Epic

Instructions for the Epic Electronic Health Record (EHR) System

GENERATING PATIENT LISTS AND AUTOMATED OUTREACH MESSAGES FOR PATIENTS ELIGIBLE FOR THE SHINGRIX VACCINE



INDICATION

SHINGRIX is a vaccine indicated for prevention of herpes zoster (HZ) (shingles):

- in adults aged 50 years and older.
- in adults aged 18 years and older who are or will be at increased risk of HZ due to immunodeficiency or immunosuppression caused by known disease or therapy.

SHINGRIX is not indicated for prevention of primary varicella infection (chickenpox).

IMPORTANT SAFETY INFORMATION

- SHINGRIX is contraindicated in anyone with a history of a severe allergic reaction (eg, anaphylaxis) to any component of the vaccine or after a previous dose of SHINGRIX
- Review immunization history for possible vaccine sensitivity and previous vaccination-related adverse reactions. Appropriate medical treatment and supervision must be available to manage possible anaphylactic reactions following administration of SHINGRIX

Please see additional Important Safety Information for SHINGRIX on <u>page 6</u> and full <u>Prescribing Information</u>, also available at <u>SHINGRIXHCP.com</u>.

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01. Background and Limitations

This document is intended to provide EHR instructions to:

- **1.** Help health systems generate patient lists for two different patient types that may be eligible for shingles immunization.
- **2.** Conduct automated outreach messaging for each of those two patient types. The specific messaging may be applicable to subsets of patients within these two groups.

The suggested steps are based on the approved indications for SHINGRIX. The Epic EHR system offers two main options to identify eligible patients for a vaccine: health maintenance advisories and patient lists. Health maintenance advisories can help identify eligible patients with a vaccine care gap during provider encounters. Patient lists can help identify eligible patients, at any time.

These instructions are specific to the Epic EHR system and to approved indications for SHINGRIX. These instructions are not appropriate for other conditions, treatments, therapeutic areas, or for other EHR systems. This document is not intended to provide any clinical advice or clinical recommendations, which are solely the responsibility of the healthcare provider.

The processes outlined in this piece are variable, and not all steps will apply to every customer. Any steps or settings that are not part of a customer's standard process should be excluded or modified accordingly. Any questions should be directed to the appropriate service provider. The practice is solely responsible for implementing, testing, monitoring, and ongoing operation of any EHR tools.

This guide is designed for organizations using the Epic 2022 version or later. Setting up a patient report and patient outreach requires minimal effort and can mostly be created by an end user.



02. Key Considerations

A patient list is a query created by entering inclusion and exclusion criteria in the EHR's reporting solution. After entering the search criteria, a list of patients who meet the criteria is generated and can be used for patient outreach. Patient lists can be leveraged to help identify patients who are eligible for a shingles vaccine based on the Prescribing Information for SHINGRIX.

The Epic EHR system has 2 reporting solutions that can be accessed by most end users: Reporting Workbench and SlicerDicer. Instructions for both solutions are included within Section 4 of this guide; however, because SlicerDicer does not include patient outreach functionality and Reporting Workbench does, the latter may be the optimal solution.



02. Key Considerations (continued)

Once a patient list is created, identified patients can be reached through Reporting Workbench's patient outreach functionality using their preferred communication method. The patient's preferred communication method is typically documented within the Patient Profile section of the demographic profile and will determine how a patient receives any outbound communication from their health system. There are 4 communication options available:

- Mail
- Phone
- MyChart (Epic's patient portal solution)
- Do Not Contact

Patients who are marked as "Do Not Contact" are excluded from any automated patient outreach activity.

Reporting Workbench and/or SlicerDicer can be used to identify patients with vaccine care gaps. Both are generally available to end users. Use the steps detailed in sections 4 and 5 on the following pages to identify patients described below:

- adults aged 50 years and older.
- adults aged ≥18 years and <50 years who are or will be at increased risk of HZ due to immunodeficiency or immunosuppression caused by known disease or therapy



03. Indication and Important Safety Information

INDICATION

SHINGRIX is a vaccine indicated for prevention of herpes zoster (HZ) (shingles):

- in adults aged 50 years and older.
- in adults aged 18 years and older who are or will be at increased risk of HZ due to immunodeficiency or immunosuppression caused by known disease or therapy.

SHINGRIX is not indicated for prevention of primary varicella infection (chickenpox).

IMPORTANT SAFETY INFORMATION

- SHINGRIX is contraindicated in anyone with a history of a severe allergic reaction (eg, anaphylaxis) to any component of the vaccine or after a previous dose of SHINGRIX
- Review immunization history for possible vaccine sensitivity and previous vaccination-related adverse reactions. Appropriate medical treatment and supervision must be available to manage possible anaphylactic reactions following administration of SHINGRIX
- In a postmarketing observational study, an increased risk of Guillain-Barré syndrome was observed during the 42 days following vaccination with SHINGRIX
- Syncope (fainting) can be associated with the administration of injectable vaccines, including SHINGRIX.

 Procedures should be in place to avoid falling injury and to restore cerebral perfusion following syncope
- Solicited local adverse reactions reported in individuals aged 50 years and older were pain (78%), redness (38%), and swelling (26%)
- Solicited general adverse reactions reported in individuals aged 50 years and older were myalgia (45%), fatigue (45%), headache (38%), shivering (27%), fever (21%), and gastrointestinal symptoms (17%)
- Solicited local adverse reactions reported in autologous hematopoietic stem cell transplant recipients (aged 18 to 49 and ≥50 years of age) were pain (88% and 83%), redness (30% and 35%), and swelling (21% and 18%)
- Solicited general adverse reactions reported in autologous hematopoietic stem cell transplant recipients (aged 18 to 49 and ≥50 years of age) were fatigue (64% and 54%), myalgia (58% and 52%), headache (44% and 30%), gastrointestinal symptoms (21% and 28%), shivering (31% and 25%), and fever (28% and 18%)
- The data are insufficient to establish if there is vaccine-associated risk with SHINGRIX in pregnant women
- It is not known whether SHINGRIX is excreted in human milk. Data are not available to assess the effects of SHINGRIX on the breastfed infant or on milk production/excretion
- · Vaccination with SHINGRIX may not result in protection of all vaccine recipients



04. Epic Electronic Health System Patient List Instructions

4.1 Configuring Reporting Workbench to Generate Patient Search Lists



Patient Type 1:

Adults aged ≥50 years

- **1.** Access Reporting Workbench (click the Epic logo > Reports > My Reports).
- 2. Navigate to the Library tab from the Reports menu.
- **3. Enter** "generic criteria" in the search field, and **click Search**.
- 4. Select the "Find Patients Generic Criteria" report template and create a New Report.

NOTE: For step 4, the "Patients with Immunization Deficiency" report template is a valid alternative template. Select the Immunization SHINGRIX or immunization family, and set the Age in years criteria to 50. Consider this alternative if subsequent criteria may not be available. Some display information and filter options may not be available when using the "Patients with immunization Deficiency" report template. Continue with step 13 when considering this alternative.

- 5. Click the Criteria tab in the toolbar in the now displayed Report Settings field.
- 6. Enter "status" in the search field (Filter Criteria).
- 7. Select the "Patient Status" criterion, and set the status to "Alive".
- 8. Enter "age" in the search field (Filter Criteria).
- 9. Select the "Age in years" criterion.
- 10. Set the patient age range to ≥50 years.
- **11. Enter "immunization"** in the search field (Filter Criteria).





4.1 Configuring Reporting Workbench to Generate Patient Search Lists (continued)

12. Select the desired immunization criteria.

NOTE: If the desired immunization criterion is not available, click + Add new criterion and select it from the Add Criterion window. For example, consider the "Imm get dose count given a reference date" criterion and set the details to:

a. Immunizations: Enter the vaccine mnemonic (for shingles, enter "SHINGRIX")

b. Start date: N/A

c. When received: Ever

d. Relationship: Less than

e. Imm get dose count given a reference date: 2

NOTE: For step 12, the "HM: Has Topic" criterion may be considered as an alternative when other criteria listed are not available. Substitute the Immunization criterion in step 11 with the "HM: Has Topic" criterion, and enter and select the Zoster 50+ health maintenance topic

- 13. Once all the criteria have been added, set the Criterion Logic to AND.
- **14.** In the General tab, **enter the desired report name** (eg, "Patients 50+ shingles vaccination") and a description.
- **15.** Select all the desired display columns (DOB [Date of Birth], patient name, etc) to include in the report.
- In the Detailed view section, enter and select the Reporting Workbench Health Maintenance View.
- **17. Click Save, and then Run** to create the Patient List. The list will display all patients matching the criteria. Use the filters to narrow down the Patient List or export to Excel.





4.1 Configuring Reporting Workbench to Generate Patient Search Lists (continued)



Patient Type 2:

Adults aged ≥18 years and <50 years who are or will be at increased risk of HZ due to immunodeficiency or immunosuppression caused by known disease or therapy

- 1. Access Reporting Workbench (click the Epic logo > Reports > My Reports).
- 2. Navigate to the Library tab from the Reports menu.
- **3. Enter** "generic criteria" in the search field, and click Search.
- 4. Select the "Find Patients Generic Criteria" report template, and create a New Report.

NOTE: For step 4, the "Patients with Immunization Deficiency report template" is a valid alternative template. Select the Immunization SHINGRIX or immunization family, and set the Age in years criteria to ≥18 AND <50 years. Consider this alternative if subsequent criteria may not be available. Some display information and filter options may not be available when using the "Patients with immunization Deficiency" report template. Continue with step 16 when considering this alternative.

- 5. Click the Criteria tab in the toolbar in the now displayed Report Settings field.
- **6. Enter "status"** in the search field (Filter Criteria).
- 7. Select the "Patient Status" criterion and set the status to "Alive".
- **8.** Enter "age" in the search field (Filter Criteria).
- 9. Select the "Age in years" criterion.
- 10. Set the patient age range to ≥18 years and <50 years.
- 11. Enter "diagnosis" in the search field (Filter Criteria).





4.1 Configuring Reporting Workbench to Generate Patient Search Lists (continued)

- **12. Select the "Diagnosis by Grouper" criterion** or, if groupers are not available, select the "Diagnosis by Code" criterion to manually enter the diagnosis ICD-10 codes for immunocompromised or immunosuppressed patients.
- **13.** Enter the names of the desired immunodeficient or immunosuppressed diagnoses groupers, or ICD-10 codes if groupers are not available. (See below for a list of example disease categories and diagnoses that may be associated with immunocompromised patients. Health systems may use these disease categories and example diagnoses to assist in potentially identifying the parameters for the search query.)

NOTE: The conditions listed in the table below are not exhaustive and only serve as an example to help identify potentially immunocompromised patients. Health system stakeholders should review and amend as they see fit to identify and manage immunocompromised patients.

>	Example Disease Categories & Diagnoses That May Be Associated With an Immunocompromised Patient		
	Disease Category	Example Indication	
	Hematologic malignancies	Chronic lymphocytic leukemia of B-cell type	
	Human immunodeficiency virus	Human immunodeficiency virus (HIV)	
	Malignant neoplasm (solid tumors)	Malignant neoplasm of breast	
	Stem cells transplant	Stem cells transplant	
	Renal transplant	Kidney transplant	

14. Enter "immunization" in the search field (Filter Criteria).

Important Notes:

• Immunodeficiency or immunosuppression can be a result of a disease and/or therapy. The degree of altered immunocompetence in a patient should be determined by a physician.





4.1 Configuring Reporting Workbench to Generate Patient Search Lists (continued)

15. Select the desired immunization criteria.

NOTE: If the desired immunization criterion is not available, click + Add new criterion and select it from the Add Criterion window. For example, consider the "Imm get dose count given a reference date" criterion and set the details to:

a. Immunizations: Enter the vaccine mnemonic (for shingles, enter "SHINGRIX")

b. Start date: N/A

c. When received: Ever

d. Relationship: Less than

e. Imm get dose count given a reference date: 2

NOTE: For step 15, the "**HM: Has Topic" criterion** may be considered as an alternative when other criteria listed are not available. Substitute the Immunization criterion in step 14 with the "HM: Has Topic" criterion, and enter and select the Zoster ≥18 AND <50 years health maintenance topic.

- 16. Once all the criteria have been added, set the Criterion Logic to AND.
- **17.** In the General tab, **enter the desired report name** (eg, "Patients aged ≥18 years and <50 years Immunodeficient or immunosuppressed shingles vaccination") and a description.
- **18.** Select all the desired display columns (DOB [Date of Birth], patient name, etc) to include in the report.
- 19. In the Detailed view section, enter and select the Reporting Workbench Health Maintenance View.
- **20.** Click Save, and then Run to create the Patient List. The list will display all patients matching the criteria. Use the filters to narrow down the Patient List or export to Excel.





4.2 Configuring SlicerDicer to Generate Patient Search Lists



Patient Type 1:

Adults aged ≥50 years

- 1. Access SlicerDicer (click the Epic logo > Reports > SlicerDicer).
- 2. Select the Patients data model.
- 3. Click New to start a new query.
- 4. Select the desired patient base.
- **5.** In the Search for criteria field, **enter "status"**.
- 6. Select the "Patient Status" criterion, and set the status to "Alive".
- 7. In the Search for criteria field, enter "age".
- 8. Select the "Age in years" criterion and set the age range to ≥50 years.
- 9. In the Search for criteria field, enter "health maintenance".
- 10. Select the "Health Maintenance Topic" criterion, and enter "zoster". Select it from the list. Select the Overdue status from the available options, and complete all details.
- **11. Confirm the logic in the Population section** in the middle of the screen.
- 12. In the Visual Options section, select the last icon on the first row to view the results.
 NOTE: If desired, right click the bar with the patient results and select Export the Slice to Reporting Workbench if Reporting Workbench is preferred to manipulate the results.
- 13. Select the General tab, and complete all report details, such as name and description.
- 14. Click Run to execute the report. The list displays all patients matching the criteria.
- **15.** To refine the results of the patient query, **click the Filters tab**. **Select the radio button** next to the desired filter criteria to narrow down the patient list.
- **16. Export the data** for further manipulation if desired.
- See next page for additional steps.



4.2 Configuring SlicerDicer to Generate Patient Search Lists (continued)



Patient Type 2:

Adults aged ≥18 years and <50 years who are or will be at increased risk of HZ due to immunodeficiency or immunosuppression caused by known disease or therapy

- 1. Access SlicerDicer (click the Epic logo > Reports > SlicerDicer).
- 2. Select the Patients data model.
- 3. Click New to start a new query.
- 4. Select the desired patient base.
- 5. In the Search for criteria field, enter "status".
- 6. Select the "Patient Status" criterion, and set the status to "Alive".
- 7. In the Search for criteria field, enter "age".
- 8. Select the "Age in years" criterion, and set the age range to ≥18 years and <50 years.
- 9. In the Search for criteria field, enter "diagnosis".

See next page for additional steps.



10. Select the "Diagnosis by Code" criterion. Select the Mode to ICD/Grouper, and enter the names of the desired immunodeficient or immunosuppressed diagnoses groupers. If groupers are not available, manually enter the diagnosis ICD-10 codes for immunocompromised or immunosuppressed patients. (See below for a list of example disease categories and diagnoses that may be associated with immunocompromised patients. Health systems may use these disease categories and example diagnoses to assist in potentially identifying the parameters for the search query.)

NOTE: The conditions listed in the table below are not exhaustive and only serve as an example to help identify potentially immunocompromised patients. Health system stakeholders should review and amend as they see fit to identify and manage immunocompromised patients.

>	Example Disease Categories & Diagnoses That May Be Associated With an Immunocompromised Patient			
	Disease Category	Example Indication		
	Hematologic malignancies	Chronic lymphocytic leukemia of B-cell type		
	Human immunodeficiency virus	Human immunodeficiency virus (HIV)		
	Malignant neoplasm (solid tumors)	Malignant neoplasm of breast		
	Stem cells transplant	Stem cells transplant		
	Renal transplant	Kidney transplant		

11. In the Search for criteria field, enter "health maintenance".

Important Notes:

• Immunodeficiency or immunosuppression can be a result of a disease and/or therapy. The degree of altered immunocompetence in a patient should be determined by a physician.

See next page for additional steps.



4.2 Configuring SlicerDicer to Generate Patient Search Lists (continued)

- **12. Select the "Health Maintenance Topic" criterion,** and **enter "zoster". Select** it from the list. **Select the Overdue status** from the available options, and complete all details.
- **13.** Confirm the logic in the Population section in the middle of the screen.
- 14. In the Visual Options section, select the last icon on the first row to view the results.
 NOTE: If desired, right click the bar with the patient results and select Export the Slice to Reporting Workbench if Reporting Workbench is preferred to manipulate the results.
- 15. Select the General tab, and complete all report details, such as name and description.
- **16.** Click Run to execute the report. The list displays all patients matching the criteria.
- **17.** To refine the results of the patient query, **click the Filters tab**. **Select the radio button** next to the desired filter criteria to narrow down the patient list.
- **18.** Export the data for further manipulation if desired.





5.1 Configure Outreach Methods Within the Epic EHR System

NOTE: The provided example text is suggested for each of the patient types. Health systems may customize the provided text to meet standard practices of the organization.



Option 1:

Setting up the Phone Tab

- 1. Click the Phone tab.
- 2. Set the desired InBasket recipient—for example, a care manager assigned to the campaign.
- **3. Set the priority** as desired.
- 4. Set the Routing Action to "Initiate Calls" and the Reason for Call to "shingles".
- 5. Create an outreach message as desired. Suggested text can be found on page 19.

NOTE: The health system may have various phone outreach options, ranging from an Interactive Voice Response (IVR) system to manually reaching out to patients. Please contact your EHR team for additional support if needed.

See next page for additional steps.



5.1 Configure Outreach Methods Within the Epic EHR System (continued)



Option 2:

Setting up the Mail Tab

- 1. Click the Mail tab.
- **2. Enter a reason** for the letter (eg, "Shingles Vaccine").
- **3.** Use the Template search field to find the optimal template. Consider using terms such as "Shingles." Click on the desired template.

NOTE: The referenced shingles template or SmartText was generated in Section 4 of this guide.

4. Review the template to ensure all information displays as desired. Select the radio button next to Show Template to display the templated letter, or select the radio button next to Show Preview For to display the customized letter for the selected patient. Suggested text for patients 50 years and older can be found on page 20. Suggested text for immunocompromised patients aged ≥18 years and <50 years can be found on page 21.</p>



Option 3:

Setting up the MyChart Tab

- 1. Click the MyChart tab.
- **2. Enter a subject** line (eg, "Shingles Vaccine").
- **3. Set the Reply options** (eg, "Allow reply directly to me").
- **4.** Use the Template search field to find the optimal template. Consider using terms such as "Shingles." Click on the desired template.

NOTE: The referenced shingles template was generated in Section 3 of this guide.

5. Enter desired text. Suggested text for patients aged >50 years can be found on <u>page 20</u>. Suggested text for immunocompromised patients aged ≥18 years and <50 years can be found on <u>page 21</u>.

NOTE: Any outreach can be tracked in Reporting Workbench or at the patient level under the Patient Outreach History section.

See next page for additional steps.



05. Epic Electronic Health System Automated Patient Outreach Instructions

5.1 Configure Outreach Methods Within the Epic EHR System (continued)



Option 4:

Sending an Individual Patient Message (MyChart)

- 1. Click Send Patient Message.
- 2. Enter a subject line (eg, "Shingles Vaccination").
- **3. Set the Reply options** (eg, "Allow reply directly to me").
- **4.** Use the Template search field to find the optimal template. Consider using terms such as "Shingles." Click on the desired template.

NOTE: The referenced Shingles template was generated in Section 3 of this guide.

5. Enter desired text. Suggested text for patients aged >50 years can be found on page 20. Suggested text for immunocompromised patients aged ≥18 years and <50 years can be found on page 21.</p>

NOTE: Any outreach can be tracked in Reporting Workbench or at the patient level under the Patient Outreach History section.



Option 5:

Do Not Contact

NOTE: Patients who have selected "do not contact" will be automatically excluded from patient outreach.



06. Sample Outreach Messaging



Hello,

This is [Health System Name] calling. Are you aware that you may be at increased risk of shingles?

Shingles is a painful rash that typically last 7 to 10 days. If you've had chickenpox, the virus that causes shingles is already inside of you and can reactivate at any time, causing shingles. When you are 50 or older, the risk of the virus reactivating sharply increases.

Our records indicate that you may be due for shingles vaccination. Talk to your doctor or pharmacist about your shingles risk and prevention.

Thank you and have a great day!



06. Sample Outreach Messaging (continued)

Patients Aged ≥50 Years



Dear [Patient Name]:

Are you aware that you may be at increased risk of shingles?

Shingles is a blistering rash that can be extremely painful. The pain has been described as burning, stabbing, or electric shocks. It usually develops on one side of the trunk or face and typically lasts 7 to 10 days. The pain during a shingles episode could interfere with your ability to perform daily activities.

Shingles is caused by the same virus that causes chickenpox, the varicella zoster virus. Once a person has had chickenpox the virus remains in the body and can reactivate later in life and cause shingles. The risk of developing shingles sharply increases after 50 years of age. In addition to age, certain chronic conditions like asthma, chronic kidney disease, COPD, cardiovascular diseases (including heart failure, heart disease, hypertension, hyperlipidemia, stroke, atrial fibrillation/flutter), or diabetes, may also increase your risk for shingles.

For immunocompromised patients

If you are immunocompromised due to a condition such as HIV or cancer, or you are taking a medication that suppresses your immune system, you may be at increased risk for shingles.

Our records indicate that you may be due for shingles vaccination. Talk to your doctor or pharmacist about your shingles risk and prevention.



06. Sample Outreach Messaging (continued)

Immunocompromised Patients Aged ≥18 Years and <50 Years



Dear [Patient Name]:

Are you aware that you may be at increased risk of shingles?

Shingles is a blistering rash that can be extremely painful. The pain has been described as burning, stabbing, or electric shocks. It usually develops on one side of the trunk or face and typically lasts 7 to 10 days. The pain during a shingles episode interfere with your ability to perform daily activities.

If you are immunocompromised due to a condition such as HIV or cancer, or you are taking a medication that suppresses your immune system, you may be at increased risk for shingles.

Our records indicate that you may be due for shingles vaccination. Talk to your doctor or pharmacist about your shingles risk and prevention.

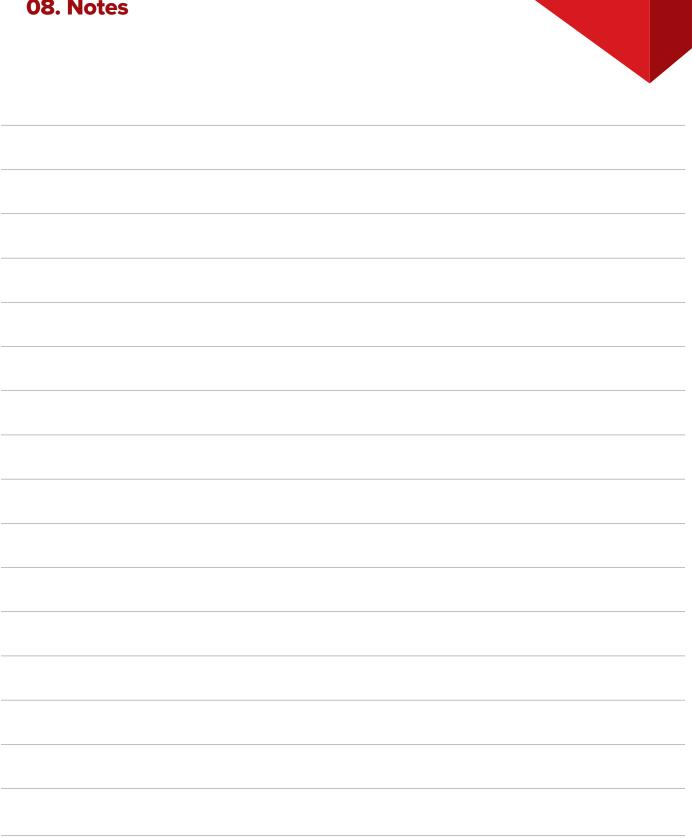


07. Disclaimers

- The customer (ie, physician, medical group, IDN) shall be solely responsible for the implementation, testing, and monitoring of the instructions to ensure proper orientation in each customer's EHR system
- Capabilities, functionality, and setup (customization) for each individual EHR system vary. GSK shall
 not be responsible for revising the implementation instructions it provides to any customer if the
 customer modifies or changes its software or the configuration of its EHR system, after such time as the
 implementation instructions have been initially provided by GSK
- While GSK tests its implementation instructions on multiple EHR systems, the instructions are not guaranteed to work for all available EHR systems and GSK shall have no liability thereto
- While EHRs may assist providers in identifying appropriate patients for consideration of assessment, treatment, and referral, the decision and action should ultimately be decided by a provider in consultation with the patient, after a review of the patient's records to determine eligibility, and GSK shall have no liability thereto
- The instructions have not been designed to and are not tools or solutions for meeting Advancing Care Information and/or any other quality/accreditation requirement
- All products are trademarks of their respective holders, all rights reserved. Reference to these products is not intended to imply affiliation with or sponsorship of GSK and/or its affiliates



08. Notes





Please see Important Safety Information for SHINGRIX on <u>page 6</u> and full <u>Prescribing Information</u>, also available at <u>SHINGRIXHCP.com</u>.

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