Medication & Lab Review – Jane Doe (MRN: M123456)

---

1. Drug Compatibility & Potential Risks

- **Polypharmacy**: Both glipizide and glimepiride are sulfonylureas, both of which increase the risk of hypoglycemia—particularly dangerous in the elderly.
- **Hypoglycemia Risk**: Labs show consistently low fasting/random glucose, low-normal HbA1c (4.3%), and severe home hypoglycemic episodes (48–52 mg/dL).
- **Metformin**: Appropriately held during acute illness (pneumonia/IV antibiotics) due to lactic acidosis risk; resumed post-hospitalization.
- **Sulfonylurea Use Post-Hospitalization**: Resumed glipizide and added glimepiride without dose adjustment following hypoglycemia incidents, exacerbating risk.
- **No Documented Allergies**.

2. Therapeutic Duplication & Effectiveness

- **Duplication**: Both glipizide and glimepiride together pose significant risk without additional glycemic benefit; duplicative and contraindicated.
- **Evidence of Ineffectiveness**: Patient's hypoglycemic events indicate overtreatment, not ineffectiveness. HbA1c previously was 8.1% (suboptimal control), but acute illness and recent low readings reflect excessive therapy.
- **Over-correction**: Drastic reduction in glucose and HbA1c (now well below goal) further highlight risk of overtreatment and inappropriateness of current regimen.

3. High-Risk Profiles & Drug Class Alerts

- **Elderly Patient (68 y/o) with Diabetes**: High sensitivity to hypoglycemia and drug side-effects.
- **Post-Acute Illness/Reduced Intake**: Decreased oral intake increases hypoglycemia risk, especially with sulfonylureas.
- **Drug Class Alert**: Sulfonylureas are high-risk in older adults per Beers Criteria; combination is not recommended.
- **Cardiovascular Risks**: Hypertension and hypoglycemic events increase overall morbidity/mortality risk.

4. Summary

Relevant History/Key Facts

- Elderly female with T2DM and hypertension.
- Recently hospitalized for CAP, held metformin appropriately, currently on glipizide, glimepiride, metformin, lisinopril.
- No known drug allergies.
- Recent severe, symptomatic hypoglycemia (home BG <55 mg/dL, with near-syncope).
- Labs confirm chronic low glucose and currently reduced HbA1c.

Risk Assessment

- Major: Duplication of sulfonylurea class (glipizide, glimepiride) and resumption after acute illness while patient still had reduced oral intake.
- Already demonstrating adverse events (severe hypoglycemia).
- High risk of recurrent life-threatening hypoglycemia, especially in elderly with comorbidities.

Monitoring Recommendations

- Immediate: Discontinue one or both sulfonylureas; do NOT use in combination.
- Monitor blood glucose closely (daily home checks, fasting and post-prandial).
- Check renal function prior to metformin continuation.
- Monitor for additional hypoglycemia or cognitive impairment.
- Re-assess diabetes treatment goals given age, comorbidities, and recent low readings.
- Periodic HbA1c and glucose monitoring; consider less stringent A1c target if appropriate.

Suggested Drug Alternatives

- Preferentially **stop glipizide and/or glimepiride**; monotherapy with metformin if tolerated and renal function is adequate.
- If further therapy needed, consider DPP-4 inhibitor (e.g. sitagliptin), GLP-1 RA (if affordable/tolerable), or SGLT2 inhibitor (with caution and monitoring).
- Avoid resumption of sulfonylureas unless absolutely necessary, and if so, use lowest effective dose, never in combination.

Professional Recommendation: Discontinue glipizide and glimepiride immediately due to substantial duplication and adverse effect risk. Reassess the diabetes regimen considering patient’s advanced age, comorbidities, and consistent hypoglycemia. Monitor blood glucose, kidney function, and review treatment goals toward safety and quality of life. Adjust antihypertensive therapy as needed based on hemodynamics and renal function during ongoing assessment. Notify pharmacy and care team urgently of the high-risk polypharmacy.