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5 **Recommendations on Maximizing the Value of HealthData.gov**

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8 **National Committee on Vital and Health Statistics**

9 **[Date]**

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12   HealthData.gov is the US Department of Health and Human Services (HHS)

13 online health information portal that helps to drive economic empowerment, innovation,

14 and transformation in health through the access and use of federal data resources. This

15 national resource powers visibility, competition, community learning, research, and

16 evidence-based decision making by allowing data users to search for and access publicly

17 available data resources in one centralized location. Increased accessibility and efficient

18 use of high-value public data by diverse users is critical to creating the information

19 needed to improve population health and the delivery of value-based health care through

20 activities such as: business innovations; identifying inefficiencies in health services;

21 monitoring fraud and abuse; performing data-driven community health needs

22 assessments, planning, and monitoring; empowering health consumers; and enabling

23 improved decision-making by patients, providers, and policymakers. Data are a critical

24 commodity in today's economy, and problems and solutions are best discovered and

25 evaluated when quality data is publicly available.

26   The purpose of this report is to transmit the findings of the National Committee

27 on Vital and Health Statistics (NCVHS) regarding the value of HealthData.gov, and

28 provide recommendations for HealthData.gov to enhance the HHS mission by promoting

29 and facilitating the use of publicly available data within HHS operating divisions and

30 among external users. Data from HealthData.gov can be repurposed to improve program

31 operations, generate insights, and develop health innovations. Taking these opportunities

32 to further enhance HealthData.gov as an essential national resource will enable data users

33 to transform public data into health innovations that will benefit all Americans. This

34 requires the continued availability of information on HealthData.gov; stringent privacy,

35   security, and confidentiality measures so that data may be used with proper stewardship

36   practices; expanding the efficient access and use of publicly available health data; and

37   sustaining the growing community of data entrepreneurs, businesses that innovate using

38   these data, researchers, public health practitioners, medical consumers, communities,

39   health care organizations, and other data consumers interested in using government-

40   produced data for health innovation. The recommendations provided are supported by

41   peer-reviewed research, experiences from open data innovators in the public and private

42   sectors, and input from the NCVHS expert work group on data access and use.[1]

43

44   **<u>Current State of HealthData.gov</u>**

45   HealthData.gov facilitates the discovery, access, and use of health data that is

46   publicly available by providing a searchable online directory of data resources from all

47   HHS operating divisions and several state and municipality open data portals. All HHS

48   operating divisions collect data that are congruent with the HHS mission to "enhance the

49   health and well-being of Americans by providing for effective health and human services

50   and by fostering sound, sustained advances in the sciences underlying medicine, public

51   health, and social services."[2] Many of these data are released to the public under stringent

52   privacy, security, and confidentiality protections to fulfill multiple objectives including

53   identifying quality gaps and health care inefficiencies, empowering data consumers to

54   address health issues, enabling researchers to make scientific discoveries, providing

55   communities with information about their health problems to inform their planning

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[1] See the workgroup charge and activities at: https://www.ncvhs.hhs.gov/subcommittees-work-groups/working-group-on-hhs-data-access-and-use/charge-of-the-working-group-on-hhs-data-access-and-use/

[2] US Department of Health and Human Services. [HHS website] https://www.hhs.gov/about/strategic-plan/introduction/index.html#mission. Published March 10, 2014. Accessed February 16, 2017.

56   efforts, and fostering innovation by entrepreneurs such as applications to search for

57   physicians. Prior to HealthData.gov, the process to search for and access HHS data

58   related to a specific topic such as prescription drug abuse or obesity required users to

59   search across multiple HHS websites to determine what data are available, whether they

60   are fit for use, and how to access them. This process incurred considerable costs for users,

61   limiting the pace of data-driven health innovation.

62   HealthData.gov enhances the value of existing HHS data by improving process

63   efficiency for locating data and promoting increased data use among diverse data

64   consumers, who reuse and combine data in new ways to improve health and well-being.[3]

65   Data users can search for key terms or browse topics to locate relevant datasets, obtain

66   metadata ("data about the data," such as publisher, years covered, and a description), and

67   click hyperlinks to be directed to an external HHS or state website where users can

68   download the data. HealthData.gov does not replace operating divisions making their

69   data available through their own websites and does not require the collection of new data.

70   Rather, this innovation allows diverse internal and external data users to more efficiently

71   discover, browse, access, and understand publicly available health data. As the only

72   public inventory of all HHS data resources, it reduces data silos and allows HHS staff to

73   make better use of data for internal programmatic, planning, and evaluation purposes. It

74   enables data consumers without detailed content expertise on HHS and health data to

75   identify relevant health data, thereby bringing in new data users including application

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[3] The HealthData.gov catalogue does not host data. The data are located on external websites including open data portals (e.g. https://health.data.ny.gov/) and webpages tailored to specific topics (e.g. https://dailymed.nlm.nih.gov/dailymed/index.cfm). The HealthData.gov software continuously reads output files from HHS operating divisions and several state and municipality open data platforms, and updates the HealthData.gov index as data are added or refreshed. The HealthData.gov catalogue provides standardized metadata for each data offering and data users can click hyperlinks to be redirected to external websites where they can access data and additional information about the resource.

76 developers, businesses, and community planning groups. It enables data customers to

77 discover and understand additional data that may be related to their interest, thereby

78 expanding the appropriate use of data. HealthData.gov also provides a single forum in

79 which to monitor and evaluate the implementation of appropriate data stewardship

80 practices,[4] which allows consumers to trust that information from them will be used and

81 protected appropriately.

82   Since its development in 2010, the HealthData.gov directory has expanded to

83 cover over 3,000 datasets in diverse areas of clinical outcomes, administration, and

84 monitoring and evaluation.[5] From 2013 to 2016, web traffic steadily increased from

85 17,561 to 178,334 visitors annually, and the number of times that users accessed the site

86 (sessions) doubled from 508,705 to 1,168,138.[6] In addition to covering data from all

87 HHS operating divisions, one-third of HealthData.gov resources are federated from state

88 and municipality portals; this increases the value of HealthData.gov by helping data users

89 discover related datasets from geographic areas that could be linked to develop new

90 insights and innovations. The inclusion of non-HHS data in HealthData.gov can also

91 enhance the quality, amount, and timeliness of HHS data as more data users become

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[4] National Committee on Vital and Health Statistics, Toolkit for communities using health data: how to collect, use, protect, and share data responsibly. http://www.ncvhs.hhs.gov/wp-content/uploads/2013/12/Toolkit-for-Communities.pdf. Published May 2015. Accessed March 24, 2017.
[5] Examples include: disease surveillance and mortality data (e.g. Drug Abuse Warning Network (DAWN); Surveillance, Epidemiology, and End Results (SEER) cancer registry; and Nationally Notifiable Diseases Surveillance System); health care access, cost, and quality data (e.g. Medicare Preventable Hospitalizations, HCUPNet query system of publicly available all-payer health care databases; Minimum Data Set Quality Indicator Report; and address tool to locate Health Professional Shortage Areas); and consumer-oriented topics (e.g. Household Products Database on the health safety of consumer brands; Genetics Home Reference on genetic conditions; and DailyMed compilation of pharmaceutical package inserts).
[6] From NCVHS Data Access and Use Work Group analysis of HealthData.gov Google Analytics data, February 2017.

92   acquainted with varied data sources and express desires for additional data or alternative

93   data formats.[7]

94

95   *Annual Number of HealthData.gov Users and Sessions, 2013 to 2016*
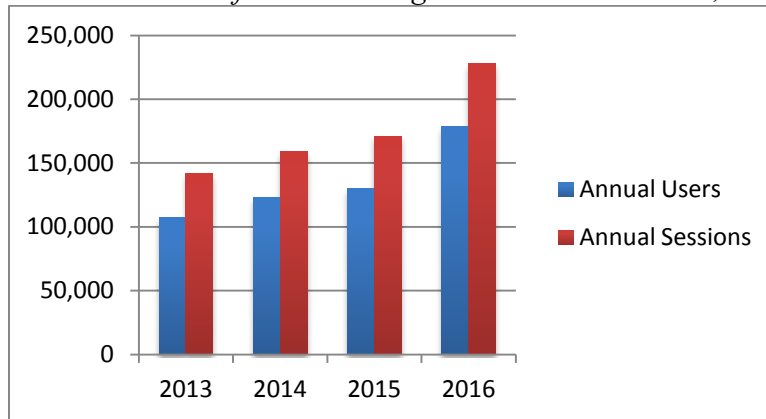
96
97   Source: NCVHS Data Access and Use Work Group Analysis of HealthData.gov Google
98   Analytics data, February 2017
99

100   Data indexed in HealthData.gov has already driven economic empowerment,

101   innovation, and transformation in health. Data that are currently catalogued in

102   HealthData.gov and discovered through HealthData.gov or other open data portals have

103   already been used to provide medical consumers with more factual and critical

104   information on local physicians providing the best valued healthcare treatments,[8]

105   document disparities in the median cost of orthopedic surgeries and appendectomies

106   between hospitals,[9] illustrate that incorrectly estimating hospitals' costs caused Medicare

107   to overpay hospitals by $2.6 billion,[10] incorporate food safety inspection data into Yelp's

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[7] Martin EG, Begany GM. Opening government health data to the public: benefits, challenges, and lessons learned from early innovators. J Am Med Inform Assoc 2016; Epub ahead of print.

[8] Lyons L. U.S. News and RowdMap, Inc. team up to help patients make more informed health care decisions. http://www.usnews.com/info/blogs/press-room/2016/01/19/us-news-and-rowdmap-inc-team-up-to-help-patients-make-more-informed-health-care-decisions. Published January 19, 2016. Accessed January 12, 2017.

[9] *Crain's New York Business*: Health Pulse Extra. January 8, 2014.

[10] Weaver C, Mathews AW, McGinty T. Medicare overpays as hospital prices rise. *Wall Street Journal*. April 15, 2015. https://www.wsj.com/articles/medicare-overpays-as-hospital-prices-rise-1429151451. Accessed February 3, 2017.

108   crowd-sourced restaurant reviews to make timely information readily available to

109   consumers and encourage safer food handling,[11] make food restaurant inspections more

110   efficient through data analytics,[12] support community learning initiatives whereby local

111   communities synthesize data across sectors to identify and address locally-defined

112   issues,[13] improve physician training by benchmarking the case assignments of medical

113   students against the local disease burden,[14] and improve real-time decision making during

114   a natural disaster to save patients' lives.[15] In addition to these products, HealthData.gov

115   has cultivated a health data ecosystem comprised of application developers, community

116   groups, private industry, and other entrepreneurs who were not traditionally engaged with

117   HHS data.[16] After repurposing the data to develop applications and other innovations,

118   ecosystem members share back their data in reusable formats. This cycle improves the

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[11] Boiles J. San Francisco promotes its restaurant inspection data on Yelp to improve food safety. https://www.codeforamerica.org/featured-stories/san-francisco-puts-restaurant-safety-data-on-yelp. Accessed February 11, 2017.

[12] Wold C. In plain sight: is open data improving our health? http://www.chcf.org/publications/2015/01/in-plain-sight-open-data. Published January 2015. Accessed February 17, 2017.

[13] The Office of the National Coordinator for Health Information Technology is currently supporting 10 local communities to synthesize data across sectors (such as clinical health, public health, criminal justice, housing, schools, and the environment) to help them identify and address locally-defined community health challenges. For example, Cleveland, Ohio is combining weather, housing, school, and clinical data to target and reduce childhood asthmatic attacks. Other community goals include better coordination of services for Chicago residents who are unstably housed, developing a more streamlined system of care for children with complex behavioral and other medical conditions in Austin, Texas, and reducing inpatient hospitalizations among pediatric patients in Cincinnati, Ohio. AcademyHealth. CHP program participant communities. http://www.academyhealth.org/node/4901. Accessed February 17, 2017.

[14] Martin EG, Helbig N, Shah NR. Liberating data to transform healthcare: New York's open data experience. *JAMA* 2014; 311(24): 2481-2482.

[15] Martin EG, Helbig N, Shah NR. Liberating data to transform healthcare: New York's open data experience. *JAMA* 2014; 311(24): 2481-2482.

[16] One metric of the expanding open health data ecosystem is attendance at the annual Health Datapalooza conference for entrepreneurs, researchers, community groups, the private sector, and other users. This annual conference allows for the exchange of ideas and updates on innovations and technology develops supported by data accessed through HealthData.gov. Its inaugural meeting included 400 participants and featured the work of 21 developers who were provided with web links to a dozen federal datasets and tasked with developing applications to present publicly. It has since grown significantly, with a current attendance of nearly 2,000 individuals from multiple sectors. Presentations communicate the state-of-the-art scientific developments in health data use, government priorities, new health data applications, and examples of business and communities using data to improve health outcomes. (G Downing, personal communication, February 22, 2017.)

119　value of data as they are repurposed and repackaged in better ways that increase its use

120　by larger audiences while furthering the HHS mission.[17] Beyond the federal open health

121　data ecosystem, HealthData.gov and its growing user community catalyzed an "open data

122　revolution," inspiring the development of open health data portals at the subnational level

123　and further data-driven health innovation.[18]

124　　　　Although HealthData.gov has facilitated the production of health innovations that

125　would not have been possible without its existence, there are a number of resource-

126　prudent opportunities to strengthen HealthData.gov over the short-term to enhance and

127　increase its use by diverse users, assist HHS staff in leveraging data across operating

128　divisions for internal use, and ensuring its long-term success and sustainability as a next

129　generation platform. We outline four actionable steps in the following recommendations.

130　To develop these recommendations, NCVHS solicited input from members of the Work

131　Group on HHS Data Use and Access, whose members are nationally-recognized in

132　diverse fields including bioinformatics, application development, population health, web

133　analytics, and data stewardship; conducted a review of relevant peer-reviewed research,

134　government reports, and other gray literature; solicited input from HHS staff who manage

135　HealthData.gov and two state open health data directors whose data are included in

136　HealthData.gov; and analyzed HealthData.gov's web analytics data.

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[17] National Committee on Vital and Health Statistics, Toolkit for communities using health data: how to collect, use, protect, and share data responsibly. http://www.ncvhs.hhs.gov/wp-content/uploads/2013/12/Toolkit-for-Communities.pdf. Published May 2015. Accessed March 24, 2017. Martin EG, Begany GM. Opening government health data to the public: benefits, challenges, and lessons learned from early innovators. J Am Med Inform Assoc 2016; Epub ahead of print. Harrison TM, Pardo TA, Cook M. Creating open government ecosystems: a research and development agenda. Future Internet 2012; 4(4): 900-28.

[18] Martin EG, Helbig N, Shah NR. Liberating data to transform healthcare: New York's open data experience. JAMA 2014; 311(24): 2481-12; Martin EG, Shah NR, Birkhead GS. Unlocking the power of open health data: a checklist to improve value and promote use. J Pub Health Manag Pract [in press].

Recommendations to Maximize the Value of HealthData.gov

138

139   HealthData.gov has already transitioned from its initial developmental phase to

140   covering all HHS operating divisions and multiple state and local agencies. Actively

141   outreaching to non-government data consumers through key stakeholder forums, such as

142   the annual Health Datapalooza, has contributed to the development of a health data

143   ecosystem. As HealthData.gov continues to evolve, there are several recommendations

144   for how HealthData.gov can improve the accessibility and usability of high-value health

145   data accessible to a wide range of customers to drive economic empowerment,

146   innovation, and transformation in health.

147   The following recommendations are designed to address shortcomings identified

148   by NCVHS to make it more efficient for diverse users to discover, browse, and access

149   data from HealthData.gov; encourage visitors to return to the site and bring in additional

150   web traffic from new users; and lay a foundation to ensure its success and sustainability

151   in the long-term. Underlying all recommendations is a continued commitment to good

152   data stewardship, including adhering to best practices for data protection, security, and

153   confidentiality. They are intended as short term and practical actions that HHS can

154   undertake over the next 18 months. Recommendation 1 is designed to move

155   HealthData.gov forward from its initial organic evolution to a targeted approach centered

156   on a strong vision and mission. The NCVHS believes that this can increase the impact of

157   future activities. Recommendation 2 addresses shortcomings in understanding the limited

158   understanding of current HealthData.gov users, and how to release data to have a

159   maximum impact. This is relevant as HealthData.gov draws in new data users who have

160   not traditionally interacted with HHS, including application developers, businesses, and

161 community planning groups. Recommendation 3 provides strategies to allow HHS to

162 adapt the HealthData.gov site to improve the user experience for diverse audiences.

163 Efficient processes for users to discover, browse, and access data are needed to encourage

164 the innovative use of data. Recommendation 4 addresses improvements in business

165 processes to streamline its operations, facilitate the successful implementation of

166 recommendations 1 through 3, and enable HealthData.gov's long-term sustainability.

167

168 **1. HHS should develop an integrated and coordinated strategy within its operating**

169 **divisions to advance the HealthData.gov vision and mission.**

170   Open data platforms are a new technology to facilitate access to and efficient use

171 of public data, and HealthData.gov was a groundbreaking undertaking in 2010. While

172 developing and adapting organically to a rapidly evolving health data environment, it has

173 already succeeded in achieving valuable outcomes related to its mission. The

174 HealthData.gov aspiration to drive economic empowerment, innovation, and

175 transformation in health and health care can be attained at a higher level by focusing

176 future activities around a focused mission. Specific strategies include:

177   • Promote HealthData.gov as a brand, reinforcing a consistent message about its

178   vision and mission, and add a tag line such as "Public Data Released" to materials

179   to make the website recognizable and memorable.

180   • Inspire data users to do more with the data by highlighting success stories,

181   encouraging HHS data custodians to post blogs and other reports about their data

182   on HealthData.gov, and organizing regular online user sessions where HHS staff

183   and external users can share ideas.

184   •   Continue to support developer challenge competitions; and provide seed funding

185   opportunities to support solutions that make HHS activities more efficient and

186   effective, cultivate the open health data ecosystem, and foster a culture of

187   consumer engagement in driving health innovation.

188   •   Develop data sharing partnerships with as many states as possible to support the

189   diffusion of best practices related to the use of these data to improve state-based

190   programs such as public health and Medicaid.

191

192 **2. HHS should implement evaluation and performance metrics and solicit data**

193 **customers' input regularly to increase the use and usefulness of HealthData.gov for**

194 **diverse consumers, support the work of HHS staff, and facilitate the development of**

195 **data-driven health innovations.**

196   As health data reach new audiences with diverse ideas and skillsets, a better

197 understanding of who the data customers are and how to release data to maximize their

198 experience and encourage their regular participation is needed. Traditional audiences for

199 public health data include researchers and community health groups. Fostering new

200 health innovation from public data requires the continued engagement of new and diverse

201 data consumers, who have different data requirements, intended uses, technical

202 capabilities, and content expertise. For example, researchers frequently desire historical

203 data over many years to document trends whereas an entrepreneur seeking to connect air

204 quality control, education, transportation networks, and environmental health may only

205 require the most recent data and needs to efficiently understand the structure and format

206 of the data to determine if these data can be combined meaningfully. Specific strategies

207 to enhance HHS data customer needs include:

208 • Implement a mechanism to solicit input systematically from diverse internal and

209   external data users.

210 • Participate in the Digital Analytics Program and use web analytics to improve

211   understanding of HealthData.gov customers and their use patterns, thereby

212   facilitating better tailoring of content to users, evaluation of dissemination

213   strategies, marketing of data to specific groups, increasing the findability of data,

214   and other benefits that result from enhanced data for decision-making and

215   customer engagement.

216 • Develop a mechanism for engaged data users to share their solutions and coding

217   resources to educate and accelerate others users' abilities to access and use

218   HealthData.gov resources.

219

220 **3. HHS should enhance the HealthData.gov platform's capabilities to make the data**

221 **more meaningful to a range of data customers to extend its reach.**

222 The web industry is continuously updating how users interface with information

223 to ensure that consumers find sites engaging, usable, and relevant for their purposes—and

224 likely to return. Similarly, HealthData.gov needs to use state-of-the-art technology in line

225 with web industry standards so that it continues to be acceptable and usable to a range of

226 data customers, to help users more efficiently and effectively discover and understand

227 data, and to ensure data customers view the HealthData.gov brand as a leading source of

228 publicly available health data. One aspect of enhanced capabilities is improved indexing,

229 which can improve the discoverability of data within HealthData.gov for internal and

230 external users and potentially benefit the HHS data enterprise more broadly by limiting

231 redundancies. Specific strategies include:

232 - Keep the website in a modern design so that users view it as a current and well-

233 maintained platform.

234 - Implement additional web features previously recommended by the National

235 Committee on Health and Vital Statistics, including: providing recommendations

236 for other data offerings that may be relevant based on other users' experiences

237 and interests ("other users who used this also look at…"), enhancing the

238 applicability of the content by allowing users to identify their roles (e.g. provider,

239 employer, consumer, etc.), and providing users with drill down menus that display

240 characteristics such as the format and metadata, allowing for customer ratings of

241 datasets.[19]

242 - Improve the automated processes currently in use to extract information from the

243 websites and open data portals that host data to ensure that HealthData.gov entries

244 are timely, complete, and reflect all updates.

245 - Improve the quality of Healthdata.gov's metadata tagging so that information can

246 be more reliably indexed and discovered; in particular feasibility studies of using

247 existing curated vocabularies such as the National Library of Medicine's Medical

248 Subject Heading (MESH) to tag HHS datasets should be considered.[20]

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[19] Green LA. Steps to improve the usability, use and usefulness of selected online HHS data resources. www.ncvhs.hhs.gov/wp-content/uploads/2014/05/140320lt.pdf. Published March 20, 2014. Accessed January 12, 2017.
[20] Marc DT, Beatti J, Herasevich V, et al. Assessing metadata quality of a federally sponsored health data repository. AMIA Annu Symp Proc 2016: 864-873. Marc DT, Khairat SS. Medical subject headings

249   • Add capabilities to allow users to post APIs and other products that can be

250   searched by other users.

251

252 **4. HHS should formalize the governance, stewardship, and business operations of**

253 **HealthData.gov.**

254   Evidence from other US state and local jurisdictions that regularly attract diverse

255 users to their open data sites have established strong governance to make explicit

256 standards for how the data they provide are produced and presented; recommended

257 business rules for data access, use, and publication; and making the release of easily

258 discoverable, accessible, and usable public data a routine public health activity.[21]

259 Governance sets ground rules helpful to streamlining operations, facilitating the

260 implementation of strategies to better target the site to diverse users' needs, and ensure

261 long-term sustainability. They are also critical to consumer trust in data use. Specific

262 strategies include:

263   • Establish standards for the datasets that are referenced and other aspects of

264   HealthData.gov and pilot these standards for datasets that are currently indexed.

265   • Create a feedback loop to inform HHS staff and data stewards about how their

266   data are being used and protected in ways that are responsive to consumers'

267   demands.

(MeSH) for indexing and retrieving open-source healthcare data. Stud Health Technol Inform 2014; 202: 157-60.

[21] Martin EG, Shah NR, Birkhead GS. Unlocking the power of open health data: a checklist to improve value and promote use. J Pub Health Manag Pract [in press]; Martin EG, Begany GM. Opening government health data to the public: benefits, challenges, and lessons learned from early innovators. J Am Med Inform Assoc 2016; Epub ahead of print.

268　　　• Develop a centralized HHS repository of policies and recommended guidelines

269　　　　　for preparing data that is more discoverable and usable (such as developing

270　　　　　metadata and tags, and providing alternative formats), privacy and security

271　　　　　management, and other data policies.

272

273　**A Strengthened HealthData.gov Benefits the HHS Mission**

274　　　In less than a decade, HealthData.gov has already made considerable strides

275　towards enabling diverse stakeholders including entrepreneurs, health professionals,

276　researchers, policy makers, community groups, and others to use public data to drive

277　economic empowerment, innovation, and transformation in health and healthcare. By

278　allowing users to more efficiently discover, browse, and access publicly available health

279　data in a centralized location, HHS increases the value of its existing resources by

280　empowering the development of new health and healthcare innovations and catalyzing an

281　open health data ecosystem. HealthData.gov can also be an engine for national and

282　community learning health systems.

283　　　Implementing these recommendations would have broad and beneficial effects

284　not only for the Healthdata.gov stakeholders outside of HHS but within HHS itself. For

285　example, future benefits of an enhanced HealthData.gov include:

286　　　• Policy makers and other data consumers within HHS will have markedly superior

287　　　　　access to timely and interpretable data across the entirety of HHS databases.

288　　　• Database developers within HHS can begin to share data models, data

289　　　　　dictionaries, and data standards across HHS operating divisions, thus reducing

290　　　　　redundancies and costs associated with building and maintaining databases.

291   Sharing database designs will foster interoperability and information exchange

292   across HHS agencies and types of data (such as administrative, survey, or

293   clinical).

294   • Groups with deep expertise in data such as the National Library of Medicine

295   might facilitate the implementation of metadata standards, and best practices for

296   data analysis across HHS databases that can also be referenced in the

297   HealthData.gov index.[22]

298   In addition to these actionable short-term recommendations to help

299 HealthData.gov reach its full potential, NCVHS identified a number of longer-term

300 transformative strategies to enhance HealthData.gov and the data sources that its users

301 connect and access. Moving towards the future, additional improvements include:

302   • Including searchable dataset sources from articles published in PubMed Central

303   and leveraging its expertise to enhance best practices for HealthData.gov data

304   curation and ontologies (e.g. types, properties, and interrelationships among data).

305   • Developing a mechanism for user-driven forms of indexing and labeling the

306   resources through social tagging to increase efficiency in finding desired

307   materials, reduce redundancy in searches and increase transparency of data

308   resources.

309   • Develop capacity through toolkits, online applications, and other modalities to

310   enable communities to synthesize and integrate multiple datasets to address local

311   health challenges consistent with the Office of the National Coordinator for

312   Health Information Technology's national interoperability roadmap, thereby

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[22] The HealthData.gov software refreshes its index by continuously reads output files from HHS operating divisions. Increasing the breadth, quality, and usefulness of metadata in HealthData.gov requires developing metadata standards for all data collected within HHS operating divisions.

313   being a national resource and engine for community and national learning health

314   systems.

315 In summary, NCVHS believes that HealthData.gov is off proven value and has great

316 potential to further benefit the health and well-being of all Americans. NCVHS is ready

317 to provide you with additional insights and results that have emerged through this initial

318 analysis and pursue additional ideas related to a long-term vision for HealthData.gov.

319

320 Sincerely,

321

322 William W. Stead, M.D., Chair

323 National Committee on Vital and Health Statistics

324

325 CC: Acting Executive Director for Innovation
326   Sanjay Koyani
327