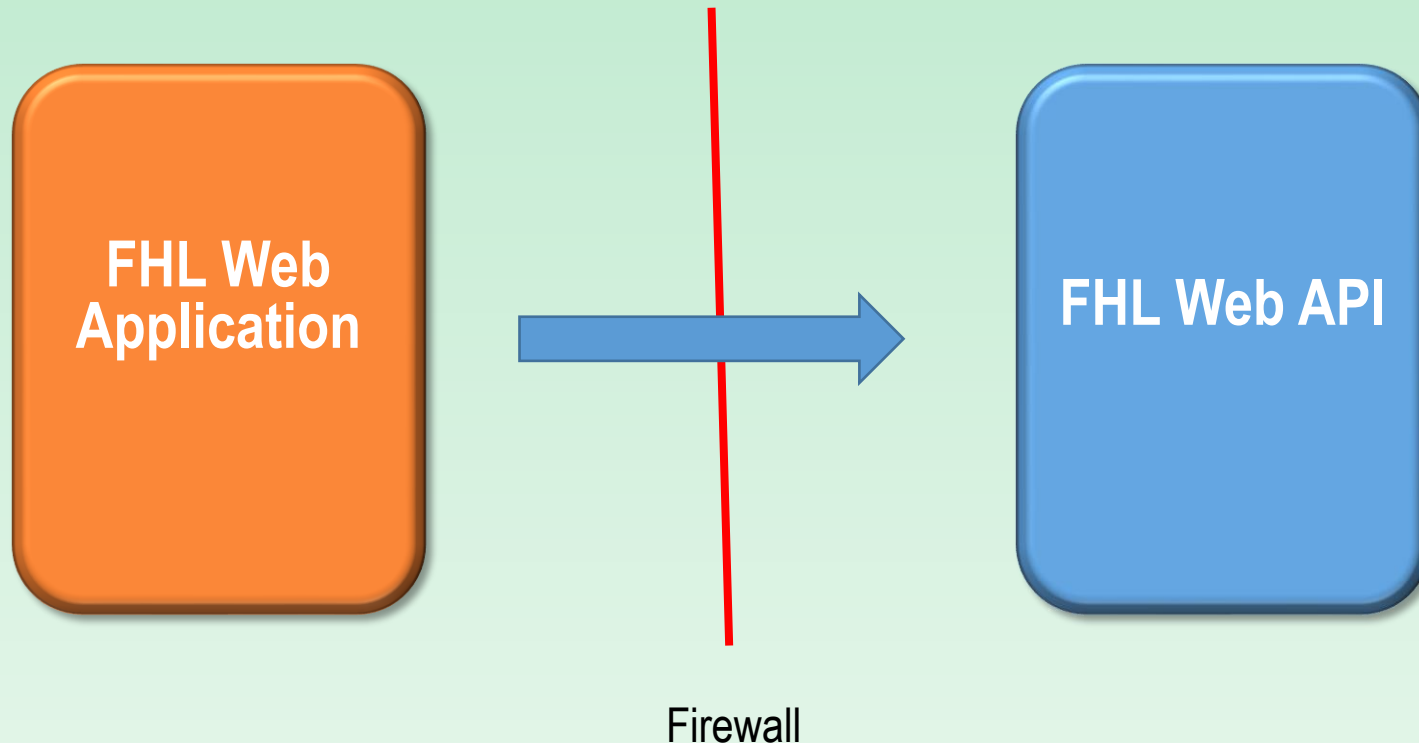
- Caregiver is not required to authenticate into VC Health eConnect
- Child's medical record information is inaccessible from the same browser after the caregiver logs out of **Foster Health Link**



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Solution: Step 1

Foster Health Link Web App makes a secure request for the child's medical record information to Foster Health Link Web API. The requested information could be Profile, Medications, Documents, Labs, Messages, Appointments, etc.



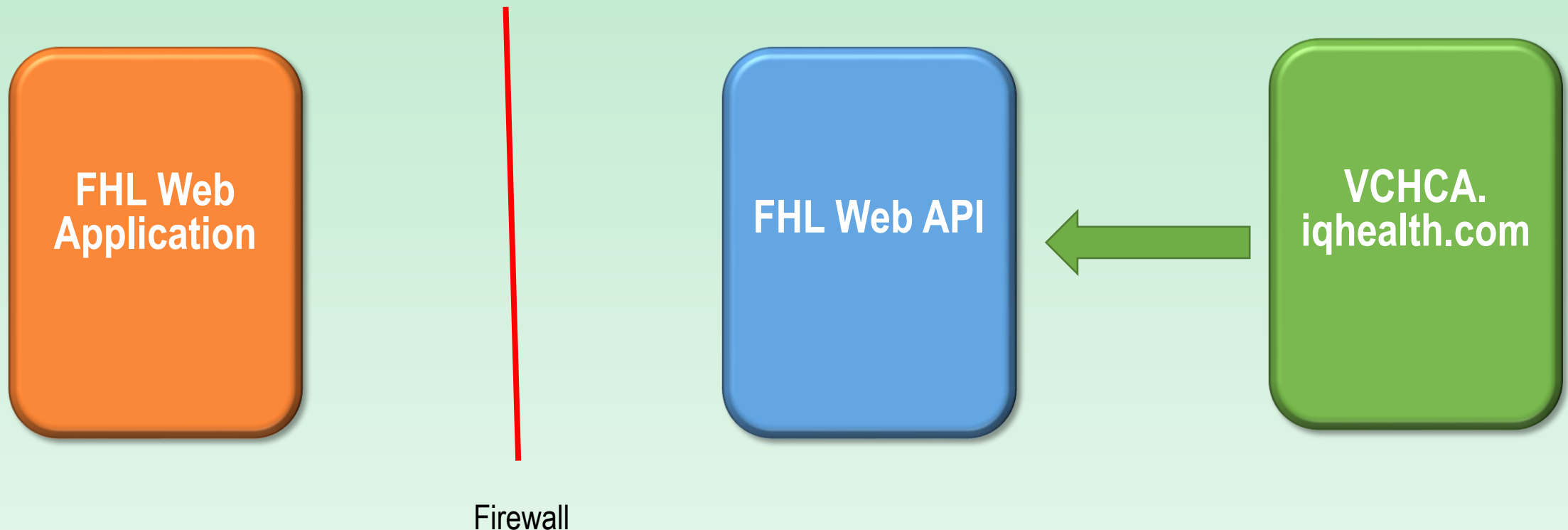
Solution: Step 2

Foster Health Link Web API calls the CernerHealth.com login page and caches cookies. It then authenticates into CernerHealth.com using the child's stored credentials. CernerHealth.com redirects to VCHCA.iqhealth.com.



Solution: Step 3

VCHCA.iqhealth.com returns the landing page for the user along with session cookies. FHL Web API caches iqhealth.com cookies and extracts Cerner ID from landing page. This Cerner ID is required in most subsequent URL requests to VCHCA.iqhealth.com



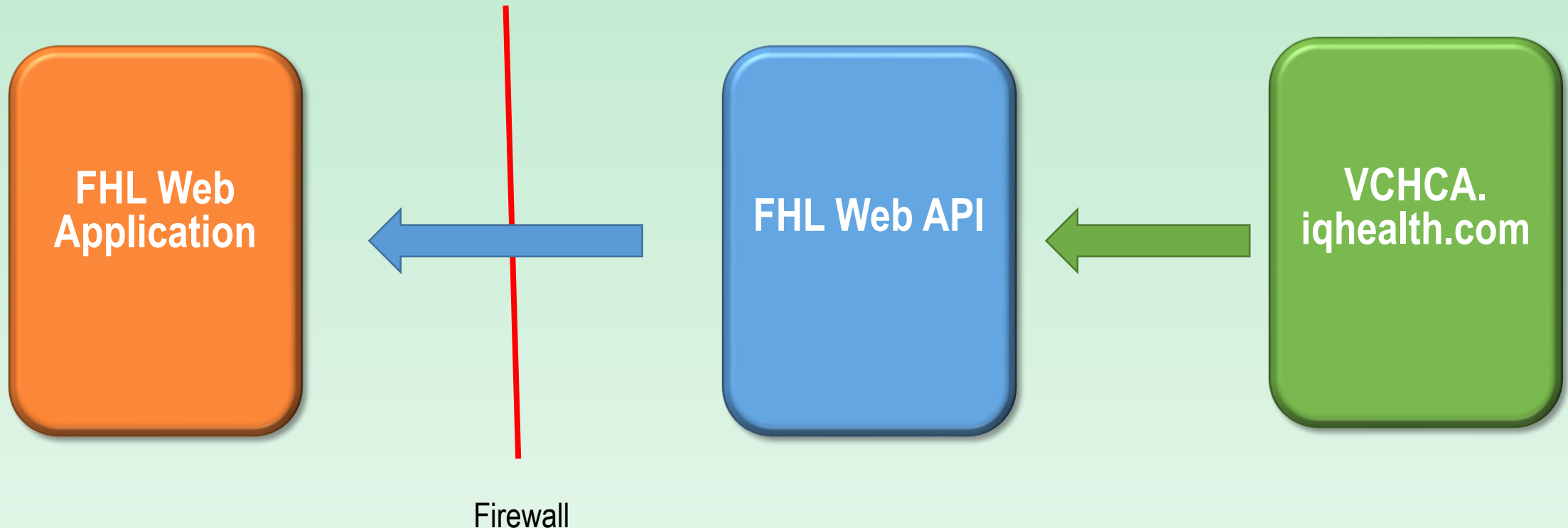
Solution: Step 4

Now, **Foster Health Link** Web API has an established session for the child's account and cookies required for authenticated requests to VCHCA.iqhealth.com in its cache. It makes the request for the information requested by the Caregiver in Step 1.



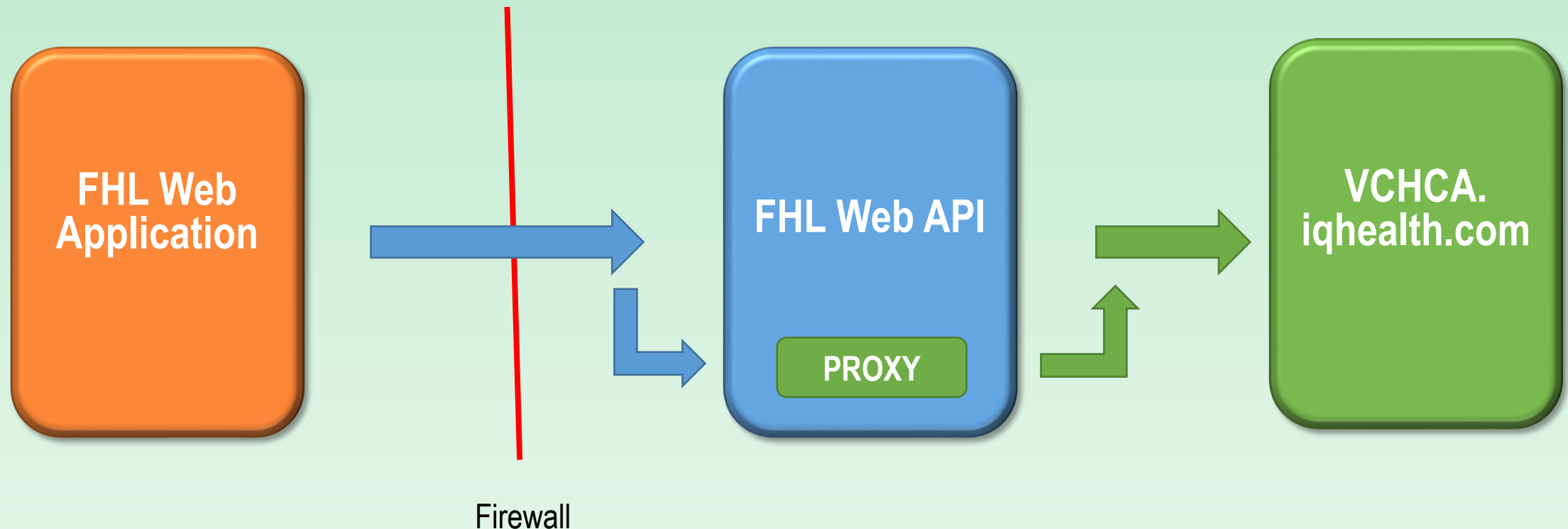
Solution: Step 5

VCHCA.iqhealth.com returns the requested page (e.g., Medications). **Foster Health Link** Web API strips extraneous information, rewrites all URLs to point to Foster Health Web API Proxy end-point, and returns the main content to **Foster Health Link** Web Application completing the request.



Solution: Step 6

All **Foster Health Link** Web Application requests for the same child by the Caregiver during the same session are routed through the Proxy end-point which uses the cached session cookies to make requests to VCHCA.iqhealth.com. The returned web page is processed as described in Step 5 and returned to **Foster Health Link** Web Application.



Solution: Step 7

Foster Health Link Web API caches the authenticated session information for VCHCA.iqhealth.com for a sliding 5-minute window. After the initial request and each subsequent request, if the FHL Web Application user does not make additional requests within 5 minutes, the cached cookies are destroyed.



Security Analysis

- Child's VC Health eConnect credentials are never exposed outside the firewall
- **Foster Health Link** Web API is entirely inside the firewall and VCHCA.iqhealth.com authentication cookies are cached by a server application (i.e., no web browser is part of the transaction)
- URLs for eConnect information are opaque as they point to the FHL Web API Proxy end-point



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Risks

- Solution is impervious to styling and script changes on VCHCA's site, but is dependent on the IDs of a small number (2-3) elements; if IDs of these elements are changed in the HTML markup, the solution will no longer work
- If cookie names on Cerner or VCHCA sites are changed, the solution will no longer work

For both of these situations, **Foster Health Link** Web Application can be designed to gracefully degrade by hiding the eConnect-related links until the solution can be adapted for the changes



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Benefits

- Writing code to interact with the Cerner API, fetch information and compose it into a functional UI for the FHL web application would be expensive and time-consuming
- VCHCA already has done the work of fetching and formatting eConnect information for display and interaction; building upon this is efficient and increases the value of public funds invested in building the VCHCA solution



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Web Application

Live Demo



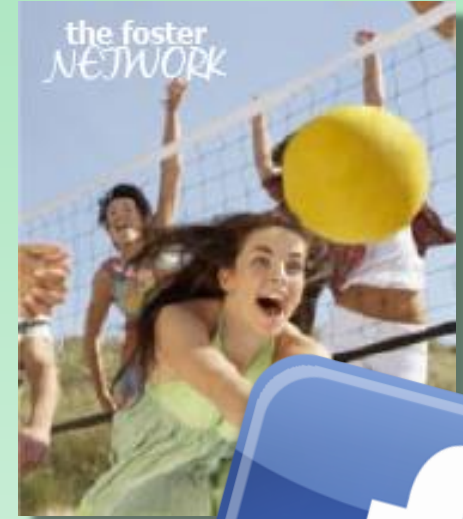
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Introducing Foster Health Link

- Caregiver participation in focus groups and system testing prior to implementation
- Targeted communication via e-mail blasts, newsletters, Facebook, and FosterVCkids website
- In-person contact during scheduled home visits by social workers and recruitment staff
- Ongoing training for caregivers during licensing process
- Orientation for new staff
- Business process changes to ensure integration of **Foster Health Link** into practice



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Caregiver Feedback

- **Foster Health Link** is easy to navigate
- Health information for foster children can typically be found quickly
- The medical dictionary can be helpful because it provides additional information about certain medical conditions

“I appreciate the easy access to information that I haven’t always had when I needed it. I also like having so much information so accessible, including case numbers and immunization records that I may need to supply to schools and clinics.”



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Impact

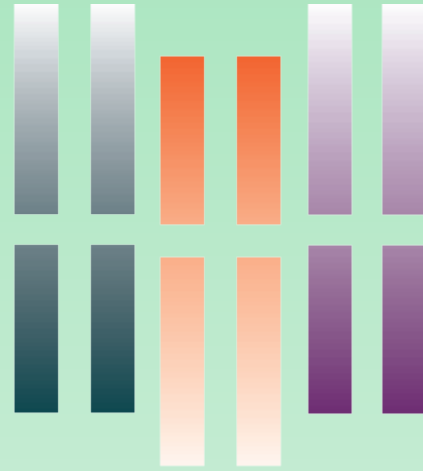
Video Clip

Next Steps

- Continue enhancing **Foster Health Link** to ensure that it meets the needs of caregivers
- Explore the addition of more information, such as school records, to **Foster Health Link**



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