

Agency for Healthcare Research and Quality (AHRQ)

Electronic Preventive Services Selector (ePSS)

API Instructions for Use



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About ePSS

The Electronic Preventive Services Selector (ePSS) is an application designed to help primary care clinicians identify the screening, counseling, and preventive medication services that are appropriate for their patients. The ePSS is available both as a web application and a mobile application. The ePSS information is based on the current recommendations of the U.S. Preventive Services Task Force (USPSTF) and can be searched by specific patient characteristics, such as age, sex, and selected behavioral risk factors. The ePSS Web application can be accessed at <http://epss.ahrq.gov/ePSS>. Visit <http://epss.ahrq.gov> for more information on additional ePSS products.

ePSS API Implementation

The ePSS API is a web service that returns a filtered ePSS recommendations data set according to specific patient characteristics, such as age, sex, selected behavioral risk factors, and recommendation grades as described in the ePSS API Data Usage and Format section using JSON. The following instructions provide field descriptions, object format, and sample code/queries to implement and request JSON formatted ePSS content. This service is designed for moderate request loads. Access to ePSS Recommendations data requires the use of a key that grants access to the API. To request a key, please contact: uspstfpa@ahrq.gov.

Filtering ePSS Data

The following is a sample query string to send to the ePSS API server containing all the parameters.

```
?age=36&sex=Female&pregnant=Y&tobacco=N&sexuallyActive=N&grade=A&grade=B&grade=C&grade=D&grade=I
```

- **age**: integer
- **sex**: Male, Female
- **pregnant**: Y, N (requires sex of Female) *
- **tobacco**: Y, N
- **sexuallyActive**: Y, N
- **grade**: A, B, C, D, I (multiple values)

Omitting a search parameter typically means return all results for that category. For example if age is omitted, all ages are included, or if grade is omitted, all grades are included. The exception is:

* If sex is female and pregnancy is not provided, pregnancy results are not included.

The following are more search query string examples. :

```
?age=15
```

```
?age=36&sex=Female&pregnant=Y
```

```
?tobacco=N
```

```
?tobacco=N&grade=A&grade=B
```

Additionally a set of recommended online resources may be fetched by setting:

```
?tools=y.
```

This action overrides all other parameters. The Tools response is detailed at the end of the document.

The following is a basic format of the search response object. See the ePSS Data Structure section for a more complete sample object:

```
specificRecommendations: [{"key": "string/integer" .. }],
```

```
grades: { "key": ["string","string"] .. },
generalRecommendations: { "key": { "key": "string/ integer array" .. } .. },
tools: { "key": { "key": "string" .. }
```

Specific Recommendations

The specificRecommendations array is sorted in the same order as the standard ePSS Web search. Each object in the array represents a single specific recommendation aimed at a target population. The following are specificRecommendations fields:

- **id**: integer identifying this specific recommendation
- **title**: title
- **grade**: grade the recommendation was given. Indexes into the grades object. see grades
- **gradeVer**: the version of the grade. index into the grade array. see grades
- **gender**: The sex of the target population.
- **ageRange**: The ages the recommendation applies to.
- **text**: HTML format - text of the recommendation
- **rationale**: (optional) HTML format - rationale for this recommendation. A fallback if a general rationale is not provided.
- **url** (optional) URL associated with the recommendation
- **servFreq** (optional) frequency of service
- **riskName** (optional) risk factor name
- **riskText** (optional) HTML format - risk factor comments
- **general**: integer to index into the generalRecommendations object. see generalRecommendations
- **tool**: Array of numbers identifying tools associated with this specific. see tools

Grades

The grades object consists of letter grade keys associated with an array of grade versions. Each array element consists of the text of the USPSTF recommendation for that grade and version.

The following is a JavaScript code example of a grade look up using a specific recommendation:

```
var recom = results.specificRecommendations[0];
var gradeText = results.grades[recom.grade][recom.gradeVer];
```

General Recommendations

The generalRecommendations object consists of integer keys associated with a general recommendation object. The specific recommendation is targeted at a population. The general recommendation is broader.

The following is an example of the general recommendation look up for a specific recommendation:

```
var recom = results.specificRecommendations[0];
var general = results.generalRecommendations[recom.general];
```

The following are the generalRecommendations fields:

- **specific**: Array of integers identifying specific recommendations associated with this general
- **title**: title
- **rationale** (optional): HTML format - rationale for this recommendation. If rationale is not defined at the general level, display the specific rationale instead.
- **clinical**: HTML format - text of the clinical consideration
- **clinicalUrl** (optional): URL associated with the clinical consideration
- **other** (optional): HTML format - other recommendation text
- **otherUrl** (optional): URL associated with the other recommendation text
- **topic**: this recommendation's topic

Tools

The format of the tools object is as follows.

- If tools=y was provided, tools: [{"key": "string" .. } ..] - an array ordered by title for displaying a list of tools.
- If tools=y was NOT provided, tools: { "key": {key: "string" .. } .. } - an object for indexing tools by id associated with a specific recommendation.

The fields for each tool are:

- **id**: number identifying this tool
- **title**: title
- **url**: optional - URL where the tool is located.
- **text**: HTML format - text describing the tool

Sample ePSS API Data Structure

```

{
  "specificRecommendations":
  [
    {
      "id": 1,
      "title": "<b>Sample Specific Recommendation</b>",
      "grade": "A",
      "gradeVer": 1,
      "gender": "male",
      "ageRange": [1,30],
      "text": "<br>Sample recommendation text",
      "servFreq": "<p>Sample frequency of service</p>",
      "riskName": "Other",
      "riskText": "<br>Sample risk",
      "general": "1",
      "tool": [1]
    }
  ],
  "grades":
  {
    "A": [
      "The USPSTF strongly recommends that clinicians provide [the service] to eligible patients. ",
      "The USPSTF recommends the service. There is high certainty that the net benefit is substantial. Offer or provide this service."
    ],
    "B": [
      "The USPSTF recommends that clinicians provide [the service] to eligible patients. ",
      "The USPSTF recommends the service."
    ],
    "C": [
      "The USPSTF makes no recommendation for or against routine provision of [the service]. ",
      "The USPSTF recommends against routinely providing the service."
    ],
    "I": [
      "The USPSTF concludes that the evidence is insufficient to recommend for or against routinely providing [the service]. ",
      "The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service."
    ]
  },
  "generalRecommendations":
  {
    "1":
    {
      "specific": [1],
      "title": "<b>Sample title</b>",
      "rationale": "Sample rationale",
      "clinical": "<p>Sample clinical consideration</p>",
      "clinicalUrl": "http://localhost",
      "other": "Sample other",
      "otherUrl": "http://localhost",
      "topic": "Sample topic"
    }
  },
  "tools":
  {
    "1":
    {
      "url": "http://localhost",
      "title": "Sample title",
      "text": "Sample text"
    }
  }
}

```