To instantiate the given safety case pattern for a Generic Patient-Controlled Analgesia (GPCA) system and create a structured assurance case, we must replace all placeholders with the specific domain details provided, and remove the undeveloped decorators. Here’s the instantiated assurance case GSN, displayed using a hierarchical tree format:

```

Assurance Case for GPCA System:

- G1: Operational safety is verified in GPCA system

- S1: Argument over the satisfaction of all specifications over GPCA system

- C1: All specs are given by FDA standard, Expertise opinion, and Previous knowledge

- G2: All operational hazards are mitigated

- S3: Argument over operational hazards

- C2: Operational hazards are given by identified hazards of Overinfusion and Underinfusion

- G3.1: Overinfusion is mitigated

- S4: Argument over the applied scenarios of Overinfusion

- C3: All related scenarios are given by detected overinfusion scenarios

- G4.1: Overinfusion is mitigated under excessive bolus requests scenario

- S5: Argument over all specs related to excessive bolus requests scenario

- C4: All related specs are given by safety requirements impacting flow rate adjustments

- G5.1: Flow rate sensor specification is appropriate for excessive bolus requests scenario

- S6: Argument over the appropriateness of flow rate sensor over properties

- C5: Properties are given by specifications like minimal detectable flow rate and accuracy

- G6.1: Flow rate measurement precision property is appropriate for flow rate sensor

- S7: Argument over the source of the flow rate specification definition

- C6: Source is given by FDA standard guideline

- G8: Flow rate measurement property definition is sufficient

- Sn2: Documented evidence from safety testing reports

- G7: FDA standard is appropriate and trustworthy

- Sn1: Expert testimonies and qualification documents

- G3.2: Underinfusion is mitigated

- S4: Argument over the applied scenarios of Underinfusion

- G4.2: Underinfusion is mitigated under programmed rate too low scenario

- S5: Argument over all specs related to programmed rate too low scenario

- G5.2: Alarm system specification is appropriate for programmed rate too low scenario

- S6: Argument the appropriateness of alarm system over properties

- G6.2: Alarm trigger threshold property is appropriate for alarm system

- S7: Argument over the source of the alarm system property definition

- G8: Alarm trigger threshold property definition is sufficient

- G7: Expertise opinion is appropriate and trustworthy

```

\*\*Explanation:\*\*

1. \*\*Goals (Gx)\*\*: In each goal, placeholders have been replaced with specific details pertaining to the GPCA hazards of Overinfusion and Underinfusion, including scenarios and specifications.

2. \*\*Strategies (Sx)\*\*: Strategies have been instantiated to show the linkage between Goals and their supporting Goals following the lines of arguments concerning specific scenarios and specifications of the GPCA.

3. \*\*Contexts (Cx)\*\*: Context elements provide background supporting details to the strategies and goals, providing information like source and specifications mentioned in the pattern and replaced with domain-specific data.

4. \*\*Solutions (Snn)\*\*: Evidence to support the claims, now directly linked to actual data and statements coming from trusted sources and standard guidelines.

Note, that all "Undeveloped" decorators have been omitted as we assume that for each element further development has taken place. The instantiation has replaced generic placeholders such as `{system}`, `{operational hazard}`, `{scenario}`, `{spec}`, `{property}`, and `{Source}` with specific context information and details relevant to the GPCA system.