

Centers for Medicare & Medicaid Services (CMS)

Marketplace Computer Matching Agreement

(CMA) Cost / Benefit Analysis (CBA)

For the Renewal of Eight Matching Programs in 2018



**COST-BENEFIT ANALYSIS FOR MARKETPLACE MATCHING PROGRAMS
JANUARY 31, 2018**

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COST-BENEFIT ANALYSIS FOR MARKETPLACE MATCHING PROGRAMS JANUARY 31, 2018

This cost benefit analysis (CBA) provides information about the costs and benefits of conducting the eight Marketplace matching programs, to support re-establishing those matching programs when the current agreements expire in 2018. The CBA demonstrates that monetary costs exceed \$30.5 million, but does not quantify benefits sufficient to offset the costs. However, the CBA describes other benefits (under Key Element 3 and in the “Other Benefits and Mitigating Factors” section following Key Element 4) which justify Data Integrity Board (DIB) approval of the matching programs. As required by the Privacy Act at 5 U.S.C. 552a(u)(4)(B), Section III.B. of this matching agreement requests that the DIB determine, in writing, that a CBA (i.e., cost-effectiveness) is not required to support approval of the agreement and requests that the DIB approve the agreement based on the other stated justifications.

I. MATCHING OBJECTIVE

The objective of the marketplace matching programs is to make initial eligibility determinations, redeterminations and renewals for enrollment in a qualified health plan, insurance affordability programs, and to issue certificates of exemption to individuals who are exempt from the individual mandate to maintain health insurance coverage. For those consumers who request financial assistance, they will be determined eligible for an amount of advanced premium tax credits (APTC) and cost sharing reductions, Medicaid, CHIP or BHP, where applicable. The Exchange and Medicaid/CHIP agencies verify data elements dependent on the eligibility determination they are performing. These may include citizenship or immigration status, household income, access to non-employer-sponsored and/or employer-sponsored minimum essential coverage. Non-employer-sponsored coverage includes coverage through TRICARE, Veteran’s Health Benefits, Medicaid, Medicare, or benefits through service in the Peace Corps. Employer-sponsored coverage for Federal Employee Health Benefits can be verified with the Office of Personnel Management. The matching programs provide a single streamlined process for making accurate and real-time assessments of each applicant’s eligibility and affordable insurance options and ensuring that the consumer can enroll in the correct applicable State health subsidy program¹ or be properly determined to be exempt from needing coverage.

MATCHING PROGRAM STRUCTURE

The Patient Protection and Affordable Care Act, Public Law No. 111-148, as amended by the Health Care and Education Reconciliation Act of 2010, Public Law No. 111-152 (ACA) requires that each State develop secure electronic interfaces for the exchange of data under a matching

¹ Section 1413(e) APPLICABLE STATE HEALTH SUBSIDY PROGRAM.—In this section, the term “applicable State health subsidy program” means—(1) the program under this title for the enrollment in qualified health plans offered through an Exchange, including the premium tax credits under section 36B of the Internal Revenue Code of 1986 and cost-sharing reductions under section 1402; (2) a State Medicaid program under title XIX of the Social Security Act; (3) a State children’s health insurance program (CHIP) under title XXI of such Act; and (4) a State program under section 1331 establishing qualified basic health plans.

Program using a single application form for determining eligibility for all State health subsidy programs.

CMS has entered into eight matching agreements with other Federal agencies including Social Security Administration (SSA), Department of Homeland Security (DHS), Internal Revenue Service (IRS), Veterans Health Administration (VHA), Department of Defense (DoD), Office of Personnel Management (OPM), and the Peace Corps. In addition, CMS has developed a matching program that is executed with every State-based Administering Entity (AE)² State Medicaid agency and each State-based Marketplace. The Federal Data Services Hub (Hub) was designed to be the centralized platform for the secure electronic interface that connects all State Medicaid agencies, State-based Exchanges and the Federal data sources (TDS or trusted data source).

Without the Hub, each State AE would have to enter into a separate arrangement with each TDS to determine whether applicants for State health subsidy programs are eligible for coverage. If operations related to the matching program were conducted through separate arrangements outside of the Hub, CMS believes the costs to CMS, each TDS, the AEs, and consumers (applicants) would be greater than under the current structure.; Therefore, CMS intends to retain the existing matching program structure when it re-establishes the eight matching agreements, but with changes intended to make the matching programs compatible with the current CMS operations and data flow.

Beginning with the Open Enrollment Period for plan year (PY) 2019, CMS is implementing a program to allow Direct Enrollment (DE) entities (qualified health plan (QHP) issuers and web-brokers) in the Federally Facilitated Exchanges (FFE) and State-based Exchanges on the Federal Platform (SBE-FPs) to integrate an application for Marketplace coverage through the FFE with the standalone eligibility service (SES) to host application and enrollment services on their own website. The SES is a suite of application program interfaces (APIs) that will allow partners to create, update, submit, and ultimately retrieve eligibility results for an application. The Enhanced Direct Enrollment (EDE) pathway will replace the proxy DE pathway that CMS allowed DE entities to use for PY 2018. When using the EDE pathway, a DE entity will provide a full application, enrollment, and post enrollment support experience on its website, and must implement the full EDE application programming interface (API) suite of services.

BACKGROUND

CMS used the following assumptions in development of the cost benefit analysis (CBA):

- Because the ACA mandates use of computer matching and requires a single streamlined application process for consumers, the issue to address in the CBA isn't whether to conduct the matching programs, but how efficiently the matching programs are structured and

²“Administering Entity” or “AE” means a State-based entity administering an Insurance Affordability Program. An AE may be a Medicaid agency, a Children’s Health Insurance Program (CHIP), a basic health program (BHP), or a State-based Marketplace (SBM) established under Section 1311 of the ACA.

- Conducted (i.e., how streamlined the eligibility determination process is for consumers, and whether the structure is less costly than an alternative structure).
- The eight matching programs, when re-established, will use processes currently in place by the source agencies and entities known as the trusted data sources (TDS). The TDSs are IRS, DHS, SSA, OPM, Peace Corps, VHA, DoD, Current Sources of Income, and state based administering entities (AEs). In addition, several contractors provide a variety of support services to the Hub, such as Identity Proofing, trouble shooting, procedure writing, and maintenance support just to name a few.
 - Private Citizens (as potential beneficiaries) can apply for applicable State health subsidy programs on the basis of the private benefit and cost of applying. The private benefit from applying is the expected value of health insurance coverage (private insurance, Medicaid, CHIP or a Basic Health Plan) obtained through a State-based Exchange or through the Federally-facilitated Exchange in relation to the value of health insurance that could be obtained without the ACA defined American Health Benefit Exchange³.
 - CMS has internal costs related to the funding of CMS federal staff and associated resources to complete processes and responsibilities related to the matching programs.
 - CMS has several internal cost centers that work on the Hub. Within CMS, these centers may be assisted by external contractors. This cost category is organized as an internal cost.
 - CMS has external costs in the hiring, maintenance, and associated costs of contractors to perform numerous functions related to the Hub.
 - CMS has several external cost factors related to the calculation of cost per transaction between a trusted data source and source agency, and CMS as the recipient agency. The cost of each data transaction is estimated from the prior year's matching program budget and the estimated number of data transactions.
 - For the recovery of Improper Payments and Debts (Key Element 4), CMS is not currently utilizing the data match result from the matching programs for payment and debt reconciliations; however, the benefit of the match does provide the potential to implement this capability in the future.
 - All annual personnel costs and savings are rounded to the nearest dollar.

³ American Health Benefit Exchange is defined @ 1311(b) (1).

II. COSTS

a. Key Elements 1 and 2: Personnel Costs and Computer Costs

- I. Costs for the recipient and source agencies are primarily personnel costs associated with maintenance and operations supported by information technology resources; therefore, Key Elements 1 and 2 are combined. *Recipient Agency (CMS) Personnel and Computer Costs - \$30.5 million (Total)***

Costs incurred by CMS for the Hub are estimated to total \$30.5 million (\$30,563,340) per year. That total includes internal costs of CMS staff and resources, and external costs to hire contractors to perform numerous functions related to the Hub, in order to obtain data from the source agencies and make the data available to AEs. It includes a portion of the costs CMS pays for the services described in subsections 1.a. through 1.h. below (not all of those costs have been quantified). It also includes \$9,287,587 for costs CMS reimburses to some of the source federal agencies (TDS).

Cost estimates are based on established definitions and practices for program and policy evaluation.⁴ CMS estimated the number of hours for its staff to complete the systems changes based on experience with other systems adjustments of similar magnitude. CMS also collected cost estimates provided by its current contractors for this proposed effort.⁵

a. Marketplace Security Operations Center (SOC) – \$8.5 million (subtotal)

The marketplace SOC is responsible for the security operations and maintenance for Healthcare.gov. In total, more than 130 people work in data security; about 100 are contractors and 35-38 are federal employees. One midlevel contractor costs \$150,000 per year and a senior contractor costs \$200,000 per year. On the federal side the most common civil service grade is GS-13, which costs around \$100,000 to \$110,000 per year, not including benefits. The current cost of all Healthcare.gov data security is \$8.5 million per year.⁶ The Healthcare.gov data

4 E.J. Mishap, Cost-Benefit Analysis: An Introduction, New York: Pager Publishers, 1971. Also see U.S. Office of Management and Budget, OMB Circular No. A-94 Revised, Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs, October 29, 2002.

5 For personnel costs, CMS used publicly available wage data from the Bureau of Labor Statistics (BLS: www.bls.gov/oes/current/oes_nat.htm) for May 2016, which is the most current data available at the time in which this cost benefit analysis was drafted, for Medicare plan and contractor personnel (i.e., third party) rates. To estimate the government staff personnel costs, CMS used the 2017 salary table with locality of pay for the Washington, D.C., Baltimore, MD and Northern Virginia area from the Office of Personnel Management (www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2015/DCB_h.pdf).

6 The cost of data security was provided to us by CMS as a lump-sum amount. When we performed independent calculations of federal salaries we used the following information for FY2018.

GS Grade	Hourly Rate	Annual Cost
GS11	\$56.49	\$108,461

security budget is not itemized by matching program; therefore, the matching program costs to the marketplace SOC are not quantifiable.

b. Exchange Operations Center (XOC) - \$18.4 million (subtotal)

The Exchange Operations Center (XOC) is an internal group in CMS that manages the Hub contract. XOC’s costs are significant given that the proposed appropriation for exchange operations (not including user fees) in the FY 2018 federal budget was \$18.4 million.⁷ At the time of this report we were unable to secure an exact budget amount for the XOC outlay in 2017.

c. Other CMS Centers - \$1.7 million (subtotal)

Using information on federal salaries and personnel time devoted to the Hub, we calculated that the direct costs of other CMS centers are \$1,710,400 per year. This information is shown in Table 1:

Table 1: Direct Costs of Other CMS Centers

Center	Annual Cost
Eligibility and Enrollment (E&E)	\$658,682
SMIPG (State Policy)	\$278,740
Marketplace Information Technology (MITG/HUB)	\$538,272
Marketplace Information Technology (MITG/STATE)	\$234,707
Total	\$1,710,400

Source: Authors’ calculations based on Federal salaries and benefits applied to personnel time provided by CMS

d. Hub Support - \$352,940 (subtotal)

CMS contracts with a support vendor to perform numerous tasks related to the Hub, including writing procedures and standards and general trouble-shooting. Over time, the support

GS12	\$67.71	\$130,003
GS13	\$80.52	\$154,598
GS14	\$95.15	\$182,688
GS15	\$111.93	\$214,906

The hourly rate for each GS grade is “fully loaded” (it includes all wages and benefits, such as pay for time not worked). We used 1,920 hours of work time per year to derive the annual cost of each GS grade.

⁷<https://www.cms.gov/About-CMS/Agency-Information/PerformanceBudget/Downloads/FY2018-CJ-Final.pdf>, Page 5.

Contractor's role has tapered off so they currently have two subcontractors working 25 hours per week and 1 hour per week, respectively, at CMS. The current value of the support contract is approximately \$352,940 per year (\$227 hourly rate with 15 percent overhead, 52 weeks per year).

e. Hub Operations – Monetary, but not quantified

CMS contracts with a vendor to provide service-oriented activities for the Hub. We assume that the associated costs are significant given that the original cost of the Hub in 2013⁸ was \$55 million. It is likely that the Hub has become more efficient since that time. At the time of this report we were unable to secure an exact budget amount for the Hub operations vendor outlay in 2017.

f. Marketplace Systems Integrator (MSI) – Monetary, but not quantified

CMS contracts with a vendor to provide integration support across all FFE systems to include the Hub. We were not able to determine the value of this contract.

g. Current Sources of Income – Monetary, but not quantified

The IRS is the primary source of income data to verify eligibility for subsidy programs under the ACA. Despite the importance of these data, they have some limitations. Income reported to the IRS is based on tax filings, therefore, there is a time lag on income verification. Some individuals do not file income tax returns and others have changed their filing status. In contrast, insurance coverage is always prospective. Individuals are asked on their application about their current income, which may not match the retrospective IRS income data.

To overcome the limitations of IRS data, CMS works with a contractor to provide a commercial sources of current income to the FFE and States. While the funding amounts are not publically available they were included in the cost analysis of this project.

h. Identity-Proofing Services – monetary, but not quantified

Another consumer credit reporting agency is accessed via the Hub for "remote identity proofing" (RIDP). Even though a person has a form of identification, there needs to be an identity check so SSA knows the person's identification has been validated. RIDP is typically completed before a person can submit an online application, and while it is not an eligibility requirement it is a way to confirm people are who they say they are.⁹ CMS pays a fee per transaction for RIDP, but we did not have access to this information.

⁸ https://www.reuters.com/article/usa-healthcare-hiring/insight-it-takes-an-army-tens-of-thousands-of-workers-roll-out-obamacare-idUSL2N0EW_28820130621? Feed Type=RSS&feedName=marketsNews&rpc=43

⁹ T. Shaw and S. Gonzales, "Remote Identity Proofing: Impacts on Access to Health Insurance," Center on Budget And Policy Priorities, January 7, 2016.

2 *Source Federal Agency (TDS) Costs Not Reimbursed by CMS – monetary, but not quantified*

CMS does not reimburse costs incurred by IRS, DOD, and Peace Corps to supply data to the Hub, and has no information about their costs.

(Costs incurred by SSA, DHS, VHA, and OPM are reimbursed by CMS under contracts which charge a total amount per Fiscal Year. The total contract cost for FY2017 is \$9,287,587, which is included in CMS's costs, in 1.above. That figure is not included here, to avoid double-counting.)

3 *State Administering Agency (AE) Costs – monetary, but not quantified*

Any and all personnel and computer costs associated with the matching program with State AE are absorbed by CMS. The costs were not quantifiable.

4 *Medicare Drug and Health Plans' Costs*

Any and all personnel and computer costs associated with the matching program with Medicare Drug and Health Plans are absorbed by CMS. The costs were not quantifiable.

5 *Client (Applicant) Costs – non-monetary; quantified as \$1.46 billion (\$87.63 per applicant)*

Costs incurred by consumers to shop and then apply for and enroll (or re-enroll) in a qualified health plan each year are time related costs, which are estimated to average 3.965 hours per applicant and \$22.10 per hour, or \$87.63 per applicant per year. Multiplied by the number of enrollees projected for 2018 (approximately 12 million), this totals \$1.46 billion per year. Only approximately 72% of those who start an application actually get marketplace coverage. Time costs for those who shop for but do not apply, and for those who apply but do not enroll, are not counted.

III. BENEFITS

b. Key Element 3: Avoidance of Future Improper Payments

1. Benefits to Agencies – not quantified

Costs incurred by CMS are Benefits to Agencies:
The Marketplace matching programs' eligibility determinations and MEC checks result in improved accuracy of beneficiary eligibility data ensuring that individuals enrolled in Medicaid, are not enrolled in a Qualified Health Plan (QHP). Improved data quality helps ensure that eligibility determinations and other decisions affecting advanced premium tax credits (APTC) affecting are accurate, which helps avoid future improper payments.

The matching programs improve the accuracy of beneficiary eligibility data as follows:

- **Multi-faceted attestation of beneficiary eligibility data.** Using matching data supplied by the eight trusted data sources for attestation in combination with an individual applicant's attestation of his or her personal information is more reliable than relying solely on applicant attestations. Due to the potential and historical presence of identity fraud, the utilization of matching programs minimizes the risk of incorrect personal information being presented and used to make eligibility determinations; therefore, preventing the incorrect dispersal of federal subsidy program benefits.
- **Verification and contest procedures.** The "verification and opportunity to contest findings" requirements specified in the Marketplace matching agreements, which are required by subsection (p) of the Privacy Act (5 USC 552a(p)), also improve data quality, thereby ensuring accurate eligibility determinations and other decisions, and avoiding improper payments. Before an Administering Entity (AE) may take any adverse action based on the information received from the match, the individual must be permitted to provide the necessary information or documentation to verify eligibility information. When an AE determines that an individual is ineligible for an Insurance Affordability Program based on the information provided through the match, and that information is inconsistent with information provided on the streamlined eligibility application or otherwise by an Applicant or Enrollee, the AE will comply with applicable law and will notify each Applicant, or Enrollee of the match findings and provide the following information: (1) The Administering Entity received information that indicates the individual is ineligible for an Insurance Affordability Program; and (2) the Applicant, or Enrollee has a specified number of days from the date of the notice to contest the determination that the Applicant or Enrollee is not eligible for the relevant Insurance Affordability Programs.

2. Benefits to Clients (Applicants who Enroll or Re-Enroll) – quantified as \$45.378 billion

The approximately 72% of applicants whose eligibility for coverage is determined through these matching programs and who enroll or re-enroll in a qualified health plan will receive a government subsidy (APTC) worth an approximate average of \$3,020 per year per enrollee. Multiplied by the number of enrollees/re-enrollees projected for 2018 (12 million), this subsidy benefit totals \$45.378 billion per year.

3. Benefits to the General Public – not quantified

An efficient application process may contribute to greater numbers of consumers enrolling in qualified health plans. Fewer uninsured patients helps reduce health care costs borne by taxpayers, because patients without insurance coverage might seek treatment in hospital settings for conditions which are less costly to treat in other settings (such as, in a doctor's office) and might delay treatment until their conditions worsen, and require more extensive health care services.

- c. Key Element 4: Recovery of Improper Payments and Debts – not applicable

Key Element 4 is not applicable, because data from the Marketplace matching programs is not currently used to identify and recover improper payments and debts, as this is not a primary goal of the matching programs. Annual reconciliation and recovery of improper tax payments are performed by the IRS through a process that is independent of the Marketplace matching programs and other CMS eligibility determination activities. While the Marketplace matching programs could provide for annual and monthly reporting of data by Marketplaces to the IRS and consumers for the purpose of supporting IRS's annual reconciliation, annual and monthly reporting is not currently an activity covered in the IRS-CMS CMA; rather, that information is exchanged between the agencies through Information Exchange Agreements. At most, the data used in the Marketplace matching programs has the future potential benefit of being used in an analytical form, to assist IRS in identifying and/or recovering improper payments and debts.

IV. OTHER BENEFITS AND MITIGATING FACTORS WHICH JUSTIFY THE MATCHING PROGRAMS

The Marketplace matching programs are required and are not discretionary. The matching programs are an operational dependency of the HUB even if they are not cost-effective.

The current structure of the Marketplace matching programs has been successful for operational needs. It is providing a single streamlined application process for consumers, and is providing accurate adjudication in eligibility determinations and MEC checks, which presumably contribute to increased enrollments in qualified health plans. However, the application process needs to be made more efficient for consumers, because applicants' time costs currently are much larger than the government subsidy per person.

CMS believes the current structure is less duplicative and therefore less costly for CMS, CMS partners, and State AEs, than the alternative structure (requiring each State AE to enter into separate matching arrangements with each TDS). CMS believes separate arrangements would involve:

- More agreements to prepare and administer (there would be one agreement per AE with each TDS, in place of one agreement per AE with CMS, and one agreement per TDS with CMS);
- More TDS data transmissions to effect and secure (there would be one TDS transmission per AE, in place of each single TDS transmission to the Hub);
- More systems to maintain and secure, to store the TDS data (there would be one system per AE, in place of the single, central Hub system); and
- More copies of TDS data to correct when errors are identified (there would be one copy to correct in each AE system, instead of the single copy in the Hub system).

Continuing to use the current matching program structure, which is less costly than the alternative structure and achieves the primary goals of providing a single streamlined application process and accurate eligibility determinations, is expected to increase the public's trust in the participating agencies as stewards of taxpayer dollars.

Modifying the application process when the matching programs are re-established in 2018 to include a phased roll out of enhanced direct enrollment (EDE) will make the application process more efficient for consumers who opt to apply for coverage through third party websites instead of through healthdata.gov. The majority usage of EDE (50%+) by the public, will reduce costs of all Hub programs by at least 20 percent.

V. DETAIL SUPPORTING CMS AND TDS COSTS (FY2018)

TDS Costs Reimbursed/Not Reimbursed by CMS

We attempted to determine the cost to each TDS of supplying data to the Hub. However, we were not able to determine these costs except at the Social Security Administration (SSA). Consequently, we analyzed how much CMS paid each TDS for the data transactions.

Table 2: TDS Costs and Transactions Reimbursed by CMS (FY2018)

Agency	Contract Cost	Transactions	Cost/Transaction
SSA	\$3,277,205	215,534,872	\$0.01520
DHS	\$3,989,359	8,795,473	\$0.45357
VA	\$2,006,623	90,738,087	N/A
OPM	\$14,400	23,170,916	N/A
Peace Corps	No reimbursement contract	unknown	unknown
IRS	No reimbursement contract	Unknown	unknown
DoD	No reimbursement contract	Unknown	unknown
Total / Total / Average	\$9,287,587	338,239,348	\$0.02746

Source: Authors' calculations applied to data from the Social Security Administration and CMS

a. Social Security Administration (SSA)

The SSA is the source of numerous data elements for the Hub: verification of the applicant's name, date of birth, citizenship, Social Security Number (SSN), a binary indicator for incarceration,¹⁰ and Title II income (retirement and disability).

This is accomplished through a reimbursable agreement with CMS valued at \$2,052,087 in FY2017 and estimated at \$3,277,205 in FY2018. The amount is first estimated and then is billed at actual cost on a quarterly basis, so that the total bill at the end of the fiscal year equals SSA's actual cost for that year. For example, the estimated cost for FY2017 was \$2,969,325 versus the actual billed cost of \$2,052,087. If this pattern continues, the actual billed amount in FY2018 will be less than the estimate. Past bills "always" have been less than the estimates, according to a personal communication from SSA.

Because the SSA is a source of numerous data elements for the Hub, it had 215,534,872 transactions in FY2018, the highest volume of transactions from any TDS. This is shown in Table 2 above.

¹⁰ Individuals in prison are not eligible for ACA benefits.

Using the estimated FY2018 cost of the contract, the average cost per transaction with the SSA is about 1.5 cents. We expect that the actual cost per transaction will be less than 1.5 cents when actual FY2018 costs are billed.

We attempted to break down SSA's cost into fixed and variable costs. However, we found that SSA (and other TDSs) does not keep records in that format. Instead, SSA provided a categorical breakdown of the estimated FY2018 cost: \$2,637,758 for systems support, \$637,704 for operations support, and \$1,743 for an annual renewal fee. The last item might be considered as fixed, but it is a very small part of the total cost. Therefore, we considered all of SSA's costs to be variable.

If the SSA were not a Trusted Data Source, CMS believes it would be very difficult to find an alternative data source. For example, self-verification of Social Security Numbers (SSNs) would invite a high incidence of fraud (e.g., using another person's number). If SSA did not provide information on incarceration, prisons might provide it, but this would be on a voluntary basis. The Department of Justice (DOJ) is also a possible source of information on incarceration, but SSA is not sure how DOJ keeps this information.

b. Department of Homeland Security (DHS)

The DHS is the verification source for naturalized and derived citizenship, and immigration status. The total cost of the DHS contract with CMS was \$3,938,359 in FY2018, and there were 8,795,473 transactions, yielding an average cost of approximately 45 cents per transaction. This is the highest average cost of transactions with any TDS.

The DHS charges according to a graduated fee schedule for using the database called "SAVE" (Systematic Alien Verification for Entitlements Program). There are up to 3 steps of SAVE verification process: Step 1 is a real-time "ping" to their system. Consumers who could not be successfully verified may go to Step 2, which takes a 3-5 days for additional database searches. The third step requires manual touch from a DHS Status Verification Officer and requires a G- 845 form. Costs are currently 50 cents per use at Steps 1 and 2 and \$1.50 per use at Step 3. Automation through DHS's paperless initiative will impact these costs in the future.

c. Veterans Health Administration (VHA)

The VHA contract with CMS is transactions-based, but the formula is not transparent. The cost of the VHA contract was \$2,006,623 in FY2018. There were 90,738,087 transactions, for an average cost of approximately 2.2 cents.

d. Office of Personnel Management

OPM charges a flat fee of \$14,400 per year for the development and submission of an Annual Premium Index File which is used to calculate affordability when a consumer is found to be in the monthly enrollment file.

e. Other Trusted Data Sources

CMS does not pay the other Trusted Data Sources (IRS, DOD, and Peace Corps). Clearly, these agencies incur costs of providing the data, but we were not able to quantify these subsidies.

VI. CONCLUSION

For the Hub to provide a net benefit, it must provide incremental benefits that exceed the incremental costs of using the Hub. The principal question of this analysis is whether the net benefit would be positive, negative, or neutral and what incentive is provided by each combination. Our analysis finds the estimated net benefit of the Hub in 2017 is \$45.378 billion. This assumes 12 million people using the Hub. Further, we find that the net benefit will be larger as more people use the Hub.

One of the major policy considerations is whether any of the proposed changes to the ACA would impact the costs and benefits of the Hub. Our analysis suggests that the benefits outweigh the costs of the Hub given the increase in private insurance coverage through the ACA.

Policy reforms already signed into law will impact the CBA results. For example, the 2017 tax reform legislation includes a provision that will repeal the individual mandate in 2019. This will have an impact on the demand for health insurance and, as a consequence, on our CBA analysis. The subsequent appendices provide further detail on the marketplace matching program benefits, including an analysis of the planned EDE program and the net benefit analysis and justification of costs.

VII. APPENDIX A: DETAILS SUPPORTING OTHER BENEFITS AND MITIGATING FACTORS – THE FUTURE STATE OF EDE AND MARKETPLACE

CMS has released data on the number of people who have enrolled in plans for 2018 coverage in the 39 state exchanges that use the HealthCare.gov platform. As of December 15, 2017, 8,822,329 people had made plan selections.¹¹ The total tally of enrollment, including states that use their own platforms, will not be available until March, 2018. Many of the state-based marketplaces are still running open enrollment. Charles Gabi of ACASignups.net has run his own operation to verify enrollment levels in state-based marketplaces and estimates that total enrollment will reach at least 11.6 million and possibly 12 million people in 2018.¹²

If we assume marketplace enrollment of 12 million and a conversion ratio of 72 percent (see footnote 20), we can solve for the number of people who begin an application: $12,000,000/0.72 = 16,666,667$. If each of these people “spends” \$87.63 in applying, the total time cost of Hub users is \$1.46 billion.¹³

While CMS will place a number of restrictions on the proxy direct enrollment process to “...minimize risk to HealthCare.gov functionality and of eligibility inaccuracies,” it eliminates “...the currently required consumer-facing redirect with Security Assertion Markup Language (SAML) for all individual market enrollment transactions for coverage offered through the Federally-facilitated Exchanges (FfEs) and State-Based Exchanges on the Federal Platform (SBE-FPs) that rely on HealthCare.gov for individual market eligibility and enrollment functions.” This change will shorten the time necessary for consumers to set up accounts on the Exchanges and allow agents, including health insurers and brokers, who are assisting consumers, to collect consumer information on 3rd party websites and input that information directly into HealthCare.gov.

Both of these changes have the potential to change the results, and possibly the conclusions, of our cost-benefit analysis presented in the previous sections. The elimination of consumer-facing redirect with SAML will provide an immediate reduction in the shopping enrollment time for all consumers – both those using the traditional exchanges and those using the new direct enrollment process. We currently have no estimate of the shopping enrollment time savings because of this change but it is not inconsequential. Even a 10 minute reduction results in a 4% reduction in opportunity cost. However, as noted above, this change applies to both pathways equally and simply reduces the opportunity cost of all consumers regardless of pathway.

¹¹ Centers for Medicare & Medicaid Services, “Weekly Enrollment Snapshot: Week Seven,” December 21, 2017; available at [https://www.cms.gov/Newsroom/MediaReleaseDatabase/fact-sheets/2017-Fact-Sheet-Enroll\[2017-12-21\].html](https://www.cms.gov/Newsroom/MediaReleaseDatabase/fact-sheets/2017-Fact-Sheet-Enroll[2017-12-21].html).

¹² Charles Gabi, ACASignups.net; available at <http://acasignups.net/17/12/21/multiple-updates-by-trump-repeal-110m-qlps-confirmed-likely-120m-when-dust-settles>.

¹³ People who start an application but fail to complete it may spend more or less time than those who complete the application. We do not have data to make this adjustment.

Unlike the elimination of the SAML requirement, the ability to input data directly into HealthCare.gov through 3rd. party websites poses a possible asymmetry. Information gathered by the authors' suggests that 3rd. party sites may yield a reduction of 30 percent or more in shopping enrollment time compared with using HealthCare.gov.

Using the results presented in the previous sections of this report we simulated the effect of this change on the consumers' opportunity cost. We modeled a 5, 10 and 15 minute reduction in shopping enrollment time due to the elimination of the SAML requirement. In this simulation we do not distinguish between the HealthCare.gov site and 3rd. party sites because either could be more efficient in terms of the time a consumer spends on the site. Results are shown in Table 6.

Table 6: Consumer Opportunity Cost by Reductions in Shopping Enrollment Time

Current Opportunity Cost						\$87.63
	% Reduction in Shopping Enrollment Time Due to Increase in Web Site Efficiency					
	20%	25%	30%	35%	40%	Current State of Affairs
5 min*	\$70.46	\$66.16	\$61.87	\$57.57	\$53.28	\$85.87
10 min*	\$70.81	\$66.60	\$62.39	\$58.19	\$53.98	\$84.12
15 min*	\$71.16	\$67.04	\$62.92	\$58.80	\$54.68	\$82.37

* Minutes reduced from elimination of SAML requirement

Recall that our model currently estimates a per person opportunity cost of \$87.63 or \$1.46 billion for all Hub users. Following the same approach as before – assuming marketplace enrollment of 12 million and a conversion ratio of 72 percent (see footnote 20) – we calculated the total time cost of Hub users under the time savings shown in Table 6. These results appear in Table 7.

Table 7: Total Opportunity Cost by Reductions in Shopping Enrollment Time

Total Current Opportunity Cost (in billions)						\$ 1.46
Total Opportunity Cost due to Web Site Efficiencies (in billions)						
	20%	25%	30%	35%	40%	Current State of Affairs
5 min*	\$ 17.17	\$ 21.47	\$ 25.76	\$ 30.06	\$ 34.35	\$ 1.43
10 min*	\$ 16.82	\$ 21.03	\$ 25.24	\$ 29.44	\$ 33.65	\$ 1.40
15 min*	\$ 16.47	\$ 20.59	\$ 24.71	\$ 28.83	\$ 32.95	\$ 1.37

* Minutes reduced from elimination of SAML requirement

* Minutes reduced from elimination of SAML requirement

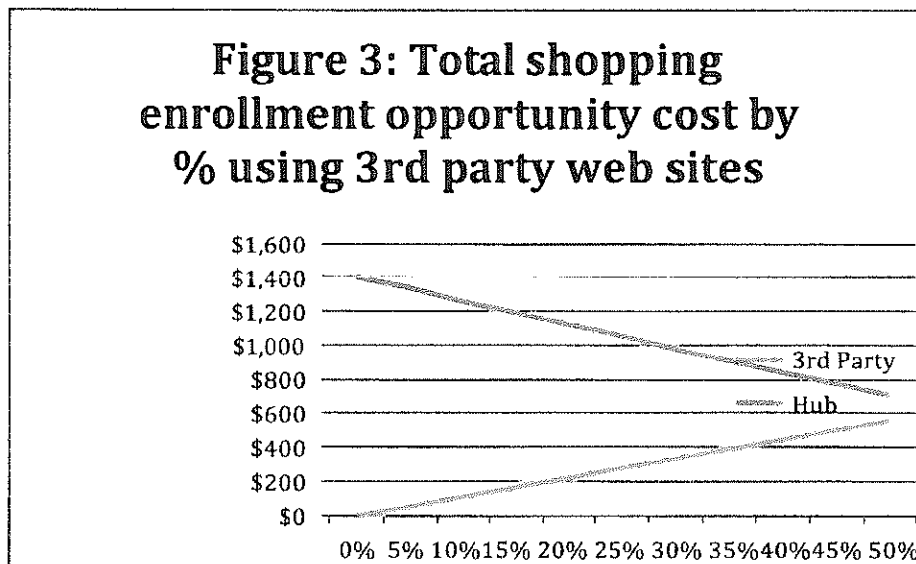
There are at least two pertinent indirect effects of these changes that could affect our cost-benefit results. Both are related to the effect of differential migration of consumers to 3rd party web sites. The first is based on the observation that 3rd party web sites might be more efficient, and therefore less costly in terms of shopping enrollment time. This would lower the consumer's opportunity costs. Below we examine both the marginal effect of differential enrollment and the extreme case of total migration to 3rd party web sites.

To estimate the total consumer opportunity cost due to differential migration to 3rd party web sites, we assumed a 10% reduction in shopping enrollment time due to the removal of the SAML requirement and a subsequent 25% reduction in shopping enrollment time for those using 3rd party web sites. We assumed that the exchange sites saw no changes except for the removal of the SAML requirement. We examined various proportions of consumers using 3rd party web sites and compared the savings in total opportunity costs. The results are shown in Table 8 and convergence is illustrated in Figure 3.

Table 8: Total Shopping Enrollment Time Opportunity Cost by % Using 3rd Party Web Sites

% using 3rd Party Web Site	Shopping Time Opportunity Costs (in millions)			% Reduction in Opportunity Costs
	3rd Party Web Site	Hub	Total	
0%	\$ -	\$ 1,402	\$ 1,402	
5%	\$ 55	\$ 1,332	\$ 1,387	1.0%
10%	\$ 111	\$ 1,262	\$ 1,373	2.1%
15%	\$ 166	\$ 1,192	\$ 1,358	3.1%
20%	\$ 222	\$ 1,122	\$ 1,344	4.2%
25%	\$ 277	\$ 1,052	\$ 1,329	5.2%
30%	\$ 333	\$ 981	\$ 1,314	6.2%
35%	\$ 388	\$ 911	\$ 1,300	7.3%
40%	\$ 444	\$ 841	\$ 1,285	8.3%
45%	\$ 499	\$ 771	\$ 1,271	9.4%
50%	\$ 555	\$ 701	\$ 1,256	10.4%

At 100% use of 3rd party web sites the total opportunity costs is reduced by 21% or \$292 million.



The second indirect effect of a decrease in shopping costs is that the *total* cost of private insurance in the ACA marketplaces will decrease. This will increase the demand for marketplace coverage, both under current law and under alternative scenarios considered in a following section of our report. As the migration to less expensive 3rd party web sites increases, the second indirect demand effect will be larger. This effect can be modeled with reasonable

Confidence and will be included in our 10-year analysis of marketplace enrollment under current law and alternative scenarios.

There appears to be a tendency for those at lower income levels to use guides/navigators and to complete enrollment at higher rates than the population as a whole. Summers and his colleagues report an 87.3 percent rate of enrollment for a sample of low income individuals in three states with 38 percent receiving assistance from a navigator or social worker (see footnote 20). At this time, it is unclear how the latter will affect migration to navigators/brokers and health issuers who use 3rd party web sites, but it is clear that higher rates of completion due to lower opportunity costs could have an impact on our base model, especially through increased use of tax credits and CSR payments. Neither of these effects can currently be estimated with any reasonable level of confidence.

VIII. APPENDIX B: DETAILS SUPPORTING OTHER BENEFITS AND MITIGATING FACTORS – THE NET BENEFIT OF HUB USE

In the previous section, we concluded that the social marginal costs of using the Hub exceed the private marginal costs, but not by a large amount. Furthermore, we are not able to quantify the external benefits of using the Hub (i.e., avoidance of future improper payments and recovery of improper payments and debt). This means that the net benefit of Hub use will be determined where the private marginal benefits (PMB) and private marginal costs (PMC) are equal, at an enrollment of 12 million people.

This cost-benefit model resembles Figure 4. Area 0BCQ is the cost of using the Hub for those who get covered, which we estimate as $\$87.63 \times 12$ million people = $\$1,051,560,000$. The net benefit of the Hub is area ABC. To account for the time cost of people who start the application process but do not get covered, we will subtract $\$87.63 \times 4,666,667$ people = $\$408,940,029$ from the net benefit.

Marginal Benefits and Costs

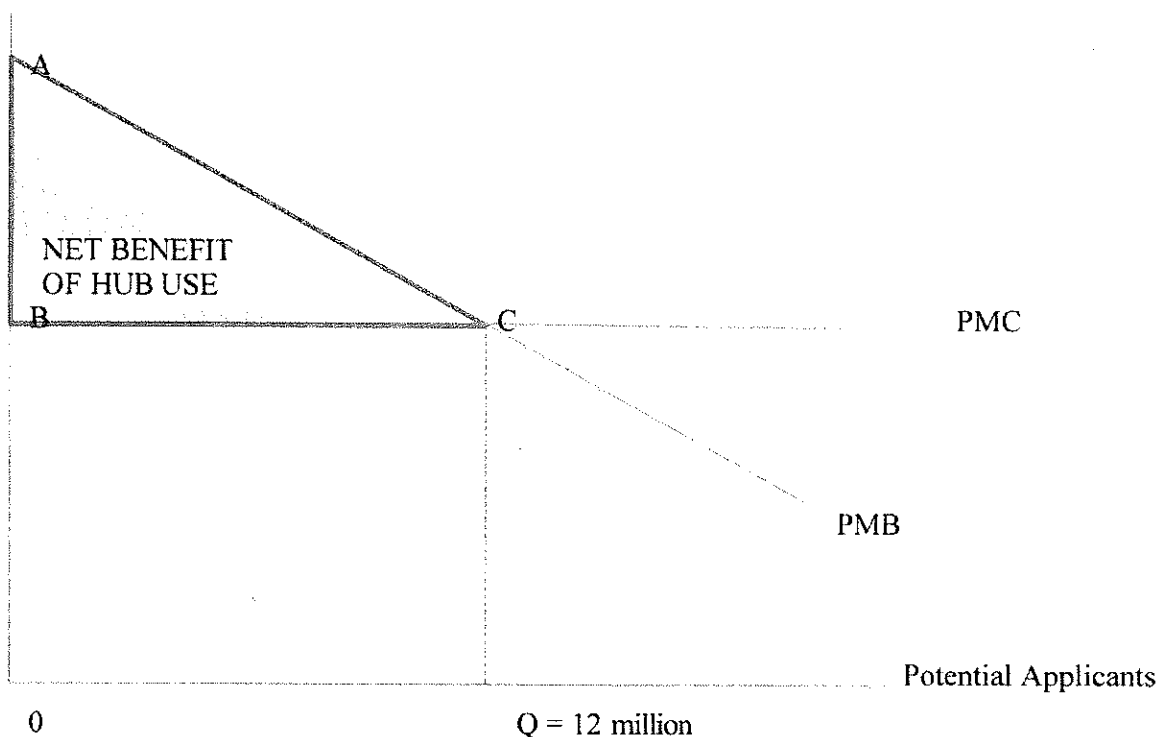


Figure 4: Revised Net Benefit of Hub Use

The size of the net benefit depends on how the demand for insurance responds to the price of coverage. Inelastic demand (less price-responsiveness) implies that the net benefit is larger, and *vice versa*. According to our calculations, the demand for insurance is relatively inelastic and the

Net benefit is large. Table 9 shows the net benefit of using the Hub to obtain insurance by income class:

Table 9: Net Benefit of Hub Use by Income Class

Income (FPL)	Net Benefit per Person in 2017S	% of Individuals with 2017 Plan Selection through the Marketplaces in States using HealthCare.gov	Net Benefit in \$1,000,000S
<100%	\$3,547	3	\$1,277
100% to 200%	\$3,019	56	\$20,290
200% to 300%	\$5,811	22	\$15,342
300% to 400%	\$4,645	9	\$5,017
>400%	\$2,877	10	\$3,452
Total		100	\$45,378

Source: Authors' calculations assuming 12 million people have marketplace coverage

The average net benefit per person of marketplace coverage ranges from \$2,877 (>400% of poverty) to \$5,811 (200% to 300% of poverty). Assuming that 12 million people obtain marketplace coverage, we estimate that the total net benefit in 2017 is \$45.378 billion. This value dwarfs the cost of using the hub and the cost of those who start an application but do not get covered.